

## Extended Data Figure Legends

**Extended Data Figure 1 | YTH domain family members are m<sup>6</sup>A-specific RNA binding proteins.** **a**, Western blot showing YTHDF1 and YTHDF3 pulled down with an m<sup>6</sup>A-containing RNA probe. \*Thiol-substituted phosphodiester bonds were used to prevent enzymatic cleavage. **b**, LC-MS/MS showing that m<sup>6</sup>A was enriched in GST-YTHDF1- or GST-YTHDF3-bound mRNA while depleted in the flow-through portion. **c-d**, Gel shift assay measuring the dissociation constant (K<sub>d</sub>, nM, indicated at the upper left corner of the gel) of GST-tagged YTH domain family proteins (**c**, YTHDF2; **d**, YTHDF1 and YTHDF3) with methylated and unmethylated RNA probes. 4 nmol RNA probe was labeled with <sup>32</sup>P and the protein concentration ranged from 20 nM to 5 μM. K<sub>d</sub> (nM) values were indicated at the upper left corner of the gel.

**Extended Data Figure 2 | Features and comparisons of YTHDF2 PAR-CLIP data with**

**RIP and m<sup>6</sup>A-seq.** **a**, Left: PAR\_CLIP gel image showing <sup>32</sup>P-labeled RNA-YTHDF2 complex; Right: western blotting of HeLa cell lysate with over-expression of flag-tagged YTHDF2 (10 µg per lane): upper band was detected by anti-flag antibody; lower band was detected by anti-GAPDH antibody. **b**, Overlap of transcripts identified by PAR-CLIP and RIP-seq of YTHDF2. **c-d**, YTHDF2 binding motif identified by MEME with top 1,000 scored PAR-CLIP peaks under different motif searching parameters. **c**, With motif length restricted to [5-10] bp,  $p = 1.1 \text{ e-}43$ , 183 sites were found under this motif. **d**, The motif length was restricted to [5-12] bp. The motif with lowest  $p$ -value was shown in main text as Fig. 1c, this motif showed the second lowest  $p$ -value,  $p = 5.1 \text{ e-}14$ , 104 sites were found. **e**, With [7-12],  $p = 7.5 \text{ e-}42$ , 231 sites were found under this motif. **f**, Distribution of PAR-CLIP peaks across the length of mRNA. Each region of 5'UTR, CDS, and 3'UTR were binned into 50 segments, and the percentage of PAR-CLIP peaks that fall within each bin was determined. **g**, Overlap of YTHDF2 PAR-CLIP peaks with m<sup>6</sup>A peaks in different sub-transcript regions. Over 70% PAR-CLIP peaks in 5UTR, CDS, stop codon, and 3UTR regions overlap with m<sup>6</sup>A peaks (at least 1 bp overlap). In contrast, only 20%~30% of PAR-CLIP peaks in transcription starting sites (TSS) and intergenic regions coincide with m<sup>6</sup>A peaks. **h**, Enrichment of YTHDF2 PAR-CLIP peaks in long exons. The length distribution of exons that contain YTHDF2 PAR-CLIP peaks (red) shifts to larger size compared with the length distribution of all exons in human genome (black).

### **Extended Data Figure 3 | Effects of YTHDF2 knockdown and summary of the**

**sequencing data.** **a**, The YTHDF2 knockdown efficiency is about 80% as detected by

RT-PCR (error bars, mean±s.t.d.,  $n = 3$ , biological replicates) and RNA-seq. Although at current stage we could not identify a reliable antibody for YTHDF2, ribosome-profiling of YTHDF2 did indicate that the translation level of YTHDF2 decreased by 80% after siRNA knockdown. RT-PCR results were normalized to that of GAPDH as an internal control. RNA-seq and ribosome profiling results were calculated by actual RPKM. **b**, YTHDF2 knockdown led to decreased translation efficiency of its targets due to the accumulation of non-translating mRNA. Translation efficiency is calculated as the ratio of ribosome-protected fragments and mRNA input.  $P$  value was calculated by using Mann-Whitney U test (two-tailed, significance level = 0.05). **c**, Multiple pairwise comparisons (Kruskal-Wallis test) by using the Steel-Dwass-Critchlow-Fligner procedure (two-tailed, significance level = 0.05). **d**, The regional effect of the YTHDF2-binding site is not significant. Cumulative distribution showing mRNA lifetime  $\log_2$ -fold changes ( $\Delta$ ) between si-YTHDF2 and si-control for non-targets and CLIP-IP common targets with major CLIP peak at 5UTR, CDS, 3UTR, intron, and non-coding RNA. Except for intron, other regions show similar fold changes (also see Extended Data Fig. 3c). **e**, The m<sup>6</sup>A methyltransferase (MT-A70) and demethylase (FTO) remain unchanged with YTHDF2 knockdown.

**Extended Data Figure 4 | Validation of representative YTHDF2 RNA targets. a-d**, Examples of transcripts harboring m<sup>6</sup>A peaks and YTHDF2 PAR-CLIP peaks: *SON* (CDS, **a**), *CREBBP* (3'UTR, **b**), *LDLR* (3'UTR, **c**), *PLAC2* (non-coding RNA, **d**). Coverage of m<sup>6</sup>A IP and input fragments are indicated in red and blue, respectively. YTHDF2 PAR-CLIP peaks are highlighted in green. Black lines signify CDS borders. **e-n**, relative RNA level quantified

by gene-specific RT-PCR, and error bars shown in these figure panels are mean  $\pm$  s.t.d.,  $n = 6$  (two biological replicates  $\times$  three technical replicates). **e**, Enrichment fold of *SON*, *CREBBP* mRNA, and *PLAC2* RNA in YTHDF2-RNA co-IP versus RNA-protein input control, and in m<sup>6</sup>A *in vitro* IP versus mRNA input control. **f**, Relative changes of *SON*, *CREBBP* mRNA, and *PLAC2* RNA in siYTHDF2 sample versus siControl, and over-expression of YTHDF2 versus over-expression of C-YTHDF2. **g-k**, Lifetimes of *SON*, *CREBBP* mRNA, and *PLAC2* RNA under siYTHDF2 versus siControl. **l-n**, YTHDF2 knockdown altered the cytoplasmic distribution of its mRNA targets. The *SON* (**l**) and *CREBBP* (**m**) mRNA levels decreased in the non-ribosome mRNP portion but increased in the 40-80S portion under siYTHDF2 compared to siControl. However, they showed different changes in the polysome portion. *RPL30* (**n**) is not a target of YTHDF2 and did not show an increase in the 40-80S portion.

**Extended Data Figure 5 | Knockdown of METTL3 (MT-A70) led to less binding of YTHDF2 to its targets and increased stability of its target RNAs similar to that of YTHDF2 knockdown.** **a**, Western blotting showing that the knockdown efficiency of siMETTL3 at 48 h was ~80%. **b-g**, relative RNA level quantified by gene-specific RT-PCR, and error bars shown in these figure panels are mean  $\pm$  s.t.d.,  $n = 6$  (two biological replicates  $\times$  three technical replicates). **b**, Percentages of YTHDF2 targets (*SON*, *CREBBP*, *LDLR*) in YTHDF2-bound portion vs unbound portion decreased significantly after METTL3 knockdown for 48 hours. After 24 h transfection of METTL3 siRNA, HeLa cells were transfected with flag-tagged YTHDF2, and cells were collected after another 24 h. Anti-flag beads were used to separate YTHDF2-bound portion (IP) from unbound portion

(flow-through). Each transcript was quantified by RT-PCR. **c**, Relative changes of *SON*, *CREBBP*, and *LDLR* mRNA in siMETTL3 sample versus siControl. **d-g**, Lifetimes of *SON*, *CREBBP*, and *LDLR* mRNA under siMETTL3 versus siControl.

**Extended Data Figure 6 | Co-localization of YTHDF2 with protein markers of P bodies, stress granules, and deadenylation complexes. a-h**, Fluorescence immunostaining of flag-tagged YTHDF2 (green, anti-flag, Alexa 488) and other protein markers (DCP1a and GW182 for P bodies and eIF3 for stress granule, DDX6 (also known as RCK/p54) and HuR for both, CNOT7, PAN2, and PARN for deadenylation complex; magenta of Alexa 647 is the color for the marker, green + magenta = white for the co-localization spot). The scale of the magnified region (white frame) is  $1.8 \mu\text{m} \times 1.8 \mu\text{m}$ . **i**, Co-localization between YTHDF2 and different protein markers were characterized by Pearson's coefficient, for each pair,  $n = 5\sim 7$ . YTHDF2 appears to have better co-localization with P bodies than stress granules. It also appears to co-localize best with CNOT7 (also known as CAF1 or POP2) which is a sub-unit of the CCR4-NOT deadenylation complex. **j**, Western blotting results showing that immunoprecipitation (IP) of flag-tagged full length YTHDF2 and N-YTHDF2 (N-terminal domain) also pulled down the p-body marker DCP2, but not with mock control or C-YTHDF2 (the C-terminal domain). For IP samples, each lane was loaded with 2  $\mu\text{g}$  IP portion; and the input lane was loaded with 10  $\mu\text{g}$  Input portion which corresponded to  $\sim 1\%$  of overall input). **k**, Comparison of P/Q/N (highlighted) rich regions of YTHDF1-3 with other aggregation-prone proteins. **l**, C-YTHDF2 is capable of selective binding of  $\text{m}^6\text{A}$ -containing RNA. LC-MS/MS showing that  $\text{m}^6\text{A}$ -containing RNA was enriched in the His6-tagged

C-YTHDF2-bound mRNA while reduced in the flow-through portion. Error bars shown in the figure are mean  $\pm$  s.t.d.,  $n = 4$  (two biological replicates  $\times$  two technical replicates).

**Extended Data Figure 7 | Tether assay of the N-terminal domain of YTHDF2. a,** Structural presentation of the two domains of YTHDF2. **b,** Scheme of the reporter assay: the RNA reporter vector encodes *firefly* luciferase (F-luc) as the primary reporter and *Renilla* luciferase (R-luc) on the same plasmids acting as transfection control for normalization. Five Box B RNA elements were inserted at the 3'UTR of F-luc as positive tether reporter (noted as F-luc-5BoxB); the effector was a fusion of N-YTHDF2 and  $\lambda$  peptide which recognizes Box B with high affinity. **c,** The F-luc luciferase activity (protein translation) for N-YTHDF2- $\lambda$  was reduced by  $\sim 20\%$  compared to that of N-YTHDF2 and  $\lambda$  controls. Error bars shown in the panel are mean values  $\pm$  s.t.d. from  $n = 8$  (biological replicates). **d-e,** The reporter mRNA lifetime was significantly reduced ( $\sim 40\%$ ) when bound by N-YTHDF2- $\lambda$  as compared to the controls of N-YTHDF2 and  $\lambda$ . Doxycycline (Dox, 400 ng/uL) was used to inhibit transcription of the reporter. 18 hours post transfection of reporter and effectors, Dox was removed to allow a pulse transcription of F-luc-5BoxB for 4 hours. Then Dox was added back and the samples were collected at indicated time point. The amounts of F-luc-5BoxB were determined by RT-PCR, normalized to R-luc, then for each time series, samples at  $t = 0$  h were set as 100%. Error bars shown in the panel are mean  $\pm$  s.t.d.,  $n = 6$  (two biological replicates  $\times$  three technical replicates). **f,** Scheme of poly(A) tail length assay. **g-h,** tethering N-YTHDF2 to the reporter mRNA does not significant trigger deadenylation of the reporter. The PCR products of reporter poly(A) tail were visualized in 10% TBE gel stain (**g**) and no

significant difference of the deadenylation rate was observed (**h**). **i-l**, Shorter poly(A) tail lengths were observed in the YTHDF2-bound fraction for the N-YHTDF2-tethered reporter RNA (**i** and **j**) as well as the native target RNA *CREBBP* (**k** and **l**). Tether reporter F-luc-5BoxB and flag-tagged YTHDF2-N- $\lambda$  (**i**) or full length flag-tagged YTHDF2 (**k**) were expressed in HeLa cells, and subjected to IP with anti-flag beads. RNA recovered from input, IP, and flow-through were further processed and the final PCR products for F-luc-5BoxB (**i**) or *CREBBP* (**k**) were visualized in 10% TBE gel. **j** and **l**, each lane were re-plotted against base pair, after *log* fitting of relative gel mobility with base pairs.

**Extended Data Figure 8 | Cellular function of YTHDF2. a-b**, The top molecular function of YTHDF2 targets is “Gene Expression and RNA Transcription”, and the top cellular function is “Cell Death and Survival”. Ingenuity Pathway Analysis of function category of YTHDF2 targets and non-targets revealed that the two gene groups are heterogeneous in their functional composition. (\* top two functions for YTHDF2 targets and \*\* top two functions for YTHDF2 non-targets.). **c-d**, Pie charts of molecular types of differentially expressed YTHDF2 targets (**c**) versus non-targets (**d**) upon YTHDF2 knockdown. Differentially expressed genes ( $p$ -value < 0.05) caused by YTHDF2 knockdown were grouped to YTHDF2 targets (796 gene) and non-targets (1554) based on their presence or absence in YTHDF2 PAR-CLIP binding sites, and subject to Ingenuity Pathway Analysis (the category “other” were not shown). The results show that the group of YTHDF2 targets is transcription regulators while that of non-targets is enzyme, indicating that m<sup>6</sup>A may significantly affect gene expression via tuning mRNA stabilities of transcription factors through YTHDF2. **e-f**,

YTHDF2 knockdown led to reduced cell viability. The IPA analysis of ribosome profiling data of YTHDF2 knockdown (48 h) versus control predicts decreased cell viability (e). Ribosome profiling data was chosen since it may better reflect the translation status. MTT assay provided experimental evidence of reduced cell viability upon YTHDF2 knockdown. *p*-Values that calculated from Student's *t*-test were 0.036,  $4.7 \times 10^{-4}$ , and  $9.4 \times 10^{-4}$ , at 48 h, 72 h and 96 h respectively (f). Error bars shown in the figure are mean  $\pm$  s.t.d.,  $n = 10$  (biological replicates).

**Extended Data Figure 9 | Comparisons of sequencing data with replicates.** a, Overlap of three biological replicates (rep1~3) for PAR-CLIP. Numbers showing the sum of genes identified in each sample. b, Correlation of enrichment fold as  $\log_2(\text{IP}/\text{input})$  between two technical RIP replicates. In rep1 the input mRNA was purified by poly(dT) beads, while in rep2 the input RNA was processed by rRNA removal. c-e, Box plot showing consistent results from two biological replicates that were conducted for ribosome profiling and mRNA lifetime profiling, respectively. For mRNA lifetime profiling, rep1 was normalized by spike-in control that proportional to cell numbers, while rep2 was normalized by spike-in that proportional to total RNA concentrations. Despite the technical variations, YTHDF2 knockdown resulted in significant lifetime increase of its targets. (T, 1,277 CLIP+RIP targets; NT, 3,905 non-targets; box, the first and third quartiles; notch, the median; dot in the box: the data average; whisker,  $1.5 \times$  standard deviation; cross, the 1 and 99 percentiles; short line, the max and min; *p* values were calculated by Mann-Whitney U test, two tailed, significant level = 0.05). f-h, Correlation of RPKM between technical mRNA input samples prepared by



poly(A) selection ( $x$  axis) and by rRNA removal ( $y$  axis), which are comparable to the variations between biological replicates that prepared by the same mRNA selection method.

**Extended Data Table 1 | Summary of the sequencing samples.**

**Supplementary Table 1 | Summary of processed sequencing results (PAR-CLIP, RIP, ribosome and mRNA lifetime profiling).**

Containing source data related to Figure 2a-d.

Category	Gene symbol	PAR-CLIP / Peak sum		
		rep1	rep2	rep3
<b>I: Non-targets.</b> <b>II: CLIP targets.</b> <b>III: CLIP+IP targets.</b>				
<b>II + III</b>	A4GALT	1	3	12
III	AAAS			
III	AACS	1		
III	AADAT			1
III	AAED1			1
III	AAGAB		1	
	AAK1		3	2
III	AAMP		1	3
<b>II</b>	AARS	4	2	13
	AARS2	1		3
	AASDH			
III	AASDHPPT			
III	AATF			1
	ABCA13		2	2
<b>II</b>	ABCA2	1	3	4
III	ABCA3		2	1
	ABCA5			1
III	ABCA7			1
	ABCB10	1		1
<b>II</b>	ABCB6	3	4	2
	ABCB7	1		
III	ABCB8			2
	ABCB9			
<b>II + III</b>	ABCC1	5	8	11
<b>II</b>	ABCC10	1	2	2
III	ABCC3		2	
	ABCC4	1		1
III	ABCC5			
<b>II</b>	ABCD1	2	1	6
	ABCD3			
III	ABCD4			
<b>II</b>	ABCE1	1	3	4
<b>II</b>	ABCF1	10	10	11
<b>II</b>	ABCF2	4	3	11
III	ABCF3			2
III	ABCG2			
III	ABHD10		2	
	ABHD11			1
<b>II</b>	ABHD12	2	8	6
<b>II + III</b>	ABHD13	2	4	7

II	ABHD14B	1	2	2
II + III	ABHD15	3	2	4
III	ABHD16A		1	
II	ABHD2	1	5	2
	ABHD3		1	
II	ABHD4	1	3	6
	ABHD5			
	ABHD6		1	1
	ABHD8			4
III	ABI1			1
	ABI2		1	4
II + III	ABL1	9	19	25
II + III	ABL2	8	11	18
	ABLIM1		4	4
III	ABLIM2			
II	ABR	3	5	11
III	ABRACL			
II	ABT1	1	2	5
II	ABTB2	1	1	3
III	ACAA1			
III	ACAA2			
	ACACA		5	6
	ACACB			
	ACAD10		1	1
	ACAD8			
	ACAD9			2
III	ACADM		2	3
III	ACADS			3
III	ACADSB			
III	ACADVL		1	
	ACAP2			
III	ACAP3			
III	ACAT1			1
III	ACAT2			
	ACBD3		2	5
III	ACBD4			
	ACBD5			1
III	ACBD6			1
III	ACCS			
III	ACD			1
	ACER3		2	
II	ACIN1	5	10	18
II	ACLY	3	1	2
III	ACN9			
III	ACO1			
III	ACO2	1		4
III	ACOT13		2	1
	ACOT2			4
III	ACOT7		2	1
III	ACOT8		1	
III	ACOT9			4

	ACOX1	2		3
	ACOX3			
III	ACP1		2	4
II + III	ACP2	3	5	9
III	ACP6			
	ACPL2		2	3
III	ACSF2		1	
II	ACSF3	2	1	6
	ACSL1			
II	ACSL3	4	5	4
	ACSL4			3
III	ACSS2			1
III	ACTA2			
II	ACTB	4	5	7
II	ACTG1	4	9	8
III	ACTL6A			
III	ACTL8	1	1	
III	ACTN1	1		4
II	ACTN4	4	5	7
III	ACTR10			
III	ACTR1A		1	6
III	ACTR1B		1	3
II	ACTR2	1	4	6
III	ACTR3		2	2
III	ACTR3B			
	ACTR5			1
III	ACTR6			
	ACTR8			
	ACVR1			1
	ACVR1B		6	7
	ACVR2B			3
III	ACYP1			
III	ACYP2			
III	ADA			
III	ADAL			1
II + III	ADAM10	1	2	5
III	ADAM15			2
	ADAM17			1
	ADAM22			
	ADAM9		1	
	ADAMTS1		2	2
	ADAMTS3			1
II + III	ADAR	5	6	15
II + III	ADARB1	3	4	10
	ADAT1		1	7
III	ADAT2			
III	ADCK1			
II	ADCK2	2	6	7
III	ADCK3			
III	ADCK4			1
II + III	ADCY3	2	1	4

III	ADCY6		1	2
II + III	ADCY7	2	7	13
II + III	ADCY9	4	3	18
II	ADD1	3	2	7
III	ADD2		1	1
	ADD3			
III	ADH5		1	1
III	ADI1			1
II	ADIPOR1	1	2	4
II + III	ADIPOR2	2	6	14
III	ADK		1	1
II	ADM	1	2	4
II + III	ADNP	4	14	15
II + III	ADNP2	9	11	30
II + III	ADO	4	7	21
II + III	ADPGK	3	5	8
III	ADPRHL1			2
II + III	ADPRHL2	2	1	3
	ADRA1B			3
	ADRA2C	1		3
II	ADRBK1	1	1	6
II	ADRM1	3	2	4
III	ADSL			1
III	ADSS	1		1
III	ADSSL1			
III	AEBP2			1
II	AEN	1	4	9
II	AES	1	2	5
II + III	AFAP1	3	3	13
III	AFAP1L1			
II + III	AFF1	1	6	8
II + III	AFF4	6	3	12
	AFG3L1P			1
II	AFG3L2	1	1	1
III	AFMID			1
	AFTPH		1	1
III	AGA			
II	AGAP1	2	4	11
III	AGAP3		1	3
III	AGBL5			
	AGFG1		1	3
III	AGFG2			2
III	AGGF1		1	3
III	AGK			
	AGL			
III	AGMAT	1		
II	AGPAT1	1	2	7
II	AGPAT2	3	5	5
II	AGPAT3	2	2	6
II + III	AGPAT5	3	1	7
II + III	AGPAT6	3	6	7

III	AGPAT9	1		
III	AGPHD1			
III	AGPS		1	
II	AGRN	6	5	9
II + III	AGTPBP1	2	3	3
III	AGTRAP			3
III	AGXT2L2		2	4
II + III	AHCTF1	2	6	6
II	AHCY	4	6	7
II	AHCYL1	1	1	4
III	AHCYL2			2
II + III	AHDC1	5	5	26
III	AHI1			
II + III	AHNAK	7	4	7
II + III	AHNAK2	8	2	7
II + III	AHR	4	6	8
II + III	AHRR	5	15	42
III	AHSA1		2	4
III	AHSA2			1
III	AIF1L			
III	AIFM1			
II	AIFM2	1	1	4
III	AIG1			
III	AIMP1		1	1
II	AIMP2	1	1	3
III	AIP			2
II	AJUBA	1	5	10
III	AK1			1
III	AK2		2	4
	AK3		2	4
II + III	AKAP1	6	8	14
II + III	AKAP10	2	1	2
	AKAP11		1	1
III	AKAP12			
II + III	AKAP13	6	7	18
	AKAP7			
	AKAP8		2	3
III	AKAP8L	2		1
III	AKAP9		1	1
III	AKIP1			2
III	AKIRIN1	1		5
III	AKIRIN2			2
III	AKR1A1			1
III	AKR1B1		2	
III	AKR7A2		1	1
III	AKT1		1	3
III	AKT1S1			3
II	AKT2	3	3	10
	AKT3		1	6
	AKTIP			
III	ALAD			1

II	ALAS1	2	2	5
III	ALDH16A1		2	2
II	ALDH18A1	2	1	4
	ALDH1A3			
II + III	ALDH1B1	6	3	11
II	ALDH3A2	1	1	9
II	ALDH3B1	1	2	4
III	ALDH4A1			1
	ALDH5A1		1	3
III	ALDH6A1			1
III	ALDH7A1			
II	ALDH9A1	1	1	1
II	ALDOA	8	5	4
III	ALDOC			
II	ALG1	1	1	1
	ALG10		2	4
II + III	ALG11	2	1	3
II	ALG12	1	1	4
III	ALG13		1	2
III	ALG14			
II + III	ALG2	7	6	11
III	ALG3	1		4
III	ALG5		1	1
III	ALG6			
III	ALG8		1	
II	ALG9	1	1	5
	ALKBH1			5
III	ALKBH2			
III	ALKBH3			1
II + III	ALKBH4	3	2	8
II	ALKBH5	4	6	8
III	ALKBH6			
III	ALKBH7			
	ALKBH8			1
	ALMS1		4	12
II	ALPI	9	11	8
	ALPK2	1		
III	ALPL			1
	ALS2			1
III	ALYREF			1
II + III	AMBRA1	4	5	14
	AMD1	1		2
III	AMDHD1			
III	AMDHD2			1
III	AMFR			3
II + III	AMIGO1	3	2	8
III	AMMECR1	1		2
II + III	AMMECR1L	3	7	12
III	AMN1			
II + III	AMOTL1	2	3	7
II + III	AMOTL2	6	6	16



III	AMPD2		1	2
III	AMTN			
II	AMZ2	1	1	2
	AMZ2P1			2
	ANAPC1			2
III	ANAPC10			1
III	ANAPC11			1
III	ANAPC13			1
III	ANAPC16			
III	ANAPC2		2	2
III	ANAPC4			
III	ANAPC5		1	1
II	ANAPC7	2	3	3
	ANGEL1			1
II + III	ANGEL2	1	1	3
	ANKFY1		1	3
II	ANKH	6	3	15
	ANKIB1	1		5
II + III	ANKLE2	12	8	16
	ANKMY2			
II + III	ANKRD10	1	2	4
II	ANKRD11	10	18	30
	ANKRD12			3
	ANKRD13A			2
II	ANKRD13B	1	1	2
	ANKRD13C		1	5
II	ANKRD13D	1	2	2
III	ANKRD16			1
II	ANKRD17	3	4	17
III	ANKRD2			
II	ANKRD26	1	3	2
	ANKRD27			1
	ANKRD28			2
	ANKRD29			
II + III	ANKRD32	1	3	4
II + III	ANKRD33B	5	10	24
III	ANKRD37			
III	ANKRD39			
II + III	ANKRD40	3	8	18
	ANKRD46	1		6
	ANKRD49		1	1
	ANKRD5	1		1
	ANKRD50	1		5
II	ANKRD52	1	3	7
III	ANKRD54			3
	ANKRD9		3	8
II	ANKS1A	2	2	3
III	ANKS3			
	ANKS6		4	6
III	ANKZF1			
III	ANLN		2	2

III	ANO10			1
	ANO2			
	ANO4			
	ANO6		1	3
III	ANO8			1
II	ANP32A	1	3	4
II	ANP32B	2	2	3
III	ANP32E		1	2
II + III	ANTXR1	4	10	16
III	ANXA1			
III	ANXA11			2
II	ANXA2	2	1	2
III	ANXA3			
III	ANXA4			
III	ANXA5	1		1
II	ANXA6	1	2	2
III	ANXA7		1	
III	AP1AR			1
III	AP1B1		2	2
II + III	AP1G1	6	5	12
III	AP1M1	4		1
III	AP1M2			1
III	AP1S1		3	3
III	AP1S2			
III	AP1S3			2
II	AP2A1	2	1	3
III	AP2A2		1	3
	AP2B1		6	6
II	AP2M1	1	1	2
III	AP2S1			1
II	AP3B1	1	1	1
III	AP3D1	1		4
III	AP3M1		1	5
	AP3M2			4
III	AP3S1			
	AP4B1			
	AP4E1	1		2
	AP4M1		1	2
II + III	AP5B1	9	19	39
	AP5M1	2		3
	AP5S1			
III	AP5Z1		1	1
	APAF1			
	APBA3			1
II + III	APBB2	1	3	6
III	APBB3			
	APC		1	7
II	APEH	1	1	4
II	APEX1	1	3	6
II	APEX2	2	6	14
II	APH1A	1	5	12

III	API5		4	9
III	APIP			
III	APLP1			
II	APLP2	2	3	5
III	APOA1BP		1	2
III	APOBEC3C			1
III	APOL2	1		2
II	APOO	2	1	1
III	APOOL		1	3
III	APOPT1		1	
II	APP	3	3	6
	APPBP2		1	4
	APPL1			
	APPL2			1
II	APRT	2	2	1
III	APTX		4	2
II	AQP3	1	6	3
	AQR		2	2
III	ARAF		2	4
III	ARAP1			
III	ARAP3	1		2
II	ARCN1	3	6	10
II	ARF1	3	5	6
III	ARF3		3	8
III	ARF4	1	1	
II	ARF5	1	1	2
II + III	ARF6	5	11	11
II + III	ARFGAP1	10	16	27
II	ARFGAP2	1	1	2
III	ARFGAP3		2	1
II + III	ARFGEF1	1	2	1
II + III	ARFGEF2	1	1	3
III	ARFIP1			2
II	ARFIP2	2	1	6
III	ARFRP1			2
III	ARG2			
II	ARGLU1	1	2	5
II	ARHGAP1	1	2	10
III	ARHGAP10			
II	ARHGAP11A	3	6	11
	ARHGAP11B			
	ARHGAP12	1		1
	ARHGAP17		3	5
II	ARHGAP18	1	3	5
II + III	ARHGAP21	3	4	15
	ARHGAP23		3	13
	ARHGAP26		1	3
III	ARHGAP27			3
	ARHGAP29			1
II + III	ARHGAP32	3	5	9
II + III	ARHGAP35	9	11	26

	ARHGAP39		1	4
III	ARHGAP44			1
II + III	ARHGAP5	5	6	15
II	ARHGDI A	3	6	11
III	ARHGEF1			
	ARHGEF10			1
	ARHGEF10L			1
III	ARHGEF11		4	5
II + III	ARHGEF12	2	1	6
III	ARHGEF16			1
II + III	ARHGEF17	2	5	13
II	ARHGEF18	4	3	9
III	ARHGEF19			2
III	ARHGEF2		1	2
III	ARHGEF25			
	ARHGEF3			
	ARHGEF4		3	2
	ARHGEF40			2
II	ARHGEF7	2	1	10
	ARHGEF9		1	1
II + III	ARID1A	12	18	44
II + III	ARID1B	5	2	18
II + III	ARID2	2	7	16
III	ARID3A		1	2
III	ARID4A		1	1
II	ARID4B	2	1	6
II + III	ARID5B	6	9	21
	ARIH1		2	7
III	ARIH2		1	4
III	ARL1			
III	ARL13B			2
	ARL15		1	1
III	ARL16			
III	ARL2		1	3
III	ARL2BP		1	1
III	ARL3			1
	ARL4D			2
	ARL5A			1
II + III	ARL5B	1	3	3
III	ARL6			
II	ARL6IP1	1	2	1
III	ARL6IP4	1		1
II	ARL6IP5	2	2	6
	ARL6IP6			
III	ARL8A			2
III	ARL8B			2
	ARMC1		2	2
III	ARMC10			
III	ARMC4			
II	ARMC5	1	1	6
II	ARMC6	4	3	5

II + III	ARMC7	3	2	5
	ARMC8	3		4
III	ARMC9			
	ARMCX3			
	ARMCX6			2
III	ARNT		2	4
	ARNTL			
III	ARPC1A	1		
III	ARPC1B			
III	ARPC2		1	3
III	ARPC3			
III	ARPC4		1	6
II	ARPC5	1	3	3
II + III	ARPC5L	4	3	5
III	ARPP19		3	6
	ARRB1			4
III	ARRB2			1
III	ARRDC1			2
II	ARRDC2	2	1	1
II + III	ARRDC3	5	2	11
	ARSB			4
II + III	ARSG	2	4	3
	ARSK			3
III	ARV1			
	ARVCF			1
III	ASAH1	1		1
III	ASAP1		3	4
II	ASAP2	1	1	7
III	ASAP3			2
	ASB1			
II + III	ASB13	1	4	8
	ASB6		3	13
	ASB7			3
	ASB8		2	4
III	ASB9			
	ASCC1			
II	ASCC2	1	1	2
II + III	ASCC3	3	3	2
III	ASF1A			
II	ASF1B	2	5	6
II + III	ASH1L	5	7	16
III	ASH2L			1
III	ASIC1		1	3
III	ASL			
	ASMTL			
III	ASNA1			2
III	ASNS		1	2
	ASNSD1			2
III	ASPH		1	2
II	ASPHD1	2	2	2
II	ASPM	1	2	4

III	ASPSCR1			2
III	ASS1		6	4
	ASTE1		1	1
III	ASUN			1
II + III	ASXL1	9	18	30
II + III	ASXL2	5	6	17
III	ATAD1			
	ATAD2			
	ATAD2B		1	
II	ATAD3A	1	2	5
III	ATAD3B		2	2
III	ATAD5			
	ATE1		1	
III	ATF1	1		2
	ATF2		2	1
II	ATF3	2	4	8
III	ATF4		1	6
II	ATF5	3	2	17
II	ATF6	3	5	8
III	ATF6B		1	3
II	ATF7	1	4	5
II + III	ATF7IP	2	4	6
	ATG10			
	ATG12		1	4
II	ATG13	1	5	8
III	ATG14		1	
	ATG16L1		2	1
III	ATG2A		1	2
	ATG2B		1	3
III	ATG3	1		
	ATG4A			
II	ATG4B	1	1	3
	ATG4C			
III	ATG4D			
II + III	ATG5	1	3	6
III	ATG7			2
II	ATG9A	5	6	5
III	ATIC			
	ATL2		3	5
II	ATL3	2	4	4
	ATM		1	1
II + III	ATMIN	5	9	23
II	ATN1	3	8	24
III	ATOX1			
	ATP10D			1
II + III	ATP11A	13	22	23
	ATP11B			1
	ATP11C			1
II	ATP13A1	1	1	1
III	ATP13A2		3	2
	ATP13A3		1	1

II	ATP1A1	1	5	2
	ATP1A1OS		1	
II	ATP1B1	4	5	6
II	ATP1B3	4	5	4
II	ATP2A2	10	14	13
	ATP2A3	1		3
II + III	ATP2B1	3	4	7
	ATP2B4		2	3
	ATP2C1			1
III	ATP5A1	1		
III	ATP5B		2	3
II	ATP5C1	1	3	1
III	ATP5D		1	4
III	ATP5F1	2		2
III	ATP5G1			1
III	ATP5G2		2	2
III	ATP5G3			1
III	ATP5H			
III	ATP5I			1
III	ATP5J			
III	ATP5J2			1
III	ATP5L		2	1
III	ATP5O			
III	ATP5S		1	2
III	ATP5SL	1		1
II	ATP6AP1	5	7	8
II	ATP6AP2	1	2	1
III	ATP6V0A1			1
II	ATP6V0A2	2	4	2
II	ATP6V0B	2	3	1
II	ATP6V0C	7	3	6
III	ATP6V0D1		3	3
II	ATP6V0E1	3	5	5
III	ATP6V0E2		1	
	ATP6V1A		2	1
	ATP6V1B2		1	3
III	ATP6V1C1			
III	ATP6V1D			
III	ATP6V1E1		3	1
III	ATP6V1F	2		1
III	ATP6V1G1		1	
III	ATP6V1H			2
	ATP7A			3
	ATP7B		1	1
	ATP8B1			
II	ATP8B2	1	3	7
II + III	ATP9A	9	11	18
III	ATP9B			1
III	ATPAF1			1
III	ATPAF2			
III	ATPBD4			

III	ATPIF1			
	ATR			
	ATRIP	1		1
II + III	ATRN	2	4	4
II	ATRX	2	1	5
II	ATXN1	1	2	7
II	ATXN10	1	1	2
II + III	ATXN1L	3	9	23
III	ATXN2		1	4
II	ATXN2L	2	6	10
III	ATXN3			1
	ATXN7		2	9
II	ATXN7L1	1	1	5
III	ATXN7L2			
II	ATXN7L3	3	4	12
	ATXN7L3B		4	9
III	AUH			3
II	AUP1	4	3	4
	AURKA	1		4
III	AURKAIP1	1		2
III	AURKB			1
III	AVEN			
II + III	AVL9	4	2	1
II	AVP11	1	1	5
II + III	AXIN1	2	1	7
	AXIN2			
II	AXL	2	4	1
III	AZI1			
II	AZI2	1	2	4
II	AZIN1	1	3	8
II	B2M	3	3	6
	B3GALNT2		4	2
II + III	B3GALT6	7	11	19
II	B3GAT3	1	2	2
	B3GNT1		3	3
II + III	B3GNT2	3	6	7
II + III	B3GNT9	2	1	10
III	B3GNTL1			
	B4GALNT1	1		2
II	B4GALNT4	1	1	7
II	B4GALT1	12	12	16
II	B4GALT2	1	5	7
II	B4GALT3	2	3	5
	B4GALT4			1
II + III	B4GALT5	3	7	11
II + III	B4GALT7	3	2	5
III	B9D1			1
	B9D2			
III	BABAM1		1	2
II	BACE1	1	3	13
II + III	BACE2	4	11	17



II + III	BACH1	1	4	7
III	BAD			
III	BAG1			1
III	BAG2			
	BAG3		3	7
	BAG4		3	7
II + III	BAG5	1	3	7
II	BAG6	2	5	2
II	BAHCC1	2	3	18
II + III	BAHD1	1	4	8
	BAI2		2	2
III	BAIAP2			1
II	BAIAP2L1	5	1	4
II	BAK1	1	2	4
II + III	BAMBI	2	3	5
II	BANF1	1	2	4
III	BANP	1	1	
II	BAP1	1	1	7
II + III	BARD1	1	1	1
II	BASP1	6	12	10
	BATF3			
II	BAX	2	3	4
II	BAZ1A	1	1	4
II	BAZ1B	1	5	11
II	BAZ2A	4	5	13
III	BAZ2B			1
III	BBIP1			1
III	BBS1			
	BBS10			
	BBS2			
III	BBS4			1
III	BBS7			
	BBS9			
II	BBX	2	3	8
III	BCAM			2
II	BCAP29	1	2	2
II	BCAP31	1	5	4
II + III	BCAR1	9	10	24
II + III	BCAR3	2	1	3
III	BCAS2			
III	BCAS3			2
III	BCAS4			
II	BCAT1	1	6	4
II	BCAT2	1	3	2
III	BCCIP	1		2
III	BCKDHA			1
III	BCKDHB			
III	BCKDK			8
	BCL10		2	4
II	BCL2L1	3	3	8
	BCL2L11			1

II	BCL2L12	1	1	2
II + III	BCL2L13	1	4	13
III	BCL2L2		3	3
III	BCL3		1	1
III	BCL6		2	3
II + III	BCL7A	2	5	12
II	BCL7B	2	3	4
III	BCL7C			1
II + III	BCL9	1	2	14
II	BCL9L	17	29	51
II	BCLAF1	1	4	5
II + III	BCOR	5	5	13
II	BCORL1	1	3	5
	BCR	2		4
III	BCS1L		1	3
	BDH1			2
III	BDH2			
III	BDP1		2	4
III	BECN1			1
III	BET1			
II	BET1L	5	6	15
II + III	BFAR	1	4	8
III	BFSP1			
II + III	BHLHE40	6	4	15
	BHLHE41		1	5
	BICC1		1	
II + III	BICD1	3	3	9
II	BICD2	2	4	9
III	BID			1
III	BIN1			
	BIN3			4
	BIRC2			2
III	BIRC5		3	3
II + III	BIRC6	3	5	12
II	BLCAP	1	2	9
	BLM		2	2
III	BLMH			2
II	BLOC1S2	2	1	4
II	BLOC1S3	2	4	6
III	BLVRA			
III	BLVRB	1		
III	BLZF1			2
III	BMP1			2
	BMP2K		2	13
	BMP4			2
II + III	BMP6	1	3	5
II + III	BMPR2	1	3	7
III	BMS1			
III	BNIP1			2
III	BNIP2			1
III	BNIP3			4

III	BNIP3L			
III	BOD1	1	1	
III	BOD1L1			1
	BOK		1	5
	BOLA1			
III	BOLA3			
III	BOP1			
	BORA		1	1
	BPGM			
III	BPHL			
III	BPNT1		1	
II	BPTF	2	5	15
	BRAF		1	1
	BRAP			1
III	BRAT1		2	6
	BRCA1			1
III	BRCA2			2
	BRCC3		2	5
II + III	BRD1	1	1	3
II	BRD2	8	16	34
II	BRD3	1	4	1
II	BRD4	4	10	15
III	BRD7	1		
II	BRD8	1	1	2
III	BRD9	2		3
III	BRE			
	BRF1	1		3
II	BRF2	2	1	3
III	BRI3	1		2
II + III	BRI3BP	3	4	9
	BRIP1			1
III	BRIX1		1	3
III	BRK1		1	1
III	BRMS1	2		1
III	BRMS1L			
III	BROX			1
III	BRP44			
III	BRP44L			
II	BRPF1	6	3	8
	BRPF3		3	9
III	BRSK2		1	2
	BRWD1			
	BRWD3			
II	BSDC1	1	2	7
II	BSG	9	4	2
II	BST2	5	4	4
	BTAF1			2
III	BTBD1		1	3
III	BTBD10			
III	BTBD2	1		5
	BTBD3	2		11

	BTBD6		2	10
II + III	BTBD7	3	8	10
	BTBD9		1	6
	BTD	2		1
III	BTF3	2		2
III	BTF3L4	1		1
II + III	BTG2	2	1	3
III	BTG3			
II + III	BTN2A1	1	7	6
II + III	BTN3A1	1	6	7
II + III	BTN3A2	3	2	10
II + III	BTN3A3	1	2	3
	BTRC		4	5
	BUB1			
III	BUB3		2	1
II	BUD13	1	2	5
III	BUD31			1
II + III	BYSL	1	2	8
	BZW1		1	5
III	BZW2		1	
	C10orf114		1	1
III	C10orf118			2
	C10orf12			1
III	C10orf125			
	C10orf137			
	C10orf2		2	5
III	C10orf32			
III	C10orf35			
II + III	C10orf47	2	5	3
III	C10orf57			
III	C10orf76			
	C10orf88		1	1
III	C11orf1			
III	C11orf10			
II	C11orf2	1	1	1
	C11orf24		2	9
	C11orf30		1	4
III	C11orf31			
	C11orf46		1	2
III	C11orf48		1	
III	C11orf49	1		4
III	C11orf54			
	C11orf57		2	4
III	C11orf58	1		
	C11orf63		1	3
III	C11orf67			
	C11orf68			2
	C11orf71			1
III	C11orf73			
III	C11orf74			
III	C11orf75		2	1

II + III	C11orf82	1	3	6
	C11orf83			
III	C11orf84		1	3
III	C12orf10		1	
	C12orf23		2	2
	C12orf26			
III	C12orf29			
	C12orf32		2	3
	C12orf35		2	7
	C12orf4		1	2
	C12orf43		1	2
II	C12orf44	1	5	5
III	C12orf45			
II + III	C12orf49	1	4	7
	C12orf5		1	4
	C12orf51	1		1
III	C12orf52			4
III	C12orf57			
II + III	C12orf65	1	2	2
	C12orf66		1	2
III	C12orf73			
III	C12orf75			
	C12orf76			
II	C14orf1	2	2	1
	C14orf101			1
	C14orf102		1	3
	C14orf109			1
	C14orf118	1		1
II + III	C14orf119	2	1	7
III	C14orf126		1	1
	C14orf129		1	
III	C14orf133	1		
II + III	C14orf135	1	5	7
	C14orf142			1
	C14orf149		1	1
III	C14orf166		2	2
II + III	C14orf169	2	2	3
III	C14orf2		1	1
II + III	C14orf43	2	6	8
	C14orf79			1
III	C14orf80	1		1
	C14orf93			
II	C15orf23	1	3	4
	C15orf29			1
II + III	C15orf39	15	20	38
III	C15orf40			1
II	C15orf41	1	1	1
II + III	C15orf42	3	6	12
II + III	C15orf44	1	4	8
III	C15orf52			
II	C15orf57	1	1	2

III	C15orf61			
III	C16orf13		1	2
	C16orf45			3
III	C16orf5		2	8
	C16orf55			
II	C16orf57	1	5	1
II	C16orf58	6	6	9
III	C16orf59			2
III	C16orf62			
III	C16orf7		1	3
	C16orf70		3	9
II + III	C16orf72	1	11	19
	C16orf74	1		2
III	C16orf80		1	
	C16orf87			1
II + III	C16orf88	1	3	7
II + III	C16orf91	2	1	3
III	C16orf95			
	C17orf101			2
III	C17orf108			
III	C17orf39			1
	C17orf48		1	2
II + III	C17orf51	4	10	26
	C17orf53		1	4
III	C17orf56		1	
	C17orf58			
II + III	C17orf59	1	3	2
II + III	C17orf62	7	9	8
	C17orf65			1
II	C17orf70	3	2	3
III	C17orf75			
III	C17orf79			
	C17orf80		3	4
III	C17orf81		1	2
	C17orf85			3
III	C17orf89			
II	C17orf90	1	2	3
II + III	C17orf96	1	2	14
II	C17orf97	2	1	2
III	C18orf21			
II + III	C18orf25	3	3	4
II + III	C18orf54	1	1	3
III	C18orf56			
III	C18orf8			1
II	C19orf10	3	4	1
	C19orf21	1	1	
II	C19orf24	5	3	4
III	C19orf25			
	C19orf26			1
	C19orf40			
II	C19orf42	4	3	1

II	C19orf43	1	4	5
II + III	C19orf44	1	6	14
II	C19orf47	1	3	1
II	C19orf48	5	6	14
	C19orf52	2		3
II	C19orf53	1	1	2
III	C19orf54		2	9
III	C19orf55			3
	C19orf57			
II	C19orf6	9	15	15
III	C19orf60			
III	C19orf70	1		
III	C19orf71			
III	C1D			
	C1GALT1	1		1
	C1GALT1C1			3
II	C1QBP	3	1	8
II	C1QL1	1	1	1
II	C1QTNF6	1	4	9
II	C1R	1	1	2
	C1RL		3	5
	C1S			1
	C1orf109	1	1	
III	C1orf112			1
	C1orf115		1	1
III	C1orf122		1	1
III	C1orf123			1
III	C1orf131			
III	C1orf133			
	C1orf135			
II	C1orf144	2	5	7
II	C1orf159	1	4	10
	C1orf174			
III	C1orf198		1	5
II + III	C1orf212	2	2	3
	C1orf216		3	10
II	C1orf233	5	1	3
II	C1orf27	1	2	2
III	C1orf31			
III	C1orf35			3
III	C1orf43		6	3
	C1orf50		1	
	C1orf52		1	1
III	C1orf53			
	C1orf56	1		2
III	C1orf63			
II + III	C1orf74	1	3	8
II	C1orf85	1	2	3
II	C1orf86	1	1	5
	C1orf9		2	5
II + III	C20orf11	1	5	9

II	C20orf111	1	2	4
	C20orf112			
II + III	C20orf20	2	2	4
III	C20orf27		3	1
III	C20orf3			3
II + III	C20orf4	6	9	17
III	C20orf43			3
	C20orf72			
	C20orf94		1	
III	C20orf96			
	C21orf119			
III	C21orf2	1		
III	C21orf33		2	1
II + III	C21orf58	1	2	8
III	C21orf59			
	C21orf91		2	
II	C22orf13	1	2	11
III	C22orf25			
II	C22orf28	2	2	2
II + III	C22orf29	3	5	9
III	C22orf32			1
	C22orf39			2
	C22orf40		1	5
III	C2CD2L			2
II + III	C2CD3	2	2	3
II	C2orf18	3	8	16
III	C2orf28	1	1	
III	C2orf29		1	2
	C2orf42			1
	C2orf43			1
II + III	C2orf44	3	1	6
III	C2orf47			
	C2orf49			1
	C2orf56		1	2
II	C2orf68	1	1	2
	C2orf69			1
III	C2orf70			
III	C2orf74		1	1
III	C2orf76			
II + III	C2orf89	6	7	11
III	C3	1		
II + III	C3orf17	1	2	2
III	C3orf18			1
III	C3orf19		1	1
III	C3orf23			
III	C3orf26		1	2
III	C3orf37			2
	C3orf38		2	5
III	C3orf52			
II + III	C3orf58	2	3	8
III	C3orf72			



III	C3orf75			
III	C3orf78			
III	C4BPA			
III	C4BPB			
	C4orf21	1		1
III	C4orf27			
	C4orf29			
III	C4orf3			
	C4orf32			2
III	C4orf33			
III	C4orf34			
III	C4orf48			
	C4orf52		1	
	C5			
II + III	C5orf15	2	3	4
II	C5orf22	1	2	12
II + III	C5orf24	1	2	9
II	C5orf25	1	4	8
	C5orf28		2	4
II + III	C5orf30	1	1	3
II	C5orf34	1	2	2
	C5orf42			3
	C5orf43			2
	C5orf44			
	C5orf45			
III	C5orf51		2	7
	C5orf54			3
II	C5orf55	1	1	2
	C5orf62			1
III	C6orf1		1	1
II	C6orf106	1	6	16
III	C6orf108			
II + III	C6orf120	1	1	4
III	C6orf130			1
II	C6orf136	1	1	2
III	C6orf162		1	1
	C6orf203			5
	C6orf211			
III	C6orf223			1
III	C6orf225			
III	C6orf226			
II + III	C6orf228	1	2	7
II + III	C6orf47	3	3	5
II	C6orf48	1	1	1
III	C6orf57			
	C6orf62		3	10
III	C6orf70			
	C6orf72			
II + III	C6orf89	2	5	6
III	C6orf99			
III	C7orf10			

	C7orf13			
III	C7orf23			
	C7orf25			
II	C7orf26	2	2	6
III	C7orf43			1
II + III	C7orf49	2	5	4
II	C7orf50	2	2	8
III	C7orf59			1
III	C7orf73			
II	C8orf33	1	2	4
	C8orf37			
	C8orf4		2	3
III	C8orf40			
	C8orf58		2	6
III	C8orf59			
III	C8orf82			1
	C9orf100			1
II	C9orf114	1	2	8
III	C9orf116			
II	C9orf123	2	1	1
II	C9orf142	1	1	1
	C9orf156		1	2
III	C9orf16		1	2
	C9orf169			
	C9orf3			3
II	C9orf37	1	2	3
III	C9orf40			3
	C9orf41			
	C9orf64			
II + III	C9orf69	10	9	16
	C9orf72			
III	C9orf78		2	1
III	C9orf85			1
II	C9orf86	3	2	6
III	C9orf89			
III	C9orf9			
	C9orf91		3	11
III	CA11			
II	CA5B	1	2	5
III	CA5BP1	2		9
	CAB39	1		
III	CAB39L			
III	CABIN1			1
	CABLES1			
	CABLES2			3
III	CABP4			2
	CACFD1			3
	CACHD1		2	3
II + III	CACNA2D1	1	2	2
	CACNA2D3		3	1
	CACNB3			3

III	CACYBP		1	
	CAD		2	
II	CADM1	1	4	1
III	CADM4			1
III	CALCOCO1			
III	CALCOCO2			
II	CALD1	3	5	5
II	CALM1	2	1	2
III	CALM2		1	3
III	CALM3			4
	CALML4		1	3
II	CALR	8	13	11
II	CALU	7	8	12
III	CAMK1			1
	CAMK1D		2	2
II + III	CAMK2G	1	2	6
III	CAMK2N1			
	CAMK4			
II + III	CAMKK1	1	1	6
	CAMKK2			1
III	CAMKMT			1
	CAMLG			
II + III	CAMSAP1	1	1	5
II + III	CAMSAP2	1	7	15
III	CAMSAP3			
III	CAMTA1		1	2
III	CAMTA2		3	3
	CAND1		3	4
II + III	CANT1	9	16	16
II	CANX	7	16	11
III	CAP1		2	4
III	CAP2		1	3
III	CAPG			
III	CAPN1			2
III	CAPN10			
II	CAPN2	1	3	4
	CAPN7			6
II	CAPNS1	2	2	2
II	CAPRIN1	1	4	5
	CAPRIN2			1
III	CAPZA1		4	6
III	CAPZA2			
II	CAPZB	3	1	4
III	CARD10			1
	CARD8		2	2
III	CARHSP1		1	1
	CARKD			7
III	CARM1		1	1
III	CARS		3	3
III	CARS2			1
II	CASC3	1	2	5

II	CASC4	1	1	2
II	CASC5	1	5	11
	CASK		1	2
	CASKIN2		2	7
II	CASP2	1	3	8
III	CASP3			1
III	CASP4			
III	CASP6			
	CASP7			1
	CASP8	1		4
	CASP8AP2		2	6
	CASP9			
II	CAST	2	2	1
III	CAT		2	1
II	CAV1	2	1	7
III	CAV2			1
II + III	CBFA2T2	5	3	11
III	CBFB			2
	CBL		3	8
	CBLB			
	CBLL1		4	9
III	CBR1			
III	CBR3			
III	CBR4			
II	CBS	1	3	5
III	CBWD1			
III	CBX1		1	6
II + III	CBX2	5	10	24
III	CBX3		1	
II + III	CBX4	8	7	14
II	CBX5	3	7	12
II	CBX6	1	8	14
III	CBX7			1
	CBX8		1	3
III	CBY1			
II	CC2D1A	1	1	2
III	CC2D1B			4
III	CC2D2A			
II	CCAR1	1	1	2
III	CCBL1	1		
III	CCBL2			
III	CCDC101			
III	CCDC102A			
III	CCDC104			
III	CCDC106			
III	CCDC109B			
	CCDC111			1
III	CCDC112			
III	CCDC113			
III	CCDC115			
	CCDC117			1

III	CCDC12			
III	CCDC120	1		
III	CCDC124		1	2
III	CCDC125			2
	CCDC126			2
	CCDC127		4	5
II	CCDC130	1	1	4
	CCDC132			
II	CCDC134	1	3	5
III	CCDC137	1		6
III	CCDC138			3
	CCDC14		2	3
III	CCDC159			
III	CCDC163P			
III	CCDC167			
	CCDC169			
III	CCDC18			
II	CCDC22	1	1	3
	CCDC23			
III	CCDC24			
III	CCDC25			1
III	CCDC28A			
II	CCDC28B	1	1	1
III	CCDC34	1		1
II	CCDC41	1	1	4
III	CCDC43			1
II	CCDC47	2	2	3
III	CCDC50	1		1
	CCDC51			
III	CCDC53			
	CCDC56			
III	CCDC57	2		5
III	CCDC58			
III	CCDC59			
II + III	CCDC6	1	2	11
III	CCDC64		1	
III	CCDC66		1	4
III	CCDC69			1
	CCDC71	1		3
III	CCDC75			
III	CCDC77			
	CCDC80			
III	CCDC82	1		2
III	CCDC84		1	1
	CCDC85B		2	3
II	CCDC85C	3	9	18
II	CCDC86	2	3	5
III	CCDC88A		2	1
III	CCDC9			
III	CCDC90A		3	5
III	CCDC90B			1

III	CCDC91		1	1
II	CCDC92	1	1	2
	CCDC93			3
II	CCDC94	1	3	5
III	CCDC97		3	7
III	CCDC99			1
III	CCHCR1			1
III	CCL2			
	CCM2			2
III	CCNA2		1	
II	CCNB1	2	2	6
III	CCNB1IP1		2	1
III	CCNB2			1
III	CCNC			
II	CCND1	2	5	5
II	CCND3	1	2	2
III	CCNDBP1			
III	CCNE1			
III	CCNE2			
II	CCNF	3	4	13
II	CCNG1	1	2	3
III	CCNG2			
III	CCNH			1
II	CCNI	1	5	6
	CCNJL		2	5
II	CCNK	1	1	2
II	CCNL1	4	3	4
	CCNL2		1	
	CCNO	2		6
II + III	CCNT1	6	12	21
II + III	CCNT2	1	2	5
III	CCNY			1
	CCP110			4
II + III	CCRN4L	2	2	10
III	CCS			
III	CCT2		3	2
III	CCT3		1	5
II	CCT4	3	2	5
II	CCT5	5	5	5
II	CCT6A	3	2	2
III	CCT6P1	1		
III	CCT6P3		2	
II	CCT7	1	2	1
III	CCT8			
III	CCZ1		1	1
III	CCZ1B			
II	CD151	3	1	2
II	CD164	2	5	4
	CD24			2
II	CD276	2	8	14
III	CD2AP		1	

II	CD2BP2	3	3	11
II	CD320	2	2	3
II	CD44	7	11	17
III	CD46		2	2
II	CD47	1	1	3
II	CD55	5	11	5
III	CD58		2	5
II	CD59	5	2	6
II	CD63	1	3	2
III	CD81	3	1	
II	CD82	1	1	3
II + III	CD83	9	8	14
II	CD9	1	3	3
II	CD97	8	14	20
III	CD99		1	
II + III	CD99L2	1	6	5
III	CDA		1	
III	CDADC1			1
	CDAN1			
III	CDC123		2	6
	CDC16			
II	CDC20	3	3	5
	CDC23			2
II	CDC25A	2	5	10
II	CDC25B	3	1	4
III	CDC25C			1
III	CDC26			
II	CDC27	1	4	11
II	CDC34	3	4	8
II	CDC37	1	4	3
III	CDC37L1			
III	CDC40			
III	CDC42			1
II	CDC42BPA	1	1	6
II	CDC42BPB	1	1	5
II	CDC42EP1	2	3	13
II + III	CDC42EP2	1	2	8
	CDC42EP3			5
II + III	CDC42EP4	3	7	13
II	CDC42SE1	2	10	8
	CDC42SE2			
III	CDC45			1
III	CDC5L			1
III	CDC6		2	5
	CDC7			2
III	CDC73			
	CDCA2		1	3
III	CDCA3	1		2
II + III	CDCA4	1	3	4
II	CDCA5	3	6	11
III	CDCA7		1	1

III	CDCA7L			
III	CDCA8		4	7
	CDH2		1	1
III	CDH24			1
III	CDIPT		3	6
III	CDK1	1	1	
II	CDK10	1	1	3
III	CDK11A			
II + III	CDK12	3	9	23
II + III	CDK13	2	7	17
III	CDK16		3	8
	CDK17		1	4
III	CDK18			
	CDK19		1	2
II	CDK2	1	4	10
III	CDK20			
III	CDK2AP1			
III	CDK2AP2			
III	CDK4			1
III	CDK5			
III	CDK5RAP1			
	CDK5RAP2	1		3
III	CDK5RAP3			1
II + III	CDK6	2	5	11
III	CDK7		1	1
	CDK8			
II	CDK9	2	2	5
III	CDKAL1			2
	CDKL1		1	1
II	CDKN1A	1	2	2
II	CDKN1B	1	4	7
III	CDKN1C			
II	CDKN2A	1	1	4
	CDKN2AIP		1	3
III	CDKN2AIPNL			
II + III	CDKN2B	2	3	5
II + III	CDKN2C	4	3	7
III	CDKN2D			2
III	CDKN3			
	CDON		1	
	CDR2		2	5
II	CDR2L	2	1	9
	CDS2			1
II	CDT1	3	1	3
II + III	CDV3	4	6	20
	CDYL		2	2
II + III	CDYL2	3	4	8
II + III	CEBPA	1	4	6
II + III	CEBPB	10	12	17
	CEBPD	1		
II + III	CEBPG	2	1	3



II + III	CEBPZ	1	1	4
III	CECR5	1		3
	CECR7		1	2
II	CELF1	1	2	8
II + III	CELSR1	16	16	27
II + III	CELSR2	11	13	21
II + III	CELSR3	3	10	24
	CENPA	1		1
II + III	CENPB	6	9	15
	CENPBD1	2		1
III	CENPC1			1
III	CENPE			1
II	CENPF	7	6	9
III	CENPH			
	CENPI		2	2
II	CENPJ	1	1	2
III	CENPK			1
	CENPL			3
III	CENPM			3
II	CENPN	1	2	7
II + III	CENPO	4	6	19
	CENPP			2
III	CENPQ			1
III	CENPT			
III	CENPV			2
III	CENPW			
II	CEP104	2	5	4
III	CEP112	1		1
	CEP120		3	6
III	CEP128			1
III	CEP135			
	CEP152			1
III	CEP164		1	2
	CEP170			2
	CEP170P1			
	CEP19			1
	CEP192		1	3
III	CEP250		3	4
III	CEP290			
	CEP350	1		2
	CEP41			
III	CEP44			
III	CEP55	1		2
III	CEP57			3
III	CEP57L1			
III	CEP63		1	2
	CEP68		1	3
III	CEP70			
II + III	CEP72	2	4	11
	CEP76			
	CEP78	1		

	CEP85		4	8
III	CEP89		2	4
III	CEP95		1	2
II + III	CEP97	1	1	3
II	CEPT1	1	1	2
II	CERCAM	1	1	2
	CERK		2	2
II	CERS2	6	11	18
III	CERS4		2	3
II	CERS5	4	4	8
	CERS6		1	2
II	CES2	3	8	11
III	CETN2	1		2
III	CETN3			
III	CFD			
III	CFDP1			1
III	CFL1		3	2
III	CFL2		1	
II	CFLAR	1	1	5
II	CGA	4	7	5
	CGGBP1			
	CGRRF1			
II + III	CHAC1	8	8	9
III	CHAC2		1	1
II	CHAF1A	2	3	5
III	CHAF1B			
II + III	CHAMP1	2	6	10
III	CHCHD1			
III	CHCHD10		1	
III	CHCHD2			1
II	CHCHD3	1	3	9
	CHCHD4			1
III	CHCHD5		1	
III	CHCHD6			1
II	CHCHD7	1	1	2
II	CHCHD8	1	2	1
III	CHD1		2	7
III	CHD1L		1	1
II	CHD2	4	7	11
II	CHD3	1	5	5
II	CHD4	4	2	2
II + III	CHD6	1	6	8
II + III	CHD7	3	3	11
II + III	CHD8	1	4	7
II + III	CHD9	2	4	18
II + III	CHDH	1	2	2
III	CHEK1		1	2
III	CHEK2			
II	CHERP	7	4	16
III	CHIC2	1	1	
II	CHID1	1	2	1

II	CHKA	1	2	2
	CHM	1	1	
II + III	CHML	10	15	25
II	CHMP1A	1	4	10
II + III	CHMP1B	2	2	3
III	CHMP2A			1
III	CHMP2B		1	
III	CHMP3		1	1
III	CHMP4A		1	
III	CHMP4B			3
III	CHMP4C			
III	CHMP5			
	CHMP6		1	4
	CHMP7	1		4
III	CHN1			1
III	CHORDC1			
II + III	CHPF	6	6	13
II + III	CHPF2	4	7	15
III	CHPT1		1	2
III	CHRA1	1		1
	CHRNA5			1
	CHRNA9		1	1
	CHRN1			1
II + III	CHST10	4	3	6
	CHST11		2	3
II + III	CHST12	3	6	8
II + III	CHST14	7	12	14
II + III	CHST15	4	6	6
II + III	CHST3	4	7	22
II + III	CHSY1	3	10	9
III	CHTF18			
II + III	CHTF8	5	13	17
	CHTOP		3	4
	CHUK			
	CIAO1			4
II	CIAPIN1	2	4	6
III	CIB1			1
	CIC	2		7
III	CIDEB		1	1
	CILP		1	4
III	CINP		1	1
III	CIR1		1	1
III	CIRBP			
III	CIRH1A		2	2
III	CISD1		1	
III	CISD2			1
III	CISD3	1		1
	CISH		2	7
	CIT			2
	CITED2			2
II	CITED4	4	1	8

II	CIZ1	1	2	5
III	CKAP2		2	2
	CKAP2L			1
II + III	CKAP4	2	2	7
II	CKAP5	4	3	2
II	CKB	2	1	2
III	CKLF	1		1
III	CKS1B		3	3
III	CKS2		2	2
	CLASP1		3	4
	CLASP2			1
III	CLASRP			1
III	CLCC1		1	1
III	CLCN2			
II + III	CLCN3	1	2	2
II + III	CLCN4	1	1	3
II	CLCN6	1	2	8
II	CLCN7	5	5	10
	CLDN12		3	3
III	CLDN7			
	CLDND1			2
	CLEC16A		1	6
III	CLGN		1	
III	CLIC1		1	3
III	CLIC4		1	2
II	CLINT1	2	4	6
	CLIP1			6
	CLIP2	2		6
III	CLK1			
III	CLK2			3
III	CLK3		1	1
III	CLK4		1	1
II + III	CLMP	2	2	6
III	CLN3	1		
	CLN5			
II	CLN6	2	4	9
III	CLNS1A			2
	CLOCK			5
	CLP1			2
II	CLPB	3	4	10
III	CLPP		2	1
II	CLPTM1	4	7	7
II	CLPTM1L	7	4	8
III	CLPX			
III	CLSPN			3
II	CLSTN1	6	5	9
III	CLSTN3		2	4
II	CLTA	2	2	2
III	CLTB		1	2
II + III	CLTC	2	8	6
	CLTCL1			

II	CLU	5	4	2
III	CLUAP1			
III	CMAS			
III	CMBL		1	3
III	CMC1			1
III	CMC2			
II	CMIP	4	4	5
III	CMPK1			
	CMTM3		1	2
II	CMTM4	1	1	2
III	CMTM6			
III	CMTM7			
III	CMTM8			1
II	CNBP	2	2	4
	CNDP2			2
III	CNEP1R1			1
II	CNIH	1	2	4
III	CNIH4		3	3
	CNKSR3		1	3
III	CNN2			2
II + III	CNNM2	6	6	14
III	CNNM3		3	2
	CNNM4			8
	CNO	1		3
II + III	CNOT1	1	6	4
III	CNOT10		1	
	CNOT2	2	2	
II	CNOT3	1	2	3
III	CNOT4		1	6
II + III	CNOT6	3	4	8
II	CNOT6L	1	2	5
III	CNOT7		1	4
II	CNOT8	1	2	2
II	CNP	2	1	6
II	CNPPD1	1	2	3
II	CNPY3	2	7	7
III	CNPY4			1
II + III	CNST	1	3	5
III	CNTLN			1
III	CNTNAP1			
III	CNTROB	1		3
III	COA5			
III	COASY	1		4
II + III	COBL	1	3	5
II	COBLL1	1	1	1
II	COBRA1	1	1	3
II + III	COG1	2	2	6
	COG2			1
	COG3			
III	COG4	1		
III	COG5			4

III	COG6			
	COG7	2		1
	COIL		1	1
	COL12A1			2
III	COL16A1			
II	COL18A1	2	2	4
III	COL1A1		1	4
	COL4A1		1	4
II	COL4A2	3	2	5
	COL4A3BP		1	4
	COL4A5			
II	COL5A1	11	12	16
II	COL7A1	4	3	4
III	COL9A3			
III	COMMD1		1	
III	COMMD10			1
III	COMMD2			1
III	COMMD4	1		2
II	COMMD5	1	1	1
III	COMMD6			1
III	COMMD7	1		
III	COMMD8			
III	COMMD9		1	
III	COMT		2	1
III	COMTD1			
II	COPA	2	3	4
	COPB1		1	3
II	COPB2	4	1	4
II	COPE	2	2	1
III	COPG1	1		1
	COPG2			1
	COPS2		4	11
III	COPS3		2	2
III	COPS4	1		
III	COPS5		1	1
III	COPS6			1
III	COPS7A	1		1
II	COPS7B	1	2	3
III	COPS8			
II	COPZ1	1	5	8
III	COPZ2			
III	COQ10A		1	2
III	COQ10B			1
III	COQ2			1
III	COQ3			
III	COQ4		3	2
	COQ5	1		2
III	COQ6			
III	COQ7			2
III	COQ9	1		7
III	CORO1B	1		

	CORO1C		1	8
	CORO2A			2
III	COTL1		1	5
III	COX10		3	3
III	COX11			
III	COX14			1
III	COX15		3	5
III	COX17			
III	COX18			
	COX19			4
III	COX20			1
III	COX4I1		2	1
III	COX5A		1	
III	COX5B			
II	COX6A1	1	3	3
III	COX6B1			3
III	COX6C			
III	COX7A2			1
III	COX7A2L			
III	COX7B			
III	COX7C			
II	COX8A	1	3	3
III	CPA4			
II + III	CPD	1	2	4
	CPEB1			
II + III	CPEB2	1	1	2
	CPEB4		3	7
III	CPNE2	1		1
II	CPNE3	2	1	2
III	CPNE7	1		3
	CPNE8		1	1
III	CPOX			1
	CPPED1			1
II + III	CPS1	6	12	4
III	CPSF1			
	CPSF2		1	1
III	CPSF3			1
III	CPSF3L		1	1
III	CPSF4		1	3
III	CPSF6		1	2
II + III	CPSF7	2	6	19
III	CPT1A		4	5
	CPT2	1		3
III	CPVL		1	
III	CPZ		1	2
III	CRADD			
II	CRAMP1L	4	2	9
III	CRAT		1	2
III	CRBN		1	
III	CRCP		2	4
	CREB1		2	5

III	CREB3			
II	CREB3L2	5	9	8
III	CREB3L4			
II + III	CREBBP	4	11	12
	CREBL2		2	3
II + III	CREBZF	6	8	15
II	CREG1	2	3	2
III	CRELD1		1	1
III	CRELD2		2	1
	CREM	1		1
II + III	CRIM1	3	6	8
III	CRIP1			
III	CRIP2			1
III	CRIPT			
II + III	CRK	4	10	14
II + III	CRKL	4	7	24
III	CRLF1			
III	CRLF3			
III	CRLS1		1	
III	CRMP1			
III	CRNDE			
	CRNKL1			1
III	CROCCP2		1	4
III	CROT			
II	CRTAP	5	4	8
II	CRTC2	1	5	7
II + III	CRTC3	2	11	23
	CRY1			
III	CRY2		1	
III	CRYBB2P1		1	
III	CRYL1			
III	CRYZ			
III	CRYZL1			1
II	CS	1	11	11
III	CSAD			
III	CSDA		2	2
II	CSDE1	2	2	5
II	CSE1L	2	6	3
II + III	CSF1	3	7	15
	CSGALNACT1		2	2
	CSGALNACT2	1		4
III	CSK			1
II	CSNK1A1	2	2	3
II	CSNK1D	5	8	25
II	CSNK1E	1	2	9
	CSNK1G1		2	5
	CSNK1G2	1		4
	CSNK1G3	1	1	
II	CSNK2A1	1	3	5
II	CSNK2A2	1	1	7
III	CSNK2B		2	2



	CSPG5			4
III	CSPP1			
II + III	CSRNP1	9	11	22
II + III	CSRNP2	2	4	13
II	CSRP1	4	5	7
III	CSRP2			
III	CST3	2		1
III	CSTB		1	1
II + III	CSTF1	8	9	10
III	CSTF2			
II + III	CSTF2T	2	4	10
III	CSTF3			
III	CTAGE5		1	
II	CTBP1	8	8	14
II + III	CTBP1-AS1	1	2	11
	CTBP2		1	1
III	CTBS			
II	CTC1	1	1	3
	CTCF	2		
II	CTDNEP1	3	8	12
	CTDP1	1		2
II	CTDSP1	1	2	6
II	CTDSP2	1	2	7
	CTDSPL			3
	CTDSPL2		2	4
II + III	CTGF	2	2	3
II	CTH	1	2	4
	CTIF	2		3
II	CTNNA1	2	7	4
III	CTNNAL1	1		1
II + III	CTNNB1	2	2	4
III	CTNNBIP1			1
III	CTNNBL1			2
II	CTNS	2	1	8
III	CTPS2			1
	CTR9			
II	CTSA	4	3	7
II	CTSB	1	3	2
	CTSC		1	4
II	CTSD	4	5	7
III	CTSF			
III	CTSL1			
III	CTSL2			
II	CTSZ	6	7	10
II	CTTN	1	3	2
	CTTNBP2		1	1
	CTTNBP2NL		7	14
III	CTU1			3
III	CTU2			
	CUEDC1			
III	CUEDC2			

	CUL1		2	1
	CUL2			
III	CUL3		1	
II	CUL4A	2	3	3
III	CUL4B		1	2
	CUL5	1		2
	CUL7		1	1
	CUL9			2
III	CUTA			
III	CUTC			1
II	CUX1	2	13	24
III	CWC15			
III	CWC22			
III	CWC25			1
III	CWC27			
III	CWF19L1			
III	CWF19L2			
II	CXADR	1	3	1
III	CXCL16			
II + III	CXCR4	11	15	13
III	CXXC1			
	CXXC4		3	1
	CXXC5			1
	CXorf38			3
	CXorf40A		3	4
	CXorf40B		1	
III	CXorf56			
	CXorf57			
II	CXorf69	1	3	6
II	CYB561	4	3	13
II	CYB561D2	1	1	3
III	CYB5A			
III	CYB5B	1		2
	CYB5D1		1	4
	CYB5D2			1
III	CYB5R1			
III	CYB5R2			
II	CYB5R3	3	2	3
III	CYB5R4	1		
	CYB5RL	1		5
II	CYBA	1	1	2
III	CYBASC3		2	3
III	CYBRD1			1
III	CYC1		1	1
III	CYCS		1	4
	CYFIP1		1	1
	CYFIP2			
II	CYHR1	3	2	3
	CYLD		3	1
III	CYP11A1			
II + III	CYP1B1	11	16	17

II	CYP26B1	1	2	9
	CYP2R1			2
III	CYP2S1			
	CYP2U1		1	2
II	CYP51A1	3	5	9
II	CYR61	1	7	4
III	CYSTM1			1
II	CYTH1	2	2	5
II	CYTH2	2	3	3
II	CYTH3	1	4	9
III	D2HGDH			
	DAAM1			1
II	DAB2	2	5	11
	DAB2IP		4	8
II	DAD1	1	2	1
II + III	DAG1	22	35	46
II	DAGLB	2	2	5
III	DAK			2
III	DALRD3			
III	DANCR		1	1
II	DAP	6	5	8
III	DAP3			1
II	DAPK3	1	3	7
III	DARS			
	DARS2			
II	DAXX	1	3	5
II	DAZAP1	2	3	7
II	DAZAP2	1	1	2
	DBF4		3	2
III	DBF4B		2	3
III	DBI		1	
III	DBN1	1		1
II	DBNDD1	2	1	2
II	DBNDD2	3	6	12
III	DBNL	2		
III	DBP			
	DBR1			4
	DBT		1	
	DCAF10		3	5
III	DCAF11			1
III	DCAF12			2
III	DCAF13			
II	DCAF15	2	3	2
	DCAF16		3	7
III	DCAF17		1	
	DCAF4			
II	DCAF5	1	4	10
III	DCAF6		1	
II	DCAF7	2	6	9
II	DCAF8	1	3	4
III	DCAKD			

II + III	DCBLD1	4	3	3
	DCBLD2	1		7
III	DCK	1		2
	DCLK2			
	DCLRE1A			
II + III	DCLRE1B	1	4	8
	DCLRE1C			2
	DCP1A	1		1
	DCP1B			
	DCP2			2
III	DCPS			
III	DCTD		3	3
III	DCTN1		1	
III	DCTN2		1	1
III	DCTN3			
II	DCTN4	1	3	5
II + III	DCTN5	1	6	12
III	DCTN6			
III	DCTPP1		1	1
	DCUN1D1		2	4
II + III	DCUN1D2	1	2	4
III	DCUN1D4			2
III	DCUN1D5	2	1	
III	DCXR		1	1
II	DDA1	4	5	6
III	DDAH1			1
III	DDAH2			
	DDB1		1	4
II	DDB2	1	2	2
	DDHD1	1		
	DDHD2		2	1
III	DDIT3		1	3
II + III	DDIT4	5	5	10
II	DDOST	2	4	6
II	DDR1	5	9	6
	DDR2		1	3
III	DDRGK1		1	1
III	DDT		1	2
III	DDTL		1	
III	DDX1			1
III	DDX10	1		
III	DDX11			5
II	DDX17	1	9	19
III	DDX18			
	DDX19A		2	4
III	DDX19B			1
	DDX20			4
II	DDX21	4	2	6
II	DDX23	5	5	13
II + III	DDX24	2	2	8
II	DDX27	2	2	4

	DDX28			3
	DDX31		2	4
III	DDX39A	1	1	
II	DDX3X	5	10	12
III	DDX41			3
II	DDX42	3	4	2
III	DDX46		1	1
II	DDX47	1	1	3
III	DDX49	1	1	
II	DDX5	1	1	9
III	DDX50			1
III	DDX51		1	3
III	DDX52			2
III	DDX54	1	1	
II	DDX55	1	1	3
III	DDX56	1		2
II	DDX59	1	1	2
II + III	DDX6	4	13	25
III	DEAF1			2
III	DECR1			1
III	DECR2			
II + III	DEDD	2	6	10
	DEDD2		2	8
III	DEF8		3	4
II + III	DEGS1	4	11	13
II	DEK	1	3	5
	DEM1			
III	DENND1A		1	5
	DENND1B			1
	DENND3			
	DENND4A			
II	DENND4B	2	1	2
	DENND4C			1
II + III	DENND5A	3	4	12
II + III	DENND5B	3	3	4
III	DENR			
III	DEPDC1		3	2
	DEPDC1B			1
III	DEPDC5		1	1
III	DEPDC7			
III	DERA			
II	DERL1	2	2	1
II	DERL2	1	3	4
	DET1			1
	DFFA		3	5
III	DFFB			
	DFNA5			
II	DFNB31	3	2	8
III	DGAT1			1
III	DGAT2			
II + III	DGCR14	1	1	8

II	DGCR2	11	11	18
III	DGCR6			
III	DGCR6L			2
	DGCR8			4
III	DGKA			
II	DGKD	2	4	5
	DGKH			2
	DGKQ		1	1
II	DGKZ	2	5	9
III	DGUOK		1	1
II	DHCR24	14	23	29
II	DHCR7	11	11	16
III	DHDDS		2	8
	DHODH		1	1
III	DHPS			
III	DHRS1			
III	DHRS11			
	DHRS13		3	3
III	DHRS2		1	
II	DHRS3	4	1	6
III	DHRS4			1
III	DHRS4L2		1	1
III	DHRS7		1	1
II	DHRS7B	1	1	2
	DHTKD1		2	1
II + III	DHX15	1	1	8
III	DHX16			2
	DHX29			
II	DHX30	2	4	10
	DHX32		2	
II + III	DHX33	3	5	8
	DHX34	2		2
	DHX35			
	DHX36			1
III	DHX37			
II	DHX38	1	2	3
	DHX40			1
	DHX57			2
	DHX8	1		2
II	DHX9	2	2	2
II	DIABLO	2	2	2
II	DIAPH1	9	14	13
III	DIAPH2	1		2
III	DIAPH3			5
II + III	DICER1	2	2	3
	DICER1-AS1			
II + III	DIDO1	8	9	24
	DIEXF			3
III	DIMT1		1	
	DIP2A			4
II + III	DIP2B	1	3	4

	DIRAS1	1		6
III	DIRC2			2
II	DIS3	1	1	2
	DIS3L			1
III	DIS3L2			1
II + III	DISP1	2	4	7
II + III	DIXDC1	2	3	5
II	DKC1	2	3	3
	DKK1		2	3
II	DLAT	1	1	2
III	DLD			3
III	DLEU1		1	1
III	DLG1			
	DLG3		1	3
III	DLG4		1	1
II + III	DLG5	3	3	7
II	DLGAP4	2	3	9
III	DLGAP5			
III	DLL3			
III	DLST	1		3
II + III	DLX1	2	7	9
II	DLX2	1	3	5
II + III	DLX4	1	2	10
	DLX6			3
III	DMAP1			
II	DMD	1	2	2
III	DMPK		1	1
	DMRTA1			1
	DMTF1			4
II	DMWD	2	2	12
	DMXL1	1		
	DMXL2			2
	DNA2			
	DNAAF2			
III	DNAAF3			
III	DNAH14			1
II	DNAJA1	1	2	4
III	DNAJA2			2
III	DNAJA3			4
II + III	DNAJB1	4	3	14
III	DNAJB11	1	1	
II	DNAJB12	1	2	5
	DNAJB14			
II	DNAJB2	1	2	4
	DNAJB4			1
III	DNAJB5			
III	DNAJB6		1	1
	DNAJB9		1	2
III	DNAJC1			
	DNAJC10			
III	DNAJC11		2	4

III	DNAJC12			
	DNAJC13			
II + III	DNAJC14	2	2	5
III	DNAJC15			
	DNAJC16		2	3
III	DNAJC17			
III	DNAJC18			1
III	DNAJC19			
III	DNAJC2			1
II	DNAJC21	2	3	4
	DNAJC22			
III	DNAJC24		1	1
III	DNAJC25			6
II	DNAJC3	3	2	4
II + III	DNAJC30	1	5	7
III	DNAJC4			
II	DNAJC5	4	2	9
II + III	DNAJC6	1	1	4
II	DNAJC7	1	1	1
II	DNAJC8	1	2	3
III	DNAJC9			3
III	DNAL1			1
III	DNAL4		1	
III	DNASE1L1			3
II	DNASE2	3	4	5
III	DNER			
III	DNLZ	1	1	
	DNM1L		1	3
III	DNM2		1	4
	DNMBP		3	4
III	DNMT1	1		4
III	DNMT3A			
III	DNMT3B			1
III	DNPEP			
III	DNTTIP1			
II	DNTTIP2	1	1	4
	DOCK1			
	DOCK10			
	DOCK4			
II + III	DOCK5	2	5	11
III	DOCK6			
	DOCK7			
	DOCK9			
III	DOHH			2
	DOK1		1	2
III	DOK4			4
II + III	DOLK	1	2	2
II	DOLPP1	2	7	10
II	DOM3Z	1	3	2
II + III	DONSON	3	2	5
	DOPEY1		1	2



II	DOT1L	1	4	10
II	DPAGT1	1	5	5
III	DPCD			1
III	DPF1		1	
III	DPF2			1
II	DPH1	2	5	6
II	DPH2	2	4	5
	DPH3		1	1
III	DPH5			
III	DPM1	1		
II	DPM2	1	6	6
III	DPM3			1
III	DPP3			2
II	DPP7	4	3	3
	DPP8			
II	DPP9	2	1	4
	DPY19L1		1	3
	DPY19L4			
III	DPY30		1	
II	DPYSL2	4	1	7
III	DPYSL5		1	1
II	DR1	4	4	6
	DRAM1	1		2
III	DRAM2			2
III	DRAP1	1		
III	DRG1	1		1
III	DRG2		1	1
II	DROSHA	3	4	7
III	DSCC1			
	DSCR3		2	2
II + III	DSE	1	4	17
	DSEL		3	8
II	DSG2	2	4	5
	DSN1		1	5
II	DSP	5	2	6
III	DSTN			
	DSTNP2			
II + III	DSTYK	1	1	2
III	DTD1			1
	DTL			4
III	DTNB			1
III	DTNBP1	1		1
III	DTWD1			1
III	DTWD2			1
	DTX3L	1		1
III	DTYMK			
III	DUS1L			1
III	DUS2L		1	
III	DUS3L			2
III	DUS4L			
II + III	DUSP1	3	2	9

	DUSP10		2	1
III	DUSP11			3
	DUSP12	1		
II	DUSP14	1	4	6
II + III	DUSP16	6	11	28
II	DUSP2	1	1	3
III	DUSP22			
III	DUSP23			
	DUSP3	2		4
II + III	DUSP4	8	3	11
II	DUSP7	4	2	2
III	DUSP9			
III	DUT	1		1
II	DVL1	1	1	5
III	DVL2		1	1
III	DVL3		1	1
III	DYM			1
II	DYNC1H1	5	3	5
III	DYNC1I2			
II	DYNC1LI1	1	1	1
	DYNC1LI2	1	1	
	DYNC2H1			
III	DYNC2LI1			
II	DYNLL1	2	6	5
II	DYNLL2	1	2	3
II	DYNLRB1	1	2	2
III	DYNLT1			
III	DYNLT3			
II + III	DYRK1A	2	5	21
III	DYRK1B		1	4
II + III	DYRK2	3	3	8
II + III	DYRK3	2	1	4
III	DYRK4		1	
	DZIP1L	1		2
III	DZIP3			
II	E2F1	1	3	8
II	E2F2	1	1	7
II + III	E2F3	7	14	16
II	E2F4	2	4	8
III	E2F5			
	E2F6		3	2
II + III	E2F7	3	2	2
	E2F8	1		3
III	E4F1			1
	EAF1		3	6
III	EAF2			
III	EAPP			1
	EARS2		6	10
	EBAG9			1
III	EBNA1BP2		1	
II	EBP	3	2	5

II	EBPL	1	2	2
III	ECD			
II	ECE1	13	23	26
III	ECE2			2
III	ECH1		1	
II	ECHDC1	1	1	1
	ECHDC3			
II	ECHS1	2	1	1
III	ECI1	1		4
III	ECI2			1
III	ECSIT			
III	ECT2	1		
	EDC3		3	6
III	EDC4	2		2
II + III	EDEM1	1	3	2
II	EDEM2	1	3	3
	EDEM3			1
II	EDF1	2	2	1
	EDN1		2	3
II + III	EDNRA	1	1	7
III	EEA1		1	1
II	EED	1	1	1
II	EEF1A2	2	3	4
III	EEF1B2		1	
II	EEF1D	1	7	15
III	EEF1E1		2	4
II	EEF1G	3	3	8
II	EEF2	10	9	14
III	EEF2K			1
	EEFSEC	1		2
III	EFCAB11			
III	EFCAB2			
III	EFCAB7			
II	EFEMP1	4	7	6
III	EFHA1			
	EFHC1			1
III	EFHD1		1	1
III	EFHD2		1	6
II	EFNA1	3	4	2
III	EFNA3			1
	EFNA4		2	4
	EFNA5		3	3
	EFNB1		2	5
	EFR3A			
III	EFR3B			1
	EFTUD1		2	3
II	EFTUD2	2	3	5
III	EGFL7			
II + III	EGFR	5	16	22
II + III	EGLN1	1	1	4
	EGLN3			

	EHBP1			2
III	EHBP1L1		1	
	EHD1		3	10
II	EHD2	6	1	12
II	EHD4	1	2	8
II + III	EHMT1	1	7	6
III	EHMT2		3	4
III	EI24		1	2
	EID1	2		5
	EID2			1
	EID2B			
II	EIF1	3	4	4
II	EIF1AD	1	4	8
II	EIF1AX	2	2	3
III	EIF1B			3
II	EIF2A	1	2	3
II	EIF2AK1	3	2	7
III	EIF2AK2		1	1
	EIF2AK3			2
	EIF2AK4		1	2
II + III	EIF2B1	1	1	4
	EIF2B2		1	1
III	EIF2B3			
III	EIF2B4			
III	EIF2B5			
III	EIF2C1			2
II + III	EIF2C2	1	2	5
	EIF2C3	1		1
III	EIF2D		1	1
III	EIF2S1		2	2
III	EIF2S2		2	2
II	EIF2S3	3	4	13
II	EIF3A	1	4	8
II	EIF3B	4	2	2
II	EIF3D	1	1	1
III	EIF3E			
III	EIF3F			
II	EIF3G	1	1	2
II	EIF3H	1	4	3
III	EIF3I		1	1
III	EIF3J		1	6
II	EIF3K	2	1	1
II	EIF3L	1	1	2
III	EIF3M			2
II	EIF4A2	2	2	2
II	EIF4A3	1	1	1
II	EIF4B	2	6	14
III	EIF4E			2
III	EIF4E2		1	
III	EIF4E3			
III	EIF4EBP1			1

II	EIF4EBP2	1	3	5
III	EIF4ENIF1		1	1
II	EIF4G1	8	8	19
II	EIF4G2	4	8	8
III	EIF4G3			6
II	EIF4H	1	7	6
II	EIF5	3	8	4
II	EIF5A	2	5	6
II	EIF5B	3	4	4
II	EIF6	1	3	2
	ELAC1			1
II	ELAC2	1	1	2
II	ELAVL1	1	1	5
	ELF1		3	2
	ELF2		1	3
II + III	ELF3	1	4	6
II	ELF4	1	5	11
	ELFN2		2	7
II	ELK1	1	1	2
	ELK3			
	ELK4		3	6
	ELL			4
III	ELL2		7	7
III	ELL3			
	ELMO2		2	2
	ELMOD1			
	ELMOD2	1	1	
III	ELMOD3			1
III	ELOF1			
II	ELOVL1	4	7	10
II	ELOVL5	4	6	6
II + III	ELOVL6	1	1	5
	ELOVL7			
	ELP2		1	
II	ELP3	1	2	3
III	ELP4			
II	EMD	1	1	4
II + III	EME1	1	3	5
III	EMG1		2	1
	EML1			
III	EML2			
III	EML3			1
II + III	EML4	3	5	5
II	EMP2	3	3	4
II	EMP3	4	2	4
II	ENAH	2	5	12
III	ENDOG			
III	ENDOV			
II	ENG	5	4	10
III	ENGASE			2
II	ENO1	8	6	14

III	ENO2			
III	ENO3			
III	ENOPH1			1
III	ENOSF1		1	2
	ENOX1			
	ENOX2			
	ENPP1			
III	ENSA		1	2
	ENTPD4		2	8
III	ENTPD5			
II	ENTPD6	2	7	8
	ENTPD7	1	2	
III	ENY2			
II + III	EP300	8	11	18
II	EP400	1	2	1
II	EPAS1	5	9	17
II	EPB41	1	2	6
II	EPB41L1	3	6	5
III	EPB41L2			
III	EPB41L3			1
III	EPB41L4A			
III	EPB41L4A-AS1	1		
	EPB41L4B			
	EPB41L5			1
III	EPB49	2		2
II + III	EPC1	1	2	7
	EPC2	1		4
	EPDR1		2	3
	EPG5			1
II + III	EPHA2	10	9	18
II + III	EPHB2	2	1	5
II	EPHB4	3	5	8
III	EPHX1			
III	EPHX2			
	EPM2A			1
II + III	EPM2AIP1	1	2	7
II	EPN1	2	4	7
II + III	EPN2	1	3	7
II + III	EPOR	3	3	6
II + III	EPPK1	10	14	16
	EPRS	1		2
	EPS15			1
III	EPS15L1		1	2
	EPS8			
III	EPS8L1			
III	EPS8L2	1		
II	EPT1	2	5	9
III	ERAL1	1		4
	ERAP1			6
	ERBB2			1
II + III	ERBB2IP	3	6	8

II + III	ERC1	3	12	28
III	ERCC1			1
III	ERCC2			
	ERCC3			2
II + III	ERCC4	1	2	11
	ERCC6			3
	ERCC6L			2
II + III	ERCC6L2	1	2	3
II + III	ERCC8	1	2	8
II	ERF	2	8	12
II	ERGIC1	2	3	7
III	ERGIC2		1	1
II	ERGIC3	1	2	5
III	ERH		1	2
	ERI1			1
	ERI2			
III	ERI3			1
III	ERICH1	1		1
III	ERLEC1	1		1
	ERLIN1			5
	ERLIN2		3	2
	ERMP1		4	3
III	ERO1L			3
	ERO1LB			1
II	ERP29	2	4	5
III	ERP44		1	1
II + III	ERRFI1	1	3	6
III	ESAM		2	2
III	ESCO1			2
III	ESCO2			
III	ESD			1
III	ESF1			
II	ESPL1	1	1	2
III	ESRRA			
II	ESYT1	3	5	4
II	ESYT2	1	5	3
	ETAA1			2
II + III	ETF1	2	4	9
III	ETFA		1	4
III	ETFB	1		1
	ETFDH			1
III	ETHE1			3
	ETNK1	1		1
	ETS1			
II + III	ETS2	1	3	5
II + III	ETV3	2	4	9
III	ETV4			
	ETV5			3
	ETV6		2	5
II	EVC	2	2	9
III	EVI5	1		1

III	EVI5L	1		2
III	EVL	1		1
III	EVPL			2
III	EWSR1		3	1
	EXD2		2	2
	EXO1			1
	EXOC1		1	1
	EXOC2	2		1
	EXOC3	1		5
	EXOC4	1		
II	EXOC5	2	1	1
III	EXOC6			2
	EXOC6B			
II	EXOC7	3	3	10
	EXOC8		1	3
	EXOG			1
III	EXOSC1			2
III	EXOSC10		1	
II	EXOSC2	3	3	11
III	EXOSC3			1
	EXOSC4	1		2
III	EXOSC5			
	EXOSC6	2		9
III	EXOSC7			
III	EXOSC8			
III	EXOSC9			
II + III	EXT1	3	6	11
II + III	EXT2	1	2	5
	EXTL2		1	4
II + III	EXTL3	7	20	23
III	EYA3		2	3
II + III	EYA4	1	4	7
III	EZH1			1
III	EZH2			1
II	EZR	1	2	2
III	F11R		1	2
III	F12			
II + III	F2R	1	5	8
	F3			
III	F8			1
III	FABP3			
II + III	FADD	6	5	11
II	FADS1	2	7	6
III	FADS2			4
III	FADS3		1	1
III	FAF1		1	1
II + III	FAF2	1	7	14
III	FAH			
	FAHD1		1	2
III	FAHD2A			
III	FAHD2B			



III	FAM			
	FAM100A		4	7
II	FAM100B	3	4	5
III	FAM101B			3
III	FAM102A		1	5
	FAM102B			2
III	FAM103A1			1
II + III	FAM104A	1	5	8
II	FAM104B	1	1	1
	FAM105A		1	1
II + III	FAM105B	1	1	8
II + III	FAM107B	1	1	1
II + III	FAM108B1	1	1	10
II + III	FAM108C1	4	2	6
	FAM109A		1	4
	FAM109B			5
	FAM110A			2
	FAM110B			5
II + III	FAM110C	1	1	3
	FAM111B	2		1
II	FAM114A1	1	2	3
III	FAM114A2			
	FAM115A			2
	FAM116A		1	1
III	FAM117A			
II + III	FAM117B	2	1	7
II + III	FAM118A	1	2	4
III	FAM118B			
II	FAM120A	3	1	13
	FAM120B		2	3
II	FAM120C	1	2	3
	FAM122A		1	3
III	FAM122B		3	5
III	FAM125A			
	FAM126A		1	1
II	FAM127A	2	6	7
II	FAM127B	1	3	7
II + III	FAM127C	1	1	10
	FAM129A	1		3
II	FAM129B	11	8	22
II	FAM131A	1	1	2
II	FAM134A	2	4	6
II + III	FAM134B	1	3	3
	FAM134C		1	6
	FAM135A		2	2
III	FAM136A		1	2
	FAM13A		1	2
III	FAM149B1			
	FAM160A1		1	3
II + III	FAM160A2	1	3	10
	FAM160B1		1	5

II	FAM160B2	2	2	3
III	FAM161A			1
III	FAM162A			
III	FAM165B			
	FAM168A		1	2
III	FAM168B		3	8
	FAM169A			3
III	FAM172A		1	1
III	FAM173A			1
	FAM173B			
II	FAM174A	1	1	1
III	FAM175A			
II + III	FAM175B	2	3	6
II	FAM176C	1	1	4
III	FAM177A1		2	2
	FAM178A			3
III	FAM179A			1
III	FAM188A			1
	FAM189A2		1	
II	FAM189B	1	5	4
III	FAM18B1			
	FAM190B			2
III	FAM192A		4	4
	FAM193A			1
	FAM193B		1	3
III	FAM195A		1	
III	FAM195B		1	
	FAM199X			1
II + III	FAM200A	2	3	5
III	FAM204A			
III	FAM206A	1		1
III	FAM207A		1	3
II + III	FAM208A	2	2	6
II + III	FAM208B	8	12	22
II + III	FAM20B	4	4	12
II + III	FAM20C	3	4	12
	FAM210A			2
III	FAM210B			1
	FAM213A			
III	FAM213B		1	1
II + III	FAM214A	1	1	3
III	FAM214B		1	1
III	FAM216A			
II + III	FAM217B	1	4	7
III	FAM219A			3
III	FAM219B			
	FAM21C			
	FAM220A	1		3
III	FAM24B			1
II	FAM32A	3	1	6
	FAM35A		1	2

III	FAM3A		1	2
III	FAM3C			1
	FAM40A			
	FAM40B			2
II	FAM43A	1	2	6
II + III	FAM46A	2	3	7
II + III	FAM46B	2	3	7
II + III	FAM46C	1	1	3
III	FAM48A		3	5
III	FAM49B		1	5
III	FAM50A			
	FAM50B			
	FAM53A			
II	FAM53B	1	4	14
II	FAM53C	4	10	16
III	FAM54A			2
	FAM54B			3
II + III	FAM57A	2	4	4
	FAM58A			
III	FAM60A			4
	FAM63A			2
	FAM63B			2
III	FAM64A			1
II	FAM65A	3	3	5
	FAM69A			2
III	FAM72B		4	7
III	FAM72D		3	7
II	FAM73A	1	1	1
III	FAM73B			1
III	FAM76A			3
III	FAM76B		1	
II + III	FAM78A	1	2	7
	FAM81A			1
II	FAM82A2	1	1	1
III	FAM82B			
II + III	FAM83D	6	4	8
II + III	FAM83G	3	5	9
II	FAM83H	10	11	24
	FAM89A			2
II	FAM89B	3	2	6
II	FAM8A1	1	1	1
	FAM91A1			1
III	FAM92A1			
III	FAM96A			
II	FAM96B	2	1	1
III	FAM98A		2	2
III	FAM98B			
III	FAM98C			
	FAN1		1	4
III	FANCA		1	2
	FANCB			3

II	FANCC	1	1	7
II	FANCD2	1	1	4
III	FANCE			2
III	FANCG		1	1
	FANCI			1
	FANCL	1		
II + III	FANCM	1	2	3
II	FAR1	1	1	2
III	FARP1			1
	FARP2		2	3
II + III	FARS2	1	3	1
III	FARSA		1	2
III	FARSB			
III	FAS			
II	FASN	14	7	13
III	FASTK			2
	FASTKD1			
	FASTKD2			
	FASTKD3	1		3
II + III	FAT1	5	12	18
III	FAU	1		1
III	FBF1			
III	FBL	1	1	
	FBLIM1			
II	FBLN1	3	1	4
	FBLN2	1		
II	FBLN5	2	1	2
	FBN2	1		3
II	FBR5	1	5	8
II	FBRSL1	3	6	16
	FBXL12			1
II + III	FBXL14	5	6	23
	FBXL15			
III	FBXL16			2
II + III	FBXL17	1	1	2
II	FBXL18	6	11	29
II	FBXL19	2	5	10
	FBXL2			1
III	FBXL20	1		1
	FBXL3		1	1
II + III	FBXL4	1	1	6
	FBXL5			2
III	FBXL6			
	FBXO10			3
	FBXO11		1	3
	FBXO17		2	3
	FBXO18			1
III	FBXO2			
	FBXO21			2
III	FBXO22			
	FBXO28		3	7

	FBXO3			1
	FBXO30		2	4
II + III	FBXO31	4	3	9
	FBXO33			2
II + III	FBXO34	2	4	10
	FBXO38			
	FBXO4			
II	FBXO41	2	2	4
II + III	FBXO42	4	5	9
III	FBXO44			
II + III	FBXO45	1	1	3
II + III	FBXO46	3	2	10
	FBXO5			5
III	FBXO7		1	5
	FBXO8			
III	FBXO9			
	FBXW11		1	4
II + III	FBXW2	8	15	16
III	FBXW4			
II	FBXW5	5	6	13
	FBXW7		1	2
III	FBXW8		2	7
III	FBXW9			
III	FCF1			2
III	FCHO1			
III	FCHO2	1		2
III	FCHSD1			
	FCHSD2			
II	FDFT1	2	2	3
III	FDPS		1	
III	FDX1		1	
III	FDX1L		1	1
	FDXACB1		1	
III	FDXR		1	2
	FECH			
II + III	FEM1A	5	11	13
II + III	FEM1B	4	11	11
	FEM1C		2	10
II + III	FEN1	5	1	8
III	FER			
II	FERMT1	1	1	3
II	FERMT2	1	1	3
III	FEZ2	1		
III	FGD1			1
	FGD4			
II + III	FGD5-AS1	4	5	11
	FGF2			
	FGFBP1			
III	FGFR1		2	1
III	FGFR1OP			1
III	FGFR1OP2			1

II	FGFR3	1	2	3
III	FGFR4		1	
III	FGFRL1		6	7
III	FH			
	FHDC1			1
III	FHL1			
III	FHL2			1
III	FHL3			4
III	FHOD1			2
III	FIBCD1		2	5
III	FIBP	1		1
	FIG4			
II + III	FIGN	1	1	7
II + III	FIGNL1	2	7	14
III	FIP1L1			
III	FIS1			1
II + III	FITM2	1	4	7
II	FIZ1	3	5	7
II + III	FJX1	8	7	14
II	FKBP10	6	12	15
	FKBP14		1	2
II	FKBP15	1	2	8
III	FKBP1A			
III	FKBP2			
III	FKBP3		1	
II	FKBP4	4	6	3
III	FKBP5			
III	FKBP7			
III	FKBP8		3	2
II	FKBP9	1	6	5
II + III	FKBPL	3	3	7
	FKTN			
II	FLAD1	2	5	8
II + III	FLCN	1	2	7
III	FLII		1	1
	FLJ27352		1	1
III	FLJ31306			3
	FLJ35776			
	FLJ37453			2
	FLJ39051			
III	FLJ46906			
II	FLNA	15	17	22
II	FLNB	5	2	2
II	FLOT1	2	3	5
III	FLOT2		1	4
II	FLVCR1	3	1	4
	FLVCR1-AS1			
	FLVCR2			1
III	FLYWCH1	1		1
III	FLYWCH2			
III	FMNL1		1	1

	FMNL2		1	2
III	FMNL3		1	2
III	FMR1			3
II	FN1	2	2	2
III	FN3K			
	FN3KRP		1	5
III	FNBP1	1		4
III	FNBP1L			
III	FNBP4		1	4
	FNDC3A		4	6
	FNDC3B		1	4
II + III	FNIP1	1	1	7
	FNIP2			1
III	FNTA		2	2
	FOCAD			
III	FOLR1		1	
III	FOPNL			1
II + III	FOS	2	1	2
III	FOSL1		1	3
II + III	FOSL2	7	10	11
II + III	FOXC1	3	9	16
II + III	FOXC2	2	2	9
II + III	FOXD1	1	1	8
II + III	FOXF1	1	2	7
II + III	FOXF2	3	8	14
III	FOXJ2		2	6
	FOXJ3			4
II + III	FOXK1	17	20	41
II + III	FOXK2	18	22	35
II + III	FOXL2	4	7	14
II	FOXM1	8	12	22
	FOXN2		1	3
II + III	FOXO1	2	3	8
III	FOXO4			2
	FOXP1			5
III	FOXP4		3	2
	FOXQ1			1
II	FOXRED1	1	7	6
II	FOXRED2	3	7	16
III	FPGS			2
III	FRA10AC1			
II + III	FRAT2	1	3	6
III	FRG1			
III	FRG1B			
	FRMD6			1
II + III	FRS2	3	3	9
	FRY			
II + III	FRYL	1	1	6
II	FSCN1	3	10	8
III	FSD1			
	FST		1	

II	FSTL1	10	11	11
II	FSTL3	2	3	11
II	FTH1	1	6	8
II	FTL	4	3	12
	FTO		4	10
III	FTSJ1		1	3
II + III	FTSJ2	2	4	8
III	FTSJ3			1
	FTSJD1		4	5
II	FTSJD2	1	2	1
II	FUBP1	1	3	3
II	FUBP3	1	3	4
	FUCA1			
II	FUCA2	2	2	2
III	FUK			1
III	FUNDC1			1
III	FUNDC2			3
II	FURIN	5	8	12
II	FUS	3	1	2
	FUT10		2	1
	FUT11			1
	FUT8		1	1
	FXC1		1	2
III	FXN		1	3
III	FXR1		3	1
II	FXR2	1	5	4
II	FXYD5	1	3	1
	FYCO1	2		3
II	FYN	2	1	4
III	FYTTD1		1	2
II + III	FZD2	10	12	22
II + III	FZD6	1	2	6
II + III	FZD8	3	3	11
	FZD9		3	4
II + III	FZR1	2	5	11
	G2E3		1	1
II	G3BP1	2	7	5
	G3BP2		2	9
III	G6PC3		2	4
II	G6PD	3	3	3
III	GAA		1	2
	GAB1			1
II	GABARAP	1	1	4
II	GABARAPL1	1	1	1
III	GABARAPL2			1
	GABPA		1	1
III	GABPB1		1	1
III	GABPB2			
III	GABRA3			
III	GABRE			5
	GABRQ	1		1



III	GAD1			
III	GADD45A		2	1
	GADD45B		2	3
III	GADD45GIP1	1		
III	GAK	1		4
III	GAL		1	3
III	GALE	2		1
III	GALK1		1	
	GALK2		1	4
III	GALM		2	1
II	GALNS	5	16	11
	GALNT1			2
II + III	GALNT10	1	6	4
	GALNT11			1
II + III	GALNT2	9	10	19
	GALNT7			1
III	GALT			
III	GAMT			
	GAN			2
II	GANAB	7	9	11
	GANC			2
II	GAPDH	8	7	7
	GAPVD1	1		5
III	GAR1			1
II	GARS	1	2	3
	GART	1		2
II + III	GAS1	13	20	21
II	GAS2L1	3	3	13
II	GAS2L3	2	4	9
III	GAS5			1
III	GAS6			
II	GAS8	1	2	3
II	GATA2	10	13	17
	GATA6			
II	GATAD1	1	4	4
II	GATAD2A	4	6	22
II	GATAD2B	1	9	12
	GATC		2	6
III	GATSL1			
II	GBA	2	2	3
	GBA2		3	8
II	GBAP1	1	3	4
III	GBAS			1
	GBE1	1		
III	GBF1		1	4
III	GCAT			
II + III	GCC1	1	6	9
III	GCC2			
	GCDH		1	1
III	GCFC1		1	1
III	GCFC2			

III	GCH1			
III	GCHFR			
	GCLC			1
III	GCLM		1	1
II	GCN1L1	3	3	5
	GCNT2		2	4
III	GCSH			
II	GDA	4	4	10
III	GDAP1			
II	GDAP2	1	1	2
II	GDE1	3	3	4
II + III	GDF11	2	2	8
II	GDF15	5	3	5
II	GDI1	2	2	6
III	GDI2		1	6
III	GDPD1			
III	GDPD5			
III	GEM		1	1
III	GEMIN2			
II + III	GEMIN4	10	10	21
II + III	GEMIN5	1	3	2
	GEMIN6			1
	GEMIN7			1
	GEMIN8			
	GEN1		2	4
II	GET4	1	5	4
III	GFER			4
	GFM1			1
	GFM2			
II + III	GFOD1	1	1	6
	GFOD2	3		2
	GFPT1			
III	GGA1		2	5
	GGA2			4
II + III	GGA3	2	5	17
III	GGCT			
III	GGCX		1	1
III	GGH			
III	GGNBP2			
III	GGPS1			1
III	GGT1			
III	GGT7			
III	GHDC			1
III	GHITM			
III	GIGYF1			7
II	GIGYF2	1	3	11
	GIN1			1
III	GINS1			1
III	GINS2		1	2
	GINS3		1	7
III	GINS4			1

III	GIPC1		2	
III	GIT1		1	5
	GIT2		1	1
II + III	GJC1	2	7	12
	GK5			
III	GKAP1			
II	GLA	1	1	2
	GLB1		3	4
	GLB1L			
II	GLB1L2	1	1	1
II + III	GLCCI1	3	2	6
	GLCE	2		5
III	GLE1		2	2
II	GLG1	4	11	12
	GLI3		2	7
III	GLIPR2			
II	GLIS2	1	2	13
III	GLMN			
III	GLO1		2	1
III	GLOD4		1	
	GLP2R		2	1
III	GLRX			
III	GLRX2			
III	GLRX3			
II	GLRX5	1	1	1
	GLS		1	4
II	GLT25D1	12	17	11
II + III	GLT8D1	1	2	1
	GLTP			
	GLTPD1		2	7
III	GLTSCR2		1	
III	GLUD1	1		1
III	GLUL	1		3
	GLYCTK			
	GLYR1		1	5
III	GM2A		1	4
	GMCL1			1
III	GMDS			
	GMEB1	1		3
II	GMEB2	2	1	9
III	GMFB			3
III	GMIP			2
III	GMNN			1
III	GMPPA			
	GMPPB		2	5
III	GMPR2	1		
III	GMPS		1	
	GNA11		1	1
II + III	GNA12	9	12	16
II + III	GNA13	2	2	6
	GNAI1			

III	GNAI2			4
	GNAI3		1	3
	GNAL			3
	GNAQ			1
II	GNAS	2	9	17
III	GNAS-AS1			
II	GNB1	3	11	10
II	GNB2	1	2	4
II	GNB2L1	1	2	6
	GNB4			
III	GNB5			3
	GNE		1	3
III	GNG11			
II	GNG12	1	4	3
III	GNG5		1	
III	GNL1	1		2
III	GNL2			
III	GNL3		2	3
II	GNL3L	4	8	16
	GNPAT	1	1	
III	GNPDA1	1		1
III	GNPDA2			1
II	GNPNAT1	2	3	4
	GNPTAB			3
III	GNPTG			
II	GNS	2	2	4
III	GOLGA1		1	1
III	GOLGA2	1		2
	GOLGA3		5	7
III	GOLGA4		3	1
	GOLGA5		1	3
III	GOLGA7		2	3
III	GOLGB1			5
III	GOLIM4		1	
II	GOLM1	1	1	1
II + III	GOLPH3	2	3	9
	GOLPH3L			1
III	GOLT1B			1
II	GON4L	1	2	10
	GOPC	1		1
III	GORAB			
II	GORASP1	3	1	10
	GORASP2		2	5
II + III	GOSR1	1	3	5
II	GOSR2	2	1	4
II	GOT1	2	1	3
II	GOT2	5	8	16
II	GPAA1	1	1	2
	GPAM			1
	GPANK1		1	2
III	GPATCH1			

II + III	GPATCH2	1	2	4
III	GPATCH3			3
III	GPATCH4			1
II	GPATCH8	5	8	21
II + III	GPBP1	1	4	5
III	GPBP1L1			1
II	GPC1	1	1	4
III	GPD1L	1		1
	GPD2			4
II + III	GPER	3	5	13
III	GPHN	1		1
II	GPI	3	6	7
III	GPKOW			1
III	GPN1			1
III	GPN2	1	1	
III	GPN3			
	GPNMB		1	3
II	GPR107	3	7	9
II	GPR108	2	1	1
	GPR124		2	2
II + III	GPR125	5	4	7
	GPR126		1	1
III	GPR137			
	GPR157			1
II + III	GPR161	3	3	14
II + III	GPR176	1	4	3
	GPR180			1
II + III	GPR37	1	3	9
II	GPR56	18	23	30
	GPR89A			1
II + III	GPRC5A	11	21	25
	GPRC5C			
	GPRIN1			2
II	GPS1	1	1	2
III	GPS2		1	1
III	GPSM1			
	GPSM2		1	2
II	GPT2	2	4	5
II	GPX1	3	4	5
III	GPX4	1		2
II	GPX8	2	1	4
III	GRAMD1A			
	GRAMD1B			
	GRAMD3			1
	GRAMD4			1
	GRB10		3	7
III	GRB2		2	4
III	GRB7			
	GREB1L		1	1
	GRHL1			
III	GRHPR	1		1

II	GRINA	5	8	7
III	GRIPAP1			1
	GRK5			4
III	GRK6			4
II	GRN	1	5	4
II	GRPEL1	1	1	4
II + III	GRPEL2	3	2	6
II	GRSF1	1	3	3
III	G RTP1			
II + III	GRWD1	2	5	9
II + III	GSG2	2	5	12
III	GSK3A		2	1
II	GSK3B	1	3	7
III	GSN			1
II	GSPT1	1	6	10
III	GSR		1	3
III	GSS		2	1
III	GSTA4			
	GSTCD			
II	GSTK1	2	2	6
III	GSTM3			1
III	GSTM4		2	4
III	GSTO1			
II	GSTP1	1	3	3
III	GSTT1			
III	GSTT2			
III	GSTZ1			
	GTDC1			
II	GTF2A1	1	1	2
II	GTF2A2	1	2	3
III	GTF2B			
II + III	GTF2E1	2	1	2
III	GTF2E2			1
III	GTF2F1			6
III	GTF2F2			1
III	GTF2H1			3
III	GTF2H2			
	GTF2H3			1
II	GTF2H4	1	1	1
III	GTF2H5			1
	GTF2I			2
III	GTF2IRD1			
III	GTF3A	1		
II	GTF3C1	4	3	3
II	GTF3C2	1	2	7
	GTF3C3			
II + III	GTF3C4	5	9	15
III	GTF3C5		2	7
III	GTF3C6			1
II	GTPBP1	1	4	5
III	GTPBP10		1	5

II + III	GTPBP2	1	6	15
III	GTPBP3		1	2
III	GTPBP4		1	
II + III	GTPBP5	4	4	11
III	GTPBP6			
III	GTPBP8			1
II	GTSE1	2	1	7
III	GUF1			
III	GUK1		1	1
III	GULP1		1	1
III	GUSB	1		1
	GXYLT1			3
II	GXYLT2	1	1	4
III	GYG1			1
III	GYG2			
III	GYS1			5
	GZF1		1	
III	H19		3	3
III	H1F0			1
II	H1FX	1	5	4
III	H2AFJ			1
II	H2AFV	2	2	1
II + III	H2AFX	7	4	11
III	H2AFY		3	3
II	H2AFZ	1	2	1
III	H3F3B		1	2
II + III	H6PD	1	4	14
III	HABP4			
	HACE1			
III	HACL1			
III	HADH		2	
III	HADHA		2	4
III	HADHB		1	
III	HAGH			
III	HAGHL			
II + III	HARBI1	1	1	1
III	HARS			1
II + III	HARS2	1	1	2
III	HAT1			
III	HAUS1		1	
III	HAUS2			2
	HAUS3		1	4
III	HAUS4			1
III	HAUS5			2
	HAUS6		2	3
III	HAUS7			
III	HAUS8			
III	HAX1	2		3
	HBP1			
III	HBS1L		1	2
III	HBXIP			

III	HCCS	1		2
II	HCFC1	8	12	24
III	HCFC1R1	2		3
	HCFC2			1
III	HCN2		1	5
III	HDAC1			
III	HDAC10			
III	HDAC11			
III	HDAC2		1	
III	HDAC3			1
	HDAC4			4
III	HDAC5			1
III	HDAC6			1
II	HDAC7	1	3	8
III	HDAC8			1
III	HDDC2		1	5
III	HDDC3		1	2
II	HDGF	7	13	13
III	HDGFRP2			
III	HDGFRP3			
	HDHD1		1	
III	HDHD2			
II + III	HDHD3	2	2	5
II	HDLBP	4	4	12
II + III	HEATR1	1	2	4
II	HEATR2	5	2	16
	HEATR3			
	HEATR5A			
	HEATR5B			1
II + III	HEATR6	1	1	1
III	HEATR7A			
III	HEBP1			
III	HEBP2			
II + III	HECA	1	2	5
	HECTD1		2	1
III	HECTD3			
	HECW1		2	1
II + III	HEG1	8	11	16
	HELB			1
III	HELLS	1		1
	HELQ			3
II	HELZ	1	5	4
III	HEMK1			3
	HENMT1			
	HERC1			
	HERC2			
	HERC3			1
	HERC4		2	
	HERC5	1		
II	HERPUD1	1	5	3
	HERPUD2	1		1



III	HES6			
III	HES7			1
III	HEXA	2		
II	HEXB	3	2	2
III	HEXDC			
II	HEXIM1	2	4	8
	HEXIM2			
	HEY1		1	1
	HFE			1
III	HGS		1	
II	HGSNAT	2	3	2
	HHAT			1
III	HHEX			
III	HHLA3			
II	HIAT1	1	3	4
II	HIATL1	4	3	9
	HIBADH			2
III	HIBCH			1
II	HIF1A	2	3	3
III	HIF1AN			1
III	HIGD1A			1
II	HIGD2A	1	1	4
	HILPDA			
	HINFP	1		
II	HINT1	2	1	2
III	HINT2		1	1
III	HINT3			1
II	HIP1	3	6	11
III	HIP1R		1	
II + III	HIPK1	3	5	12
II + III	HIPK3	3	2	6
	HIRA	1	1	
III	HIRIP3			
II + III	HIST1H1C	1	3	4
II + III	HIST1H2AC	1	1	3
II + III	HIST1H2AG	1	2	1
II + III	HIST1H2AI	1	3	1
	HIST1H2AM			
	HIST1H2BC		1	
II + III	HIST1H2BD	3	1	2
	HIST1H2BF	1		2
	HIST1H2BJ	2		2
II	HIST1H2BK	1	1	4
II + III	HIST1H2BN	1	1	2
	HIST1H2BO		1	
II + III	HIST1H3D	1	1	3
	HIST1H3H		2	
II + III	HIST1H4H	1	1	3
	HIST1H4I			
	HIST2H2AC			
II + III	HIST2H2BE	1	3	1

	HIST3H2A	1		
II + III	HIVEP1	5	7	17
II + III	HIVEP2	2	2	6
	HJURP		3	4
II	HK1	2	1	2
	HK2	2		
III	HLA-A		2	1
III	HLA-B			
III	HLA-C			
III	HLA-E		2	1
II + III	HLCS	2	2	4
III	HLTF			2
II	HM13	5	18	18
	HMBOX1			1
III	HMBS			
	HMG20A	1		4
II	HMG20B	1	1	3
II	HMGA1	1	5	7
III	HMGB2			
III	HMGB3			3
III	HMGCL		1	
II	HMGCR	1	2	1
II	HMGCS1	1	5	3
III	HMGN1			
III	HMGN2			3
III	HMGN3		1	1
	HMGN4	1		1
II	HMGXB3	3	5	12
	HMGXB4	1		2
III	HMHA1			
III	HMMR		1	
III	HMOX1			1
III	HMOX2			3
III	HN1	1		1
	HN1L		1	6
II	HNRNPA0	7	11	14
	HNRNPA1L2		1	
II	HNRNPA2B1	8	4	5
III	HNRNPAB		3	3
II	HNRNPC	4	1	6
III	HNRNPD			
II + III	HNRNPF	2	1	3
II	HNRNPH1	1	2	4
III	HNRNPH3			1
II	HNRNPK	1	5	4
III	HNRNPL		3	6
III	HNRNPM	3	1	
III	HNRNPR		3	2
II	HNRNPU	4	7	8
II	HNRNPUL1	1	2	6
III	HNRNPUL2		1	2

III	HNRPDL		1	2
	HNRPLL			1
III	HOGA1			
	HOMER1		1	
III	HOMER2			1
III	HOMER3		2	1
	HOMEZ			2
III	HOOK3		1	2
III	HORMAD1			
	HOTAIR			1
III	HOTAIRM1			3
	HOXA10		1	4
	HOXA11		4	9
	HOXA11-AS			1
	HOXA13			
	HOXA4			
	HOXB13			3
II	HOXB6	1	4	10
III	HOXB7			2
III	HOXB9			4
II	HOXC10	1	3	6
II + III	HOXC11	2	4	7
II + III	HOXC13	2	3	5
III	HOXC9			2
	HOXD11			1
	HOXD8	1		3
	HOXD9		1	3
II	HP1BP3	1	3	3
III	HPCAL1		1	3
III	HPD			
II + III	HPDL	2	2	5
III	HPRT1			
III	HPS1			1
	HPS3			2
	HPS4			5
II + III	HPS5	1	1	3
II + III	HPS6	4	4	10
III	HPSE			
II	HR	5	5	7
III	HRAS			1
II + III	HRCT1	1	2	4
III	HRSP12			
III	HS1BP3			2
	HS2ST1		1	2
II + III	HS6ST2	2	1	2
III	HSBP1		1	4
III	HSBP1L1			
III	HSCB			2
	HSD17B1			
III	HSD17B10			1
III	HSD17B11			1

III	HSD17B12			
III	HSD17B4			2
III	HSD17B7			
III	HSD17B8		1	1
III	HSD3B7			
II + III	HSDL1	2	2	8
III	HSDL2			2
III	HSF1			
III	HSF2			
III	HSF2BP			
II	HSP90AA1	4	9	13
II	HSP90AB1	4	5	6
II	HSP90B1	5	9	5
	HSPA12A		3	3
II + III	HSPA13	1	6	5
II	HSPA14	2	5	10
II + III	HSPA1B	11	2	12
III	HSPA4		3	3
III	HSPA4L			1
II	HSPA5	3	14	9
II	HSPA8	7	7	12
II	HSPA9	4	6	6
II	HSPB1	1	2	1
III	HSPB11			
III	HSPB7			1
II	HSPB8	1	1	2
	HSPBAP1			1
III	HSPBP1		2	3
II	HSPD1	1	3	2
II	HSPH1	1	3	2
III	HTATIP2		1	2
III	HTATSF1			1
	HTRA1		1	
III	HTRA2			1
II	HTRA3	1	4	5
II	HTT	1	2	2
III	HUS1		1	3
II	HUWE1	6	12	16
II + III	HYAL1	4	4	7
II + III	HYAL2	4	3	5
II	HYOU1	2	12	8
III	IAH1			
II + III	IARS	4	8	5
	IARS2		1	
	IBTK			
II + III	ICAM1	10	11	11
III	ICAM3			
	ICAM5			
II + III	ICMT	5	12	16
II + III	ICOSLG	3	7	15
III	ICT1			1

III	ID1			4
	ID2			
II	ID3	2	3	3
	IDE			2
III	IDH1		1	1
III	IDH2			
III	IDH3A		1	1
III	IDH3B			
III	IDH3G			
III	IDI1			
II	IDS	1	1	3
II + III	IER2	11	8	8
II	IER3	6	11	13
III	IER3IP1		1	
II + III	IER5	3	3	8
II + III	IER5L	9	16	20
III	IFI27L1			
III	IFI27L2			
II	IFI30	1	2	1
III	IFI35			
III	IFI6			
III	IFITM1			1
II	IFITM2	1	1	1
II	IFITM3	3	1	4
II	IFNAR1	1	2	3
	IFNAR2			1
	IFNGR1			
III	IFNGR2			2
III	IFRD1	1		2
II	IFRD2	2	4	7
III	IFT122			
III	IFT140			
III	IFT172			
III	IFT20			
III	IFT27			
III	IFT43			
III	IFT46			
III	IFT52	1		
III	IFT57			
III	IFT80			
III	IFT81			
III	IFT88		1	3
II	IGBP1	2	2	3
II + III	IGF1R	15	21	29
II	IGF2BP1	4	9	13
	IGF2BP2			2
	IGF2BP3		1	1
II	IGF2R	6	4	10
II	IGFBP3	2	3	5
II	IGFBP4	3	4	10
III	IGFBP6			

II	IGFBP7	3	6	4
III	IGFLR1			
	IGHMBP2		2	5
III	IGSF8	1		
III	IK			
III	IKBIP		2	2
	IKBKAP	1		
II + III	IKBKB	1	3	4
III	IKBKE			
II	IKBKG	2	1	2
	IKZF5		1	2
	IL10RB			
III	IL11RA			
	IL13RA1		4	8
	IL15RA	2		3
II + III	IL17RA	5	7	11
II + III	IL17RB	1	1	3
III	IL17RC			1
III	IL18			
	IL27RA			2
II + III	IL6R	2	5	10
II + III	IL6ST	7	7	10
	IL7R		1	
III	ILF2		1	3
II	ILF3	12	11	21
II	ILK	2	2	2
III	ILKAP			
III	ILVBL		1	3
III	IMMP1L			2
III	IMMP2L			
II	IMMT	1	2	3
II + III	IMP3	4	1	4
II	IMP4	2	1	3
III	IMPA1			
III	IMPA2		2	2
III	IMPACT			1
II + III	IMPAD1	2	5	9
III	IMPDH1			
III	IMPDH2		1	4
	INADL			
II	INCENP	2	1	6
II	INF2	4	5	12
	ING1			3
	ING2			
III	ING3			
III	ING4			
II + III	ING5	2	1	7
III	INHA	1		
	INO80		1	5
III	INO80C			
III	INO80E			1

	INPP1			2
	INPP4A			1
III	INPP5A		1	4
III	INPP5B			1
II	INPP5E	2	1	6
	INPP5F			
III	INPP5J			
	INPP5K		1	1
II	INPPL1	5	9	14
III	INSIG1		4	4
III	INSIG2		1	
III	INSL4			
II + III	INSR	3	3	3
III	INTS1		1	1
II	INTS10	4	2	4
II	INTS12	1	1	4
	INTS2			2
II	INTS3	3	3	2
III	INTS4			
II + III	INTS5	4	5	14
	INTS6		1	6
II + III	INTS7	1	1	3
III	INTS8			
	INTS9		2	2
II + III	INVS	1	2	5
II + III	IP6K1	4	7	17
II	IP6K2	2	1	4
	IPO11			2
II	IPO13	1	2	9
III	IPO4		2	3
II + III	IPO5	1	3	5
II + III	IPO7	3	9	9
II	IPO8	3	1	6
II	IPO9	4	4	3
	IPP			
	IPPK		1	3
III	IQCB1			1
	IQCC			1
III	IQCE			3
II	IQGAP1	1	1	4
III	IQGAP3		2	2
II + III	IQSEC1	2	2	13
II	IRAK1	2	5	6
III	IRAK4			1
	IREB2		1	4
III	IRF1	1		1
	IRF2			1
	IRF2BP1		3	14
II + III	IRF2BP2	11	9	16
II + III	IRF2BPL	4	10	16
III	IRF3		1	2

III	IRF9			
	IRGQ	2		3
II + III	IRS1	6	8	19
II + III	IRS2	13	8	31
II	IRX3	1	1	8
II	IRX5	1	3	5
III	ISCA2			1
III	ISCU			1
III	ISG15	1		
III	ISG20			
	ISG20L2	2		7
II + III	ISL2	1	1	2
III	ISOC1			
II	ISOC2	1	2	4
II + III	IST1	4	4	12
	ITCH		1	3
II	ITFG1	1	1	6
III	ITFG2			1
II	ITFG3	4	3	4
III	ITGA2B			
II	ITGA3	5	6	13
II + III	ITGA5	9	16	16
	ITGA6			3
III	ITGAE			
	ITGAV		1	2
II	ITGB1	2	3	2
III	ITGB1BP1			
III	ITGB3BP		3	3
II	ITGB5	2	4	2
	ITGB8			1
II	ITM2B	2	1	1
III	ITM2C		1	2
III	ITPA			1
III	ITPK1		2	3
	ITPKA			2
II	ITPKB	5	3	10
	ITPKC	2		4
	ITPR1		1	
	ITPR2		2	1
II	ITPR3	1	1	2
II + III	ITPRIP	15	25	35
II + III	ITPRIPL2	22	25	37
III	ITSN1			2
III	ITSN2			
II + III	IVD	4	7	16
II	IVNS1ABP	1	1	6
II	IWS1	1	1	1
	JAG1			
II	JAG2	4	2	4
II + III	JAGN1	3	3	7
II	JAK1	1	2	1



II	JAK2	1	1	2
	JARID2			7
III	JAZF1		1	3
	JDP2			4
	JKAMP	1		1
	JMJD1C		7	11
	JMJD4	1		1
	JMJD6	1		1
II	JMJD8	2	3	5
II + III	JMY	2	2	6
	JOSD1		2	6
III	JOSD2	1		
	JPH1			7
II + III	JPH3	3	1	12
II	JRK	1	1	3
	JRKL			1
III	JTB		4	6
	JUN		3	3
II + III	JUNB	6	11	14
II + III	JUND	9	7	17
III	JUP	2		3
II + III	KANK1	1	2	2
II	KANK2	5	2	5
II + III	KANK4	1	1	6
II + III	KANSL1	2	9	16
	KANSL1L			3
III	KANSL2			1
II + III	KANSL3	1	3	6
II	KARS	1	2	4
II	KAT2A	3	2	5
	KAT2B			
III	KAT5			
II + III	KAT6A	5	5	17
	KAT6B		1	1
III	KAT7			2
III	KAT8			1
III	KATNA1			
	KATNAL1		1	
III	KATNAL2			
III	KATNB1			1
	KAZALD1			
III	KAZN			1
	KBTBD2		3	3
	KBTBD4			1
II + III	KBTBD6	2	2	4
	KBTBD7	1		1
III	KCMF1		1	2
II	KCNAB2	4	4	11
	KCNG1		2	4
II	KCNK1	3	5	9
	KCNK15		1	1

III	KCNN4			1
III	KCNQ1			
	KCNS3			
	KCTD1		4	11
	KCTD10		1	5
	KCTD11	1		7
II + III	KCTD12	1	5	8
III	KCTD13		2	1
II + III	KCTD15	2	4	10
III	KCTD17	1		2
	KCTD18			
II + III	KCTD2	1	2	10
II + III	KCTD20	1	5	7
	KCTD21		2	5
	KCTD3		1	2
	KCTD5		4	13
	KCTD6			
II	KCTD7	1	1	2
III	KDELC1			
II	KDELC2	2	1	4
II	KDELR1	3	10	9
II	KDELR2	5	18	12
II	KDELR3	2	3	4
II	KDM1A	1	1	2
III	KDM1B			1
II	KDM2A	3	6	15
	KDM2B		1	4
	KDM3A		1	3
	KDM3B		5	9
	KDM4A			1
III	KDM4B			3
	KDM4C	1		1
	KDM5A		2	6
	KDM5B		4	3
II	KDM5C	2	4	10
II + III	KDM6A	3	9	11
II	KDM6B	2	1	11
	KDM8			1
	KDSR	1		2
II + III	KEAP1	1	2	2
	KHDC1			1
II	KHDRBS1	1	2	1
III	KHK			
	KHNYN		3	11
II	KHSRP	2	6	17
III	KIAA0020		1	2
II + III	KIAA0040	1	3	10
II + III	KIAA0100	9	9	17
III	KIAA0101			
II	KIAA0141	1	1	2
III	KIAA0146			4

II	KIAA0182	4	2	6
III	KIAA0195			2
	KIAA0196			
	KIAA0226		1	4
II + III	KIAA0232	1	2	6
II + III	KIAA0240	1	3	9
	KIAA0247			1
II	KIAA0284	5	7	5
II + III	KIAA0317	1	3	4
	KIAA0319L		4	2
	KIAA0355		4	5
	KIAA0368		2	2
	KIAA0391		1	2
	KIAA0430			
II	KIAA0494	1	3	6
II + III	KIAA0513	1	3	9
	KIAA0528			
	KIAA0556			2
	KIAA0564			
III	KIAA0586	1		1
II	KIAA0664	6	5	8
II	KIAA0753	2	1	3
	KIAA0754			
II + III	KIAA0825	1	4	4
	KIAA0895			1
	KIAA0895L			
	KIAA0907		2	5
	KIAA0913			2
II + III	KIAA0922	1	1	2
II	KIAA0930	2	3	16
II + III	KIAA0947	8	5	13
III	KIAA1009		1	
	KIAA1033			2
	KIAA1109			4
III	KIAA1143			
	KIAA1147	1		1
	KIAA1161		7	11
III	KIAA1191		2	3
	KIAA1211		1	
II + III	KIAA1244	1	2	8
III	KIAA1274			1
III	KIAA1279			
	KIAA1324L			
II + III	KIAA1429	2	1	8
	KIAA1430			1
	KIAA1432		2	5
III	KIAA1467		2	3
	KIAA1468		1	
	KIAA1522		6	8
III	KIAA1524		1	
II + III	KIAA1549	2	4	8
III	KIAA1586			

III	KIAA1598		1	
	KIAA1609			
II	KIAA1644	3	5	13
III	KIAA1704			
	KIAA1715			2
II + III	KIAA1731	1	1	4
II + III	KIAA1737	2	1	7
II + III	KIAA1804	1	7	10
III	KIAA1841			
	KIAA1919		1	
II + III	KIAA1958	3	7	24
II	KIAA1967	1	3	5
II + III	KIAA2013	5	10	20
	KIAA2026		5	6
II + III	KIDINS220	4	6	5
III	KIF11			4
II + III	KIF13A	2	3	9
III	KIF13B			
III	KIF14			
III	KIF15		1	
	KIF16B	1		2
	KIF18A			1
II	KIF18B	1	3	7
II + III	KIF1B	1	5	10
III	KIF1C		3	10
II	KIF20A	1	1	3
III	KIF20B			
III	KIF21A		1	1
III	KIF22			
III	KIF23			1
II + III	KIF24	2	3	7
II	KIF26A	6	5	6
	KIF26B		5	8
II	KIF2A	1	2	1
II	KIF2C	1	2	4
III	KIF3A			
II + III	KIF3B	2	2	14
	KIF3C		1	4
	KIF4A			2
III	KIF5B		3	5
	KIF7			
	KIF9	1		1
	KIFAP3			
II	KIFC1	4	1	8
II	KIFC3	1	5	5
III	KIN			
II	KIRREL	6	15	25
	KITLG	2		2
III	KLC1			1
III	KLC2			3
III	KLC3			

III	KLC4			
	KLF10		3	5
	KLF11		2	8
II + III	KLF13	12	11	28
	KLF15		1	4
II	KLF16	1	4	9
II + III	KLF3	2	3	6
II + III	KLF4	6	5	13
II	KLF5	3	3	4
II + III	KLF6	2	1	2
	KLF7		2	3
	KLF9	1		2
II	KLHDC10	1	3	2
III	KLHDC2			
III	KLHDC3	1		1
III	KLHDC4			1
II + III	KLHDC5	1	1	9
III	KLHDC8B			4
	KLHL11	1		4
	KLHL12	1		2
	KLHL13			
	KLHL15		1	5
III	KLHL17			
II + III	KLHL18	4	9	15
	KLHL2			
	KLHL20	1		2
II + III	KLHL21	10	11	16
	KLHL22		1	1
	KLHL24			3
	KLHL25		2	5
II + III	KLHL26	3	2	9
	KLHL28			3
	KLHL29		1	6
III	KLHL35			
II + III	KLHL36	1	2	9
II + III	KLHL5	3	1	3
	KLHL7			
	KLHL8			1
II + III	KLHL9	1	1	9
	KNTC1			
II + III	KPNA1	3	9	12
III	KPNA2		4	4
II + III	KPNA3	1	4	6
III	KPNA4		1	2
	KPNA5			1
II	KPNA6	2	9	19
II	KPNB1	2	7	13
III	KPTN			
III	KRAS			
	KRBA1	2		4
III	KRCC1			

III	KRI1	4		7
III	KRIT1		1	1
III	KRR1			1
III	KRT10		2	4
III	KRT17			
III	KRT18	1	2	
II	KRT7	1	1	7
III	KRT8	4		3
II	KRT80	3	9	13
III	KRTCAP2		2	
	KSR1			5
III	KTN1	1		2
III	KXD1			3
III	KYNU			
II	L1CAM	10	19	17
III	L2HGDH			1
II + III	L3MBTL2	3	2	9
	L3MBTL3			
	LACE1			
	LACTB			
III	LACTB2			
III	LAGE3			
II	LAMA5	3	6	7
II	LAMB1	4	2	3
III	LAMB2	1		1
III	LAMB3	1		1
	LAMC1		4	7
II	LAMC3	2	1	4
II	LAMP1	1	3	3
III	LAMP2		1	2
II	LAMTOR1	1	1	2
III	LAMTOR2			1
III	LAMTOR3			
III	LANCL1			
III	LANCL2			1
III	LAP3			
III	LAPTM4A		6	4
II	LAPTM4B	5	1	1
II + III	LARP1	14	25	32
II	LARP1B	1	3	4
II	LARP4	2	8	11
II	LARP4B	1	3	3
	LARP6			
III	LARP7			
	LARS	2		1
II	LARS2	2	4	7
III	LAS1L			
II	LASP1	2	6	7
II + III	LATS1	3	6	22
II + III	LATS2	11	17	14
III	LBH			

II	LBR	1	7	5
II	LCLAT1	1	11	9
III	LCMT1			
II + III	LCMT2	1	1	3
II	LCORL	1	2	2
	LDB1		5	9
II	LDHA	7	4	5
III	LDHB	1		3
III	LDHD			
II + III	LDLR	12	13	16
III	LDLRAD3		1	2
II	LDLRAP1	1	2	6
II	LDOC1	1	3	3
II + III	LDOC1L	16	16	37
II	LEMD2	2	4	6
II + III	LEMD3	3	3	4
III	LENG1		1	1
II	LENG8	1	1	3
II + III	LENG9	2	2	1
III	LEO1			
	LEPR			1
II	LEPRE1	3	3	3
III	LEPREL1		1	4
II	LEPREL2	2	1	2
II + III	LEPREL4	3	4	6
II	LEPROTL1	1	1	2
II	LETM1	4	5	10
II	LETMD1	1	1	1
III	LGALS1			
III	LGALS3			1
II	LGALS3BP	13	20	24
	LGALS8			3
	LGALSL	1		1
III	LGMN	1	1	
II + III	LGR4	5	9	10
	LHFP		1	2
II + III	LHFPL2	1	1	9
III	LHPP			
	LHX2		1	6
II + III	LHX4	1	1	6
III	LIAS			
II + III	LIFR	3	11	17
III	LIG1		1	2
	LIG3			3
	LIG4		1	3
II	LIMA1	2	6	6
II	LIMCH1	4	11	10
II + III	LIMD1	3	4	12
III	LIME1			2
III	LIMK1		1	2
II	LIMK2	1	1	3

III	LIMS1			
III	LIN37			
	LIN52			1
	LIN54		2	7
III	LIN7B			
III	LIN7C		2	5
	LIN9			1
III	LINC00085		1	
II + III	LINC00094	1	2	1
III	LINC00116			
III	LINC00162			1
II	LINC00263	2	1	4
III	LINC00265		1	3
II + III	LINC00319	1	4	7
	LINC00339			1
III	LINC00467			1
II + III	LINC00473	15	21	33
III	LINC00493			
	LINS		1	2
III	LIPA			
	LIPT1			
	LIPT2			1
II	LITAF	1	2	2
III	LIX1L			
III	LLGL1	1	1	
III	LLGL2			
III	LMAN1		2	4
II	LMAN2	1	3	4
	LMAN2L		1	4
II + III	LMBR1	3	9	9
III	LMBR1L			1
III	LMBRD1			
	LMBRD2			2
II	LMF2	1	1	2
II	LMNA	4	4	5
III	LMNB1			3
II	LMNB2	2	1	5
III	LMO1			
III	LMO4		2	2
II	LMO7	1	1	3
II + III	LMTK2	10	12	15
	LNP1			
II + III	LNPEP	3	7	8
	LNX2		1	3
	LOC100128822			
III	LOC100128881		1	4
III	LOC100129250			
	LOC100129361		1	3
III	LOC100129917			
	LOC100130093			1
	LOC100130776		3	5



	LOC100131089			
III	LOC100132352			
III	LOC100216545			1
	LOC100270746			
III	LOC100271722			
	LOC100287015		1	1
	LOC100287177			1
	LOC100287482			
	LOC100288842			
	LOC100288911			
III	LOC100289092		1	1
	LOC100289341			2
	LOC100289361			
II + III	LOC100292680	2	1	8
III	LOC100505483			1
III	LOC100505666			
III	LOC100505761			
III	LOC100505783			1
II	LOC100505876	2	1	2
	LOC100506033			
III	LOC100506054			
III	LOC100506100			
II + III	LOC100506190	4	7	11
III	LOC100506233			1
	LOC100506451			1
III	LOC100506548		2	3
II + III	LOC100506668	3	1	9
	LOC100506688			2
II + III	LOC100506710	3	1	12
	LOC100506714			
III	LOC100506844			
	LOC100506930			3
III	LOC100507217	1		3
	LOC100507246			6
	LOC100507410			
	LOC100652730			1
	LOC147727			
	LOC148189			
II + III	LOC148413	2	2	2
	LOC152217		1	1
III	LOC202781			
III	LOC284023			
	LOC284751			1
	LOC285074			
	LOC286467			1
III	LOC338799			2
III	LOC339803			1
III	LOC375295			1
	LOC387647			
III	LOC388796		3	1
II	LOC389641	1	1	1
	LOC400027			1

	LOC400657	1		3
III	LOC401397			
III	LOC401588			
	LOC440288			
	LOC440434			1
III	LOC440944		2	
	LOC493754	1		1
	LOC550112			1
III	LOC550643		3	2
	LOC554206			
II + III	LOC642852	7	5	13
III	LOC644656			
	LOC645212			
III	LOC645249			
III	LOC645638			
II + III	LOC646719	2	1	2
	LOC647946			1
	LOC728190			2
	LOC728431			2
III	LOC728554			1
	LOC728613		1	4
III	LOC729013			
	LOC729852			
III	LOC81691			
III	LOC92249		2	4
	LOC93622		1	2
	LOC96610			6
	LOH12CR1	1		1
II	LONP1	5	2	7
II	LONP2	2	3	4
	LONRF1			1
	LONRF3		2	8
	LOX			1
II	LOXL2	4	2	2
II	LPCAT1	11	15	25
III	LPCAT3		2	3
III	LPCAT4			
II	LPGAT1	2	3	6
II	LPHN1	4	12	28
	LPIN1			
	LPIN2			
II	LPL	4	15	14
II	LPP	1	2	4
II	LPPR2	1	1	4
	LRBA			1
II	LRCH1	1	1	4
III	LRCH3			1
III	LRCH4			1
II + III	LRFN3	4	6	11
II + III	LRFN4	22	25	33
	LRIF1		3	1
	LRIG1			2

II + III	LRIG2	2	4	4
	LRIG3		1	
	LRP1	1		1
II	LRP10	2	3	6
III	LRP11		3	4
	LRP12		2	5
II	LRP3	2	1	7
	LRP4		3	2
II	LRP5	3	3	4
II + III	LRP6	2	6	11
II	LRP8	1	5	6
II	LRPAP1	6	2	4
	LRPPRC		3	2
	LRR1			4
	LRRC1			
II + III	LRRC14	5	1	17
	LRRC16A		1	
	LRRC20		1	1
III	LRRC23		1	1
	LRRC28		1	1
III	LRRC40			
	LRRC41	1		6
	LRRC42		1	
III	LRRC45			
III	LRRC47			2
III	LRRC49			
	LRRC57	1		1
	LRRC58		5	8
II	LRRC59	6	13	13
II + III	LRRC61	2	1	4
II + III	LRRC8A	12	10	26
II + III	LRRC8C	1	4	6
II + III	LRRC8D	2	5	9
II + III	LRRC8E	1	3	8
III	LRRFIP1	1		1
III	LRRFIP2	1		5
II + III	LRRN2	4	7	16
III	LRSAM1		1	2
III	LRTOMT			
III	LRWD1		1	1
	LSG1	1		
III	LSM1			
II + III	LSM10	1	2	5
	LSM11			2
III	LSM12			2
III	LSM14A			1
II	LSM14B	1	2	3
III	LSM2			2
III	LSM3			
II	LSM4	2	1	1
III	LSM5			

III	LSM6			
III	LSM7			1
III	LSMD1			
III	LSR			2
III	LSS		1	2
III	LTA4H	1		1
	LTBP1	1		2
III	LTBP3			1
III	LTBP4			
II	LTBR	11	12	12
	LTN1		1	2
III	LTV1			1
III	LUC7L			
III	LUC7L2		4	2
III	LUC7L3			3
II + III	LUZP1	5	7	24
III	LY6E	3		1
II	LY6K	2	1	2
III	LYAR		1	1
	LYN		3	3
	LYPD1			2
II	LYPD3	4	5	7
	LYPD6			1
III	LYPLA1			
III	LYPLA2			1
III	LYPLAL1			
III	LYRM1			
III	LYRM2			2
III	LYRM4			1
III	LYRM5			
III	LYRM7			1
	LYSMD1		1	2
III	LYSMD2			
III	LYSMD3		3	4
III	LZIC			
III	LZTFL1			1
II	LZTR1	1	3	5
II	LZTS2	2	2	8
II	M6PR	2	1	1
	MACF1		1	
III	MACROD1	1		1
III	MAD1L1			1
III	MAD2L1			2
II + III	MAD2L1BP	1	2	1
III	MAD2L2	1		1
	MADD			4
II + III	MAEA	3	1	7
II	MAF1	1	3	1
III	MAFG		5	5
II	MAFK	5	6	16
II	MAGEA1	1	2	5

III	MAGEB2			
III	MAGED2			
II + III	MAGEF1	1	2	1
	MAGI1			1
	MAGI3			2
III	MAGOH			
III	MAGOHB			
II	MAGT1	1	3	4
III	MAK16		1	4
II	MALAT1	7	29	32
III	MALSU1			
	MALT1		2	3
	MAMDC2			
II + III	MAML1	1	8	21
II + III	MAML3	3	1	16
	MAMLD1			2
	MAN1A1			1
II + III	MAN1A2	5	5	10
II	MAN1B1	1	2	8
	MAN2A1			4
III	MAN2A2			2
III	MAN2B1			
II	MAN2B2	1	1	5
III	MAN2C1		1	2
	MANBA	1		2
II	MANBAL	1	2	5
II + III	MANEA	1	3	2
II + III	MANEAL	2	6	9
III	MANF		2	2
	MANSC1			
III	MAOB			
	MAP1B			1
III	MAP1LC3B			
II + III	MAP1S	5	8	21
II	MAP2K1	1	1	3
III	MAP2K2			2
II	MAP2K3	1	1	7
II + III	MAP2K4	1	3	8
III	MAP2K5		1	1
	MAP2K6			
III	MAP2K7		3	9
	MAP3K1		1	3
II	MAP3K10	2	2	4
II	MAP3K11	3	3	5
III	MAP3K12			
	MAP3K13		2	2
II	MAP3K14	2	3	6
II + III	MAP3K2	2	5	5
	MAP3K3		1	7
II + III	MAP3K4	2	2	5
	MAP3K5			

III	MAP3K6			
	MAP3K7			
	MAP3K8			
	MAP3K9		3	5
II	MAP4	1	2	5
III	MAP4K2			
	MAP4K3			1
III	MAP4K4			1
III	MAP4K5			
	MAP6D1			3
II	MAP7	1	1	3
II	MAP7D1	1	1	1
III	MAP7D3	2		2
II	MAPK1	2	2	8
II	MAPK11	1	1	2
II	MAPK12	2	1	5
	MAPK14			3
II	MAPK1IP1L	1	8	8
III	MAPK3			1
II + III	MAPK4	2	4	5
	MAPK6		5	5
	MAPK7	1		9
III	MAPK8			
III	MAPK8IP1			1
III	MAPK8IP3			3
III	MAPK9			1
III	MAPKAP1		3	5
II	MAPKAPK2	2	2	8
III	MAPKAPK3		3	4
III	MAPKAPK5			1
II	MAPKBP1	1	4	7
II	MAPRE1	1	4	4
III	MAPRE2		3	2
III	MAPRE3			2
	MARC1		2	2
III	MARC2			1
	MARCH2			1
	MARCH3			
III	MARCH5			2
	MARCH6		5	10
	MARCH7			3
	MARCH8		1	3
	MARCH9		1	3
II	MARCKS	1	2	5
III	MARCKSL1		1	2
	MARK1			1
	MARK2		3	13
III	MARK3		4	5
III	MARK4		1	3
II	MARS	1	1	5
II + III	MARS2	1	3	10

II + III	MARVELD1	3	2	5
	MAST2	2		4
	MAST3			
	MASTL			1
II + III	MAT2A	1	4	8
III	MAT2B			
III	MATK			
	MATN3			
III	MATR3		8	7
II	MAU2	2	2	6
II	MAVS	2	1	6
III	MAX		1	2
II	MAZ	3	6	16
	MB21D1		1	2
	MB21D2		2	4
	MBD1		3	4
III	MBD2		1	1
II	MBD3	7	7	22
II + III	MBD4	1	1	5
	MBD5			4
II	MBD6	1	4	6
III	MBIP			1
	MBLAC2			
II + III	MBNL1	2	12	16
II + III	MBNL2	1	6	8
	MBNL3		1	1
II + III	MBOAT1	2	1	4
	MBOAT2	2		1
II	MBOAT7	5	12	19
	MBP		2	6
	MBTD1		1	
	MBTPS1		4	5
	MBTPS2		6	9
II + III	MC1R	3	11	18
II	MCAM	11	19	26
	MCAT	2		3
III	MCCC1		1	1
III	MCCC2		1	
III	MCEE			1
III	MCF2L			4
II + III	MCFD2	1	2	3
	MCI			
II + III	MCL1	11	14	24
	MCM10	1		3
II	MCM2	5	1	5
II	MCM3	1	2	5
	MCM3AP		2	8
III	MCM4	2		5
II	MCM5	4	3	4
	MCM6			1
II	MCM7	1	4	7

	MCM8		1	
	MCMBP			
III	MCOLN1	1		1
	MCOLN2	1		2
	MCPH1		1	2
III	MCRS1		2	3
III	MCTS1			
III	MCU		1	2
II	MDC1	5	10	22
	MDFIC			
III	MDH1		1	3
II	MDH2	2	2	3
III	MDM1			1
II + III	MDM2	4	3	9
	MDM4		2	9
II	MDN1	1	1	2
III	MDP1			
III	ME1	1		2
III	ME2			
III	MEA1			1
III	MEAF6			
	MECOM			3
II	MECP2	2	2	10
III	MECR			
II + III	MED1	1	4	19
II	MED10	1	3	8
	MED11		1	3
III	MED12	1		4
II + III	MED13	3	10	24
II + III	MED13L	6	8	21
	MED14		2	4
II	MED15	1	1	3
III	MED16		1	4
III	MED17			1
	MED18			1
III	MED19			2
	MED20			
III	MED21		1	2
II	MED22	1	1	5
	MED23			
III	MED24		1	
III	MED25			
II + III	MED26	1	4	10
III	MED27		1	1
III	MED28			1
II	MED29	1	1	4
III	MED30			
III	MED31			
III	MED4			
II	MED6	1	1	3
	MED7			



III	MED8	1		1
	MED9		1	6
II	MEF2A	1	1	3
	MEF2BNB	2	1	
III	MEF2D		1	4
III	MEGF8		2	3
II + III	MEGF9	9	11	12
	MEIS1			
II + III	MEIS2	1	2	5
II	MELK	1	1	1
	MEMO1			2
II	MEN1	2	1	2
II + III	MEPCE	5	7	18
II + III	MESDC1	4	3	9
II + III	MESDC2	3	8	8
II + III	MET	7	8	19
	METAP1			1
	METAP1D			1
II	METAP2	1	1	4
III	METRNL	4		3
II	METTL1	1	2	2
III	METTL10			1
	METTL13	3		4
II	METTL14	1	1	2
II	METTL16	2	1	5
III	METTL17		1	
	METTL18		1	
II	METTL21A	2	3	5
	METTL21B			
III	METTL21D			1
III	METTL22			
	METTL23			1
III	METTL2A	1		2
	METTL2B			1
III	METTL3			1
	METTL4			
III	METTL5			
III	METTL6			
	METTL7A			1
	METTL8			1
	METTL9		4	4
	MEX3C		3	11
II + III	MEX3D	4	7	13
II	MFAP1	4	1	2
III	MFAP2			
II + III	MFAP3	6	9	18
III	MFF		1	1
III	MFGE8			
II + III	MFHAS1	13	27	34
	MFN1			

II	MFN2	2	1	5
III	MFSD1			
II	MFSD10	1	1	2
	MFSD11		1	1
II	MFSD12	1	5	5
III	MFSD2A			1
III	MFSD3	1		1
II + III	MFSD5	5	9	12
	MFSD6	1		3
	MFSD8			
II + III	MFSD9	1	1	4
II + III	MGA	13	22	36
II + III	MGAT1	10	17	28
II + III	MGAT2	3	5	14
II	MGAT4B	5	4	10
II + III	MGAT5	1	6	7
III	MGAT5B		1	4
II + III	MGC2752	1	2	9
	MGC39372			4
III	MGC72080			
	MGEA5		1	3
III	MGMT			
II	MGRN1	1	3	2
III	MGST1			2
III	MGST2		1	1
III	MGST3			1
II	MIA3	1	2	5
	MIB1		1	
III	MIB2			
II	MICA	1	1	1
III	MICAL1			
II	MICAL3	5	6	18
II	MICALL1	1	3	5
III	MICALL2			1
	MICU1	1		
II + III	MID1	2	2	7
II + III	MID1IP1	3	9	16
II	MIDN	2	1	4
III	MIEN1			
III	MIER1			2
III	MIER2		1	2
II + III	MIER3	1	2	4
III	MIF4GD		1	2
III	MIIP			
	MINA		1	2
II	MINK1	1	1	2
III	MINOS1			1
	MINPP1			4
	MIOS		1	2
III	MIPEP			
III	MIPOL1			1

III	MIR100HG			1
III	MIR31HG			2
III	MIS18A			1
III	MIS18BP1		1	2
III	MITD1			
II + III	MITF	1	4	6
II	MKI67	6	22	33
III	MKI67IP			1
	MKKS			
II	MKL1	3	6	12
II + III	MKL2	3	4	11
II + III	MKLN1	1	1	8
III	MKNK1			1
II	MKNK2	1	2	7
III	MKRN1		2	2
III	MKRN2		2	1
	MKRN3			
III	MKS1			
	MKX		1	9
II	MLEC	11	10	18
III	MLF1			
III	MLF1IP			
II	MLF2	3	6	6
III	MLH1			
	MLH3	2		2
II	MLKL	1	1	4
II	MLL	12	15	24
II	MLL2	24	36	62
II	MLL3	3	2	15
II	MLL4	3	3	14
II	MLL5	6	8	21
II	MLLT1	4	16	24
	MLLT10			3
III	MLLT11			2
	MLLT3			1
	MLLT4			
III	MLLT6		2	8
II	MLST8	3	3	4
II	MLX	2	5	7
II	MLXIP	7	8	33
	MLYCD			1
III	MMAB		3	2
III	MMACHC	1		2
III	MMADHC			1
III	MMD			
III	MMGT1		3	4
II	MMP15	2	3	6
	MMP17			1
III	MMP24			
III	MMS19			2
II + III	MMS22L	1	1	4

II + III	MN1	4	10	13
III	MNAT1		1	1
III	MND1			
III	MNF1			2
III	MNT		1	10
	MOAP1			
III	MOB1A			
III	MOB1B			
	MOB2		1	2
	MOB3A		1	5
	MOB3B		1	2
	MOB3C			
II + III	MOCOS	1	1	5
III	MOCS2			
	MOCS3		3	8
II	MOGS	4	4	7
	MON1A			3
II + III	MON2	1	1	3
II	MORC2	1	1	4
	MORC3			
	MORC4		1	1
III	MORF4L1		1	1
III	MORF4L2		3	3
III	MORN1		1	3
III	MORN2			
III	MOSPD1		1	2
	MOSPD2	1		1
III	MOSPD3			2
II	MOV10	1	1	2
II	MPDU1	3	6	5
	MPDZ			1
III	MPG			
III	MPHOSPH10			1
III	MPHOSPH6			1
III	MPHOSPH8			
	MPHOSPH9			
III	MPI			2
III	MPLKIP		2	5
III	MPP1			
III	MPP2		2	2
III	MPP3			1
	MPP5		1	3
III	MPP6		1	1
	MPP7			
	MPPE1			
II	MPRIP	3	4	14
III	MPST			
III	MPV17		2	
III	MPV17L2		1	5
II	MPZL1	1	1	9
II	MRAS	1	2	12

III	MRC2		1	2
III	MRE11A			
III	MREG			1
II	MRFAP1	2	2	5
	MRFAP1L1			1
II	MRI1	2	2	2
III	MRM1			
II + III	MRP63	1	1	1
III	MRPL1			
II	MRPL10	2	1	1
III	MRPL11			
III	MRPL12		1	3
III	MRPL13			
	MRPL14	2		5
III	MRPL15			1
III	MRPL16			
	MRPL17			2
III	MRPL18			1
III	MRPL19			
III	MRPL2			
III	MRPL20			
III	MRPL21			
III	MRPL22			2
III	MRPL23			
III	MRPL24		2	1
	MRPL27	1		1
III	MRPL28			
III	MRPL3		2	4
III	MRPL30		1	1
III	MRPL32			
III	MRPL33			
II + III	MRPL34	2	2	4
II	MRPL35	1	2	5
	MRPL36		1	4
II	MRPL37	1	5	4
II	MRPL38	1	1	2
III	MRPL39			
III	MRPL4	1		1
III	MRPL40		1	2
III	MRPL41			
III	MRPL42			
III	MRPL43			
	MRPL44			1
III	MRPL45			3
III	MRPL45P2			
III	MRPL46			
III	MRPL47			1
III	MRPL48		1	1
III	MRPL49			1
	MRPL50	1		3
III	MRPL51		1	

III	MRPL52			
III	MRPL53			
III	MRPL54			
III	MRPL55			1
III	MRPL9		3	3
III	MRPS10			
III	MRPS11		1	4
II	MRPS12	3	6	6
III	MRPS14			
III	MRPS15			1
III	MRPS16		3	5
	MRPS17		1	1
III	MRPS18A		2	3
III	MRPS18B			4
III	MRPS18C			
II	MRPS2	8	8	11
II	MRPS21	1	2	3
III	MRPS22		1	2
III	MRPS23			1
II	MRPS25	2	2	1
III	MRPS26		1	3
II	MRPS27	3	4	6
III	MRPS28			1
II	MRPS30	1	3	9
III	MRPS31			
III	MRPS33			
II	MRPS34	4	5	5
III	MRPS35		2	1
III	MRPS36			
III	MRPS5		1	1
III	MRPS7		1	3
III	MRPS9			
III	MRRF		3	7
III	MRS2			1
III	MRTO4	3		2
	MSANTD2		3	3
II + III	MSANTD3	1	1	4
II + III	MSANTD4	1	1	5
	MSH2	2		1
	MSH3			
	MSH6		3	5
II	MSI2	1	1	2
II + III	MSL1	3	8	10
II + III	MSL2	2	4	18
III	MSL3			
	MSL3P1	1		2
III	MSLN	2		
II + III	MSMO1	1	3	1
II	MSN	6	9	10
III	MSRA			1
II + III	MSRB1	1	1	3

III	MSRB2		1	1
	MSRB3		1	4
III	MST4		1	3
II	MSX1	1	3	6
	MSX2			1
III	MT1E			
III	MT1X			
III	MT2A			2
III	MTA1			2
III	MTA2		1	4
III	MTA3			
	MTAP		1	3
III	MTBP			
III	MTCH1			1
II	MTCH2	1	1	1
III	MTCP1NB			
II	MTDH	2	8	11
	MTERF			
	MTERFD1			
	MTERFD2			1
III	MTERFD3			
II + III	MTF1	3	3	9
II	MTF2	1	1	3
III	MTFMT			
II	MTFP1	2	2	5
III	MTFR1			2
III	MTG1			
III	MTHFD1		2	2
II	MTHFD1L	1	1	8
III	MTHFD2	2		2
	MTHFR		1	8
II + III	MTHFSD	1	6	11
III	MTIF2			1
III	MTIF3			
	MTM1			
	MTMR1			3
	MTMR10		1	4
III	MTMR11		1	2
	MTMR12	1		4
II	MTMR14	1	2	1
III	MTMR2			
	MTMR3			4
II + III	MTMR4	1	4	13
	MTMR6		1	
	MTMR9			
	MTMR9LP	1		
	MTO1	2		2
	MTOR			1
	MTPAP		4	8
	MTR		2	4
III	MTRF1			1

III	MTRF1L			1
	MTRR		6	12
II	MTSS1L	4	17	30
	MTUS1			1
II	MTX1	1	1	2
III	MTX2			
	MTX3		1	
III	MUC1			4
II + III	MUL1	5	4	12
II + III	MUM1	2	3	11
III	MUS81		1	1
	MUT			1
III	MUTYH	1		
III	MVD			1
III	MVK		1	1
III	MVP			
	MXD1		1	
III	MXD3			1
II	MXD4	2	3	8
III	MXI1			1
III	MXRA7		1	2
II	MYADM	5	7	6
III	MYBBP1A			3
III	MYBL1			1
II	MYBL2	1	2	9
II + III	MYC	8	10	15
	MYCBP2		1	
III	MYEOV2			
II	MYH10	1	1	1
II	MYH9	5	6	9
III	MYL12A		1	1
II	MYL12B	1	3	2
III	MYL5			
III	MYL6			2
III	MYL6B			
III	MYL9			
	MYLIP		2	5
III	MYLK3			5
	MYNN			4
II	MYO10	5	5	13
	MYO19			3
	MYO1B			
II	MYO1C	5	4	6
	MYO1D			
	MYO1E		2	7
	MYO5A			2
	MYO6			
	MYO9A		2	3
II + III	MYO9B	5	9	22
	MYOF		1	3
II + III	MYPN	2	2	5



	MYSM1		1	2
	MZF1			
III	MZT1			
III	MZT2A			
III	MZT2B			
	N4BP1			3
	N4BP2		2	5
	N4BP2L2		1	1
	N4BP3			6
	N6AMT1		1	1
III	N6AMT2		1	
II	NAA10	2	2	2
II	NAA15	2	1	7
III	NAA16			1
II	NAA20	1	1	2
	NAA25		2	2
II + III	NAA30	1	2	2
	NAA35			1
III	NAA38			1
II + III	NAA40	1	3	14
III	NAA50		6	3
II	NAA60	2	1	12
III	NAAA	1	1	
II + III	NAB1	1	2	3
	NAB2		5	8
II	NACA	1	3	3
II	NACC1	3	14	33
II	NACC2	1	2	14
III	NADK		1	1
	NADKD1			1
III	NADSYN1	1		
III	NAE1			
	NAF1		1	1
	NAGA		4	3
III	NAGK			
	NAGLU		1	5
	NAGPA			1
	NAIF1	1		4
III	NAMPT			
	NANP			
III	NANS			1
III	NAP1L1		1	1
II	NAP1L4	5	6	7
	NAP1L5			2
III	NAPA			
	NAPEPLD			
III	NAPG			1
III	NAPRT1			
III	NARF			
III	NARFL	2		1
II + III	NARG2	1	3	2

III	NARS		1	
III	NARS2			
III	NASP			
	NAT1			2
II	NAT10	1	3	2
III	NAT14			2
	NAT6			
II	NAT8L	5	9	12
III	NAT9		1	5
II + III	NAV1	3	3	13
	NAV2			8
	NBAS			1
	NBEA			
	NBEAL1		1	2
III	NBEAL2			1
III	NBN			5
	NBPF3			3
	NBR1	1	1	
II	NCAPD2	1	4	2
	NCAPD3			1
III	NCAPG			1
	NCAPG2			
III	NCAPH			1
III	NCAPH2	1		5
II	NCBP1	1	2	1
III	NCBP2		1	2
III	NCDN			4
II + III	NCEH1	2	2	7
	NCK1			1
	NCK2	1		1
	NCKAP1			
	NCKAP5		1	4
II	NCKAP5L	3	7	15
III	NCKIPSD			3
II	NCL	4	4	8
II	NCLN	13	21	15
II + III	NCOA1	1	1	3
II + III	NCOA2	1	1	8
II + III	NCOA3	2	3	8
II + III	NCOA4	1	4	3
II	NCOA5	2	4	10
II	NCOA6	2	8	14
II + III	NCOA7	3	6	10
	NCOR1		4	10
II	NCOR2	6	5	15
II + III	NCR3LG1	1	3	6
III	NCS1		4	6
II	NCSTN	1	1	4
III	NDC80			
II	NDE1	3	2	6
III	NDEL1		3	6

III	NDFIP1	1		1
III	NDFIP2			1
II + III	NDNL2	2	1	7
II	NDOR1	6	18	27
III	NDRG1		1	3
III	NDRG2			
III	NDRG3		1	2
II	NDST1	8	12	20
II + III	NDST2	1	1	2
III	NDUFA1			
III	NDUFA10			1
III	NDUFA11	3		
II	NDUFA12	1	2	2
III	NDUFA13	1		1
II	NDUFA2	1	1	1
III	NDUFA3			
III	NDUFA4			
III	NDUFA5			
III	NDUFA6			1
III	NDUFA7		1	1
III	NDUFA8		1	1
III	NDUFA9	1	1	
III	NDUFAB1	1		2
	NDUFAF1			
III	NDUFAF2			1
III	NDUFAF3	1		2
III	NDUFAF4			
III	NDUFB1			
III	NDUFB10		1	
III	NDUFB11			1
III	NDUFB2			
III	NDUFB3			
II	NDUFB4	1	1	2
III	NDUFB5			
III	NDUFB6		1	1
II	NDUFB7	2	1	1
III	NDUFB8			
III	NDUFB9		1	1
III	NDUFC1			1
	NDUFS1		2	1
III	NDUFS2	1		1
III	NDUFS3		1	
III	NDUFS4			1
III	NDUFS5			
III	NDUFS6		1	1
III	NDUFS7			
III	NDUFS8			
II	NDUFV1	1	1	1
III	NDUFV2			2
II	NDUFV3	1	1	2
II	NEAT1	7	14	12

II	NECAB3	4	3	1
III	NECAP1	1		
II + III	NECAP2	2	2	2
	NEDD1			
	NEDD4			2
	NEDD4L			2
	NEDD9			
III	NEIL2			
	NEIL3			
III	NEK1			
III	NEK2			2
III	NEK3			
	NEK4			4
II	NEK6	1	2	3
	NEK7		1	
	NEK9			2
III	NELF	2		7
	NELL2		1	1
III	NEMF			
II	NENF	2	2	3
II	NEO1	4	11	13
III	NES			
	NET1		1	3
II + III	NETO2	1	4	11
II	NEU1	8	6	10
II + III	NEU3	2	6	11
III	NEURL		1	4
	NEURL1B			1
III	NEURL4	1		1
III	NEXN			1
II + III	NF1	2	3	8
II	NF2	2	2	4
II	NFAT5	1	16	27
II + III	NFATC1	1	3	4
II	NFATC2IP	1	2	3
II + III	NFATC3	3	9	12
II + III	NFE2L1	14	35	36
II + III	NFE2L2	2	7	11
II + III	NFIA	1	1	8
II	NFIB	1	4	7
II	NFIC	13	17	32
II + III	NFIL3	2	5	9
III	NFIX		4	8
	NFKB1		1	5
III	NFKB2		1	2
	NFKBIA		2	2
III	NFKBIB			1
	NFKBIE			
III	NFKBIL1			
III	NFKBIZ			1
	NFRKB	1		

II	NFS1	2	1	6
III	NFU1			
	NFX1		1	1
	NFXL1			1
II + III	NFYA	1	2	4
III	NFYB		1	1
III	NFYC		1	4
III	NGDN			1
III	NGFRAP1			
III	NGLY1			1
II	NGRN	1	5	13
III	NHEJ1			1
	NHLRC2		1	7
III	NHLRC3			
III	NHP2			1
III	NHP2L1		1	4
II + III	NHS	1	2	9
II + III	NIF3L1	2	1	1
	NIN			1
II	NINJ1	7	3	10
	NINL			
	NIP7	1		2
II + III	NIPA1	1	1	7
II	NIPA2	4	6	6
	NIPAL3			2
II + III	NIPBL	3	4	19
III	NIPSNAP1		1	2
III	NIPSNAP3A			
II	NISCH	3	4	12
II	NIT1	1	2	3
III	NIT2			1
III	NKAIN1		1	2
III	NKAP			
II	NKD2	1	3	11
III	NKIRAS1			
III	NKIRAS2			
	NKRF		2	6
II	NKTR	1	3	4
	NKX3-2		2	5
III	NLE1	1		2
II	NLGN2	7	6	17
	NLK			
	NLN		3	2
II + III	NLRC5	1	2	5
	NLRX1		1	5
III	NMD3			3
III	NME1	3	1	
III	NME4		1	
II + III	NME6	1	2	6
III	NME7			
II	NMRAL1	1	1	1

III	NMRK1			
II	NMT1	2	5	17
III	NMT2			
II	NNMT	1	2	3
	NNT			1
II + III	NOA1	2	2	2
II	NOB1	3	1	3
II	NOC2L	1	3	3
II	NOC3L	2	1	3
III	NOC4L			
II + III	NOD1	1	1	4
	NOG		1	3
III	NOL10			3
	NOL11	1		2
III	NOL12			2
III	NOL3		2	
II	NOL6	4	5	5
III	NOL7			
III	NOL8		1	8
II	NOL9	3	4	7
III	NOLC1		2	3
	NOM1		1	2
II	NOMO1	5	1	1
	NOMO2			3
II	NOMO3	2	3	3
II	NONO	2	6	10
II	NOP10	3	3	4
III	NOP14		1	4
II	NOP16	1	1	2
II	NOP2	1	6	4
III	NOP56		1	4
III	NOP58		1	1
III	NOSIP			
II + III	NOTCH1	5	4	11
II + III	NOTCH2	19	24	40
	NOTCH2NL			1
III	NOV		1	
III	NPAS2		3	4
	NPAT		5	7
II	NPC1	2	3	5
III	NPC2		1	1
II	NPDC1	4	2	3
	NPEPPS		1	4
III	NPHP4			
III	NPL			2
II	NPLOC4	8	14	19
III	NPM1		4	6
III	NPM3	1	1	
II	NPR3	9	7	15
III	NPRL2			
II	NPRL3	1	1	2

II	NPTN	1	3	6
II + III	NPTX1	12	16	24
III	NPTXR		2	1
III	NQO1	1		5
III	NQO2		1	1
III	NR1D1		1	5
	NR1D2			5
III	NR1H2			
III	NR1H3		1	2
III	NR2C1		2	
	NR2C2		1	4
III	NR2C2AP			1
II + III	NR2F1	1	4	4
II + III	NR2F2	3	2	5
II	NR2F6	5	5	10
II + III	NR3C1	3	10	19
	NR3C2			2
II	NR4A1	1	2	9
	NR4A2			
	NR4A3	1		5
	NRARP		2	4
	NRAS		6	7
III	NRBP1		2	5
III	NRBP2		1	
	NRCAM			
II	NRD1	2	3	3
III	NREP			1
II + III	NRF1	1	5	8
III	NRG4		1	
III	NRGN		1	1
	NRIP1	1		10
II	NRM	2	5	5
II + III	NRP1	1	1	4
III	NRSN2			4
III	NSA2		2	2
II + III	NSD1	4	5	19
	NSDHL		2	4
	NSF			2
III	NSFL1C			1
	NSFP1		1	
III	NSL1	1		1
III	NSMAF			1
III	NSMCE1			
III	NSMCE2			3
III	NSMCE4A			
III	NSRP1		1	
II + III	NSUN2	1	7	4
	NSUN3			
II	NSUN4	1	1	3
III	NSUN5			
	NSUN6			1

III	NT5C			
II	NT5C2	2	1	3
III	NT5C3		1	2
II	NT5C3L	2	3	6
III	NT5DC1			1
II	NT5DC2	2	2	2
	NT5DC3			8
	NT5E			
III	NT5M			
III	NTAN1			
III	NTHL1	1		
II	NTN1	1	5	4
	NTN4			1
III	NTPCR		1	
II + III	NTSR1	6	8	19
II + III	NUAK1	3	7	21
II + III	NUAK2	6	7	13
III	NUB1			
III	NUBP1			
III	NUBP2			1
III	NUBPL			
II	NUCB1	5	6	4
III	NUCB2			1
II	NUCKS1	2	10	14
III	NUDC		2	2
III	NUDCD1	1		1
III	NUDCD2			
II + III	NUDCD3	6	11	17
III	NUDT1	1	1	
	NUDT12			1
III	NUDT13			
III	NUDT14			
III	NUDT15			
	NUDT16		1	2
III	NUDT16L1			2
	NUDT18			
II	NUDT19	2	1	2
III	NUDT2			
III	NUDT21		1	1
III	NUDT22		1	3
III	NUDT5			
	NUDT7			
III	NUDT8			
III	NUDT9			
III	NUF2			
III	NUFIP1			
II + III	NUFIP2	5	17	27
III	NUMA1		1	2
III	NUMB		1	1
	NUMBL		1	4
II	NUP107	1	1	5



	NUP133			
II + III	NUP153	5	13	21
II + III	NUP155	2	4	3
	NUP160		4	3
II	NUP188	1	2	6
	NUP205	1	1	
II	NUP210	3	6	9
II	NUP214	3	3	13
III	NUP35			
III	NUP37			1
III	NUP43			3
II + III	NUP50	4	6	12
III	NUP54		1	
II + III	NUP62	12	8	22
III	NUP62CL			
III	NUP85		2	1
III	NUP88		1	2
III	NUP93		1	
II + III	NUP98	2	7	8
II	NUPL1	1	1	1
	NUPL2		2	6
III	NUPR1		1	3
II	NUSAP1	1	3	4
II	NUTF2	1	4	5
III	NVL			1
II	NXF1	2	2	3
II + III	NXN	3	3	9
II	NXPH4	4	6	5
	NXT1		1	1
III	NXT2			
II	OAF	1	2	2
III	OAS3			
III	OAT		1	1
II	OAZ1	2	1	1
II	OAZ2	1	2	5
II	OBSCN	4	2	10
III	OBSL1	1		
III	OCEL1			1
III	OCIAD1		3	5
III	OCIAD2			
	OCRL	1		
II	ODC1	4	3	4
III	ODF2			1
III	ODF2L			
	ODZ3		1	4
III	OFD1		2	4
II + III	OGDH	3	3	10
III	OGDHL			
	OGFOD1		2	4
III	OGFOD2			
II	OGFR	4	2	8

	OGFRL1		1	1
III	OGG1		1	1
II + III	OGT	2	14	21
III	OIP5			
III	OLA1			
II + III	OLFM1	13	16	19
II	OLFM2	2	2	4
	OLFML1		2	2
II	OLFML2A	2	1	2
	OLFML2B			1
II	OLR1	1	2	3
III	OMA1			
	OPA1			1
III	OPLAH			
II + III	OPN3	1	4	4
III	OPTN			
II	ORAI1	2	2	6
II + III	ORAI2	5	2	9
III	ORAI3			1
III	ORAOV1			1
	ORC1		3	2
III	ORC2			
III	ORC3			1
	ORC4			2
	ORC5			3
III	ORC6			2
III	ORMDL1			1
III	ORMDL2			1
II	ORMDL3	2	2	2
II	OS9	2	6	8
II + III	OSBP	1	2	11
III	OSBP2	1		2
	OSBPL10		1	6
	OSBPL11		2	2
III	OSBPL1A			
II + III	OSBPL2	1	3	5
	OSBPL3			1
III	OSBPL5			
	OSBPL6			
	OSBPL8		1	2
III	OSBPL9		1	3
III	OSCP1			
III	OSGEP			1
	OSGEPL1			
	OSGIN1	1		9
	OSGIN2		1	1
	OSMR		7	14
	OSR2			4
III	OST4		1	3
III	OSTC		1	1
III	OSTF1			

III	OSTM1		2	2
III	OTUB1	1		2
	OTUD1			3
II	OTUD3	1	1	1
II + III	OTUD4	1	4	8
III	OTUD5		2	7
III	OTUD6B			1
II	OTUD7B	5	2	9
III	OXA1L		3	5
III	OXCT1			1
	OXNAD1		1	
	OXR1			2
	OXSM		1	1
II + III	OXSR1	3	1	10
III	P2RX4			
II + III	P2RY6	6	3	4
III	P4HA1			
III	P4HA2			
II	P4HB	6	18	13
III	P4HTM	1		2
II	PA2G4	1	4	7
	PAAF1			1
II	PABPC1	3	5	4
II	PABPC4	1	2	3
III	PACRGL			
III	PACS1		2	3
	PACS2			4
II	PACSIN2	1	1	1
III	PACSIN3			1
III	PAF1		1	1
	PAFAH1B1		3	9
	PAFAH1B2		1	6
III	PAFAH1B3			
	PAFAH2		3	7
III	PAGE1			1
III	PAICS		4	5
III	PAIP1		2	3
II	PAIP2	1	1	1
III	PAIP2B			
III	PAK1			
III	PAK1IP1			
II	PAK2	1	4	6
III	PAK4			1
	PALB2		1	14
III	PALLD			
III	PALM		1	2
	PAM			3
	PAN2			2
	PAN3			4
	PANK1			
	PANK2			2

	PANK3		2	7
	PANK4			
II + III	PANX1	1	1	4
III	PAPD4			4
II	PAPD5	6	4	11
II + III	PAPD7	2	8	16
III	PAPOLA		2	3
III	PAPOLG		1	
	PAPPA			2
III	PAPSS1	1		1
	PAPSS2			3
III	PAQR3			
II + III	PAQR4	5	8	15
II	PAQR5	1	1	1
II	PAQR7	1	3	4
	PARD3	1		2
	PARD6A			
	PARD6G			3
	PARG			2
III	PARK7	1		
III	PARL	1		
III	PARN			2
III	PARP1		1	4
III	PARP12			3
	PARP14			
III	PARP16			3
III	PARP2			
III	PARP3			
	PARP4			
III	PARP6		1	2
	PARP8	1		2
	PARP9			2
III	PARPBP		1	2
	PARS2		1	1
III	PARVA			6
II	PARVB	1	1	3
II	PASD1	1	3	6
	PASK			1
II	PATL1	1	2	5
II + III	PATZ1	6	7	17
III	PAWR			1
	PAX9			3
	PAXIP1		2	1
	PBK		2	2
III	PBLD			
	PBRM1		2	5
III	PBX1	1		3
III	PBX3		1	2
III	PBXIP1			
III	PC			
III	PCBD1		1	1

III	PCBD2		2	2
II + III	PCBP1	7	7	11
II	PCBP2	5	11	12
III	PCBP4			
III	PCCA			
III	PCCB		1	1
II + III	PCF11	1	2	12
III	PCGF1			
III	PCGF2			
II + III	PCGF3	1	2	4
	PCGF5		1	3
III	PCGF6			
II	PCID2	2	2	8
III	PCIF1			1
III	PCK2			
III	PCM1			1
III	PCMT1		1	2
	PCMTD1			
	PCMTD2		1	7
III	PCNA		2	1
III	PCNP			3
III	PCNT			1
II + III	PCNX	5	6	10
II + III	PCNXL3	10	13	36
II	PCOLCE	1	1	1
	PCOLCE2			1
II	PCSK7	3	2	5
II	PCSK9	2	4	11
	PCTP			2
II + III	PCYOX1	2	6	8
	PCYOX1L			
	PCYT1A			
II	PCYT2	3	1	4
III	PDAP1			
III	PDCD10			1
II	PDCD11	3	3	4
III	PDCD2			1
III	PDCD2L	1		1
III	PDCD4		1	1
III	PDCD5			
II	PDCD6IP	1	1	1
III	PDCD7			1
	PDCL			
III	PDCL3			
III	PDDC1			1
	PDE10A		1	2
II + III	PDE12	3	6	9
	PDE3A		2	4
	PDE3B		3	7
	PDE4A		4	10
II + III	PDE4D	2	4	11

	PDE4DIP			3
III	PDE6D			
	PDE7A		2	7
	PDE7B			
	PDE8A		3	3
	PDE8B			
II + III	PDF	2	4	4
II + III	PDGFA	4	1	2
II	PDGFB	5	5	9
II	PDGFRB	2	2	1
III	PDHA1	1	1	
III	PDHB		1	
III	PDHX			
II	PDIA3	2	8	4
II	PDIA4	3	3	4
III	PDIA5		1	
II	PDIA6	1	5	3
	PDIK1L		1	2
	PDK1			
III	PDK2			2
	PDK3		1	1
	PDK4			
III	PDLIM1			
III	PDLIM2			2
III	PDLIM3			
	PDLIM5		1	1
III	PDLIM7	1		
	PDP1		2	4
II + III	PDP2	2	2	7
II + III	PDPK1	1	3	10
II	PDRG1	3	5	6
	PDS5A		5	5
	PDS5B		1	2
III	PDSS1			
III	PDSS2			
II	PDXDC1	1	1	1
	PDXDC2P		1	1
II	PDXK	6	8	22
II	PDXP	1	1	3
III	PDZD11			1
	PDZD4			2
	PDZD8		1	7
II	PEA15	4	4	10
II + III	PEAK1	1	1	8
II	PEBP1	1	1	2
III	PECR			
III	PEF1	1		5
II + III	PEG10	11	18	40
	PEL11			
III	PEL13			3
	PELO		3	5

II	PELP1	5	5	5
III	PEMT		3	5
III	PEPD			1
II	PER1	1	3	9
	PER3			
II	PERP	3	6	10
III	PES1	1		2
III	PET112			
	PET117			
	PEX1			
III	PEX10		1	3
	PEX11A		1	1
	PEX11B		2	4
	PEX12	2		3
II + III	PEX13	1	1	1
III	PEX14		2	
III	PEX16		1	1
III	PEX19		2	4
	PEX2			
II	PEX26	2	1	11
III	PEX3			
III	PEX5			1
III	PEX6			
III	PEX7			
	PFAS		4	4
III	PFDN1			3
III	PFDN2			
III	PFDN4			
III	PFDN5			
III	PFDN6			
	PFKFB2		2	2
II + III	PFKFB3	3	6	13
II	PFKFB4	2	1	2
II	PFKL	1	1	2
III	PFKM			1
II	PFKP	4	4	10
II	PFN1	3	4	4
III	PFN2		1	1
III	PGAM5		7	12
II	PGAP2	1	1	2
II + III	PGBD1	2	3	4
	PGBD2		1	2
II	PGD	1	1	2
	PGGT1B			
II	PGK1	1	2	3
III	PGLS	1		2
III	PGM1			
	PGM2			
	PGM2L1			
	PGM3		1	8
II	PGP	2	1	2

	PGPEP1		1	3
III	PGRMC1	1		1
II	PGRMC2	4	4	9
	PGS1		1	1
	PHACTR2	1		2
II	PHACTR4	1	2	5
III	PHAX		2	2
II	PHB	2	2	8
II	PHB2	1	5	5
III	PHC2		3	5
	PHC3		2	
III	PHF1			1
III	PHF10			1
II + III	PHF12	1	3	6
	PHF13		2	1
II	PHF14	1	1	4
II + III	PHF15	10	12	31
	PHF16			1
II + III	PHF17	1	3	3
II	PHF19	1	2	10
	PHF2		1	2
II + III	PHF20	1	5	12
III	PHF20L1		1	3
	PHF21A		2	7
II + III	PHF23	1	3	16
	PHF3		1	6
II	PHF5A	1	2	4
III	PHF6			4
	PHF7			
II	PHF8	1	3	13
II	PHGDH	4	3	6
	PHIP	1		2
	PHKA1			1
	PHKA2			
II + III	PHKB	1	1	1
	PHKG2		2	4
III	PHLDA2			
	PHLDA3			4
II	PHLDB1	3	6	4
II + III	PHLDB2	6	8	12
III	PHLDB3			1
	PHLPP1		1	5
II + III	PHLPP2	2	2	8
III	PHPT1			1
II	PHRF1	1	1	1
III	PHTF1			2
	PHTF2			
III	PHYH			1
	PHYHIP			1
III	PI4K2A		1	4
	PI4K2B			



III	PI4KA			1
III	PI4KAP2			
II + III	PI4KB	2	1	9
II + III	PIAS1	1	2	8
	PIAS2		1	2
III	PIAS3			2
II	PIAS4	1	2	5
III	PIBF1		2	1
III	PICALM		3	4
III	PICK1		1	3
III	PIDD			
II	PIEZO1	10	11	20
II	PIF1	1	1	1
	PIGA	2		3
III	PIGB			
	PIGC			1
III	PIGF			
	PIGG		1	8
III	PIGH			
III	PIGK			
	PIGL	1	1	
II + III	PIGM	3	4	5
	PIGN			1
II	PIGO	2	3	5
III	PIGP			1
II	PIGQ	4	5	3
II	PIGS	2	8	10
II	PIGT	5	4	5
III	PIGU			
II + III	PIGV	1	1	3
	PIGW		2	1
III	PIGX			
II	PIGY	1	1	1
III	PIH1D1		1	2
	PIK3C2A			2
II + III	PIK3C2B	2	4	6
III	PIK3C3			1
	PIK3CA			1
II + III	PIK3CB	1	2	5
	PIK3CD	2		4
II	PIK3R2	1	1	4
	PIK3R3			
II + III	PIK3R4	2	4	6
	PIKFYVE			
II	PILRB	1	1	2
III	PIM1			3
II	PIM2	1	1	4
II	PIM3	9	8	9
III	PIN1		1	
III	PIN4			1
III	PINK1			2

III	PINX1			
III	PIP4K2A		1	3
II + III	PIP4K2B	4	5	12
II + III	PIP4K2C	1	6	11
II	PIP5K1A	5	11	14
	PIP5K1B			2
II + III	PIP5K1C	11	15	31
III	PIR			2
II + III	PISD	3	2	6
III	PITHD1			
III	PITPNA		3	4
II	PITPNB	1	1	1
III	PITPNC1			
III	PITPNM1		1	
	PITRM1	1		5
II + III	PITX1	6	12	16
	PJA1			1
III	PJA2		1	2
II	PKD1	2	6	15
	PKD2			1
III	PKDCC			1
III	PKIG			
II	PKMYT1	2	4	6
III	PKN1			
II	PKN2	1	2	3
III	PKN3		2	5
	PKNOX1			
	PKP2			1
III	PKP3			
	PKP4			4
	PLA2G12A		1	
II + III	PLA2G15	3	13	10
III	PLA2G16	1		
	PLA2G4A			
III	PLA2G6			
	PLAA			1
II + III	PLAC2	5	10	11
II + III	PLAGL1	3	3	8
	PLAUR		1	1
II	PLBD2	2	1	5
III	PLCB3			
	PLCB4		4	2
II	PLCD3	1	2	9
II	PLCG1	1	1	4
	PLCG2			1
	PLCL2	1		4
	PLD1			
III	PLD2		1	
II	PLD3	1	3	1
	PLD6	1		2
III	PLDN			1

II	PLEC	32	25	40
III	PLEK2			
	PLEKHA1			1
II	PLEKHA2	1	1	5
III	PLEKHA5			3
	PLEKHA7			3
	PLEKHB2			
II + III	PLEKHF2	1	1	6
	PLEKHG2			4
	PLEKHG3	3		4
III	PLEKHG4	1		3
II	PLEKHH3	3	8	9
III	PLEKHJ1			
	PLEKHM2		1	5
	PLEKHO2			4
III	PLGRKT			
III	PLIN3		2	1
II	PLK1	2	3	5
III	PLK1S1			1
	PLK2			
III	PLK3			
	PLK4		2	5
II	PLLP	1	2	3
II	PLOD1	7	7	13
	PLOD2			
II	PLOD3	2	5	3
II	PLP2	3	9	7
III	PLRG1			
III	PLS1			
	PLS3			
III	PLSCR1			1
II	PLTP	1	2	3
II	PLXNA1	1	6	12
	PLXNA3			5
III	PLXNB1	1		3
II	PLXNB2	4	4	7
II	PLXND1	6	3	11
	PM20D2			
	PMAIP1		1	6
II	PMEPA1	3	9	14
II	PMF1	1	1	1
III	PMM1			
II + III	PMM2	2	6	10
II	PMP22	2	10	7
II	PMPCA	3	2	3
III	PMPCB			
	PMS1		1	2
	PMS2	2		2
III	PMS2P1			
	PMS2P4			2
III	PMVK		1	1

III	PNISR		2	1
II	PNKD	1	1	5
III	PNKP			
II + III	PNMA1	1	2	2
III	PNN		1	1
III	PNO1	2		2
III	PNP		2	4
III	PNPLA2			
III	PNPLA3			1
III	PNPLA4			
II	PNPLA6	1	1	1
III	PNPLA8			
II	PNPO	1	5	3
II	PNPT1	1	1	2
	PNRC1		2	7
	POC1A			4
	POC1B			
III	POC5		2	1
II + III	PODXL	14	20	26
II	PODXL2	7	6	12
II + III	POFUT1	6	9	10
II	POFUT2	1	2	7
II + III	POGK	6	8	16
	POGLUT1			2
II + III	POGZ	3	11	18
	POLA1			1
III	POLA2			1
III	POLB			
III	POLD1		1	2
II	POLD2	1	2	2
	POLD3		1	1
III	POLD4			2
II	POLDIP2	3	7	7
III	POLDIP3		1	2
II	POLE	3	1	1
III	POLE2			
II	POLE3	1	3	6
III	POLE4			1
	POLG	2		2
	POLG2	1		
	POLH		3	3
	POLI			
	POLK			
	POLL	1		1
III	POLM			1
	POLQ			3
II	POLR1A	2	4	10
	POLR1B		1	4
III	POLR1C		1	1
	POLR1D			3
	POLR1E		1	2

II	POLR2A	6	8	19
	POLR2B			1
II	POLR2C	1	3	4
	POLR2D		1	7
III	POLR2E		1	5
III	POLR2F			2
III	POLR2G			
III	POLR2H			
III	POLR2I	1		
III	POLR2J	1		
III	POLR2J3			3
II	POLR2J4	1	1	2
III	POLR2K			3
III	POLR2L	1		2
	POLR3A		1	2
	POLR3B	1		2
III	POLR3C			3
II	POLR3D	1	3	5
	POLR3E			1
III	POLR3F			2
III	POLR3G			1
III	POLR3GL			
II + III	POLR3H	2	4	9
III	POLR3K			
III	POLRMT			1
II	POMGNT1	2	3	2
III	POMP			2
III	POMT1	1	1	
III	POMT2			3
III	PON2	1		1
II	POP1	1	2	3
III	POP4			2
III	POP5	1	2	
II	POP7	4	5	11
III	POPDC3			
II	POR	3	5	5
III	PORCN			
III	POT1			
II + III	PP7080	8	15	22
III	PPA1			
III	PPA2	1		
III	PPAP2A			
	PPAP2B			1
III	PPAP2C		2	3
II	PPAPDC1B	1	4	4
	PPAPDC2		4	5
	PPARA		1	8
	PPARD		4	7
	PPARG		2	2
II + III	PPARGC1A	2	1	4
II + III	PPARGC1B	1	1	8

III	PPAT		3	1
II	PPCDC	1	1	2
III	PPCS			1
II	PPDPF	2	2	3
	PPFIA1			1
III	PPFIA3		1	2
III	PPFIBP1		1	1
III	PPHLN1		1	4
III	PPIA		2	1
II	PPIB	1	4	5
III	PPIC			
III	PPID		1	
III	PPIE	1		4
II	PPIF	4	3	5
III	PPIG			
III	PPIH			
III	PPIL1		1	5
II	PPIL2	4	10	14
III	PPIL3			
III	PPIL4		2	2
	PPIP5K1			
	PPIP5K2			
	PPL			
II + III	PPM1A	1	2	7
II + III	PPM1B	1	1	5
II + III	PPM1D	1	5	3
III	PPM1F			
II	PPM1G	5	6	9
	PPM1H		2	6
	PPM1K			
	PPM1L		2	2
III	PPM1M			1
III	PPME1			2
III	PPOX			
III	PPP1CA		1	1
II	PPP1CB	2	2	2
II	PPP1CC	1	2	9
II	PPP1R10	3	8	8
II	PPP1R11	1	2	7
III	PPP1R12A		1	2
III	PPP1R12B			3
III	PPP1R12C			
	PPP1R13B			1
III	PPP1R13L		1	
III	PPP1R14B			2
II	PPP1R15A	3	3	5
II + III	PPP1R15B	17	23	25
III	PPP1R16A			1
II	PPP1R18	1	8	21
III	PPP1R2			1
	PPP1R21			

II + III	PPP1R26	3	3	7
II	PPP1R35	1	1	3
III	PPP1R37	1		2
	PPP1R3B			3
	PPP1R3C		1	3
III	PPP1R3F			
III	PPP1R7			2
	PPP1R8			1
II	PPP1R9B	5	6	13
II	PPP2CA	2	2	8
	PPP2CB		1	
II	PPP2R1A	5	4	11
	PPP2R1B		1	3
II	PPP2R2A	2	2	4
III	PPP2R2B		2	2
II + III	PPP2R2D	4	1	6
III	PPP2R3B			2
III	PPP2R3C			
III	PPP2R4	1		4
	PPP2R5A		2	3
III	PPP2R5B			
II	PPP2R5C	1	2	4
III	PPP2R5D		4	2
	PPP2R5E		2	1
	PPP3CA		2	1
III	PPP3CB		1	1
III	PPP3CC			
III	PPP3R1		4	6
II	PPP4C	2	2	2
II + III	PPP4R1	2	2	9
	PPP4R1L	1		
	PPP4R2		1	2
III	PPP5C		1	1
II	PPP6C	1	6	14
II	PPP6R1	3	1	3
II	PPP6R2	1	1	2
II	PPP6R3	1	1	4
II + III	PPRC1	3	8	9
III	PPT1		2	3
	PPTC7		1	4
III	PPWD1			1
III	PQBP1			
	PQLC1		1	5
II	PQLC2	1	1	3
III	PQLC3			
III	PRADC1		1	1
III	PRAF2		2	1
	PRAME			3
II	PRC1	1	3	4
II + III	PRCC	1	6	13
III	PRCP			

	PRDM10		1	3
	PRDM15	1		2
	PRDM2			5
II + III	PRDM4	1	2	9
II	PRDX1	1	2	2
III	PRDX2	2		4
III	PRDX3		2	2
III	PRDX4	3		2
III	PRDX5			
II	PRDX6	1	2	3
II	PREB	1	1	2
III	PRELID1		1	1
	PREP			
	PREPL			2
	PREX1			1
II	PRIC285	7	1	4
III	PRICKLE3			1
	PRICKLE4			2
III	PRIM1			
III	PRIM2		1	
II	PRKAA1	1	5	5
	PRKAA2		2	3
II	PRKAB1	1	1	6
	PRKAB2			5
III	PRKACA		5	3
	PRKACB			2
III	PRKAG1			1
	PRKAG2			
II	PRKAR1A	2	2	2
III	PRKAR1B		1	4
	PRKAR2A			1
III	PRKAR2B			
	PRKCA		5	6
III	PRKCD			
III	PRKCDBP			1
III	PRKCI		1	1
II	PRKCSH	3	5	4
III	PRKCZ			1
III	PRKD2			1
	PRKD3		1	2
II + III	PRKDC	2	1	2
III	PRKRA			
II + III	PRKX	2	2	7
III	PRMT1		2	2
II + III	PRMT10	1	2	2
III	PRMT2		1	2
III	PRMT3			
III	PRMT5		1	4
II + III	PRMT6	1	1	2
III	PRMT7	1		2
II + III	PRNP	5	5	6



II	PROCR	2	2	5
	PROS1			
	PROSC			1
II	PROSER1	3	5	8
	PRPF18			
III	PRPF19			4
III	PRPF3		2	2
III	PRPF31			1
II	PRPF38A	1	2	5
III	PRPF38B		1	1
	PRPF39		1	2
	PRPF4		3	2
III	PRPF40A		1	
II	PRPF4B	1	1	2
II	PRPF6	3	2	3
II	PRPF8	6	8	13
III	PRPS1			1
III	PRPS2			1
	PRPSAP1		1	1
III	PRPSAP2		1	3
II	PRR11	1	4	5
II	PRR12	10	7	27
II	PRR13	1	1	2
III	PRR14			4
	PRR14L	1		10
II + III	PRR5L	1	2	3
II	PRR7	3	2	4
II	PRRC1	3	2	4
II	PRRC2A	17	20	40
II	PRRC2B	10	21	33
II	PRRC2C	5	9	17
	PRRG1		1	2
III	PRRX2	1		1
III	PRSS16			
II	PRSS21	4	7	7
II + III	PRSS23	6	6	5
III	PRSS27			
II	PRSS56	5	3	3
III	PRTFDC1			
II + III	PRUNE	1	1	8
II	PSAP	7	5	3
III	PSAT1		2	7
	PSD3		1	3
II + III	PSEN1	3	4	9
III	PSEN2		1	1
III	PSENEEN			
	PSIMCT-1		1	1
III	PSIP1		1	
II + III	PSKH1	1	1	4
III	PSMA1			2
II	PSMA2	1	3	4

II	PSMA3	1	1	1
II	PSMA4	1	1	3
III	PSMA5		1	2
III	PSMA6			1
III	PSMA7		1	5
III	PSMB1			
III	PSMB10			
III	PSMB2	1		4
III	PSMB3	1		
III	PSMB4	2		
II	PSMB5	1	1	2
III	PSMB6			1
III	PSMB7		4	4
III	PSMB8		1	
III	PSMC2		1	2
III	PSMC3	1		
III	PSMC3IP			
II	PSMC4	1	1	2
II	PSMC5	2	1	2
III	PSMC6			
III	PSMD1			2
III	PSMD10			1
III	PSMD11			1
II	PSMD12	1	2	2
III	PSMD13		1	3
III	PSMD14		1	2
II	PSMD2	2	2	2
II	PSMD3	3	4	6
III	PSMD4	1		
	PSMD5		1	5
III	PSMD6			
II	PSMD7	3	1	5
II	PSMD8	1	2	4
III	PSMD9		2	3
III	PSME1			
III	PSME2			
II	PSME3	1	7	11
	PSME4			1
III	PSMF1			2
III	PSMG1			
III	PSMG2			
III	PSMG3		2	1
III	PSMG4		1	1
III	PSPC1			1
III	PSPH	1		
III	PSRC1			2
III	PSTK			
	PTAR1		2	3
II	PTBP1	6	6	11
	PTBP2			3
II	PTBP3	1	2	8

	PTCD2		1	3
	PTCD3			1
II + III	PTCH1	1	1	4
II	PTDSS1	1	6	6
III	PTDSS2		1	10
II	PTEN	1	3	9
	PTER			1
II	PTGES	3	2	4
II	PTGES2	1	2	3
II	PTGES3	2	2	4
	PTGFRN		2	2
III	PTGR1			1
III	PTGR2			
III	PTGS1		4	5
	PTK2			1
	PTK2B			
III	PTK7		1	2
II	PTMA	1	2	3
III	PTMS	2		
III	PTOV1	1		2
II	PTP4A1	4	6	13
II	PTP4A2	2	3	9
	PTPDC1			3
III	PTPLA			
II	PTPLAD1	1	4	4
	PTPLB		2	4
III	PTPMT1	1	1	
III	PTPN1		7	6
II	PTPN11	2	4	8
II	PTPN12	3	3	6
	PTPN13			
II + III	PTPN14	3	4	6
III	PTPN18			
III	PTPN2			
II + III	PTPN21	1	2	7
II	PTPN23	4	5	4
	PTPN3		2	4
II + III	PTPN9	1	1	5
III	PTPRA	1		2
II	PTPRF	3	4	6
II + III	PTPRJ	1	4	7
	PTPRK		1	
	PTPRM	1		1
II	PTPRS	4	3	3
III	PTPRU			
II	PTRF	2	3	16
III	PTRH1			2
II + III	PTRH2	2	2	4
III	PTRHD1			
III	PTS			1
III	PTTG1		1	1

II	PTTG1IP	2	5	6
III	PUF60		1	3
II + III	PUM1	3	7	4
	PUM2		6	9
II + III	PURA	2	7	8
II + III	PURB	1	6	12
	PUS1		3	10
	PUS3		1	3
III	PUS7		1	1
	PUS7L			
III	PUSL1			
II	PVR	2	4	14
	PVRL2		2	4
	PVRL3		3	
II	PVT1	2	5	9
II	PWP1	2	1	1
II	PWP2	1	1	5
	PWWP2A			3
II + III	PWWP2B	3	2	9
II	PXDC1	2	5	8
II + III	PXDN	16	17	19
III	PXK		1	
III	PXMP2			
II	PXN	5	5	17
III	PYCR1		2	5
III	PYCR2		1	1
	PYCRL			1
III	PYGB	2		2
II	PYGL	2	1	4
II + III	PYGO1	1	2	9
II + III	PYGO2	3	10	14
III	PYROXD1		2	
III	PYROXD2			
II	QARS	2	1	2
III	QDPR			1
II	QKI	2	5	5
III	QPCTL		1	3
III	QPRT		1	2
	QRICH1		2	7
III	QRSL1			1
II + III	QSER1	4	8	23
II	QSOX1	4	1	5
II + III	QSOX2	2	10	16
III	QTRT1			
II + III	QTRTD1	2	2	4
III	R3HCC1			4
III	R3HDM1			2
III	R3HDM2			1
III	R3HDM4			
II	RAB10	1	1	5
III	RAB11A	1		

III	RAB11B	2		2
	RAB11FIP1		1	14
	RAB11FIP2			4
III	RAB11FIP3			
II	RAB11FIP5	1	2	9
III	RAB12			
III	RAB13			
II	RAB14	1	3	4
	RAB17		1	3
III	RAB18			3
III	RAB1A		1	5
II	RAB1B	3	6	8
	RAB20	1		7
III	RAB21		2	3
II	RAB22A	2	2	1
	RAB23		1	3
III	RAB24			
	RAB26			
III	RAB27A			
	RAB28	1		3
III	RAB2A		1	1
III	RAB2B			
	RAB30		1	
III	RAB31	1		1
	RAB32		1	2
	RAB33B			
II	RAB34	1	2	1
II	RAB35	3	4	9
	RAB3D		1	5
	RAB3GAP1		1	4
II + III	RAB3GAP2	1	3	5
	RAB3IL1		3	5
	RAB3IP		1	
	RAB40B			
II + III	RAB40C	1	3	10
III	RAB4A			1
II	RAB5A	1	1	2
III	RAB5B		2	5
II	RAB5C	3	3	8
III	RAB6A		2	1
III	RAB6B			
II	RAB7A	1	3	5
	RAB7L1			1
II	RAB8A	3	2	8
	RAB8B			2
II + III	RAB9A	1	1	2
III	RABAC1	3		
II	RABEP1	1	3	6
III	RABEP2			1
III	RABEPK		2	
	RABGAP1	2		1

	RABGAP1L			
	RABGEF1			
III	RABGGTA	1		
III	RABGGTB			1
	RABIF		2	3
III	RABL3			1
	RABL5			
II	RAC1	1	3	5
	RACGAP1		1	2
II	RAD1	1	3	1
	RAD17			
III	RAD18		1	5
III	RAD21		2	3
III	RAD23A			
III	RAD23B		1	7
III	RAD50			5
III	RAD51			
III	RAD51AP1			
	RAD51B			2
III	RAD51C			1
	RAD52	1	1	
III	RAD54B			1
III	RAD54L		1	2
II	RAD54L2	1	1	6
	RAD9A	1		4
III	RAE1		2	5
II + III	RAF1	3	3	8
II + III	RAI1	8	12	32
	RAI14		2	3
III	RALA			
III	RALB			1
	RALBP1		1	2
	RALGAPA1		2	1
	RALGAPB		1	4
	RALGDS		1	3
II	RALGPS2	1	2	1
II	RALY	1	2	2
II	RAN	3	5	4
III	RANBP1			
	RANBP10		4	12
	RANBP17			2
	RANBP2		2	6
II	RANBP3	1	2	4
	RANBP6			2
III	RANBP9	1		2
II	RANGAP1	8	10	18
III	RANGRF		1	1
III	RAP1A			1
III	RAP1B			
III	RAP1GAP		1	
II	RAP1GAP2	2	5	13

III	RAP1GDS1			
	RAP2A	1		5
II + III	RAP2B	1	2	5
II	RAP2C	1	3	4
II	RAPGEF1	1	3	6
	RAPGEF2		1	2
	RAPGEF6		2	6
II + III	RAPH1	1	5	14
	RARA		6	11
III	RARG			1
III	RARS	1		2
III	RARS2		1	
	RASA1			3
	RASA2			2
III	RASA3			
II + III	RASAL2	2	5	8
	RASGEF1B		2	1
III	RASIP1		2	3
III	RASL10B			5
	RASL11A			
III	RASSF1		3	1
II	RASSF3	1	4	1
III	RASSF7			
II + III	RASSF8	4	4	9
II	RAVER1	2	2	8
	RAVER2			2
II	RB1	1	2	3
II + III	RB1CC1	1	4	4
	RBAK		3	6
III	RBBP4		2	3
	RBBP5			1
II	RBBP6	2	6	10
III	RBBP7		1	
III	RBBP8		2	1
III	RBBP9		1	3
III	RBCK1		1	2
III	RBFA			
II	RBFOX2	2	2	8
III	RBKS			
	RBL1		2	2
	RBL2			1
II	RBM10	1	2	1
II + III	RBM12	2	7	15
II + III	RBM12B	2	3	9
II	RBM14	5	3	11
II + III	RBM15	5	15	19
II + III	RBM15B	5	9	17
III	RBM17			
III	RBM18		1	
III	RBM19	1		3
	RBM22		2	5

II	RBM23	1	4	5
III	RBM25		1	3
II	RBM26	1	1	1
III	RBM27		7	8
II	RBM28	1	2	2
II	RBM3	2	2	7
II	RBM33	1	2	5
III	RBM34			5
II + III	RBM38	6	7	14
II	RBM39	2	7	3
	RBM41			1
III	RBM42		1	1
III	RBM45			
	RBM47			2
	RBM48			1
	RBM4B			3
III	RBM5		1	1
	RBM6	1		3
III	RBM7			
III	RBM8A			2
III	RBMS1			2
II	RBMX	2	3	4
III	RBMX2			
	RBPJ		1	4
III	RBPMS		1	7
III	RBPMS2			2
III	RBX1			
II	RC3H1	1	2	10
II + III	RC3H2	1	2	4
	RCAN1		1	5
III	RCAN3	1		
	RCBTB1			
III	RCC1		3	7
II	RCC2	1	2	13
	RCCD1	1		2
III	RCE1		2	2
III	RCHY1			
	RCL1		2	2
II	RCN1	3	2	4
II	RCN2	1	1	1
II	RCN3	3	2	3
II + III	RCOR1	4	6	8
III	RCOR2			
II	RCOR3	2	2	6
III	RDBP			1
	RDH10			
II	RDH11	2	1	4
II	RDH13	5	4	10
III	RDX		4	7
	RECK		1	1
	RECQL			



III	RECQL4		1	1
	RECQL5			1
III	REEP1			
III	REEP2			
III	REEP3	1	1	
II	REEP4	7	6	5
II	REEP5	2	4	4
III	REEP6			
	REL		1	3
III	RELA		1	5
III	RELB			
III	RELL2			1
III	RELT			1
II + III	REPIN1	5	4	16
III	REPS1			1
II	RER1	4	4	3
II	RERE	1	4	7
II + III	REST	7	4	6
II	RETSAT	1	1	2
	REV1		2	1
	REV3L		2	6
II	REXO1	1	4	13
III	REXO2			
III	REXO4	1		1
III	RFC1			2
III	RFC2			
III	RFC3		1	2
III	RFC4			
III	RFC5		1	2
III	RFK	1		
II	RFNG	1	3	3
II	RFT1	1	1	4
	RFTN1			
	RFWD2	1		1
II + III	RFWD3	4	7	8
III	RFX1		1	2
II	RFX5	1	1	2
	RFX7		3	4
III	RFXANK			1
III	RFXAP		1	
III	RGL2			2
III	RGL3			
II + III	RGMB	2	3	5
	RGNEF		2	4
II	RGP1	3	2	3
III	RGS10			
	RGS12			4
III	RGS14			
III	RGS19			1
	RGS2		1	
III	RHBDD2		2	3

III	RHBDD3			2
III	RHBDF1			1
II	RHBDF2	2	2	5
III	RHEB			1
III	RHOA	3		3
II + III	RHOB	15	13	10
	RHOBTB1			7
II + III	RHOBTB2	3	5	20
	RHOBTB3		1	5
III	RHOC		1	1
III	RHOD		1	1
II + III	RHOF	5	9	23
	RHOG		1	7
III	RHOT1			
III	RHOT2			1
II + III	RHOU	1	2	4
II + III	RHOV	6	7	8
III	RHPN1		1	2
III	RHPN2			1
II	RIBC2	2	1	2
II + III	RIC8A	5	3	5
	RIC8B		2	5
II + III	RICTOR	1	2	5
	RIF1		2	3
III	RILP			
III	RILPL1		1	4
III	RILPL2	1		
II + III	RIMKLB	1	2	5
II	RIMS4	1	2	5
III	RIN1			
	RIN2		1	1
III	RING1	1	1	
II	RINT1	1	1	2
III	RIOK1	1		
III	RIOK2			
III	RIOK3		1	1
II + III	RIPK1	1	2	8
	RIPK2			1
	RIPK4			1
	RIT1		1	
	RLF		4	8
II + III	RLIM	1	3	11
III	RLTPR			1
	RMI1			
II + III	RMI2	2	2	4
	RMND1			
	RMND5A		1	2
III	RMND5B			
	RMRP	2	1	
III	RNASEH1	1		3
II	RNASEH2A	1	1	3

III	RNASEH2B			1
II	RNASEH2C	1	4	2
II	RNASEK	6	5	6
	RNASEL			
III	RNASET2			
	RND3			
II	RNF10	2	2	5
	RNF11			1
II + III	RNF111	1	3	4
	RNF113A			
II	RNF114	1	1	1
III	RNF115			1
II	RNF121	2	4	9
III	RNF123			1
III	RNF126			3
	RNF13		2	3
	RNF130		2	1
	RNF135			
III	RNF138			
II + III	RNF139	2	4	5
	RNF14			
III	RNF141			
	RNF144B	1		3
II + III	RNF145	1	4	5
	RNF146			1
III	RNF149	1		1
	RNF150			
	RNF166			1
III	RNF167		2	3
	RNF168		1	6
	RNF169		4	10
III	RNF170	1		1
II	RNF181	1	2	1
II + III	RNF182	5	4	10
	RNF185		4	13
III	RNF187		6	5
	RNF19A		1	4
	RNF19B		1	
III	RNF2		1	1
II	RNF20	1	2	3
II	RNF212	2	2	2
II + III	RNF213	6	10	13
III	RNF214		1	
III	RNF215			1
	RNF216		1	9
II + III	RNF216P1	2	8	19
II + III	RNF217	1	3	5
	RNF219		1	1
III	RNF220	1		
II + III	RNF24	1	2	5
III	RNF25	1		1

II + III	RNF26	11	22	27
III	RNF31			
II + III	RNF34	2	3	5
	RNF38			
II + III	RNF4	1	1	4
II	RNF40	1	6	11
	RNF41		4	6
III	RNF44	2		4
	RNF6		1	4
III	RNF7			1
	RNF8			2
III	RNFT1			1
II	RNFT2	2	5	8
	RNGTT			8
II	RNH1	1	2	2
II	RNMT	1	1	2
	RNMTL1		2	4
III	RNPC3		1	
III	RNPEP			
II	RNPEPL1	2	3	10
II	RNPS1	1	3	4
	ROBO1		1	2
III	ROCK1		3	1
II	ROCK2	2	5	7
III	ROGDI			
III	ROMO1			2
II + III	ROR2	5	10	15
	RP2	1		2
III	RP9			
	RPA1	1		2
III	RPA2	1		
III	RPA3			
III	RPAIN			1
II	RPAP1	1	1	5
III	RPAP2		1	
III	RPAP3			2
III	RPE			1
III	RPF1		1	1
III	RPF2			
III	RPGR			
III	RPGRIP1L			
III	RPIA			
II	RPL10	1	2	3
III	RPL10A		2	3
III	RPL11			1
III	RPL12	2		
II	RPL13	2	3	3
II	RPL13A	1	3	1
	RPL13P5			
III	RPL14		2	1
II	RPL15	3	1	4

III	RPL17		1	2
II	RPL18	1	5	2
III	RPL18A			
III	RPL19		2	3
III	RPL22		2	2
III	RPL22L1			
III	RPL23	1	2	
III	RPL23A	1	2	
III	RPL24		1	
III	RPL26			1
III	RPL26L1			
III	RPL27		2	
II	RPL27A	2	5	9
II	RPL28	2	1	4
III	RPL29		1	2
II	RPL3	1	2	2
III	RPL30		1	3
III	RPL31			3
II	RPL32	1	1	3
III	RPL34			
II	RPL35	1	3	1
III	RPL35A			
II	RPL36	1	1	1
III	RPL36AL			
III	RPL37		2	1
II	RPL37A	1	1	2
II	RPL38	3	1	1
III	RPL39L			
II	RPL4	3	1	3
II	RPL41	1	2	6
III	RPL5	1	1	
II	RPL6	1	3	7
III	RPL7A		1	3
II	RPL8	2	5	2
II	RPL9	2	3	3
III	RPLP0		1	6
II	RPLP1	3	3	4
III	RPLP2			1
II	RPN1	1	5	4
II + III	RPN2	9	9	9
	RPP14		1	6
II + III	RPP25	3	6	16
	RPP25L			3
II	RPP30	1	1	1
	RPP38		1	2
III	RPP40			
III	RPRD1A		2	3
II + III	RPRD1B	2	7	12
II + III	RPRD2	7	16	30
III	RPS11	1	1	
III	RPS12		2	

III	RPS13	1		
III	RPS14	1	1	
III	RPS15		1	3
II	RPS15A	1	1	2
III	RPS16			3
III	RPS18		1	
III	RPS19		1	2
III	RPS19BP1	1		
III	RPS20	1		
II	RPS21	1	2	3
II	RPS23	1	1	2
III	RPS24		1	
III	RPS25		1	2
III	RPS26			1
III	RPS27A		3	3
III	RPS27L			
III	RPS28			
III	RPS29	1		1
III	RPS3		2	1
II	RPS4X	1	4	3
II	RPS5	1	2	4
III	RPS6		4	2
	RPS6KA1			3
	RPS6KA3		2	2
III	RPS6KA4		1	2
	RPS6KA5			
II + III	RPS6KB1	1	2	8
III	RPS6KB2	1		
	RPS6KC1		2	1
II	RPS7	2	2	1
III	RPS8		1	3
III	RPS9	2	1	
II	RPTOR	4	8	22
II	RPUSD1	3	2	15
II + III	RPUSD2	1	1	4
III	RPUSD3	1		3
	RPUSD4			2
	RQCD1		2	3
II + III	RRAGA	2	3	3
	RRAGB			1
	RRAGC			
III	RRAS			1
III	RRAS2			
II	RRBP1	1	1	3
II + III	RREB1	5	7	20
	RRM1		1	1
II	RRM2	3	5	3
	RRM2B		1	1
	RRN3		1	1
III	RRNAD1		1	3
II	RRP1	1	2	3

II	RRP12	1	2	1
III	RRP15			1
II + III	RRP1B	2	1	3
II	RRP36	2	1	4
II	RRP7A	2	3	6
III	RRP7B	1		2
	RRP8		1	1
III	RRP9			
III	RRS1			1
	RSAD1		1	4
	RSBN1	1		1
II + III	RSBN1L	1	1	1
II	RSF1	1	4	8
	RSG1	1		2
II	RSL1D1	2	3	5
III	RSL24D1			
	RSPH3			
	RSPRY1	1		
III	RSRC1			1
III	RSRC2			
III	RSU1			
III	RTCA			
III	RTF1			2
	RTKN		3	5
	RTKN2			1
III	RTN2			
II	RTN3	2	7	2
II	RTN4	6	8	9
	RTN4IP1			
II + III	RTN4R	3	5	5
II	RTN4RL2	3	3	9
	RTTN			
III	RUFY1		1	1
III	RUFY2			
III	RUFY3		3	1
II + III	RUNDC1	2	4	2
III	RUSC1		3	5
II + III	RUSC2	1	6	12
II	RUVBL1	1	1	4
III	RUVBL2		1	1
III	RWDD1			
	RWDD2A			
	RWDD2B		1	1
	RWDD3			
II	RXRA	7	6	25
	RXRB		3	6
	RYBP		3	6
III	RYK			2
III	S100A10		2	2
II	S100A11	2	4	5
III	S100A13			1

III	S100A16			
III	S100A2			
II	S100A4	1	1	2
III	S100A6			
III	S100P			
	S100PBP			3
	S1PR5		2	1
III	SAA1			
III	SAAL1			
III	SAC3D1	1		1
	SACM1L			2
II + III	SACS	1	3	3
III	SAE1			2
III	SAFB	1		
III	SAFB2			1
III	SAMD1			
III	SAMD10			1
	SAMD11	2		3
II + III	SAMD4A	2	2	5
II	SAMD4B	3	5	7
	SAMD8		1	1
III	SAMHD1			
III	SAMM50	1	2	
	SAP130		1	3
III	SAP18		1	1
III	SAP30			1
II	SAP30BP	1	2	8
	SAP30L		1	2
II	SAPCD2	1	4	12
II	SAR1A	2	2	4
II	SAR1B	1	3	3
III	SARNP			1
II	SARS	2	4	3
III	SARS2		1	1
III	SART1			
II	SART3	1	1	1
	SASH1		1	5
III	SASS6		1	1
III	SAT1		1	1
III	SAT2		1	2
	SATB2			6
	SAV1		1	3
	SAYSD1			3
III	SBDS			1
III	SBDSP1			
III	SBF1	1		1
	SBF2		3	5
	SBNO1			2
II	SBNO2	6	1	4
	SC5DL		2	4
II	SCAF1	8	15	27



	SCAF11		2	5
	SCAF4		2	4
II + III	SCAF8	2	7	11
	SCAI		1	1
III	SCAMP1		1	
III	SCAMP2	1	1	
II	SCAMP3	2	2	4
II	SCAMP4	5	7	11
III	SCAMP5			1
III	SCAND1	2		1
II	SCAP	4	3	5
III	SCAPER			3
II + III	SCARA3	13	21	33
II	SCARB1	10	12	13
II	SCARB2	1	1	6
III	SCCPDH			
II	SCD	16	24	26
III	SCD5		1	4
III	SCFD1			
	SCFD2			1
III	SCLT1			4
III	SCMH1			1
	SCML1		1	4
	SCML2			
III	SCN1B			
II + III	SCO1	1	1	2
III	SCOC			
III	SCP2			1
III	SCPEP1			
III	SCRIB	2		
III	SCRN1			2
III	SCRN2			
III	SCRN3			
II	SCYL1	1	1	3
II + III	SCYL2	1	1	4
	SCYL3		1	1
II	SDAD1	1	1	1
II + III	SDC1	12	13	18
	SDC2			
	SDC3		1	2
II	SDC4	4	4	5
III	SDCBP		2	3
II	SDCCAG3	2	5	7
III	SDCCAG8	1		
	SDF2		4	9
II	SDF2L1	2	1	2
II	SDF4	4	9	5
II	SDHA	3	3	10
	SDHAF1			1
	SDHAF2			
III	SDHAP1	1		1

II	SDHAP2	1	1	2
III	SDHAP3			2
III	SDHB		1	1
II	SDHC	1	3	3
III	SDHD		1	
III	SDR39U1			
III	SEC11A			1
III	SEC11C			
III	SEC13		1	5
II	SEC14L1	1	1	5
III	SEC14L2			
III	SEC14L4			
II + III	SEC16A	11	13	24
	SEC22A		1	1
III	SEC22B		2	3
III	SEC22C		3	3
	SEC23A	1		1
III	SEC23B			1
	SEC23IP		2	4
II + III	SEC24A	1	5	5
	SEC24B	1		2
II	SEC24C	2	4	4
	SEC24D			1
II	SEC31A	1	1	2
II + III	SEC61A1	18	26	26
III	SEC61A2		2	3
III	SEC61B			
III	SEC61G			
III	SEC62		1	4
III	SEC63			2
III	SECISBP2			2
II + III	SECISBP2L	1	3	4
	SECTM1		1	4
III	SEH1L		1	2
	SEL1L		6	8
II + III	SEL1L3	1	2	3
III	SELENBP1			
III	SELK			1
III	SELM		2	4
III	SELO		1	1
II + III	SELRC1	4	4	7
III	SELT			2
II	SEMA3B	2	1	2
	SEMA3C			
III	SEMA3F		1	1
II + III	SEMA4B	1	3	5
	SEMA4C		2	2
	SEMA4D			2
	SEMA6D	1		3
	SENP1	1		6
II	SENP2	1	3	5

	SENP5			4
III	SENP6		1	1
III	SENP7			
	SENP8			1
	15-Sep		2	3
II	SEPHS1	1	3	1
II + III	SEPHS2	1	3	7
II	SEPN1	1	6	6
	SEPSECS			1
	10-Sep			1
	11-Sep			3
III	2-Sep		2	
III	3-Sep			2
III	6-Sep			1
III	7-Sep			1
	8-Sep			1
	9-Sep		6	10
II	SEPW1	1	3	4
	SERAC1			
II	SERBP1	2	5	8
III	SERF2	1	2	
III	SERGEF			
III	SERINC1			1
III	SERINC2		1	2
II	SERINC3	5	7	5
III	SERP1	2		1
III	SERPINB1			
II	SERPINB6	1	2	3
II + III	SERPINE1	5	17	10
II	SERPINE2	3	2	1
II	SERPINH1	2	6	8
III	SERPINI1			
II + III	SERTAD1	3	1	3
II + III	SERTAD2	4	4	14
II + III	SERTAD3	4	6	7
	SERTAD4			3
	SESN1			
II	SESN2	1	1	6
	SESN3			1
	SESTD1			
II	SET	3	6	7
II	SETD1A	1	3	9
II + III	SETD1B	10	16	30
II + III	SETD2	3	6	11
II + III	SETD3	1	1	2
III	SETD4			1
II	SETD5	9	21	41
	SETD6	1		1
	SETD7		9	11
III	SETD8		3	2
III	SETD9			

II	SETDB1	1	7	7
	SETDB2			3
	SETMAR		1	5
II + III	SETX	5	7	11
III	SEZ6L2		1	1
II	SF1	5	8	15
III	SF3A1		1	3
III	SF3A2		2	2
II	SF3A3	2	4	5
	SF3B1	1		4
III	SF3B14			
II	SF3B2	2	4	6
II	SF3B3	3	12	12
II	SF3B4	2	5	7
	SF3B5	2		3
III	SF11			
	SFMBT1		4	6
	SFMBT2			5
	SFN		3	3
II	SFPQ	3	1	4
III	SFR1			
III	SFSWAP			
III	SFT2D1		1	1
II + III	SFT2D2	1	1	1
	SFT2D3			1
III	SFXN1			3
III	SFXN2			
III	SFXN3			
II	SFXN4	1	1	1
III	SFXN5			1
III	SGCB	1		1
III	SGCE			1
II	SGK1	9	8	15
II + III	SGK196	8	8	11
II + III	SGK223	4	7	15
II + III	SGMS1	2	6	10
II + III	SGMS2	1	2	3
III	SGOL1		1	2
III	SGOL2			2
	SGPL1		1	1
II + III	SGPP1	2	3	7
II + III	SGSH	9	19	23
III	SGSM2		1	2
III	SGSM3			
II	SGTA	3	4	4
III	SGTB			
III	SH2B1			
III	SH2D2A			1
III	SH2D3A			
II	SH2D4A	1	1	5
III	SH3BGRL			

	SH3BGRL2			
II	SH3BGRL3	1	1	2
III	SH3BP2	3		8
II + III	SH3BP4	3	6	16
II	SH3BP5	1	1	3
III	SH3BP5L		1	8
	SH3D19		1	2
III	SH3GL1		2	2
III	SH3GL2			
	SH3GLB1			1
III	SH3GLB2		1	3
III	SH3KBP1			
II + III	SH3PXD2A	4	5	19
II + III	SH3PXD2B	5	6	13
	SH3RF1			4
	SH3RF2			1
II + III	SH3TC1	2	4	16
III	SHARPIN		1	2
	SHB		2	4
II	SHC1	3	10	17
III	SHCBP1		1	1
III	SHFM1			
III	SHISA4			1
III	SHISA5		3	5
III	SHKBP1			
III	SHMT1			3
II	SHMT2	1	3	4
	SHOC2		1	
II + III	SHPK	2	1	8
	SHPRH			
	SHQ1		1	1
II	SHROOM1	2	2	4
II + III	SHROOM3	3	2	9
	SIAE	2		
II + III	SIAH1	1	1	8
II + III	SIAH2	1	3	4
III	SIDT2		1	3
III	SIGIRR			
II	SIGMAR1	1	9	4
II + III	SIK1	10	4	17
	SIK2	3		8
II + III	SIK3	4	2	7
II	SIKE1	1	1	1
II	SIL1	1	2	2
	SIM2	1		5
II + III	SIN3A	2	7	12
	SIN3B	1		3
II	SIPA1	1	1	2
II + III	SIPA1L1	1	1	3
	SIPA1L2		1	2
II + III	SIPA1L3	2	3	10

	SIRT1		1	2
III	SIRT2	1	1	
	SIRT3		1	2
	SIRT4			
III	SIRT5			
III	SIRT6			
	SIRT7		1	2
III	SIVA1			
	SIX1		1	4
II	SIX2	1	5	11
II + III	SIX4	4	6	13
II + III	SIX5	1	5	6
III	SKA1			4
III	SKA2			
III	SKA3		1	2
III	SKAP2			
II	SKI	5	9	16
II + III	SKIL	3	3	8
III	SKIV2L	1		
III	SKIV2L2			1
III	SKP1			
	SKP2			1
II	SLAIN2	1	1	2
III	SLBP		1	5
II + III	SLC10A3	5	16	20
II + III	SLC11A2	1	2	5
	SLC12A2		1	4
	SLC12A6			1
II + III	SLC12A7	13	21	29
II	SLC12A9	5	3	4
II + III	SLC15A4	3	5	4
II + III	SLC16A1	7	11	18
	SLC16A10			
	SLC16A13			3
II	SLC16A3	18	18	26
II + III	SLC16A5	1	2	7
	SLC16A7			
	SLC16A9		1	5
III	SLC17A5			
III	SLC18B1			
II	SLC19A1	2	9	6
	SLC19A2		1	2
	SLC1A1		1	1
II + III	SLC1A3	6	4	3
II + III	SLC1A4	5	6	10
II	SLC1A5	10	18	19
	SLC20A1		3	6
II	SLC20A2	2	4	3
III	SLC22A18			2
II + III	SLC22A23	3	4	6
	SLC22A4		1	3

II	SLC22A5	2	1	2
II	SLC23A2	1	3	4
	SLC24A6		1	3
III	SLC25A1	1		1
III	SLC25A10	2		1
II	SLC25A11	1	2	4
	SLC25A12			
III	SLC25A13		1	1
III	SLC25A14			
III	SLC25A15			
	SLC25A16			
II	SLC25A17	2	2	2
	SLC25A19		2	3
	SLC25A20			
	SLC25A21			
II	SLC25A22	1	2	2
III	SLC25A23	2		4
	SLC25A24		1	2
II	SLC25A25	1	4	5
III	SLC25A26			
II + III	SLC25A28	3	2	10
II + III	SLC25A29	5	10	19
II	SLC25A3	3	3	3
	SLC25A30		1	2
	SLC25A32			2
III	SLC25A33			
II + III	SLC25A36	1	5	9
II + III	SLC25A37	3	5	9
	SLC25A38	1		3
II	SLC25A39	3	1	2
III	SLC25A4	1		
III	SLC25A40			
III	SLC25A42			1
II + III	SLC25A43	1	3	3
	SLC25A44		6	11
	SLC25A46		1	2
II	SLC25A5	2	2	3
II	SLC25A6	8	8	10
	SLC26A11	1		
II + III	SLC26A2	3	8	11
III	SLC26A6	1		1
III	SLC27A1	1		2
	SLC27A2			2
II	SLC27A4	4	9	9
III	SLC27A5			
II	SLC29A1	1	8	8
III	SLC29A2		3	8
II	SLC2A1	10	13	12
III	SLC2A11			
	SLC2A13			
II + III	SLC2A3	3	7	8

II	SLC2A4RG	1	2	5
II + III	SLC2A6	3	2	2
III	SLC2A8	1		2
II + III	SLC30A1	3	3	10
II	SLC30A5	1	2	3
	SLC30A6		3	5
	SLC30A7		1	1
III	SLC30A9	1		2
II	SLC31A1	1	1	5
II + III	SLC31A2	1	2	4
II + III	SLC33A1	2	6	8
	SLC35A1			
	SLC35A2		5	14
	SLC35A3			
II	SLC35A4	6	10	21
II + III	SLC35A5	1	2	2
III	SLC35B1		1	2
II	SLC35B2	3	7	15
	SLC35B3			1
II + III	SLC35B4	3	1	8
II + III	SLC35C1	3	8	11
II	SLC35C2	4	6	15
	SLC35D1			
	SLC35D2	1		
II + III	SLC35E1	6	16	31
II + III	SLC35E3	1	1	3
	SLC35E4			
II	SLC35F2	3	5	5
II	SLC35F5	1	1	2
	SLC35G1			1
II	SLC36A1	1	3	4
III	SLC36A4			
	SLC37A1		1	3
II + III	SLC37A3	1	2	7
III	SLC37A4		2	5
II	SLC38A1	8	16	30
II	SLC38A10	5	7	18
II + III	SLC38A2	7	10	20
III	SLC38A6			2
II	SLC38A7	2	4	8
III	SLC38A9			
II	SLC39A1	7	10	13
II + III	SLC39A10	1	4	5
II + III	SLC39A11	1	3	4
III	SLC39A13	2	1	
II + III	SLC39A14	7	22	23
II	SLC39A3	2	3	5
II	SLC39A6	2	8	9
II	SLC39A7	8	12	14
III	SLC39A8			1
II + III	SLC39A9	5	4	10



II	SLC3A2	10	17	13
II	SLC41A1	4	5	13
	SLC41A2			2
III	SLC41A3	2	3	
III	SLC43A1			
II	SLC43A2	8	6	8
	SLC44A1	1		
III	SLC44A2		3	3
	SLC45A3	1		4
II + III	SLC45A4	3	1	6
III	SLC47A1			1
II	SLC48A1	1	1	5
III	SLC4A1AP			2
II	SLC4A2	3	7	5
	SLC4A7		2	2
III	SLC50A1			1
II	SLC52A2	6	3	6
	SLC5A3	2		7
II	SLC5A6	1	3	7
	SLC6A15		2	
II	SLC6A6	4	10	12
II	SLC6A8	2	4	10
II	SLC6A9	3	10	9
II + III	SLC7A1	11	28	48
II + III	SLC7A11	1	3	5
II + III	SLC7A2	1	3	6
II	SLC7A5	46	50	43
II + III	SLC7A6	5	5	14
III	SLC7A6OS			2
III	SLC9A1		2	9
	SLC9A3			
	SLC9A3R1		2	4
III	SLC9A3R2			2
	SLC9A6			3
	SLC9A8		5	6
II	SLCO3A1	11	21	19
II	SLCO4A1	8	10	21
	SLFN12			2
	SLFN5		1	2
III	SLIRP		1	2
III	SLK	1		2
	SLMAP		1	2
III	SLMO1			3
III	SLMO2		4	4
III	SLPI	1		1
III	SLTM			
III	SLU7			
	SLX4		1	3
	SMAD1			5
II + III	SMAD2	1	2	5
II + III	SMAD3	6	7	17

II + III	SMAD4	1	3	9
II + III	SMAD5	2	10	15
II + III	SMAD6	5	7	13
II + III	SMAD7	1	4	5
	SMAGP			3
	SMAP1		2	1
III	SMAP2		1	2
	SMARCA1			
III	SMARCA2	1		3
III	SMARCA4	2		2
	SMARCA5		2	2
	SMARCAD1		1	1
	SMARCAL1			
III	SMARCB1		1	1
III	SMARCC1		4	7
III	SMARCC2	1		3
II	SMARCD1	3	4	5
III	SMARCD2			
III	SMARCD3		1	
III	SMARCE1			1
II	SMC1A	4	8	14
III	SMC2		3	2
III	SMC3		1	2
III	SMC4			1
III	SMC5			1
III	SMC6			1
	SMCHD1	1		
	SMCR7		4	2
II + III	SMCR7L	4	3	12
II + III	SMCR8	15	19	39
II + III	SMEK1	3	4	7
	SMEK2		2	6
II + III	SMG1	2	1	5
II	SMG5	1	5	14
	SMG6		3	9
II	SMG7	4	3	15
II + III	SMG8	3	6	10
III	SMG9		1	
II	SMNDC1	1	1	1
II	SMOC1	1	7	4
III	SMOX		1	
II + III	SMPD1	3	7	7
III	SMPD2			
II	SMPD4	1	2	8
III	SMPDL3A			
III	SMS	1		1
III	SMTN			1
III	SMU1	1	1	
	SMUG1	1		1
II + III	SMURF1	1	5	6
	SMURF2			3

III	SMYD2	1		
III	SMYD3			1
	SMYD4			
II	SMYD5	1	5	8
III	SNAI1		2	5
III	SNAP23			
III	SNAP25			
III	SNAP29			
II + III	SNAP47	4	2	7
III	SNAPC1		1	2
II	SNAPC2	1	1	2
III	SNAPC3			2
II	SNAPC4	5	1	9
	SNAPC5			2
III	SNAPIN			
II	SND1	1	2	5
III	SNF8			1
III	SNHG1		1	4
II	SNHG10	1	2	1
III	SNHG11		1	1
III	SNHG12			
III	SNHG15			1
III	SNHG5			
III	SNHG6			
III	SNHG8			
III	SNHG9			
	SNIP1		1	4
	SNRK	2		6
II	SNRNP200	4	2	3
III	SNRNP25		1	2
III	SNRNP27			1
	SNRNP35		1	1
III	SNRNP40		2	1
III	SNRNP48		4	6
II	SNRNP70	3	3	3
III	SNRPA		2	1
III	SNRPA1		1	
III	SNRPB			4
III	SNRPB2		1	1
II	SNRPC	1	1	2
III	SNRPD1		1	1
III	SNRPD2		1	2
III	SNRPD3		1	1
III	SNRPE		1	
II	SNRPF	1	1	1
III	SNRPG			
III	SNTA1			1
	SNTB1			
	SNTB2		2	6
	SNUPN			
III	SNW1			

III	SNX1			1
III	SNX10			
III	SNX11			3
II	SNX12	1	6	4
II + III	SNX13	1	2	4
III	SNX14			2
III	SNX17		1	1
	SNX18	2		3
II + III	SNX19	4	3	10
II	SNX2	1	1	1
	SNX21		1	5
	SNX24			
	SNX25			
II	SNX27	1	4	7
III	SNX3			1
	SNX30		2	1
II + III	SNX33	2	4	17
III	SNX4			
III	SNX5		3	1
III	SNX6		1	
II	SNX8	4	1	6
II	SNX9	1	1	3
II	SOAT1	2	4	6
II + III	SOCS2	1	3	7
II + III	SOCS3	7	16	25
II + III	SOCS4	2	3	9
	SOCS6		1	5
III	SOCS7		1	1
III	SOD1	1		1
III	SOD2			
II	SOGA1	10	27	39
	SOGA2		2	12
II	SOLH	4	1	10
II + III	SON	15	18	36
III	SORBS2			
II	SORBS3	1	1	2
III	SORD		1	2
III	SORT1		1	3
II	SOS1	2	2	7
	SOS2		2	2
II + III	SOWAHC	5	5	13
II	SOX12	3	8	15
II	SOX13	1	2	6
II + III	SOX4	9	12	24
	SOX9			1
II + III	SP1	3	10	18
III	SP100			
III	SP2		2	5
II + III	SP3	4	2	8
	SP4		2	3
III	SPA17			

III	SPAG1			
III	SPAG4			
II	SPAG5	1	4	6
III	SPAG7			
	SPAG9		2	5
	SPAST			1
II + III	SPATA13	2	2	5
III	SPATA17			
II + III	SPATA2	1	7	18
III	SPATA20		1	
III	SPATA24			
	SPATA2L		1	1
	SPATA5	1		1
	SPATA5L1		1	
	SPATA7			1
	SPATS2		2	4
III	SPATS2L			
	SPC24			1
III	SPC25			
II	SPCS1	1	2	1
III	SPCS2			1
III	SPCS3			1
II + III	SPECC1	7	4	10
	SPECC1L	1		11
II	SPEN	3	10	24
	SPG11		1	3
II + III	SPG20	1	1	4
III	SPG21			
II	SPG7	1	4	6
II	SPHK1	2	3	1
II	SPHK2	2	1	2
	SPICE1			
II + III	SPIN1	5	7	13
	SPIN2B			
	SPIN3	1		2
	SPIN4		1	2
III	SPINK4			
	SPIRE1		4	2
III	SPIRE2		2	7
III	SPNS1	1		1
	SPOP			6
II + III	SPPL2A	1	1	1
II	SPPL2B	1	3	6
II + III	SPPL3	2	2	5
III	SPR			3
	SPRED1			3
II + III	SPRED2	5	11	21
	SPRY2			2
III	SPRYD3		2	3
III	SPRYD4			
III	SPRYD7		1	

II + III	SPSB1	4	3	14
	SPSB2			3
III	SPSB3			1
II	SPTAN1	1	3	3
II + III	SPTBN1	6	5	7
	SPTBN2			
III	SPTLC1			
	SPTLC2		1	4
III	SPTSSA			
	SPTY2D1			4
II + III	SQLE	1	2	5
III	SQRDL			
II	SQSTM1	9	9	21
II	SRA1	2	4	8
	SRBD1			3
II	SRC	1	1	6
II	SRCAP	17	35	74
III	SRD5A1			2
III	SRD5A3			
II	SREBF1	5	4	6
II	SREBF2	2	1	5
II	SREK1	1	1	1
III	SREK1IP1			
III	SRF		4	3
	SRFBP1		1	2
	SRGAP1		6	4
II + III	SRGAP2	2	3	14
III	SRGN			
III	SRI			1
III	SRM			7
III	SRP14		1	1
	SRP19		1	2
III	SRP54			1
II	SRP68	1	1	4
III	SRP72		1	3
III	SRP9		1	2
II	SRPK1	2	2	8
	SRPK2	1		
II	SRPR	2	7	7
II	SRPRB	1	1	2
III	SRPX			
	SRR			
	SRRD			2
II	SRRM1	1	4	4
II	SRRM2	22	36	41
	SRRM3		2	2
III	SRRT			4
II	SRSF1	1	2	6
III	SRSF10			1
II	SRSF11	2	2	1
II	SRSF2	2	6	7

II	SRSF3	1	1	2
III	SRSF4			4
II	SRSF5	1	4	7
III	SRSF6	1		3
III	SRSF7			
	SRSF8			2
III	SRSF9	1		2
II + III	SRXN1	4	10	16
II	SS18	2	5	5
	SS18L1			5
III	SS18L2			
III	SSB			1
III	SSBP1			
III	SSBP3	1		1
III	SSBP4		1	3
	SSFA2		1	5
II	SSH1	1	2	17
II + III	SSH2	2	6	13
III	SSH3		2	2
II	SSNA1	1	1	1
II	SSR1	3	9	8
II	SSR2	1	7	7
III	SSR3		3	3
II	SSR4	2	2	3
II	SSRP1	2	4	4
III	SSSCA1			1
III	SSU72		2	4
III	SSX2IP		2	2
II + III	ST3GAL2	7	11	19
	ST3GAL3		1	
III	ST3GAL4			1
II	ST5	2	1	3
	ST6GAL1		1	6
II	ST6GALNAC4	2	3	12
III	ST6GALNAC6		2	3
III	ST7		3	2
III	ST7L	1	1	
III	STAC			1
	STAG1		1	2
	STAG2			3
III	STAG3L2			3
III	STAG3L4			
II	STAM	2	2	4
III	STAM2		1	2
III	STAMPB		1	
III	STAMBPL1			1
III	STARD10			
	STARD13			1
II	STARD3	1	2	2
III	STARD3NL		1	2
	STARD4			1

II + III	STARD7	1	5	9
	STARD8			
III	STAT1		2	3
	STAT2			1
III	STAT3			1
III	STAT5A			
	STAT5B		3	4
III	STAT6		3	4
II + III	STAU1	3	10	9
III	STAU2			1
III	STC1		1	1
II	STC2	10	27	34
II	STEAP3	1	4	5
II + III	STIL	2	2	2
III	STIM1		3	4
	STIM2		4	10
II	STIP1	1	2	4
	STK10		1	3
III	STK11IP			
	STK16			1
	STK17A		1	1
II	STK17B	1	1	3
III	STK19			
III	STK24			1
II	STK25	2	1	2
	STK3			1
III	STK32B	1		4
III	STK32C	1		
II + III	STK35	3	5	13
	STK36		1	3
	STK38		3	3
	STK38L	1		1
III	STK39			
II	STK4	1	3	4
III	STK40		1	5
III	STMN1		3	4
III	STMN3			
II	STOM	6	5	8
III	STOML2	1	2	
	STON2		3	6
	STOX2	1		3
II	STRA13	3	1	6
	STRADA			3
III	STRAP		5	5
III	STRBP			1
	STRN		2	
II	STRN3	1	1	2
III	STRN4	1		2
II	STT3A	3	2	6
II	STT3B	4	4	3
III	STUB1			



III	STX10			1
III	STX12			
II	STX16	2	1	6
III	STX17			3
III	STX18		2	
III	STX1A			
	STX2			
III	STX3			
III	STX4			
III	STX5			
II + III	STX6	3	2	8
III	STX7			
III	STX8			
II	STXBP1	1	3	4
III	STXBP2			
III	STXBP3			
	STXBP4			1
	STXBP5		1	1
III	STXBP6			1
II	STYX	1	2	5
III	STYXL1		1	
II	SUB1	1	2	4
III	SUCLA2		2	3
III	SUCLG1			1
	SUCLG2			3
III	SUDS3			1
II	SUFU	1	1	3
III	SUGP1			
II + III	SUGP2	2	7	10
III	SUGT1			
	SUGT1P1			
	SULF2			
III	SULT1A1			1
	SUMF1	1		
III	SUMF2		2	4
	SUMO1			
III	SUMO2		2	1
II	SUMO3	1	1	5
II	SUN1	3	2	5
III	SUN2		1	1
	SUOX		1	3
II	SUPT16H	1	1	5
III	SUPT3H			
III	SUPT4H1		2	3
III	SUPT5H		1	1
II	SUPT6H	1	3	4
	SUPT7L			2
III	SUPV3L1			1
III	SURF1			
III	SURF2			
II	SURF4	8	19	17

II	SURF6	4	6	9
	SUSD1			1
	SUV39H1			6
	SUV39H2		2	3
II	SUV420H1	1	1	2
	SUV420H2		1	1
	SUZ12		1	2
III	SUZ12P1		1	1
	SV2B	1		1
	SVEP1		1	1
	SVIL	2		1
III	SVIP			
III	SVOPL			
III	SWAP70		3	5
III	SWI5			
	SWSAP1			
III	SYAP1			
	SYBU			
III	SYCE2			
II + III	SYDE1	8	8	17
II + III	SYDE2	1	2	2
III	SYF2			
II	SYMPK	2	4	5
II	SYNCRIP	1	2	4
III	SYNGR1			
II	SYNGR2	2	3	6
	SYNGR3	1		1
	SYNJ1	2		3
II + III	SYNJ2	1	2	8
II	SYNM	1	1	4
	SYNPO		2	7
II + III	SYNRG	1	1	10
III	SYPL1	2	4	
	SYT12		4	4
	SYT17			1
II	SYVN1	2	6	8
III	SZT2	1		5
	TAB1	1		4
II + III	TAB2	5	5	16
	TAB3		2	2
	TACC1		1	4
II	TACC2	2	3	3
II	TACC3	1	2	6
III	TACO1			
III	TADA1			
III	TADA2A			
II + III	TADA2B	2	4	15
III	TADA3	1		4
	TAF1		1	5
III	TAF10	1		1
	TAF11		1	

III	TAF12			4
III	TAF13			
III	TAF15			1
III	TAF1A			1
	TAF1B			
II + III	TAF1C	4	6	14
III	TAF1D		1	3
	TAF2			
III	TAF3			1
II	TAF4	3	4	9
	TAF4B		1	2
	TAF5			
II + III	TAF5L	4	7	18
III	TAF6			1
	TAF6L		1	3
II + III	TAF7	1	3	7
	TAF8			4
III	TAF9		2	5
III	TAF9B		2	2
II	TAGLN2	3	6	10
II	TALDO1	1	2	2
III	TAMM41	1		2
	TANC1	1		1
II + III	TANC2	2	5	19
II + III	TANK	1	1	1
II	TAOK1	1	3	9
III	TAOK2			1
III	TAOK3			1
II	TAP1	1	1	2
II	TAP2	3	5	5
II	TAPBP	6	10	11
II + III	TAPT1	1	4	4
	TARBP1			
III	TARBP2		1	4
	TARDBP		1	3
II	TARS	1	1	2
II	TARS2	2	2	3
	TARSL2			1
	TASP1			
III	TATDN1			
II + III	TATDN2	5	11	22
III	TATDN3			1
III	TAX1BP1	2		3
II	TAZ	1	1	3
	TBC1D1			
III	TBC1D10A			1
II	TBC1D10B	3	6	16
	TBC1D12			1
II	TBC1D13	3	2	8
II + III	TBC1D14	5	8	18
III	TBC1D15			

II + III	TBC1D16	2	2	5
III	TBC1D17			1
III	TBC1D19			1
	TBC1D2		1	1
	TBC1D20			3
III	TBC1D22A			
	TBC1D22B		1	1
	TBC1D23	1		2
II + III	TBC1D24	2	4	12
	TBC1D25		2	8
II	TBC1D2B	2	1	4
	TBC1D30		2	2
II + III	TBC1D4	1	1	2
III	TBC1D5		1	1
III	TBC1D7			
	TBC1D8			1
II + III	TBC1D9	2	1	2
II + III	TBC1D9B	6	2	11
III	TBCA			
III	TBCB			1
II + III	TBCC	2	3	3
	TBCCD1	1		2
III	TBCD		1	1
III	TBCE			
	TBCEL			2
	TBCK			2
III	TBK1			
III	TBKBP1		1	1
II + III	TBL1X	3	3	12
	TBL1XR1	1		5
II	TBL2	3	2	5
III	TBL3			2
II	TBP	2	1	1
III	TBPL1			
III	TBRG1		1	6
II	TBRG4	1	1	3
II	TBX1	2	1	1
II + III	TBX3	2	6	10
III	TBXA2R			
III	TCEA1			1
II	TCEA2	1	1	4
III	TCEA3			
III	TCEAL1			
III	TCEAL4			
III	TCEAL8	1		
	TCEANC2			2
III	TCEB1			
III	TCEB2			1
	TCEB3		2	4
II	TCERG1	2	4	6
II + III	TCF12	1	2	5

II + III	TCF19	5	2	10
II + III	TCF20	2	3	15
III	TCF25		1	
II	TCF3	1	3	11
	TCF4		2	4
III	TCF7L2			1
II	TCFL5	1	1	5
III	TCHP			2
III	TCIRG1			
III	TCOF1	3		3
III	TCP1		2	6
	TCP11L1			
III	TCTA			
III	TCTN1			
III	TCTN2			
	TCTN3	1		4
	TDG		1	3
	TDP1		1	3
III	TDP2		2	
III	TDRD3			1
	TDRD7			
	TDRD9			1
III	TDRKH			
II + III	TEAD1	3	9	17
III	TEAD2		1	5
III	TEAD3		1	1
II	TEAD4	1	1	2
	TECPR1			
III	TECR	2	1	
	TEF		1	1
	TEFM			
II	TEKT4P2	1	6	10
II	TELO2	1	1	1
III	TENC1		1	
	TEP1			1
	TERF2		1	8
III	TERF2IP	1		
	TES	1		2
III	TESC			
II	TESK1	2	2	9
II + III	TET3	3	8	16
II + III	TEX10	1	3	6
II + III	TEX2	5	7	9
II	TEX261	2	1	7
II	TEX264	3	4	3
III	TEX30			1
III	TFAM			1
III	TFAP2A	2		6
	TFAP2C		1	4
III	TFAP4		1	1
	TFB1M			2

	TFB2M			
	TFCP2	1		1
III	TFDP1		3	3
III	TFDP2			
II	TFE3	2	6	7
II	TFEB	1	1	4
II	TFG	2	2	3
	TFIP11			3
III	TFPT			
II + III	TFRC	5	7	11
III	TGDS			
II	TGFB1	3	6	7
III	TGFB111			2
II + III	TGFBR1	1	4	5
	TGFBR2		2	4
	TGFBR3		1	2
	TGFBRAP1		2	1
	TGIF1			9
II + III	TGIF2	2	4	9
II	TGOLN2	4	9	11
II	TGS1	1	1	4
II	TH1L	1	3	9
II + III	THADA	1	1	3
	THAP1			
	THAP10			
II + III	THAP11	4	7	12
	THAP2			2
	THAP3		1	1
II	THAP4	3	4	5
	THAP5			1
III	THAP6			
II + III	THAP7	2	1	5
	THAP9			1
II + III	THBS1	9	14	16
III	THBS3			
II	THEM6	1	2	7
	THG1L			
	THNSL1			
III	THOC1			
III	THOC2		1	1
III	THOC3			1
III	THOC5		1	2
III	THOC6			
III	THOC7			
II	THOP1	1	3	2
III	THRA		1	2
III	THRAP3		2	6
III	THTPA			1
II + III	THUMPD1	1	3	5
III	THUMPD2			1
	THUMPD3		1	3

III	THYN1		1	
III	TIA1			
II	TIAL1	1	2	5
	TIAM1		1	2
II + III	TICAM1	2	5	14
	TIFA			
	TIGD1			
	TIGD2			
II + III	TIGD5	1	5	8
	TIGD6	1		2
	TIGD7			1
III	TIMELESS			
III	TIMM10			
II	TIMM13	3	1	2
	TIMM17A			1
III	TIMM17B			
III	TIMM21			1
II + III	TIMM22	5	1	5
II	TIMM23	1	1	1
II	TIMM44	1	1	1
II	TIMM50	1	5	4
II + III	TIMM8A	1	1	1
III	TIMM8B			1
III	TIMM9		1	2
III	TIMMDC1	1		
II	TIMP1	2	1	1
II	TIMP2	10	9	15
III	TIMP4			1
III	TINAGL1			
	TINF2			3
II + III	TIPARP	2	2	14
II	TIPIN	1	1	2
III	TIPRL			2
	TIRAP		3	4
III	TJAP1			1
II	TJP1	2	3	5
	TJP2		2	3
III	TK1		3	1
	TK2			2
II	TKT	6	6	5
II	TLCD1	2	2	4
	TLE1	1	2	
III	TLE2			
II	TLE3	1	2	9
	TLE4			1
III	TLK1		1	2
II	TLK2	1	2	2
II	TLN1	4	2	3
	TLN2			
	TLR3		1	4
III	TLX3			1

III	TM2D1			1
II + III	TM2D2	1	3	3
	TM2D3			
III	TM4SF1	1		1
II	TM7SF3	2	3	3
II + III	TM9SF1	1	4	7
	TM9SF2		1	2
II	TM9SF3	1	3	4
II	TM9SF4	7	11	21
III	TMA16			2
III	TMBIM1			2
III	TMBIM4			
II	TMBIM6	11	11	14
III	TMC6			1
II + III	TMCC1	2	2	9
	TMCC2		1	4
II	TMCO1	1	2	2
	TMCO3		1	4
II	TMCO4	1	1	3
III	TMCO6			
	TMCO7			2
	TMED1		2	2
II	TMED10	1	9	6
II	TMED2	2	5	5
III	TMED3		2	
III	TMED4			
II	TMED5	1	3	5
II + III	TMED8	1	2	2
II	TMED9	4	11	10
III	TMEM101		1	1
II	TMEM104	2	6	18
III	TMEM106B	1		
III	TMEM106C		1	1
II + III	TMEM107	1	1	4
II	TMEM109	3	8	10
II + III	TMEM111	2	1	5
II + III	TMEM115	6	3	12
	TMEM116			2
	TMEM117			
III	TMEM120A		1	1
III	TMEM120B			3
III	TMEM123		4	5
III	TMEM126A			
III	TMEM126B			1
II + III	TMEM127	12	17	30
III	TMEM128			1
II	TMEM129	3	3	4
III	TMEM131		1	8
II	TMEM132A	3	6	4
III	TMEM134			
III	TMEM135			2



	TMEM136			
III	TMEM138		1	2
	TMEM139			2
III	TMEM141			
III	TMEM143			
III	TMEM147		2	1
III	TMEM14A			
III	TMEM14B	1		
II	TMEM14C	2	2	3
III	TMEM150A			1
III	TMEM158			
III	TMEM159			2
III	TMEM160			
II	TMEM161A	3	3	2
	TMEM161B		2	3
III	TMEM161B-AS1	1		3
III	TMEM164			
II	TMEM165	1	3	3
III	TMEM167A			2
II + III	TMEM167B	1	1	4
II + III	TMEM168	2	2	2
II + III	TMEM170A	1	1	1
II	TMEM173	1	1	1
II	TMEM175	1	1	4
	TMEM177		1	3
III	TMEM179B			
II	TMEM18	3	3	5
	TMEM181		3	1
II	TMEM184A	4	16	30
II	TMEM184B	2	9	16
II + III	TMEM184C	1	1	3
	TMEM185A		2	3
II + III	TMEM185B	3	6	14
II + III	TMEM186	2	3	4
	TMEM187		1	1
	TMEM19		1	1
II	TMEM192	3	1	1
	TMEM194A		2	6
	TMEM194B			
	TMEM199		1	
II + III	TMEM2	2	2	3
II	TMEM201	4	7	8
II + III	TMEM203	5	6	6
III	TMEM205	1	1	
	TMEM206		2	4
III	TMEM208	2	1	
II	TMEM209	1	5	2
II	TMEM214	7	11	12
III	TMEM218			
III	TMEM219		1	
III	TMEM222		3	3

II + III	TMEM223	2	4	3
III	TMEM230			
	TMEM231		1	2
	TMEM234	1		1
III	TMEM237	1		2
III	TMEM241			
III	TMEM242			
II + III	TMEM245	3	2	7
III	TMEM25			
	TMEM30A		4	3
II	TMEM33	1	2	5
II + III	TMEM37	2	1	2
	TMEM38A	1		2
II	TMEM38B	1	1	1
II	TMEM39A	2	2	3
II	TMEM39B	1	1	2
	TMEM41A			4
III	TMEM41B	1		1
III	TMEM42			3
II + III	TMEM43	5	11	16
III	TMEM45A		2	2
	TMEM47		2	4
II + III	TMEM48	2	3	7
	TMEM5			
III	TMEM50A		1	3
III	TMEM50B			
II + III	TMEM51	2	2	5
III	TMEM54			
III	TMEM55A			
III	TMEM55B	1		3
	TMEM57		4	6
III	TMEM59	1	1	
III	TMEM59L			
	TMEM60		1	2
III	TMEM62			1
III	TMEM63A		1	4
III	TMEM63B		1	3
III	TMEM64		1	1
III	TMEM65			
II + III	TMEM66	3	4	3
	TMEM67			
III	TMEM68			
III	TMEM69			
	TMEM70			1
II + III	TMEM79	1	6	9
III	TMEM80			1
II	TMEM87A	1	1	4
	TMEM87B			1
	TMEM8A		7	6
III	TMEM8B			
III	TMEM9	1		2

II + III	TMEM97	2	5	8
III	TMEM99			1
III	TMEM9B		1	3
	TMF1		2	3
	TMLHE			
III	TMOD3			
II	TMPO	1	4	12
III	TMPRSS3			1
II	TMSB10	1	1	1
II	TMSB4X	1	1	2
II + III	TMTC1	1	2	8
	TMTC3		3	3
	TMTC4			1
II	TMUB1	4	5	6
II	TMUB2	1	1	3
III	TMX1			
	TMX3			1
III	TMX4		2	2
II + III	TNFAIP1	5	6	11
II	TNFAIP2	1	2	4
II + III	TNFAIP3	2	1	7
	TNFAIP8		1	1
	TNFAIP8L1		2	8
	TNFRSF10A			4
II + III	TNFRSF10B	3	9	15
II	TNFRSF10D	3	2	4
II	TNFRSF12A	3	3	3
	TNFRSF19			1
II	TNFRSF1A	8	8	7
II + III	TNFRSF21	1	2	5
II + III	TNFSF9	1	3	3
III	TNIP1		2	
III	TNIP2	1		1
	TNK1	1		2
III	TNK2			2
	TNKS		5	
II	TNKS1BP1	3	11	18
	TNKS2		2	
III	TNNC1			
III	TNNT1			
II + III	TNPO1	2	3	5
II	TNPO2	1	2	3
	TNPO3		2	5
II + III	TNRC18	21	13	30
II	TNRC6A	4	9	15
II	TNRC6B	2	4	4
II	TNS1	2	3	10
II + III	TNS3	2	3	6
	TOB1	3		3
II + III	TOB2	1	8	14
	TOE1			3

II	TOLLIP	1	1	1
III	TOM1		1	2
III	TOM1L1		1	
II	TOM1L2	2	2	10
II	TOMM20	3	2	5
III	TOMM22	1		1
II	TOMM34	1	1	3
II	TOMM40	1	2	7
II + III	TOMM40L	3	2	7
III	TOMM5			2
II	TOMM6	2	1	4
III	TOMM7			
II	TOMM70A	3	1	6
III	TONSL	1		2
III	TOP1		1	5
III	TOP1MT	1		
	TOP2A	1		4
III	TOP2B		1	1
II	TOP3A	5	2	6
III	TOP3B			
II + III	TOPBP1	1	2	4
	TOPORS		4	5
	TOR1A		1	3
II + III	TOR1AIP1	4	5	14
II + III	TOR1AIP2	9	10	18
II + III	TOR1B	2	12	11
II	TOR2A	1	3	5
II + III	TOR3A	3	1	4
II	TOR4A	5	14	24
	TOX2			1
III	TOX4		1	1
III	TP53			4
	TP53BP1			1
	TP53BP2		2	5
III	TP53I13	1		1
	TP53I3			
III	TP53INP2	1		1
III	TP53TG1			
II + III	TP73-AS1	1	1	8
II + III	TPBG	7	10	15
II	TPCN1	3	2	5
III	TPD52			3
II	TPD52L2	4	6	13
III	TPGS1			1
III	TPGS2		5	4
II	TPI1	3	7	6
III	TPM1			
II	TPM2	1	1	2
II	TPM3	1	1	4
III	TPM4		6	4
III	TPMT			

II	TPP1	3	6	7
	TPP2			
II + III	TPPP	4	5	7
III	TPR			2
II	TPRA1	2	4	4
III	TPRG1L			
III	TPRKB			
III	TPRN		1	5
	TPST1	1		3
	TPST2	1		
II	TPT1	5	5	3
III	TPT1-AS1			
II	TPX2	3	11	11
III	TRA2A	1		3
II	TRA2B	1	1	2
III	TRABD			3
II	TRADD	1	1	1
II	TRAF2	2	1	5
	TRAF3		2	6
III	TRAF3IP1		1	
	TRAF3IP2		1	5
II + III	TRAF4	6	2	14
	TRAF5			4
II + III	TRAF6	1	1	2
II	TRAF7	5	2	7
III	TRAFD1	1		3
	TRAIP			1
II + III	TRAK1	2	3	9
	TRAK2		1	4
III	TRAM1		2	2
II	TRAM2	2	9	16
III	TRAP1	1		2
III	TRAPPC1			1
II + III	TRAPPC10	1	4	6
	TRAPPC11		1	
II	TRAPPC12	2	1	10
III	TRAPPC2			
III	TRAPPC2L			1
	TRAPPC3			1
III	TRAPPC4			
III	TRAPPC5			1
III	TRAPPC6A			
III	TRAPPC6B		2	1
II + III	TRAPPC8	1	1	1
	TRAPPC9			
	TRDMT1			
II	TRERF1	1	2	9
	TREX1			
	TRIAP1		1	
II + III	TRIB1	5	5	21
II	TRIB3	3	8	14

II	TRIM11	3	4	7
	TRIM13		2	2
II	TRIM14	1	1	4
	TRIM16		4	7
II	TRIM16L	3	6	12
	TRIM2		5	2
	TRIM21	1		2
	TRIM23			
	TRIM24		1	1
II	TRIM25	7	5	11
II	TRIM26	1	5	13
II	TRIM27	1	3	8
II	TRIM28	5	5	5
III	TRIM29			2
	TRIM3		1	1
II + III	TRIM32	2	1	5
	TRIM33		2	3
III	TRIM35	1		1
	TRIM36			
	TRIM37			
	TRIM38		1	3
II	TRIM4	1	4	7
II	TRIM41	3	1	6
III	TRIM44		2	6
	TRIM45			3
III	TRIM47		3	6
	TRIM5		1	2
	TRIM52			1
II + III	TRIM56	5	7	12
	TRIM62		1	4
II	TRIM65	2	4	11
II	TRIM7	1	1	2
	TRIM8			4
	TRIML2			
II + III	TRIO	5	9	10
III	TRIOBP		1	2
III	TRIP10		1	3
III	TRIP11			2
II + III	TRIP12	2	1	6
III	TRIP13		2	3
III	TRIP4			
II	TRIP6	1	1	2
III	TRIT1			
III	TRMT1	2		4
III	TRMT11			
III	TRMT112			
III	TRMT12			
III	TRMT1L			
	TRMT2A			2
III	TRMT2B			
	TRMT5			1

III	TRMT6			1
III	TRMT61A			3
	TRMT61B			2
III	TRMU			1
III	TRNAU1AP			
III	TRNP1			
	TRNT1			1
III	TROAP		2	6
	TROVE2			4
	TRPC1			1
III	TRPC4AP		2	4
	TRPM7			
II + III	TRPS1	3	7	13
III	TRPT1			
II + III	TRRAP	4	2	6
III	TRUB1			
II + III	TRUB2	1	1	3
	TSC1	1		7
III	TSC2			
II + III	TSC22D1	10	13	29
II + III	TSC22D2	1	3	15
	TSC22D3	1		1
II	TSC22D4	3	6	14
III	TSEN15			1
III	TSEN2			1
III	TSEN34			1
II	TSEN54	1	1	2
II + III	TSFM	2	2	2
III	TSG101		2	2
II + III	TSHZ1	3	3	12
II + III	TSHZ2	1	2	5
III	TSN			2
III	TSPAN12			
III	TSPAN13			
II	TSPAN14	2	2	6
III	TSPAN15		1	1
II + III	TSPAN17	2	2	3
II	TSPAN3	7	8	7
III	TSPAN31			
III	TSPAN33			
II	TSPAN4	1	1	1
	TSPAN5		1	2
III	TSPAN7			
III	TSPAN9		2	2
III	TSPO	1		3
II + III	TSPYL1	1	1	9
III	TSPYL2			3
II + III	TSPYL4	1	3	4
II	TSR1	2	2	3
II	TSR2	1	2	6
II	TSSC1	2	1	2

	TSSC4	3		4
III	TST			
III	TSTA3		1	1
	TSTD2			3
	TTBK2		3	7
III	TTC1			1
III	TTC12			
III	TTC13			
III	TTC14			
III	TTC17	1	2	
III	TTC19			1
	TTC21B			
	TTC23			
	TTC26			
	TTC27	1		
II + III	TTC28	1	1	10
	TTC28-AS1		1	1
	TTC3	1		2
III	TTC31			
III	TTC32			
	TTC33			1
	TTC37		1	1
III	TTC38	1		
	TTC39C			
III	TTC5			
III	TTC7A			4
III	TTC7B			
III	TTC8			1
	TTC9		4	7
III	TTC9C			1
III	TTF1			
	TTF2			3
II + III	TTI1	2	3	12
	TTI2	1		
III	TTK			
II	TTLL12	1	3	4
	TTLL4		2	5
III	TTLL5			2
	TTLL7			
II + III	TTPAL	3	4	11
II	TTYH3	12	12	23
II	TUBA1A	2	5	8
II	TUBA1B	5	9	11
II	TUBA1C	8	4	9
II	TUBA4A	1	1	3
II	TUBB	12	9	11
	TUBB2A		1	3
III	TUBB3		2	1
II	TUBB4B	1	4	7
II + III	TUBB6	3	4	8
	TUBD1			



III	TUBE1			
II	TUBG1	1	3	6
III	TUBG2			2
III	TUBGCP2			1
	TUBGCP3		1	2
II	TUBGCP4	1	2	2
	TUBGCP5			1
	TUBGCP6		1	
II	TUFM	3	1	4
II	TUFT1	1	3	12
II + III	TUG1	9	15	36
II	TULP3	2	4	10
II + III	TULP4	2	7	18
	TUSC1		1	2
III	TUSC2			
III	TUSC3		1	1
II	TUT1	1	2	5
II	TWF1	2	3	1
III	TWF2			1
	TWISTNB		2	2
	TWSG1	1		
III	TXLNA		4	9
III	TXLNG	1		1
III	TXN	1		
II	TXN2	2	2	3
II + III	TXNDC11	1	2	10
III	TXNDC12		1	3
II	TXNDC15	1	1	4
	TXNDC16			
III	TXNDC17			
III	TXNDC9			
II	TXNIP	1	3	8
III	TXNL1		1	2
II	TXNL4A	1	1	1
	TXNL4B			1
II	TXNRD1	8	14	19
II	TXNRD2	1	4	5
III	TYK2			
III	TYMP			
III	TYMS	2	1	
III	TYRO3		1	2
II	TYSND1	2	5	7
	TYW1			1
III	TYW3			
	TYW5			
II	U2AF1	2	1	3
III	U2AF1L4			
II	U2AF2	6	7	16
III	U2SURP		1	3
III	UACA			
	UAP1			2

II	UAP1L1	2	3	13
II	UBA1	7	3	6
III	UBA2	1		2
III	UBA3		1	1
III	UBA5			
II	UBA52	2	4	4
II + III	UBA6	2	2	1
III	UBAC1	1		
II	UBAC2	2	1	2
	UBAC2-AS1			
II + III	UBAP1	4	5	13
III	UBAP2		1	5
II	UBAP2L	5	9	10
	UBASH3B			1
III	UBB		2	5
II	UBC	4	4	10
III	UBE2A			2
III	UBE2B		2	3
III	UBE2C	2		
III	UBE2D1			2
II	UBE2D2	1	2	5
II	UBE2D3	1	1	4
III	UBE2E1		2	1
III	UBE2E2		1	
III	UBE2E3		1	2
II	UBE2G1	3	4	3
	UBE2G2			2
	UBE2H			5
III	UBE2I	2		2
II	UBE2J1	2	2	3
II	UBE2J2	4	1	4
III	UBE2K	1		3
II	UBE2L3	3	3	6
III	UBE2M		2	4
III	UBE2N		1	1
	UBE2O		5	17
II + III	UBE2Q1	2	6	11
III	UBE2Q2			
	UBE2R2		7	11
II	UBE2S	2	1	7
III	UBE2T		1	1
II	UBE2V1	2	6	7
III	UBE2V2			1
III	UBE2W			
II	UBE2Z	2	2	10
	UBE3A		4	3
II + III	UBE3B	1	1	4
	UBE3C		4	8
III	UBE3D			
II + III	UBE4A	1	6	4
	UBE4B			6

III	UBFD1		1	1
II + III	UBIAD1	2	5	6
	UBL3		1	2
II + III	UBL4A	4	7	16
III	UBL5			2
III	UBL7		2	2
III	UBLCP1			1
II	UBN1	1	3	13
II	UBN2	1	3	13
	UBOX5			
II	UBP1	2	7	7
II	UBQLN1	1	4	2
II + III	UBQLN2	3	5	5
II	UBQLN4	2	3	5
	UBR1			1
	UBR2			2
	UBR3			4
	UBR4		3	3
	UBR5		2	3
III	UBR7			2
	UBTD1			1
II + III	UBTD2	2	3	7
II	UBTF	2	6	15
II	UBXN1	2	1	1
III	UBXN11			
	UBXN2A		1	2
III	UBXN2B	1		1
III	UBXN4		1	3
III	UBXN6		3	1
	UBXN7		1	1
III	UBXN8		1	2
III	UCHL3			
II	UCHL5	1	1	1
	UCK1			1
II	UCK2	1	1	7
III	UCKL1			1
III	UCP2		1	1
	UEVLD			
III	UFC1			2
III	UFD1L			1
III	UFL1	1	3	
III	UFM1			1
III	UFSP2			
II	UGCG	1	1	1
III	UGDH			
	UGGT1	1		1
	UGGT2			2
III	UGP2			
II + III	UHMK1	2	3	10
	UHRF1			2
II + III	UHRF1BP1	2	4	13

	UHRF1BP1L		1	2
	UHRF2			1
III	UIMC1		1	1
	ULBP3			1
II	ULK1	3	1	11
III	ULK3			1
	ULK4	1		
II + III	UMPS	1	1	2
III	UNC119			3
II	UNC119B	1	5	3
II + III	UNC13B	2	1	5
III	UNC13D		2	
III	UNC45A			
III	UNC50			
III	UNC93B1		1	1
III	UNG	1		2
III	UNK			2
	UNKL	2		6
II	UPF1	9	5	16
II	UPF2	2	3	3
III	UPF3A			2
III	UPF3B			
III	UPP1		1	1
III	UPRT			
	UQCC		1	6
II	UQCR10	2	2	2
II	UQCR11	1	1	2
III	UQCRB		1	2
III	UQCRC1			1
II	UQCRC2	1	1	2
	UQCRFS1			1
III	UQCRH			1
III	UQCRQ			3
II + III	URB1	2	3	7
II + III	URB2	3	7	16
II + III	URGCP	7	5	14
III	URI1			
III	URM1			3
III	UROD			
III	UROS			
III	USE1	1		
II + III	USF1	2	4	5
II	USF2	1	2	4
III	USH1C	1		
III	USMG5			
III	USO1		1	1
	USP1		1	5
II + III	USP10	5	8	14
III	USP11		1	2
	USP13			
III	USP14	1		

	USP15		1	
III	USP16			
III	USP18			
III	USP19		1	3
	USP20			3
III	USP21			1
II	USP22	3	11	20
	USP24		1	
II + III	USP25	1	3	3
	USP28			1
II	USP3	1	4	6
II + III	USP30	2	2	3
II + III	USP31	5	5	17
	USP32	1		2
	USP33			1
	USP34		3	3
	USP35			2
II	USP36	2	3	14
II + III	USP37	1	2	3
II + III	USP38	1	3	8
III	USP39			1
	USP4		2	2
	USP40		1	4
	USP42			9
	USP43		1	
	USP45			
	USP46		2	3
II + III	USP47	1	2	4
III	USP48			
II	USP5	1	1	5
II + III	USP53	1	3	1
	USP54			3
II + III	USP6NL	2	2	6
II	USP7	2	3	4
III	USP8		1	1
II + III	USP9X	2	2	10
	USPL1		2	5
	UST		1	2
III	UTP11L		1	1
III	UTP14A			4
	UTP15			
III	UTP18			1
	UTP20	1		
III	UTP23			2
	UTP3		1	3
III	UTP6			
	UVRAG		1	2
	UXS1			
III	UXT		1	
II	VAC14	2	2	6
III	VAMP1			
III	VAMP2		1	3

II	VAMP3	1	2	6
III	VAMP4			
	VAMP7			1
III	VAMP8			
II + III	VANGL1	3	8	16
III	VAPA		2	2
III	VAPB		3	6
II	VARS	3	3	5
	VASH2			
II + III	VASN	5	6	10
III	VASP			2
II	VAT1	3	4	4
III	VAV2			2
III	VAV3			
III	VBP1			1
II	VCL	1	4	7
II	VCP	3	3	6
II + III	VCPIP1	3	3	9
II	VDAC1	1	1	1
III	VDAC2		1	1
III	VDAC3			2
II + III	VDR	2	2	5
II + III	VEGFA	5	11	13
III	VEGFB		4	5
	VEZF1			9
II + III	VEZT	1	2	3
	VGLL4		1	4
III	VHL	3		5
II	VIM	4	6	8
	VIT			
II	VKORC1	3	3	4
	VKORC1L1		2	3
	VLDR		1	2
III	VMA21		1	1
II	VMP1	2	2	1
II + III	VOPP1	3	3	7
II + III	VPRBP	2	7	11
III	VPS11			4
	VPS13A	1		2
	VPS13B		1	3
	VPS13C			1
	VPS13D			1
II + III	VPS18	7	7	14
II	VPS25	1	4	3
III	VPS26A		1	1
III	VPS26B		4	6
III	VPS28	1	1	
III	VPS29			3
	VPS33A		2	3
III	VPS33B			
II	VPS35	1	1	3

III	VPS36		1	1
III	VPS37A			2
	VPS37B		4	9
III	VPS37C		2	2
II + III	VPS39	2	5	10
	VPS41			1
	VPS45			
II	VPS4A	3	2	3
III	VPS4B			1
III	VPS52			1
	VPS53		2	12
	VPS54		1	1
III	VPS72			1
	VPS8	1		1
	VRK1			1
III	VRK2		1	1
III	VRK3			1
	VSIG10		2	6
III	VTA1			1
	VTI1A	1		3
III	VTI1B			1
III	VWA5A			1
II	WAC	2	1	6
	WAPAL			2
II	WARS	1	2	3
	WARS2			1
III	WASF1		1	3
III	WASF2		9	14
	WASF3			2
II	WASL	2	4	5
II	WBP11	3	3	6
II	WBP2	1	2	6
III	WBP4			
III	WBP5		1	
III	WBSCR16		1	4
III	WBSCR22			
	WDFY1		2	2
	WDFY2			
	WDFY3		1	2
II	WDHD1	1	1	1
II	WDR1	1	3	3
	WDR11			3
III	WDR12			
II	WDR13	1	2	2
III	WDR18		1	2
	WDR19			
	WDR20		2	2
	WDR24		2	5
II	WDR25	1	2	3
II + III	WDR26	1	1	9
II + III	WDR27	1	3	9

	WDR3			
II + III	WDR33	3	7	10
III	WDR34	5	1	
	WDR35			
	WDR36		2	3
	WDR37			
III	WDR4			2
	WDR41			1
II	WDR43	4	7	4
	WDR44			
III	WDR45			
II	WDR45L	7	8	12
II	WDR46	2	1	4
II + III	WDR47	1	1	4
	WDR48	1		1
III	WDR5		2	5
	WDR53			1
III	WDR54			
II	WDR55	2	1	3
	WDR59			
	WDR5B		3	4
II + III	WDR6	13	11	24
III	WDR60			
III	WDR61			
III	WDR62			
	WDR67			
	WDR7			1
III	WDR70		1	2
	WDR73	2		2
III	WDR74	1		2
III	WDR75			
III	WDR76	1		
II	WDR77	3	1	2
II + III	WDR81	8	5	22
II + III	WDR82	3	6	8
III	WDR83			
III	WDR83OS			
	WDR85	1		1
	WDR89		3	4
III	WDR90			
	WDR91			1
	WDR92			2
	WDSUB1			1
III	WDTC1			3
	WDYHV1			
	WEE1	1		4
III	WFDC1			1
II	WFS1	1	8	5
II	WHAMM	1	2	2
II + III	WHSC1	3	6	18
II + III	WHSC1L1	1	3	10



III	WHSC2			1
II	WIBG	1	3	2
III	WIPF1		3	2
II	WIPF2	2	5	12
III	WIP11			
II	WIP12	2	4	10
III	WISP2	1		2
II	WIZ	1	3	10
II	WLS	2	2	4
II	WNK1	10	13	26
III	WNT10B		1	2
II + III	WNT3	2	1	6
II + III	WNT5A	5	5	10
II + III	WNT7B	4	10	13
	WNT9A			
III	WRAP53			
III	WRAP73			2
III	WRB			
	WRN			
III	WRNIP1		1	
	WSB1		1	2
II	WSB2	2	2	5
II + III	WSCD1	1	2	7
II + III	WTAP	1	3	1
III	WTIP			
III	WWC1			1
	WWC2		1	1
	WWC3		1	3
III	WWOX			
	WWP1			1
III	WWP2		2	4
	WWTR1			3
III	XAB2	1	1	
II	XBP1	5	8	9
	XIAP		1	1
II + III	XK	1	2	4
III	XPA			
	XPC		1	2
III	XPNPEP1			
	XPNPEP3			4
II	XPO1	2	5	7
II + III	XPO4	1	1	2
II	XPO5	3	3	4
II	XPO6	4	6	12
II	XPO7	1	2	8
II	XPOT	2	2	2
II + III	XPR1	1	1	2
II	XRCC1	2	1	1
	XRCC2			1
II	XRCC3	1	1	8
III	XRCC4			

III	XRCC5			7
II	XRCC6	2	1	2
III	XRCC6BP1			
	XRN1			2
	XRN2			1
	XRRA1			2
II + III	XXYLT1	3	2	2
III	XYLB			
II + III	XYLT1	6	4	19
	XYLT2		1	3
III	YAE1D1		1	
III	YAF2			
II + III	YAP1	1	4	6
II	YARS	3	7	9
II	YARS2	1	4	5
III	YBEY			
III	YBX1		1	2
II	YDJC	1	4	3
	YEATS2		2	2
III	YEATS4			
III	YES1			2
III	YIF1A		1	2
III	YIF1B	2		2
	YIPF1			
III	YIPF2			3
II	YIPF3	2	4	5
II	YIPF4	1	1	1
	YIPF5		2	5
III	YIPF6		2	1
III	YKT6		3	5
	YME1L1		1	4
II	YPEL5	1	1	2
III	YRDC			1
III	YTHDC1		2	3
	YTHDC2			2
II + III	YTHDF1	15	17	20
II + III, as the ger	YTHDF2	25	31	30
II + III	YTHDF3	4	12	21
II	YWHAB	3	4	8
III	YWHAE		3	6
II	YWHAG	4	8	20
	YWHAH	1		7
II	YWHAQ	1	3	6
II	YWHAZ	2	7	7
II	YY1	1	5	6
II	YY1AP1	3	3	12
II + III	ZADH2	1	5	10
	ZAK			1
	ZBED3		2	3
II + III	ZBED4	5	1	10
II + III	ZBED5	2	4	4

	ZBED6		2	10
	ZBTB1			5
II + III	ZBTB10	2	4	11
II + III	ZBTB11	1	1	5
II	ZBTB17	1	1	1
II + III	ZBTB2	4	5	14
II + III	ZBTB24	2	2	5
	ZBTB25		2	3
	ZBTB26		1	4
	ZBTB3		2	4
	ZBTB33			4
	ZBTB34		1	4
II + III	ZBTB37	1	1	2
II + III	ZBTB38	1	9	14
II + III	ZBTB39	2	7	12
II	ZBTB4	3	8	26
II	ZBTB40	1	8	16
	ZBTB41		2	4
	ZBTB43			5
II + III	ZBTB44	3	2	6
	ZBTB45		2	9
	ZBTB46		1	4
	ZBTB47		1	
III	ZBTB48		1	1
	ZBTB49		2	3
II + III	ZBTB5	1	1	2
II + III	ZBTB6	3	4	7
II	ZBTB7A	2	2	7
II + III	ZBTB7B	7	11	20
	ZBTB8A			2
III	ZBTB8OS			
	ZBTB9			7
III	ZC2HC1A			
	ZC3H10			1
II	ZC3H11A	2	2	9
	ZC3H12A			
III	ZC3H13		4	5
III	ZC3H14		2	2
II	ZC3H15	1	1	1
II	ZC3H18	2	1	9
III	ZC3H3			4
II + III	ZC3H4	5	9	19
III	ZC3H7A			
III	ZC3H7B		2	4
III	ZC3H8			
II + III	ZC3HAV1	1	1	8
	ZC3HAV1L		1	1
III	ZC3HC1		1	1
III	ZC4H2			1
III	ZCCHC10			
II	ZCCHC11	1	1	2

II + III	ZCCHC14	9	9	24
III	ZCCHC17			1
II + III	ZCCHC2	3	5	12
	ZCCHC24			1
II + III	ZCCHC3	1	1	2
III	ZCCHC4		1	
	ZCCHC6			2
	ZCCHC7			3
II + III	ZCCHC8	1	1	6
III	ZCCHC9			
III	ZCRB1			
	ZDBF2	1		
III	ZDHHC12			
III	ZDHHC13			
	ZDHHC14		2	1
III	ZDHHC16		1	1
	ZDHHC17		2	
II	ZDHHC18	1	1	8
III	ZDHHC2			2
III	ZDHHC20		1	2
	ZDHHC23		2	6
III	ZDHHC24			
II + III	ZDHHC3	1	10	16
III	ZDHHC4		1	4
II + III	ZDHHC5	3	10	14
III	ZDHHC6		1	
II + III	ZDHHC7	2	5	8
III	ZDHHC8	2		12
II	ZDHHC9	1	2	3
II	ZEB1	1	2	5
	ZEB1-AS1		1	
	ZER1			2
III	ZFAND1			
III	ZFAND2A			3
III	ZFAND2B			
III	ZFAND3		4	5
II	ZFAND5	2	3	3
II	ZFAND6	1	1	1
	ZFAT			2
II	ZFC3H1	1	2	7
II + III	ZFHX3	8	10	29
	ZFP1		1	3
II + III	ZFP106	2	2	7
	ZFP161			
	ZFP30		4	5
II	ZFP36	1	4	6
II	ZFP36L1	2	3	7
II + III	ZFP36L2	5	8	17
	ZFP62			5
II + III	ZFP64	2	8	9
	ZFP90			

III	ZFPL1		3	2
	ZFR		2	11
II + III	ZFX	3	7	6
	ZFYVE1			
	ZFYVE16		1	2
II	ZFYVE19	1	2	4
II + III	ZFYVE20	3	3	7
III	ZFYVE21			
	ZFYVE26			4
III	ZFYVE27		2	4
	ZFYVE9		1	4
	ZGPAT	2		3
	ZHX1		3	3
II + III	ZHX3	1	1	6
	ZIC2		6	6
II + III	ZIC5	1	3	10
II + III	ZKSCAN1	1	3	10
	ZKSCAN2		1	4
	ZKSCAN3			2
	ZKSCAN4		1	3
II + III	ZKSCAN5	1	2	5
II	ZMAT2	1	2	3
	ZMAT3			1
III	ZMAT5		1	
II + III	ZMIZ1	1	4	6
II	ZMIZ2	1	2	6
II	ZMPSTE24	1	1	2
	ZMYM1			2
	ZMYM2			4
II	ZMYM3	1	2	3
	ZMYM4		1	1
	ZMYM5			
	ZMYM6			1
III	ZMYM6NB			
III	ZMYND11			
II	ZMYND19	2	3	8
II + III	ZMYND8	2	6	8
	ZNF10			1
	ZNF101			
II + III	ZNF12	2	2	9
II + III	ZNF121	3	6	7
II + III	ZNF131	2	3	6
	ZNF133			1
	ZNF134			3
II + III	ZNF136	1	1	2
	ZNF138		1	5
	ZNF14			
II + III	ZNF140	2	1	4
II + III	ZNF142	2	6	7
III	ZNF143		1	1
II + III	ZNF146	1	8	8
II + III	ZNF148	3	4	11

	ZNF16			2
II + III	ZNF160	1	1	1
	ZNF17		1	
	ZNF174			
	ZNF175		2	6
	ZNF18			6
	ZNF180		1	4
	ZNF182		1	2
	ZNF184		2	5
III	ZNF185			
	ZNF187			
	ZNF189			1
	ZNF192		1	3
	ZNF193		1	3
	ZNF195		3	5
	ZNF197			7
	ZNF2			1
	ZNF200		1	4
II + III	ZNF202	2	2	7
III	ZNF205	2	1	
II	ZNF207	1	5	4
	ZNF212	1		2
II	ZNF213	1	1	11
	ZNF215			
II + III	ZNF217	3	4	4
III	ZNF219		1	3
	ZNF222			
	ZNF226			1
	ZNF227			
	ZNF23			1
	ZNF232			1
	ZNF236		1	3
II + III	ZNF238	1	1	3
	ZNF239		1	3
	ZNF24		1	3
	ZNF248	1		4
	ZNF251			1
III	ZNF259	1		
	ZNF26			3
	ZNF260		2	2
	ZNF263		3	6
	ZNF266		1	4
III	ZNF267			1
	ZNF268			4
II + III	ZNF271	1	3	4
	ZNF274		2	3
II + III	ZNF275	1	2	5
	ZNF276		1	5
	ZNF277		1	3
III	ZNF280D			2
II + III	ZNF281	1	6	10
	ZNF282	1		5

II + III	ZNF286A	2	2	8
II + III	ZNF292	1	3	7
II + III	ZNF295	4	3	12
	ZNF3		1	3
	ZNF30			
	ZNF302			3
	ZNF304		1	4
II + III	ZNF317	2	2	10
II + III	ZNF318	2	2	10
II + III	ZNF319	3	2	9
	ZNF320		2	10
	ZNF323			
II + III	ZNF324	1	1	7
III	ZNF326			
	ZNF329		2	3
III	ZNF330			
	ZNF331			
III	ZNF335		1	
	ZNF337		1	1
	ZNF33A	1		3
	ZNF341			2
	ZNF343			2
	ZNF346		3	6
II + III	ZNF35	1	2	5
	ZNF350			1
	ZNF354A			
	ZNF354B			3
III	ZNF358			
III	ZNF362			3
II	ZNF367	1	1	2
	ZNF383			3
II	ZNF384	3	9	17
III	ZNF385A			2
	ZNF394		1	4
	ZNF395	1		3
	ZNF397			
II + III	ZNF398	3	6	7
	ZNF407			1
	ZNF408	1		4
	ZNF41		3	9
II + III	ZNF410	3	3	3
III	ZNF414			
	ZNF416			4
	ZNF420		1	3
	ZNF426			
III	ZNF428			1
	ZNF430		2	3
II + III	ZNF434	1	3	3
	ZNF436	1		5
	ZNF44	1		
III	ZNF444		2	3
II + III	ZNF445	2	4	11

	ZNF446			2
	ZNF449	1		4
	ZNF45	1	1	
II + III	ZNF451	1	5	19
II + III	ZNF460	9	10	18
II + III	ZNF473	1	4	10
	ZNF48		1	2
	ZNF480		3	6
	ZNF484		1	3
	ZNF485			
II + III	ZNF496	3	5	13
II + III	ZNF498	2	4	8
	ZNF500		1	2
II + III	ZNF503	3	6	13
II + III	ZNF507	1	2	4
	ZNF510			4
III	ZNF511			1
III	ZNF512			1
III	ZNF512B		4	7
II + III	ZNF513	1	1	6
	ZNF516			3
	ZNF521			1
III	ZNF524			
II + III	ZNF526	3	4	14
	ZNF529			1
	ZNF530			4
II + III	ZNF543	2	3	7
II + III	ZNF544	1	2	6
	ZNF548		1	4
II + III	ZNF550	1	1	2
	ZNF552			
	ZNF556		1	7
	ZNF557			3
	ZNF558	1		
	ZNF561			6
II + III	ZNF562	1	3	8
	ZNF566		1	2
	ZNF567			
	ZNF57		2	3
	ZNF574		6	10
	ZNF576	2		1
II	ZNF579	1	2	5
II	ZNF580	1	1	1
II + III	ZNF581	3	1	3
	ZNF584		1	2
	ZNF586			1
	ZNF589		1	1
II + III	ZNF592	5	3	9
III	ZNF593			
II	ZNF598	3	2	9
II	ZNF605	1	1	3
	ZNF609		11	15



	ZNF611			2
	ZNF613			
	ZNF614		1	5
II + III	ZNF615	1	2	5
	ZNF616			1
	ZNF622		1	2
II + III	ZNF623	1	4	10
	ZNF627		1	1
II + III	ZNF629	1	4	11
II + III	ZNF638	2	3	7
	ZNF639		1	4
II + III	ZNF641	1	1	5
	ZNF644		5	4
II + III	ZNF646	6	10	29
	ZNF652		4	8
	ZNF655		2	1
II	ZNF664	2	5	11
	ZNF668			2
	ZNF669			
	ZNF670			2
II + III	ZNF672	4	10	17
	ZNF673		3	2
	ZNF675		6	9
	ZNF684			1
II + III	ZNF687	6	9	21
	ZNF688			1
II + III	ZNF689	1	3	9
II + III	ZNF691	1	1	1
III	ZNF692			1
	ZNF7			5
II + III	ZNF700	1	2	9
II + III	ZNF703	6	11	20
III	ZNF706			
II + III	ZNF707	2	2	7
II	ZNF710	2	1	2
	ZNF721	1		5
	ZNF74			
II	ZNF740	1	2	9
II + III	ZNF746	5	1	10
	ZNF747			
	ZNF749			2
	ZNF75A		3	7
III	ZNF76		1	1
II + III	ZNF761	1	4	3
II + III	ZNF764	1	3	5
	ZNF766		1	1
II	ZNF768	2	4	8
	ZNF77	1		2
	ZNF770		7	10
III	ZNF771			
II + III	ZNF776	1	2	4
	ZNF777		1	5

II + III	ZNF778	2	3	6
	ZNF780A		2	4
	ZNF784			
	ZNF786			2
II	ZNF787	2	2	10
	ZNF789			
	ZNF79		1	2
	ZNF791			3
II + III	ZNF8	3	5	13
II + III	ZNF800	1	4	6
	ZNF808		4	5
	ZNF821		1	1
	ZNF823			
	ZNF83			4
	ZNF830			
II + III	ZNF831	14	13	27
	ZNF839			2
	ZNF84			
II + III	ZNF841	1	2	3
II + III	ZNF865	7	11	25
III	ZNF92		1	3
II + III	ZNFX1	5	3	9
III	ZNFX1-AS1		3	6
III	ZNHIT1			1
	ZNHIT2		1	2
III	ZNHIT3			
III	ZNHIT6		1	1
III	ZNRD1		1	
III	ZNRF1		2	1
	ZNRF2		1	1
II + III	ZNRF3	2	11	17
III	ZP3			
II + III	ZRANB1	2	2	2
III	ZRANB2		1	3
	ZRANB3			1
III	ZRSR2			1
II + III	ZSCAN12	1	1	8
	ZSCAN16			
	ZSCAN2			5
	ZSCAN21			
II + III	ZSCAN29	3	1	3
	ZSCAN30			1
II + III	ZSWIM1	3	1	5
	ZSWIM3			4
II + III	ZSWIM4	2	3	10
II + III	ZSWIM6	1	4	8
III	ZSWIM7			
	ZUFSP			1
	ZW10			1
III	ZWILCH			3
II	ZWINT	3	3	4
II + III	ZXDC	2	3	7

	ZYG11A			2
	ZYG11B		2	2
II	ZYX	3	1	3
	ZZEF1			1
II + III	ZZZ3	1	2	5

RIP / Enrich- $\log_2$ (IP/Input)		Ribosome profiling / change fold- $\log_2$ (siYTHDF2 /siControl)		
rep1-polyA input	rep2-ribominus input	RPF( <b>Source Data to Figure 2b</b> )	mRNA input ( <b>Source Data to Figure 2a</b> )	Translation Efficiency ( <b>Source Data to Extended Data Figure</b> )
1.752	2.973	-0.124	-0.653	0.529
-2.976	-2.063	-0.224	-0.158	-0.066
-0.249	0.700	-0.469	-0.004	-0.465
-0.084	-0.559	1.174	0.391	0.782
-1.843	-2.433	-0.155	0.026	-0.181
-1.802	-2.260	-0.099	-0.129	0.030
0.275	0.213	-0.387	-0.011	-0.376
-2.060	-1.456	0.096	-0.286	0.382
0.207	0.574	0.248	0.346	-0.098
0.550	0.750	0.399	0.484	-0.086
2.282	1.300	0.329	0.289	0.040
-1.140	-2.279	0.031	-0.165	0.195
-1.811	-0.985	-0.249	-0.037	-0.211
0.447	0.165	-0.105	0.397	-0.502
-0.810	-0.098	-0.322	-0.463	0.141
-0.619	0.111	-0.042	-0.178	0.136
0.118	-0.610	0.850	0.678	0.172
-1.399	-0.912	0.228	-0.323	0.552
0.894	-0.287	0.265	0.755	-0.489
-0.696	-0.340	-0.023	-0.484	0.461
0.690	-0.301	-0.053	0.257	-0.310
-1.473	-1.069	0.014	0.137	-0.124
0.610	0.574	0.170	-0.033	0.203
1.752	2.106	-0.061	-0.148	0.087
0.285	0.272	-0.003	-0.298	0.294
-0.646	-0.030	-0.206	-0.102	-0.104
1.337	0.295	-0.018	0.266	-0.284
-0.258	-0.331	0.710	0.318	0.392
-0.226	0.497	-1.651	-0.757	-0.894
0.731	-0.159	-0.063	0.431	-0.494
-0.358	0.199	0.115	-0.107	0.222
-1.313	-2.326	-0.084	0.760	-0.844
0.495	0.815	0.249	0.520	-0.272
0.376	0.573	0.142	0.617	-0.475
-0.299	0.189	0.291	0.088	0.203
-0.321	-0.879	-0.598	0.489	-1.087
-0.258	-1.084	0.241	0.284	-0.043
0.480	1.207	0.437	-0.273	0.711
-1.161	-0.564	0.084	-0.021	0.106
2.460	1.534	0.140	-0.215	0.354

-2.877	-2.403	-0.674	-0.695	0.021
2.371	2.315	0.148	0.342	-0.193
-1.514	-1.211	-0.141	-0.256	0.115
0.393	0.004	-0.542	-0.124	-0.418
0.037	-0.739	0.008	-0.133	0.141
-1.608	-1.000	-0.242	-0.374	0.132
0.308	-0.181	0.356	0.196	0.161
0.734	0.902	0.305	-0.517	0.822
0.526	0.998	0.559	-0.320	0.879
-0.403	-1.113	-0.016	-0.029	0.013
0.458	0.738	-0.540	-0.202	-0.339
1.162	1.467	-0.177	-0.246	0.069
2.028	1.339	0.604	0.567	0.037
0.791	0.153	-0.356	-0.038	-0.318
-1.640	-1.364	-0.201	-0.724	0.523
0.751	0.879	-0.170	-0.074	-0.096
-2.481	-2.052	0.202	-0.194	0.396
0.341	0.411	-0.115	-0.211	0.096
0.213	0.957	-0.106	-0.260	0.154
-0.994	-0.609	-0.244	-0.370	0.126
-1.262	-1.302	-0.101	0.561	-0.662
0.531	0.461	0.233	0.484	-0.251
0.240	0.327	0.109	0.037	0.072
0.080	0.326	0.193	0.305	-0.112
0.886	1.010	0.193	-0.217	0.410
0.171	0.164	-0.055	0.144	-0.200
-1.379	-1.809	0.162	-0.100	0.262
-0.580	-0.166	0.458	-1.024	1.482
-0.206	-0.841	-0.303	0.328	-0.631
-2.400	-1.748	-0.485	0.161	-0.647
0.264	-1.220	0.053	0.119	-0.066
-1.130	-0.427	-0.320	-0.717	0.398
-2.429	-2.446	-0.110	0.145	-0.255
-2.771	-2.507	0.494	0.286	0.209
0.268	0.612	0.213	-0.021	0.235
-0.896	-0.719	0.236	-0.388	0.623
0.093	-0.735	0.329	0.165	0.164
-1.280	-1.078	0.038	-0.268	0.306
-0.081	0.275	0.191	0.006	0.185
-2.706	-2.464	-0.021	-0.543	0.521
0.333	-0.732	-0.518	-0.113	-0.405
-2.464	-1.780	0.172	0.551	-0.379
0.036	-0.155	-0.326	0.097	-0.423
-1.577	-1.432	0.294	-0.464	0.758
-0.095	-0.723	0.817	0.364	0.454
-1.259	-0.975	-0.003	0.226	-0.228
-2.072	-1.889	0.117	-0.005	0.122
0.516	0.959	0.704	-0.262	0.966
-2.653	-1.007	-0.196	-0.288	0.092
-2.406	-2.163	-0.124	-0.395	0.272
-0.453	-0.724	0.177	-0.231	0.408

0.343	-0.391	0.147	-0.227	0.374
0.960	0.946	0.391	0.006	0.385
-3.345	-3.511	-0.004	-0.136	0.132
1.104	1.294	0.087	0.443	-0.356
-0.993	-0.844	-0.182	-0.433	0.252
2.510	1.858	-1.061	-0.425	-0.636
-0.765	0.747	0.095	0.569	-0.475
-0.142	0.291	-0.015	-0.114	0.100
1.416	0.818	0.560	0.142	0.418
0.399	-0.319	-0.033	0.265	-0.298
0.870	-0.315	0.334	0.631	-0.297
-1.014	-0.729	0.732	0.027	0.705
-0.922	-0.351	0.265	-0.752	1.017
-1.641	-0.296	-0.392	0.027	-0.419
-0.782	0.109	-0.069	-0.240	0.171
-1.906	-1.922	0.044	0.323	-0.279
-1.057	-0.590	-0.828	-0.302	-0.526
-0.194	1.498	0.300	0.233	0.067
-1.087	0.000	-0.353	0.268	-0.621
-0.670	-1.518	0.230	-0.038	0.268
-0.646	-0.206	-0.396	-0.176	-0.220
-1.267	-0.851	-0.065	-0.467	0.402
-0.634	-1.211	0.134	0.918	-0.784
-1.323	-2.171	-0.036	0.267	-0.303
-0.474	-0.577	0.034	-0.283	0.316
1.572	1.350	0.444	-0.155	0.599
-1.319	-1.992	0.606	0.475	0.131
0.847	0.251	0.228	0.298	-0.069
2.584	2.175	-0.192	0.080	-0.272
0.484	0.763	-1.270	-0.608	-0.662
1.023	0.506	0.225	-0.088	0.313
-1.428	-0.723	0.130	-0.323	0.453
-1.259	-1.614	0.564	-0.521	1.085
-1.499	-1.169	-0.619	-1.009	0.390
-0.540	-1.267	0.074	0.077	-0.003
1.460	0.261	0.009	0.853	-0.844
-1.417	-1.127	-0.932	-0.753	-0.179
1.667	0.619	-0.041	0.240	-0.281
1.060	0.629	-0.158	0.756	-0.914
0.253	-0.541	-0.296	0.331	-0.627
2.082	1.509	-0.769	-0.090	-0.679
1.769	1.002	0.021	0.647	-0.626
1.289	1.278	0.073	0.329	-0.256
1.217	1.404	-0.351	-0.022	-0.329
2.259	1.557	-0.369	-0.140	-0.230
-0.281	-0.771	-0.251	-0.581	0.330
-1.017	-0.770	-0.451	-0.283	-0.168
0.823	0.978	0.343	-0.244	0.587
-0.286	-0.037	-0.154	-0.230	0.076
-0.994	-0.362	0.573	0.102	0.472
1.262	1.120	-0.098	-0.204	0.105

-0.184	-0.041	-0.587	-0.175	-0.411
2.044	1.547	-0.363	-0.371	0.008
1.814	1.716	0.009	-0.002	0.011
-0.509	-0.018	0.049	0.102	-0.053
-0.923	-0.685	-0.271	-0.365	0.094
0.201	-1.232	-1.050	-0.083	-0.967
-0.897	-1.319	0.100	0.720	-0.621
-2.700	-2.659	-0.446	-0.622	0.176
-2.330	-2.116	0.173	0.049	0.124
1.115	0.763	0.125	-0.341	0.467
-0.961	-1.405	-0.667	-0.724	0.057
0.979	1.293	-0.159	-0.445	0.286
2.213	2.497	0.233	0.235	-0.003
3.305	2.573	0.487	0.342	0.144
2.291	2.048	0.032	-0.496	0.528
1.855	1.778	-0.284	-0.367	0.083
-0.942	-0.522	-0.076	-0.628	0.552
1.305	1.543	0.009	-0.110	0.119
1.805	2.326	-0.062	-0.542	0.480
0.836	1.157	-1.149	-0.978	-0.171
-1.649	-1.269	0.044	-0.214	0.258
-2.634	-2.011	-0.127	-0.540	0.414
-1.954	-1.337	-0.077	-0.211	0.134
-0.180	-1.028	0.251	0.240	0.011
-0.784	-0.869	-0.004	-0.715	0.711
-0.372	-0.632	-0.276	-0.258	-0.018
0.543	0.060	0.336	-0.431	0.767
-3.421	-2.728	0.237	-0.572	0.809
1.073	0.853	-0.204	0.206	-0.410
-0.786	-0.695	-0.214	-0.129	-0.085
1.617	1.441	-0.594	-0.208	-0.386
1.512	0.579	0.848	0.898	-0.050
0.410	0.816	0.534	0.205	0.329
0.251	0.164	0.067	0.494	-0.427
-1.401	-1.315	-0.265	-0.846	0.581
2.184	1.669	0.191	0.171	0.020
-1.243	-1.612	-0.288	-0.095	-0.193
0.926	1.212	0.221	0.100	0.121
-0.717	-0.026	0.111	-0.150	0.261
-0.992	-0.630	0.169	-0.336	0.504
0.206	-0.908	-0.552	0.087	-0.639
-1.857	-1.614	-0.847	-0.138	-0.709
-0.722	-1.388	-0.050	-0.017	-0.034
-0.555	-0.706	-0.192	0.602	-0.794
0.913	0.173	-0.023	0.604	-0.627
-0.259	-0.293	-0.249	-0.491	0.241
-2.840	-2.281	-0.184	-0.011	-0.173
-0.967	-0.446	-0.282	-0.453	0.171
0.808	1.100	-0.071	-0.178	0.106
1.430	0.400	0.293	0.014	0.279
1.904	2.404	0.076	0.138	-0.062

-0.580	-1.124	-0.786	-0.530	-0.256
-0.287	0.218	0.191	-0.896	1.087
-0.560	-1.369	0.102	0.202	-0.100
-0.583	0.078	-0.327	0.049	-0.376
1.467	0.192	0.375	-0.034	0.409
-2.028	-1.510	0.622	-0.611	1.233
-0.820	-0.806	-0.272	-0.604	0.332
1.875	0.995	0.439	1.251	-0.812
-1.350	-1.055	0.296	0.068	0.228
-0.776	-1.216	0.065	-0.157	0.222
-0.566	-0.702	-0.016	-0.140	0.123
1.939	2.288	0.118	-0.242	0.360
-0.030	-0.758	0.137	0.471	-0.334
1.239	1.216	0.567	1.575	-1.008
1.380	1.363	-0.406	0.891	-1.297
2.431	0.956	0.466	0.399	0.067
2.084	2.031	0.208	0.197	0.011
-1.764	-0.963	0.068	0.168	-0.101
-0.186	-0.416	1.411	0.635	0.776
-2.562	-1.985	0.197	-0.126	0.323
-1.269	-0.978	-0.247	0.624	-0.871
-0.495	-0.040	-0.159	-0.056	-0.103
-1.325	-1.422	0.428	0.047	0.381
-2.245	-1.605	0.030	0.346	-0.315
-0.850	-1.079	0.103	0.061	0.042
-2.349	-1.791	-0.185	-0.283	0.099
0.368	0.338	0.329	0.020	0.309
-1.851	-1.388	0.291	-0.678	0.969
-1.578	-1.554	-0.105	0.375	-0.480
0.294	-0.650	0.027	0.394	-0.367
2.214	1.968	-0.314	0.324	-0.638
1.690	0.955	0.004	-0.212	0.216
1.234	0.287	0.399	0.907	-0.509
-0.068	0.196	0.301	0.494	-0.193
1.450	1.230	-0.053	0.581	-0.634
0.077	-0.207	0.262	-0.144	0.406
1.081	1.604	0.151	0.202	-0.051
-2.205	-1.212	0.195	-0.121	0.316
-0.646	-0.467	0.109	0.724	-0.615
-1.141	-0.718	-0.185	-0.363	0.179
-0.161	-0.622	0.148	0.266	-0.118
-0.564	0.072	0.019	-0.392	0.412
-2.467	-2.341	-0.267	-1.043	0.776
-2.600	-2.271	0.085	0.202	-0.116
-1.897	-1.320	0.165	-0.011	0.176
-1.022	-0.368	0.166	-0.540	0.706
-2.562	-1.150	-1.205	-0.840	-0.364
-0.200	0.566	0.327	-0.138	0.464
0.711	0.184	0.676	0.148	0.528
0.362	-0.007	0.369	0.816	-0.447
-0.910	-0.301	-0.026	-0.184	0.158



-0.934	-0.722	0.192	-0.030	0.222
-1.378	-0.880	0.163	-0.160	0.323
-0.393	-0.371	0.012	0.741	-0.729
0.420	0.213	0.395	0.099	0.296
2.968	2.675	0.249	0.271	-0.022
0.554	-0.038	-0.085	0.028	-0.113
-0.131	0.421	-0.312	-0.430	0.117
-0.557	-0.213	-0.427	0.406	-0.832
0.839	0.315	-1.013	0.284	-1.297
-0.101	-0.726	-0.027	-0.129	0.102
-1.656	-1.607	-0.595	0.638	-1.233
-0.595	-0.996	0.539	0.482	0.057
-2.502	-0.994	-0.497	-0.134	-0.363
-2.233	-1.812	0.268	-0.037	0.305
-0.932	-0.821	-0.147	-0.131	-0.016
1.804	0.456	0.293	0.650	-0.357
2.208	1.652	0.023	0.695	-0.672
0.068	0.513	-0.115	-0.675	0.560
-0.862	-0.994	0.614	0.082	0.532
-0.423	-0.450	0.405	-0.459	0.864
2.516	2.538	0.264	-0.250	0.514
-3.489	-2.784	-0.314	-0.327	0.013
-2.491	-2.515	-0.128	-0.043	-0.085
-0.138	-0.724	0.355	0.253	0.102
-2.957	-3.058	-0.164	0.359	-0.523
-0.259	-0.700	-0.425	-0.937	0.512
2.641	1.534	0.227	-0.317	0.544
-0.654	0.075	0.267	-0.499	0.766
-0.446	0.205	-0.098	-0.432	0.334
2.116	2.334	0.185	-0.346	0.531
-0.045	0.153	0.081	-0.581	0.662
-1.499	-0.914	-0.416	-0.765	0.349
-1.586	-1.220	0.059	-1.155	1.215
0.658	0.314	-0.061	0.349	-0.410
2.676	1.686	0.296	0.551	-0.255
-0.235	0.641	-0.879	-0.292	-0.588
2.564	1.765	0.088	0.897	-0.809
-1.364	-0.739	-1.351	-0.770	-0.581
2.101	1.613	0.380	0.364	0.016
-2.138	-1.783	0.430	-0.562	0.992
1.658	1.810	0.291	0.299	-0.008
0.085	-1.318	0.068	-0.006	0.073
-0.954	-1.383	-0.017	-0.126	0.110
-1.477	-1.219	0.506	-0.281	0.787
-0.240	-0.584	-0.069	-0.145	0.076
1.923	2.451	-0.351	0.396	-0.746
-0.660	-1.387	-1.137	-0.103	-1.034
2.294	2.275	0.409	0.280	0.129
-0.943	-1.342	0.238	-0.137	0.375
1.649	1.165	0.197	0.395	-0.198
1.802	1.696	0.307	0.063	0.244

-0.956	-0.685	-0.224	-0.230	0.006
-1.299	-1.340	0.199	0.908	-0.709
-0.988	-1.007	0.613	-0.042	0.656
0.078	-0.052	1.019	-0.565	1.583
1.641	0.943	0.313	0.798	-0.485
-1.516	-2.045	-0.230	-0.177	-0.053
-2.673	-2.538	0.409	-0.898	1.308
-0.689	-1.141	0.153	-0.375	0.528
-2.660	-2.491	-0.153	-0.096	-0.057
-0.198	0.362	0.022	-0.345	0.367
-0.203	-0.767	0.360	0.364	-0.004
-0.789	-0.851	-0.143	-0.058	-0.084
0.419	0.333	0.106	0.006	0.099
0.365	0.407	-0.137	-0.361	0.223
1.324	0.471	0.058	-0.240	0.298
1.834	1.431	0.378	0.336	0.042
0.619	1.298	-0.510	-0.266	-0.245
2.007	0.493	-0.218	0.092	-0.310
1.929	1.653	0.008	-0.071	0.080
0.144	-0.646	0.156	0.105	0.052
1.951	1.416	0.042	-0.013	0.055
0.046	1.248	0.083	0.295	-0.212
0.101	-0.337	0.366	0.853	-0.487
0.311	-0.001	-0.654	-0.138	-0.516
-0.011	0.992	-0.214	-0.689	0.475
0.213	-0.941	-0.289	-0.098	-0.191
-1.458	-0.918	0.419	-0.440	0.860
-0.268	-0.029	0.115	-0.915	1.030
0.501	0.140	-0.018	0.563	-0.581
-1.039	-0.868	1.546	0.407	1.139
-0.876	-0.821	0.884	0.501	0.383
1.750	1.268	0.065	-0.226	0.292
2.011	0.998	0.137	0.203	-0.066
1.170	0.889	-0.232	-0.238	0.005
1.924	0.585	0.254	-0.058	0.313
2.514	2.146	0.911	0.777	0.133
-0.171	-0.786	0.186	-0.433	0.619
-1.221	-1.040	0.626	0.078	0.548
1.994	1.634	0.015	-0.266	0.281
0.516	-0.238	0.483	0.316	0.167
1.917	1.310	-0.270	0.311	-0.581
1.794	1.058	-0.149	0.051	-0.200
2.462	1.667	-0.238	0.418	-0.656
-1.303	0.316	-1.247	-0.546	-0.700
-1.257	-0.827	0.508	-0.046	0.554
0.101	0.524	0.227	-1.408	1.634
0.728	0.862	-0.115	-0.039	-0.076
-1.331	-0.895	0.358	-0.375	0.734
0.765	0.815	-0.058	-0.223	0.165
-0.956	0.116	-0.029	0.040	-0.069
-0.483	-2.048	-0.170	0.569	-0.739

-0.118	-0.090	-0.351	-0.096	-0.254
0.282	0.294	-1.437	-0.895	-0.543
0.856	0.141	-0.517	-0.342	-0.174
0.914	0.027	0.084	0.249	-0.165
-0.500	-0.246	-0.354	-0.694	0.340
-3.086	-2.413	-0.528	0.396	-0.924
-3.086	0.106	-0.211	-0.104	-0.107
-3.719	-3.487	0.141	0.414	-0.273
1.245	0.960	-0.402	0.314	-0.716
-1.626	-1.912	0.116	0.046	0.071
-1.411	-0.977	-0.452	-0.406	-0.046
-1.223	-1.081	-0.666	0.377	-1.043
-1.671	-1.729	-0.416	-0.343	-0.073
-1.675	-1.363	-0.350	-0.537	0.186
-1.905	-1.629	-0.161	-0.146	-0.015
-1.158	-0.713	-0.019	-0.028	0.009
-1.138	-1.444	0.098	-0.259	0.357
-1.403	-1.920	0.567	0.031	0.535
-1.075	-0.387	-0.006	-0.101	0.095
1.847	1.292	0.335	0.456	-0.121
-0.518	0.762	-0.447	-0.528	0.081
-3.585	-3.108	0.337	0.149	0.187
-2.842	-2.600	0.051	-0.138	0.189
-1.924	-1.966	-1.498	0.187	-1.685
-1.751	-2.223	-0.293	-0.658	0.366
-1.324	-0.839	0.159	-0.162	0.321
-0.518	-0.201	0.286	-0.133	0.419
0.046	0.038	0.100	0.441	-0.341
-1.874	-1.615	0.100	-0.379	0.478
-2.948	-2.275	0.361	-0.543	0.904
-0.317	-0.899	0.283	0.340	-0.057
-0.979	-0.066	-0.281	-0.458	0.177
-1.049	-1.941	-0.135	0.221	-0.356
2.003	1.635	0.684	0.421	0.263
-1.215	-1.508	0.597	0.201	0.396
1.304	0.968	0.220	0.195	0.025
1.331	0.346	0.454	0.307	0.148
0.248	0.571	0.971	0.375	0.596
1.274	1.914	0.396	0.327	0.069
2.488	1.599	-0.244	-0.065	-0.179
0.498	1.011	-0.049	-0.380	0.331
-1.138	-0.760	-0.212	-0.026	-0.186
0.844	0.066	0.972	0.792	0.180
0.231	0.918	-0.303	-0.849	0.546
2.315	1.537	0.422	0.081	0.341
-1.038	-0.511	0.526	-0.195	0.721
1.266	0.597	0.345	1.068	-0.723
-1.735	-1.375	0.005	0.016	-0.011
-0.859	-0.781	-0.238	0.174	-0.412
0.627	1.109	0.070	0.110	-0.040
-1.802	-1.424	-0.171	-0.419	0.249

-0.109	-1.020	-0.513	0.697	-1.210
-1.716	-1.978	-0.773	0.370	-1.144
-2.268	-1.387	0.371	0.061	0.309
-0.634	-0.375	-0.175	0.378	-0.552
-1.536	-1.324	0.038	-0.427	0.466
-1.392	-1.014	-0.331	-0.071	-0.260
-0.658	-0.014	-0.105	-0.252	0.148
-3.126	-2.923	0.029	-0.081	0.111
-2.325	-2.611	-0.232	0.141	-0.374
-0.027	0.423	0.318	-0.235	0.553
-0.402	-0.276	-0.302	0.525	-0.827
0.631	-0.057	0.574	0.461	0.113
0.167	-1.340	-0.632	-0.048	-0.584
0.623	0.464	0.330	0.151	0.179
-3.181	-2.655	-0.151	-0.515	0.365
-0.760	-0.897	0.331	-0.215	0.546
-2.671	-1.409	-0.967	-0.408	-0.559
1.095	0.011	-0.476	0.275	-0.752
-0.809	-0.323	-0.469	-0.522	0.053
-0.861	-0.173	0.093	-0.026	0.119
-0.062	0.428	0.423	0.309	0.114
-1.450	-1.622	0.082	0.069	0.013
-2.172	-1.966	-0.502	-0.388	-0.114
-2.944	-2.434	0.000	0.214	-0.214
-2.583	-2.318	-0.912	-0.321	-0.591
-2.997	-2.450	-0.217	-0.758	0.541
1.824	1.655	0.237	0.234	0.003
1.142	1.591	-0.159	-0.356	0.197
-1.405	-1.185	0.178	-0.270	0.448
-0.694	-1.759	-0.031	0.030	-0.061
1.195	0.212	0.181	0.478	-0.297
2.376	0.814	0.054	0.416	-0.362
-0.054	-1.366	0.292	0.183	0.110
-0.235	0.216	-0.009	-0.123	0.114
-1.419	-0.803	0.100	-0.267	0.368
-0.803	-1.252	-0.497	-0.272	-0.225
-0.959	-0.981	0.652	0.029	0.623
-1.033	-0.631	0.222	-0.559	0.781
-0.025	-0.362	0.197	-0.055	0.252
0.677	0.500	0.200	0.642	-0.441
0.648	0.597	0.157	0.105	0.051
2.497	1.056	0.701	0.353	0.348
0.599	2.108	-0.282	-0.367	0.085
-0.062	-1.068	-1.320	-0.547	-0.773
1.813	1.324	-0.442	0.632	-1.074
0.441	0.964	-0.159	-0.010	-0.149
0.576	0.499	0.670	0.777	-0.107
-0.058	0.175	-0.120	-0.277	0.157
1.975	1.079	0.607	0.550	0.057
1.423	1.412	-0.491	0.042	-0.533
2.442	2.055	0.654	0.479	0.175

0.608	1.104	0.567	0.042	0.525
-0.791	-0.292	0.197	-0.011	0.208
1.462	0.747	0.388	0.696	-0.309
-2.065	-1.016	-0.544	-0.636	0.092
-1.178	-0.744	-0.300	-0.439	0.138
0.937	0.862	-0.938	-0.528	-0.410
0.129	0.108	0.243	-0.185	0.429
-0.482	0.067	0.213	0.170	0.043
1.542	0.890	-0.180	0.109	-0.289
-0.209	0.093	-0.064	-0.037	-0.027
1.593	1.600	0.148	-0.837	0.985
-0.242	0.026	0.215	-0.137	0.352
-0.606	-0.179	1.000	-0.084	1.084
-0.093	0.442	-0.444	-0.240	-0.204
-1.092	-0.979	0.319	-0.243	0.563
1.906	1.728	0.209	-0.104	0.313
1.340	1.873	-0.223	-0.017	-0.207
0.181	0.341	0.281	0.149	0.132
0.919	0.658	-0.057	0.161	-0.218
0.120	-0.153	-0.132	-0.179	0.047
1.728	2.718	0.217	0.359	-0.143
2.559	2.296	0.237	0.240	-0.003
2.579	1.741	0.180	0.612	-0.432
-0.231	-0.177	0.207	-0.332	0.539
-0.530	-0.502	0.141	0.500	-0.359
-0.474	0.279	0.147	0.554	-0.407
1.918	1.520	0.382	0.221	0.162
0.298	-0.358	-0.509	-0.087	-0.422
-0.033	-0.139	-0.060	-0.204	0.144
-2.317	-2.696	0.266	-0.353	0.619
-0.019	-1.076	0.068	0.005	0.062
0.949	0.116	0.270	0.110	0.161
-0.106	0.076	0.750	0.367	0.383
-2.197	-1.745	-0.239	-1.070	0.831
-0.552	-1.038	0.227	0.125	0.102
-2.138	-1.716	0.443	0.102	0.341
2.191	2.180	0.367	-0.540	0.907
0.279	-0.762	-0.412	0.508	-0.920
1.176	-0.633	0.258	0.264	-0.006
-0.638	-1.849	0.772	0.260	0.512
-1.414	-1.969	0.145	0.003	0.142
-3.456	-2.775	0.230	-0.336	0.567
0.726	0.639	0.098	-0.188	0.286
0.782	-0.407	-0.295	-0.645	0.350
-2.327	-1.915	0.038	-0.575	0.613
-0.651	-1.464	0.144	0.666	-0.523
1.611	0.340	0.378	0.442	-0.065
-0.686	-1.448	0.581	0.285	0.295
-0.254	-0.596	0.802	0.731	0.071
0.840	0.956	0.105	-0.448	0.553
-0.706	-0.422	0.076	-0.357	0.434

1.710	2.326	-0.055	-0.009	-0.046
1.156	0.099	0.341	0.208	0.132
-0.210	-0.031	0.801	0.424	0.377
0.428	-0.250	0.196	0.371	-0.175
0.562	0.662	-0.262	-0.369	0.107
-0.913	-0.751	-0.210	-0.394	0.184
0.024	0.091	0.309	-0.152	0.461
-1.420	-1.385	-0.332	0.101	-0.434
-1.904	-1.312	-0.044	-0.741	0.697
-2.339	-1.827	-0.140	0.157	-0.297
-2.421	-2.207	0.384	0.555	-0.171
-3.559	-3.375	-0.355	-0.261	-0.094
0.069	-0.996	-0.008	-0.137	0.129
2.222	2.118	0.426	-0.776	1.202
-1.570	-2.297	-0.377	-0.020	-0.357
0.526	0.664	0.406	-0.166	0.573
-2.409	-1.453	0.228	-0.448	0.676
-1.231	-0.855	-0.318	-0.788	0.471
-0.060	0.570	-0.058	-0.613	0.555
2.079	1.405	-0.622	0.050	-0.672
0.043	0.073	-0.939	-0.219	-0.720
3.060	2.611	0.208	-0.118	0.326
0.498	-0.718	-0.111	0.322	-0.433
-1.417	-1.249	-0.345	-0.386	0.041
0.068	0.088	0.281	-0.654	0.935
-0.112	-0.571	-0.375	-0.144	-0.231
-0.003	-0.388	0.002	-0.019	0.022
0.585	-0.225	-0.135	-0.113	-0.022
-0.686	-0.474	0.032	-0.355	0.387
0.441	0.658	0.361	-0.225	0.585
1.881	1.932	0.212	-0.440	0.651
1.516	2.276	0.115	-0.006	0.122
2.055	1.372	0.518	0.147	0.371
2.641	2.036	0.722	-1.575	2.297
-1.506	-1.373	-0.725	-0.054	-0.671
0.085	-0.577	0.249	0.287	-0.039
-1.725	-1.040	0.134	0.144	-0.010
2.145	0.788	0.954	1.015	-0.060
-0.938	-1.530	0.407	-0.071	0.478
-1.447	-0.254	0.612	0.021	0.591
1.233	1.160	0.322	0.599	-0.277
-0.418	-0.376	-0.086	0.023	-0.109
-1.008	-0.359	-0.628	-0.512	-0.116
-1.635	-1.085	0.138	-0.265	0.403
0.093	0.103	0.135	0.341	-0.206
-2.728	-2.194	0.080	-0.177	0.257
-1.043	-1.027	0.089	-0.345	0.434
2.059	1.281	0.397	0.238	0.159
-0.935	-1.517	-0.497	-0.396	-0.101
-1.951	-1.061	-0.123	-0.798	0.675
-0.261	-0.699	0.540	1.368	-0.828

-2.317	-1.721	-0.478	-0.733	0.255
-2.654	-1.978	-0.964	0.542	-1.506
2.534	1.871	0.525	0.076	0.449
-1.864	-2.277	0.278	0.301	-0.023
1.934	2.230	-0.061	0.051	-0.112
1.637	0.677	-0.298	0.476	-0.775
-0.611	-1.643	-0.287	-0.028	-0.259
0.071	-0.828	0.266	0.502	-0.236
0.917	-0.019	-0.065	0.273	-0.337
-1.823	-1.003	0.071	-0.059	0.129
-1.426	-0.833	-0.272	0.278	-0.551
-0.554	-0.860	0.488	0.284	0.204
1.064	-0.338	-0.062	0.168	-0.230
-0.317	-0.844	0.110	-0.187	0.297
0.227	-1.024	0.089	0.152	-0.063
-0.213	0.209	-0.297	-0.571	0.273
-2.522	-2.149	0.136	0.315	-0.179
-1.110	0.862	-0.027	0.002	-0.029
0.090	-0.568	-0.117	0.155	-0.272
-2.073	-1.396	-0.738	-0.138	-0.600
-2.127	-1.401	-0.510	-0.212	-0.298
1.488	1.264	0.054	0.442	-0.388
0.069	-0.062	0.317	-0.085	0.402
0.244	-0.342	0.143	-0.332	0.475
0.398	0.287	0.187	0.016	0.171
-0.073	-0.568	0.231	0.331	-0.100
0.905	0.336	-0.019	-0.339	0.320
-0.540	-0.123	-0.124	-0.198	0.074
1.599	1.018	0.243	0.784	-0.542
-2.398	-2.563	-0.008	-0.084	0.076
1.800	1.385	0.371	0.120	0.251
-0.108	0.045	0.293	-0.550	0.843
0.266	-0.362	-0.081	-0.036	-0.045
-1.983	-1.287	-0.021	-0.817	0.796
2.246	1.476	0.256	-0.097	0.353
-0.288	-0.466	0.105	-0.145	0.249
-0.974	-0.506	-0.557	-0.258	-0.299
-0.873	-0.997	0.042	0.053	-0.011
1.133	0.281	0.420	-0.016	0.436
0.116	-0.458	-0.097	-0.309	0.212
0.973	-0.038	0.062	0.288	-0.226
3.051	2.473	0.000	0.159	-0.159
-2.339	1.258	-0.450	-0.432	-0.018
-2.777	-0.552	0.254	-1.070	1.324
1.799	1.102	0.265	0.736	-0.471
2.135	1.476	-0.407	0.026	-0.432
0.417	-0.777	-0.555	-0.386	-0.170
0.930	-0.560	-0.305	0.199	-0.504
-2.259	-1.600	-0.565	-0.197	-0.368
-2.221	-1.503	0.171	-0.279	0.451
2.002	-0.115	0.387	0.352	0.035

-0.478	-0.190	-0.292	0.493	-0.785
1.606	1.607	0.124	-0.487	0.611
-0.219	-0.586	-0.896	0.322	-1.218
-0.850	-0.885	-1.157	-0.317	-0.840
0.409	0.547	-0.942	-0.195	-0.748
0.271	0.425	0.427	-0.366	0.793
1.044	0.313	-0.656	0.423	-1.079
1.426	0.704	-0.411	0.291	-0.701
0.092	-0.404	0.135	0.222	-0.088
-0.631	-1.184	0.020	0.362	-0.342
-1.547	-1.539	-0.020	0.300	-0.320
-2.687	-2.609	-0.205	-0.060	-0.144
-3.128	-0.675	-0.162	-1.131	0.968
-1.274	-1.468	0.043	0.210	-0.167
-3.723	-3.417	-0.345	0.193	-0.538
-3.858	-3.092	-0.117	0.178	-0.295
-2.727	-2.302	-0.386	-0.392	0.006
-3.818	-3.317	0.191	-0.107	0.297
-4.537	-3.716	-0.088	-0.253	0.165
-3.083	-2.270	0.080	-0.074	0.154
-4.179	-3.676	0.045	-0.280	0.325
-3.539	-2.955	-0.431	-0.039	-0.392
-3.461	-2.862	-0.530	0.357	-0.887
-0.580	-0.889	0.129	-0.643	0.773
-1.729	-1.465	0.015	-0.189	0.204
-2.101	-1.397	0.197	0.242	-0.045
-1.855	-1.827	-0.407	-0.087	-0.321
-0.992	-0.636	0.017	0.320	-0.303
0.698	-0.148	-0.995	-0.028	-0.967
-3.524	-2.692	-0.235	-0.409	0.173
-2.679	-0.330	-0.326	-0.921	0.595
-1.305	-0.809	0.129	-0.182	0.311
0.681	1.157	0.462	0.243	0.220
-1.666	-1.055	0.917	0.005	0.912
0.430	-0.745	0.041	-0.092	0.134
0.001	-1.048	0.201	0.440	-0.239
-0.614	-1.272	0.119	0.560	-0.441
-1.648	-2.012	-0.160	-0.056	-0.104
-3.295	-3.055	-0.127	0.386	-0.512
-2.959	-2.166	0.275	-0.026	0.301
-3.361	-3.327	0.424	0.140	0.284
-0.399	-0.416	0.161	0.007	0.154
2.257	1.031	-0.006	0.778	-0.785
1.469	1.210	-0.448	0.309	-0.757
0.807	0.247	0.042	0.067	-0.024
-0.237	0.037	-0.250	-0.188	-0.062
1.393	1.135	-0.428	-0.014	-0.414
-0.016	-0.119	0.072	-0.188	0.260
-1.375	-1.389	0.401	-0.452	0.853
-0.631	-0.283	0.119	-0.701	0.820
-1.611	-1.728	0.241	0.436	-0.194



-3.542	-3.033	-0.156	-0.780	0.623
1.897	0.559	0.379	0.452	-0.072
0.355	0.243	0.427	0.116	0.310
1.201	0.780	-0.143	0.631	-0.774
-0.334	-0.075	0.165	1.106	-0.940
0.975	0.708	0.412	0.414	-0.002
-0.721	-0.855	-0.078	-0.321	0.243
1.061	1.657	-0.957	-0.106	-0.851
-1.183	-0.528	-0.008	0.411	-0.419
-2.500	-0.409	-0.257	-0.309	0.053
-1.205	-1.478	0.124	-0.314	0.438
1.097	0.752	-0.156	-0.276	0.120
0.241	0.421	0.412	0.124	0.288
-0.619	-0.528	-0.205	-0.017	-0.187
0.484	0.727	0.029	0.100	-0.071
1.811	1.811	0.334	-0.268	0.603
-1.028	-1.405	-0.075	-0.024	-0.051
-3.196	-2.715	-0.433	-0.244	-0.189
0.538	0.267	-0.022	0.210	-0.232
-2.272	-1.600	0.148	-0.580	0.729
-1.863	-1.518	-0.357	-0.382	0.025
-1.336	-1.089	-0.462	-0.460	-0.002
2.600	0.832	0.486	0.102	0.385
0.431	0.622	-0.977	-0.965	-0.013
1.280	2.572	0.074	-0.199	0.273
1.384	1.190	-0.569	-0.585	0.016
-1.282	-1.378	-0.908	-0.840	-0.068
-1.436	-0.217	0.531	0.199	0.332
0.960	0.356	0.687	-0.184	0.871
-0.853	-1.134	0.201	0.072	0.130
-2.422	-2.494	-0.561	-0.003	-0.558
0.801	-0.133	0.381	-0.106	0.487
2.020	2.212	0.036	-0.714	0.750
-0.960	-0.184	0.388	-0.214	0.601
1.397	1.818	0.632	0.250	0.382
3.715	2.723	-0.347	0.181	-0.529
1.367	1.798	0.155	-0.083	0.238
-0.093	0.050	0.107	-0.858	0.965
0.418	0.584	0.063	-0.098	0.161
-0.220	0.227	0.144	-0.749	0.894
-0.734	-0.238	-0.567	-0.533	-0.035
0.326	1.088	-0.091	-0.222	0.131
0.593	0.606	-0.128	-0.438	0.310
0.437	0.616	0.251	0.074	0.177
1.008	0.754	0.267	0.193	0.074
1.003	1.486	-0.391	-0.653	0.262
-2.100	-1.736	0.242	-0.149	0.391
0.542	0.353	1.375	-0.094	1.469
-1.794	-1.364	-0.358	-0.429	0.071
0.405	0.814	0.302	0.329	-0.027
1.306	1.291	-1.018	-0.685	-0.334

3.290	1.602	-0.002	0.027	-0.028
-2.426	-1.873	0.926	-0.014	0.940
-2.381	-2.238	0.062	-0.099	0.162
-1.611	-1.853	-0.288	-0.199	-0.089
0.404	1.820	-0.140	-0.060	-0.080
3.092	1.784	0.030	0.361	-0.332
1.925	1.378	0.253	-0.023	0.276
-1.976	-1.588	-0.012	-0.052	0.041
0.796	1.316	-0.358	-0.149	-0.209
1.153	1.908	0.423	0.145	0.278
0.052	0.552	0.525	-0.257	0.782
-0.351	0.778	0.500	0.013	0.487
0.016	0.371	0.243	-0.610	0.853
-2.064	-1.873	0.234	1.117	-0.883
2.593	2.513	0.064	-0.098	0.161
-2.290	-1.608	0.385	-0.169	0.554
-0.360	0.507	-0.182	-0.681	0.499
-0.752	0.014	-0.585	-0.256	-0.329
3.359	0.936	-0.016	-0.104	0.088
-0.464	0.072	0.126	0.004	0.122
0.267	0.685	0.034	-0.345	0.379
-2.124	-1.562	0.750	-0.721	1.471
0.040	0.098	0.202	0.986	-0.784
-0.166	0.035	0.435	0.851	-0.415
-0.310	0.141	-0.890	-0.193	-0.698
-0.064	-0.240	0.324	0.962	-0.638
-0.266	-0.409	1.120	0.139	0.981
-1.455	-0.997	0.991	0.448	0.543
1.319	0.489	0.244	0.357	-0.113
0.158	-0.127	0.241	0.044	0.197
-1.157	-1.406	0.194	0.068	0.126
-0.188	-0.901	0.330	0.583	-0.253
0.679	0.050	0.497	0.251	0.246
0.837	-0.200	-0.180	0.585	-0.765
-2.401	-1.116	0.174	-0.303	0.477
-1.330	-1.525	0.087	0.074	0.013
-2.428	-2.092	-0.095	0.309	-0.404
1.182	2.061	0.304	0.184	0.120
1.639	1.560	0.116	-0.414	0.529
-1.658	-1.853	0.277	0.179	0.098
-0.236	-0.470	-0.080	0.170	-0.250
-1.949	-1.690	0.347	-0.877	1.224
0.762	-0.901	-0.404	0.345	-0.749
-2.288	-1.919	-0.268	-0.687	0.419
-0.504	-0.381	0.309	0.106	0.202
-0.762	-0.579	-0.078	-0.161	0.083
-0.313	-1.600	0.118	-0.021	0.140
-0.309	0.295	0.239	-0.503	0.743
1.893	0.812	0.008	-0.450	0.458
0.952	1.206	0.586	-0.051	0.637
0.329	0.526	0.250	-0.086	0.336

-2.389	-2.084	-0.638	-1.106	0.468
1.410	1.267	-0.094	-0.201	0.107
-1.075	-0.807	0.471	-0.370	0.841
-2.588	-0.955	0.461	-0.606	1.067
-0.442	-0.479	-0.312	-0.025	-0.287
1.903	2.213	0.186	-0.215	0.401
-0.211	0.366	0.172	-0.324	0.497
-2.922	-2.367	0.028	-0.619	0.647
1.448	2.320	-0.028	0.298	-0.325
0.788	2.081	-0.310	-0.068	-0.242
-0.939	-1.532	0.567	1.122	-0.555
1.616	1.478	-0.278	-0.079	-0.199
0.803	1.831	0.090	-0.004	0.093
0.583	0.977	0.285	0.159	0.126
-0.695	-0.546	0.061	-0.635	0.696
0.282	0.800	-0.406	-0.121	-0.286
-1.514	-1.353	-0.197	0.388	-0.585
-0.617	-0.809	-0.145	0.770	-0.915
-0.027	-0.458	-0.444	-0.170	-0.273
-2.587	-2.724	-0.709	-0.131	-0.578
0.574	0.971	0.067	-0.629	0.696
1.363	1.110	0.085	-0.323	0.408
-1.104	-0.834	-0.010	0.280	-0.290
2.153	2.206	-0.002	-0.036	0.035
0.825	1.027	-0.624	-0.676	0.051
1.561	0.453	0.275	0.532	-0.257
1.784	1.543	-0.036	0.095	-0.130
0.696	0.598	0.070	-0.243	0.314
-1.337	-1.265	0.171	-0.666	0.837
-2.096	-1.518	-0.232	-0.496	0.264
0.626	0.988	0.517	-0.120	0.637
2.380	1.476	0.436	0.383	0.053
-1.306	-1.215	0.049	-0.462	0.511
2.315	0.974	0.192	0.747	-0.555
0.618	0.936	0.404	-0.131	0.535
1.555	0.740	0.732	0.728	0.005
-0.521	0.218	-0.390	-0.588	0.198
0.631	0.359	0.504	-0.390	0.894
0.824	1.533	0.451	-0.281	0.732
-1.579	-1.040	0.480	-0.378	0.857
-3.095	-2.309	-0.095	-1.022	0.927
-0.682	-1.940	0.582	0.637	-0.054
-0.917	-0.401	-0.378	0.158	-0.536
1.690	1.056	0.653	0.363	0.290
2.675	2.819	1.390	-0.017	1.406
1.749	1.427	0.067	-0.176	0.243
1.854	1.066	-0.384	0.070	-0.455
-0.311	0.398	0.419	0.917	-0.498
-1.262	-0.961	0.306	-0.166	0.472
-0.538	-1.089	-0.071	-0.268	0.198
-1.583	-1.500	-0.116	0.503	-0.618

-1.376	-1.988	-0.184	-0.296	0.112
-0.960	-0.732	-0.895	-0.380	-0.514
-0.257	0.224	-0.360	0.556	-0.916
1.611	1.670	-0.063	-0.493	0.430
0.581	1.048	0.424	-0.881	1.305
-3.688	-3.415	-0.148	-0.291	0.143
-2.059	-1.097	-0.055	-0.076	0.021
1.416	0.819	0.453	0.383	0.070
0.367	0.191	0.324	-0.043	0.366
-0.649	-0.462	0.140	-0.171	0.311
-2.310	-2.454	0.123	0.265	-0.142
0.224	0.752	0.428	0.641	-0.214
0.746	0.039	0.284	0.781	-0.497
0.186	-0.564	-0.337	-0.004	-0.332
-0.046	0.152	0.117	-0.036	0.152
0.228	-0.178	0.530	0.694	-0.164
-0.140	-0.387	0.682	0.875	-0.193
1.286	1.175	0.752	1.212	-0.460
1.274	1.648	0.055	-0.134	0.189
0.031	0.482	-0.135	-0.038	-0.097
0.111	0.295	0.017	-0.258	0.275
-1.338	0.176	-0.345	-0.682	0.337
-1.899	-2.060	0.123	0.589	-0.466
-1.064	-0.657	0.328	0.394	-0.066
-0.706	-0.177	0.174	-0.289	0.463
-1.948	-1.560	-0.266	0.293	-0.558
0.777	1.341	-0.136	0.100	-0.236
0.925	0.783	0.203	-0.246	0.449
-2.728	-0.523	-0.526	-0.134	-0.392
1.644	1.518	0.357	-0.188	0.544
0.529	-0.311	0.708	0.821	-0.113
-2.604	-2.656	0.097	0.468	-0.371
-2.178	-2.042	0.234	-0.100	0.333
-2.681	-2.072	-0.028	-0.296	0.268
-1.842	-2.000	0.063	0.250	-0.187
-0.172	-1.499	0.048	-0.177	0.225
-2.651	-2.799	-0.204	-0.731	0.526
-2.923	-2.653	-0.428	-0.297	-0.131
0.905	1.734	0.087	0.156	-0.069
0.818	1.578	0.279	0.475	-0.195
-0.366	0.279	0.023	-0.464	0.488
0.931	0.299	0.788	0.238	0.550
0.301	0.026	-0.395	0.255	-0.650
0.577	0.566	0.427	-0.267	0.694
-3.233	-2.563	-0.423	-0.952	0.529
-3.690	-2.881	-0.137	-0.447	0.310
1.351	0.563	0.153	0.743	-0.590
-0.434	-1.411	-0.034	-0.089	0.055
-1.257	-1.725	0.398	0.546	-0.148
-1.442	-0.740	-0.035	-0.593	0.558
3.585	2.152	-0.118	0.084	-0.202

1.880	3.133	0.364	0.611	-0.247
2.271	1.432	0.756	0.370	0.386
1.158	0.998	0.631	0.821	-0.190
2.426	1.828	-0.120	-0.089	-0.032
-2.454	-1.906	0.268	0.848	-0.580
-2.289	-2.646	0.173	0.363	-0.190
1.160	1.485	-0.155	-0.198	0.042
-2.246	-2.239	-0.036	-0.868	0.832
2.096	2.723	0.236	0.849	-0.613
1.769	1.575	0.339	0.240	0.100
1.619	1.574	0.061	0.396	-0.335
1.921	1.691	0.711	0.649	0.062
0.863	0.778	0.027	-0.079	0.105
0.377	-0.388	0.214	0.692	-0.478
-1.296	-1.666	0.073	-0.342	0.415
0.922	0.983	0.221	-0.059	0.281
-1.444	-1.108	0.601	-0.378	0.979
1.121	2.160	0.386	0.025	0.361
0.830	-0.669	-0.773	-0.118	-0.654
-1.710	-1.803	-0.043	-0.488	0.445
1.598	2.097	0.864	-0.299	1.163
-0.223	-0.469	0.339	0.529	-0.191
1.134	0.858	0.057	0.373	-0.316
-3.013	-2.666	0.136	-0.783	0.919
0.565	-0.157	0.667	0.486	0.181
0.893	1.619	-0.357	-0.241	-0.116
-1.367	-1.589	0.675	-0.521	1.196
-1.798	-1.593	0.304	-0.306	0.610
1.312	1.265	0.018	-0.340	0.358
-1.332	-1.314	-0.132	0.404	-0.536
-0.928	-0.611	0.069	0.194	-0.125
2.505	1.953	0.152	0.033	0.119
-2.824	-2.264	-0.053	0.031	-0.085
-3.943	-3.600	-0.273	-0.316	0.043
-1.502	-1.068	0.025	-0.722	0.747
1.387	1.926	-1.069	-0.812	-0.257
1.251	1.504	0.209	0.250	-0.041
-3.377	-2.940	0.320	-0.656	0.976
1.357	0.562	0.094	0.139	-0.044
-1.642	-1.309	0.508	-0.037	0.545
-0.737	-0.130	0.142	-0.281	0.423
-0.261	-1.361	-0.405	0.007	-0.412
1.039	0.249	0.409	0.118	0.291
-1.958	-1.895	-0.029	0.342	-0.371
0.874	1.165	0.683	0.516	0.166
-2.150	-1.084	0.062	-0.420	0.481
1.059	1.922	0.025	-0.241	0.266
1.107	0.690	0.044	-0.657	0.701
-1.664	-2.018	-0.087	0.032	-0.119
-2.076	-1.516	0.005	0.068	-0.063
-1.847	-1.090	-0.340	-0.141	-0.199

2.018	0.721	-0.109	0.050	-0.159
0.413	0.967	0.547	-0.586	1.133
-1.931	-1.230	-0.098	-0.530	0.432
-2.183	-1.309	0.100	-0.214	0.314
1.739	1.035	-0.074	0.171	-0.245
0.596	-0.395	-0.045	-0.013	-0.032
-1.636	-2.646	-0.094	0.235	-0.329
0.717	1.166	0.153	0.249	-0.095
1.017	1.368	0.276	0.429	-0.152
0.081	-1.100	0.087	0.282	-0.195
1.638	1.822	0.186	0.151	0.035
-0.092	0.569	0.473	-0.415	0.888
-2.662	-2.596	-0.061	-0.300	0.239
1.648	0.834	-0.165	-0.314	0.149
1.029	0.367	-0.026	-0.224	0.198
0.667	0.569	0.501	0.264	0.237
-0.286	0.117	0.176	-0.535	0.711
-3.975	-3.440	0.288	-0.604	0.891
1.329	1.272	0.605	-0.373	0.978
3.520	2.175	0.240	-0.132	0.372
-1.460	-1.154	-0.167	-0.738	0.571
-1.685	-2.076	0.287	-0.159	0.446
0.562	0.720	0.796	-0.507	1.303
-2.646	-1.936	-0.037	-0.758	0.721
1.308	0.875	0.071	0.120	-0.049
1.780	1.580	0.584	0.390	0.194
0.375	0.432	1.253	-0.083	1.336
1.994	0.918	-0.094	0.028	-0.122
2.744	2.691	0.500	-0.168	0.668
-1.134	-1.516	0.062	-0.021	0.083
1.364	0.696	0.337	-0.072	0.409
-0.077	-0.156	-0.362	-0.447	0.085
2.928	1.558	-0.020	-0.075	0.055
0.398	0.213	0.569	-0.133	0.701
0.237	0.021	0.180	-0.477	0.657
-2.747	-2.207	-0.082	0.206	-0.287
2.155	2.396	0.109	-0.107	0.216
-3.576	-3.061	-0.576	-0.989	0.413
1.895	1.510	-0.429	-0.031	-0.398
1.099	1.520	1.293	0.670	0.623
-0.329	0.137	0.153	-0.649	0.802
0.926	1.180	0.557	-0.253	0.810
-0.116	0.123	0.146	-0.152	0.299
1.859	0.913	-0.087	0.075	-0.162
2.558	3.273	-0.067	-0.240	0.173
-0.940	-0.635	-0.436	-0.117	-0.319
0.253	-0.123	-0.072	-0.242	0.170
1.737	1.539	0.057	0.098	-0.042
1.735	1.755	0.178	-0.009	0.187
-0.519	0.149	0.326	0.280	0.046
0.005	-0.068	0.705	-0.116	0.821

-0.523	0.667	0.702	-0.826	1.528
-2.339	-1.773	0.399	-1.161	1.560
0.449	0.776	0.305	-0.276	0.582
-1.472	-1.104	-0.165	-0.514	0.349
0.626	1.003	1.212	0.303	0.909
-1.284	0.464	-0.185	-0.141	-0.044
-1.179	-0.254	-0.781	-0.921	0.140
-1.164	-0.473	0.276	-0.840	1.116
-0.053	-0.552	0.316	-0.235	0.551
-0.582	0.038	0.200	-0.359	0.558
1.199	1.257	-0.384	-0.780	0.396
2.409	1.340	0.125	-0.233	0.359
0.655	1.268	-0.163	-0.969	0.807
-0.165	-0.130	0.305	-0.436	0.741
0.559	0.799	-0.111	0.163	-0.274
1.425	1.677	0.709	0.228	0.481
2.083	2.169	-0.374	-0.451	0.077
-0.694	-0.044	-0.001	-0.712	0.711
0.114	0.769	-0.152	-0.275	0.123
-1.066	-0.888	-0.427	-0.596	0.169
-0.052	-0.129	0.667	0.031	0.636
1.518	1.285	0.267	-0.744	1.012
1.420	1.743	0.223	0.231	-0.008
0.837	0.910	0.214	-0.086	0.300
-0.670	0.066	0.023	-0.614	0.637
0.184	0.953	-0.786	-0.625	-0.161
1.642	1.812	-0.155	-0.312	0.156
2.015	2.316	0.188	-0.262	0.450
0.185	0.252	0.251	0.056	0.195
0.922	1.584	0.516	-0.243	0.759
-0.851	-1.253	0.348	-0.117	0.465
-1.429	-0.989	0.174	-0.556	0.730
1.689	1.326	-0.081	0.099	-0.179
-1.860	-1.670	-0.155	-0.539	0.384
0.305	0.329	0.214	0.134	0.080
-2.725	-2.080	0.250	0.020	0.230
0.812	1.351	0.315	-0.728	1.042
1.341	1.896	0.173	-0.185	0.358
0.775	1.984	1.308	0.169	1.140
-0.638	-0.739	0.537	-0.398	0.935
1.456	0.518	0.168	0.073	0.095
1.457	0.648	-0.301	0.000	-0.302
-0.291	-0.393	0.739	-1.417	2.156
-1.001	-0.783	-0.107	-0.315	0.208
-2.310	-1.728	0.048	-0.060	0.108
0.519	0.793	-1.316	-0.288	-1.028
-0.747	0.225	0.119	-0.966	1.085
-0.162	0.364	-0.052	0.004	-0.056
0.244	0.977	0.448	-0.936	1.384
2.012	1.829	1.198	-0.493	1.692
-0.123	-0.063	0.354	-0.129	0.483

-1.064	-0.477	-0.132	-0.900	0.768
1.595	2.532	0.376	0.103	0.273
0.173	0.413	0.489	-0.318	0.808
0.898	1.288	-0.407	-0.661	0.254
0.974	1.059	0.124	-0.823	0.947
-2.259	-1.718	0.198	-0.466	0.664
-0.903	0.096	0.170	-0.367	0.538
-1.372	-0.953	0.400	-0.726	1.126
0.082	0.476	-0.195	0.058	-0.253
-0.352	0.322	-0.306	-0.129	-0.177
-3.127	-2.565	-0.184	-0.636	0.452
-2.132	-1.320	-0.025	-0.785	0.760
-1.870	-0.535	-0.351	-0.154	-0.197
-2.227	-3.192	0.690	0.582	0.108
2.067	1.125	0.863	0.586	0.277
2.562	2.328	0.504	0.537	-0.032
-2.550	-2.450	0.065	-0.188	0.253
-1.376	-0.305	0.459	-1.171	1.630
0.243	0.890	-0.041	0.208	-0.249
-0.665	0.013	0.877	0.823	0.054
1.643	1.567	0.240	0.141	0.099
1.425	1.417	0.406	0.980	-0.574
0.593	0.162	0.193	-0.196	0.389
-0.780	-1.448	0.218	0.417	-0.200
0.993	1.128	0.230	0.061	0.169
-2.545	-2.230	-0.056	-1.390	1.334
-0.101	0.034	0.392	-0.487	0.878
-2.580	-2.503	-0.663	-0.197	-0.467
-1.825	-1.075	-0.291	-1.597	1.306
0.895	1.035	0.538	0.252	0.286
-0.894	-0.490	-0.886	-0.390	-0.496
0.307	0.986	0.309	-0.759	1.068
1.263	0.924	-0.758	-0.249	-0.509
-0.398	-0.191	-0.570	-0.485	-0.086
2.015	2.470	0.285	-0.458	0.742
1.548	1.839	0.375	0.546	-0.171
0.383	1.422	0.091	-0.732	0.824
-0.776	-1.263	0.194	-0.022	0.215
-2.087	-1.758	0.476	-0.498	0.973
-1.163	-0.636	-0.214	-0.758	0.544
-0.649	-0.869	0.196	-0.157	0.353
0.970	1.351	0.818	-0.559	1.377
0.363	0.010	0.154	-0.546	0.699
-1.840	-1.693	-0.700	-0.297	-0.403
0.297	0.656	-0.658	-1.342	0.684
-1.227	-1.094	0.499	0.101	0.399
3.165	2.517	0.206	-0.291	0.497
-1.257	-0.800	0.194	0.008	0.186
-0.192	0.430	0.223	-0.872	1.095
1.531	0.512	0.485	0.614	-0.130
1.171	1.485	0.449	-0.266	0.715



0.596	0.602	0.040	-0.068	0.107
0.558	0.948	0.490	-0.421	0.910
1.041	1.310	0.756	-0.198	0.953
-2.554	-1.951	-0.224	-0.414	0.190
-0.272	-0.071	-0.716	-0.183	-0.533
2.283	2.172	0.029	-0.084	0.113
-1.964	-1.623	-0.006	-0.052	0.046
1.665	1.515	0.383	0.033	0.349
3.035	1.909	0.051	-0.081	0.132
-1.818	-0.994	0.982	0.269	0.713
0.859	0.984	0.130	-0.895	1.026
-0.040	0.451	0.474	-0.241	0.715
-0.856	-0.107	0.184	0.153	0.032
1.209	1.228	-0.169	-0.287	0.118
-3.391	-2.724	0.539	0.058	0.481
0.754	-0.290	-0.032	0.346	-0.378
0.450	0.834	-1.395	-1.110	-0.285
-1.497	-1.104	-0.230	-0.325	0.095
-0.526	-0.385	-0.096	-0.115	0.019
1.460	1.688	-0.119	0.053	-0.172
-2.266	-1.796	0.609	-0.202	0.811
0.351	0.531	0.388	-0.439	0.828
0.311	0.748	-0.033	-0.828	0.795
-1.015	-0.669	0.178	-0.304	0.482
1.027	0.994	0.307	0.471	-0.164
0.230	0.291	0.538	-0.070	0.608
-1.393	-1.136	-0.172	-0.819	0.647
-0.148	0.249	-0.119	-0.274	0.155
2.424	1.779	0.333	-0.043	0.375
0.796	0.234	0.450	-0.088	0.538
2.547	1.952	0.497	0.267	0.230
-0.276	-1.146	0.527	-0.307	0.834
0.045	-0.810	0.453	-0.177	0.630
0.480	0.185	0.409	0.587	-0.178
0.725	0.800	0.179	-0.469	0.648
2.212	1.381	0.467	0.162	0.305
-0.322	0.423	0.699	0.098	0.601
-1.651	-0.816	0.450	-0.034	0.485
-0.777	-1.012	0.733	-0.197	0.930
3.094	2.590	-0.799	-0.046	-0.753
-0.239	0.160	0.803	1.080	-0.277
1.647	0.957	0.473	0.282	0.191
-0.008	0.525	0.355	-0.126	0.481
-0.285	0.175	0.151	-0.128	0.279
-0.885	-1.712	0.046	0.056	-0.009
-2.756	-2.465	0.068	-0.162	0.230
-1.432	-1.037	0.309	0.118	0.192
2.865	1.882	1.231	0.091	1.140
-0.884	-0.941	-0.152	-0.372	0.220
3.240	2.106	0.243	0.311	-0.068
-0.119	-0.386	-0.536	-0.752	0.216

-0.906	-0.664	-0.069	-0.306	0.237
-3.320	-2.422	-0.039	-1.394	1.355
-0.300	-0.205	0.310	0.770	-0.460
-2.376	-1.856	0.072	0.143	-0.071
1.242	0.468	0.680	0.769	-0.089
-1.791	-1.814	0.468	0.355	0.113
0.333	-0.330	0.233	0.370	-0.136
-0.539	-0.467	0.233	-0.015	0.248
0.157	0.187	-0.064	-0.105	0.041
-0.133	-0.592	0.003	-0.045	0.048
-0.881	-1.720	-0.741	-0.682	-0.059
-3.505	-1.118	-0.321	-2.234	1.913
2.508	2.047	0.722	-0.646	1.368
0.291	-0.395	-0.031	0.065	-0.096
1.681	1.578	0.523	0.432	0.091
-0.483	-1.195	0.518	0.037	0.481
2.223	0.973	-0.003	0.366	-0.368
0.891	1.869	-0.645	-0.360	-0.286
2.881	2.114	0.117	-0.462	0.579
2.293	1.457	0.019	-0.336	0.356
0.360	-0.394	0.112	0.124	-0.012
1.051	0.235	0.622	0.519	0.103
1.391	0.760	0.839	0.095	0.744
0.441	-0.174	0.056	-0.054	0.110
0.430	0.553	1.320	0.820	0.500
-1.217	-1.661	-0.790	-0.505	-0.284
3.349	2.128	0.168	-0.135	0.303
0.924	1.170	0.028	-0.419	0.446
0.488	0.394	0.789	-0.172	0.960
-2.376	-2.023	0.373	-0.260	0.632
-0.181	0.455	0.318	0.064	0.254
-3.325	-2.742	-0.256	-0.898	0.643
2.003	1.203	0.055	-0.374	0.429
-1.240	-0.751	-0.146	-0.269	0.124
-1.510	-0.731	0.119	-0.821	0.940
-1.021	-1.105	-0.422	-0.587	0.165
0.818	1.394	0.435	0.289	0.146
0.253	-0.804	0.388	-0.043	0.431
-0.230	-0.034	1.035	0.310	0.725
-1.609	-1.366	0.675	-0.422	1.098
-0.646	-0.541	0.174	-0.606	0.780
2.149	1.345	0.093	0.089	0.004
1.352	1.713	0.088	-0.177	0.265
-2.226	-1.810	0.030	-0.702	0.732
-2.277	-1.581	0.039	-1.047	1.086
1.103	0.432	0.207	-0.216	0.422
-0.461	-0.732	0.032	-0.468	0.500
1.725	1.078	0.143	-0.018	0.162
1.032	1.111	-0.195	0.041	-0.236
-1.324	-1.243	1.275	-0.089	1.364
-0.771	-0.302	0.225	-0.071	0.295

0.806	0.934	-0.573	-0.554	-0.019
-0.644	0.020	0.287	-0.770	1.057
0.961	0.917	0.203	-0.010	0.213
0.948	1.119	0.491	-0.593	1.084
-1.680	-1.252	0.241	-0.130	0.371
1.826	1.986	0.135	-0.404	0.540
-2.686	-2.121	0.395	-0.120	0.515
-2.637	-2.098	0.225	-1.041	1.266
-0.705	-0.784	-0.238	0.010	-0.248
-1.889	-2.066	-0.027	-0.162	0.134
0.117	-0.629	0.425	0.359	0.066
2.275	2.290	-1.156	-1.021	-0.135
-0.489	-0.197	-0.152	-0.520	0.369
1.383	1.690	0.239	-0.020	0.259
-2.493	-2.589	-0.392	0.289	-0.680
-0.487	-0.110	0.581	-0.752	1.333
0.403	0.374	0.120	-0.395	0.515
-0.313	0.069	0.203	-0.281	0.484
-0.989	-0.975	2.176	0.501	1.675
-1.916	-1.589	0.164	0.088	0.076
-3.217	-1.664	0.076	-0.509	0.584
1.170	1.255	0.356	0.144	0.212
-2.796	-2.279	0.091	-0.902	0.994
0.120	0.878	1.500	-0.122	1.622
0.734	0.870	0.144	-0.353	0.496
0.952	1.678	-0.013	-0.663	0.649
-0.867	-0.578	0.243	-0.467	0.710
1.188	-0.278	0.538	0.211	0.327
1.923	0.562	0.633	0.195	0.439
1.664	2.283	0.578	0.018	0.560
0.429	-0.863	0.386	0.048	0.338
-1.891	-1.521	0.240	0.236	0.004
-1.189	-1.147	0.135	-0.190	0.325
-0.564	0.025	-0.102	-0.207	0.105
-2.556	-2.400	0.059	-1.181	1.240
-1.049	-0.421	0.245	-0.558	0.804
1.615	1.632	-0.444	-0.727	0.283
-2.777	-1.530	0.136	-0.106	0.242
-0.228	-0.663	-1.122	-0.592	-0.530
-0.271	0.305	-0.964	-0.042	-0.923
0.973	-0.358	-0.117	0.006	-0.123
-0.402	-0.657	0.511	-0.026	0.537
-0.401	-0.105	-0.244	-0.098	-0.146
1.257	1.344	-0.691	-0.487	-0.204
1.293	1.687	0.487	-0.165	0.652
-0.021	0.120	0.688	0.243	0.445
0.023	-0.040	0.607	-0.181	0.788
1.879	1.373	0.142	0.545	-0.403
1.722	0.031	-0.453	0.360	-0.813
0.182	-0.018	-0.459	-0.330	-0.128
0.409	0.964	0.746	-0.195	0.941

-3.068	-2.926	0.141	0.892	-0.751
0.154	0.253	0.094	0.295	-0.201
-1.216	-1.664	-0.853	0.097	-0.950
-1.367	-0.654	-0.765	-0.203	-0.562
-1.193	-1.250	-0.632	-0.199	-0.433
-2.532	-2.770	0.125	0.140	-0.015
-2.097	-1.961	-0.327	0.437	-0.764
-1.974	-2.543	0.178	-0.037	0.214
-1.780	-1.775	0.123	0.033	0.090
-2.432	-1.664	0.276	-0.203	0.479
0.228	0.376	-0.011	-0.004	-0.007
-0.790	-0.421	-0.465	-0.388	-0.077
0.031	-0.258	-0.398	0.166	-0.564
-2.412	-2.053	0.566	-0.366	0.932
0.771	0.547	0.358	-0.184	0.543
1.447	1.295	0.418	-0.129	0.547
-0.526	-0.060	0.035	-0.481	0.516
1.334	0.365	-0.064	0.127	-0.191
2.058	2.017	-0.089	-0.670	0.581
0.502	0.508	-0.409	-0.450	0.041
-1.245	-1.282	0.200	-0.295	0.496
0.489	0.467	0.508	-0.509	1.017
2.272	1.714	0.157	0.088	0.069
1.578	0.798	0.486	0.542	-0.056
-0.292	0.504	0.316	-0.493	0.809
-1.376	-0.951	0.280	-0.079	0.359
-2.293	-0.941	-0.197	-0.843	0.647
2.762	1.431	0.624	0.771	-0.147
2.120	2.306	0.439	0.073	0.366
-1.344	-1.584	0.013	0.558	-0.545
-1.284	-1.598	-0.014	0.508	-0.522
-0.467	-1.672	-0.047	0.457	-0.504
-2.506	-1.777	-0.560	-0.622	0.062
-0.790	-0.334	-0.307	-0.604	0.297
-1.251	-0.587	-0.355	-0.232	-0.123
0.518	0.023	0.275	0.091	0.184
0.926	-0.013	0.456	0.176	0.280
-3.799	-2.499	-0.081	-0.633	0.552
0.526	-0.540	0.175	0.385	-0.210
0.888	0.334	0.145	-0.173	0.318
-0.938	-1.854	-0.623	0.339	-0.962
-2.898	-3.091	0.058	-0.161	0.218
-2.103	0.357	-0.500	-1.042	0.542
-1.520	-1.004	0.346	-0.152	0.498
1.000	0.681	0.441	-0.078	0.520
-0.263	-0.024	0.174	-0.173	0.347
1.992	2.103	0.159	-0.344	0.502
-1.987	-1.142	-0.688	-0.663	-0.025
-0.931	-0.822	0.542	-0.050	0.592
-1.544	-1.265	0.044	-0.324	0.368
-0.400	-0.159	0.232	0.163	0.069

-1.718	-2.681	-0.055	0.687	-0.742
0.625	-0.060	-0.058	0.872	-0.930
0.246	-0.162	0.185	0.129	0.055
0.493	1.075	0.232	0.038	0.194
-0.241	0.293	-0.820	-0.384	-0.437
-0.469	-1.051	0.275	0.078	0.197
-1.366	-1.809	0.445	0.173	0.272
-0.787	-0.896	0.326	0.157	0.170
0.836	0.550	-0.433	0.110	-0.543
1.000	0.812	0.532	0.358	0.174
0.579	0.690	0.262	0.484	-0.223
0.353	0.305	-0.139	-0.609	0.469
-1.928	-2.220	-0.158	-0.133	-0.025
-0.854	-1.088	0.082	0.055	0.027
0.606	0.700	-0.289	-0.281	-0.008
-0.312	-1.112	-1.739	-1.574	-0.165
1.431	1.365	0.298	1.684	-1.386
-1.914	-2.451	-0.442	-0.327	-0.114
0.563	0.295	-0.126	0.158	-0.284
1.289	1.039	0.698	0.625	0.073
0.734	0.925	-0.366	-0.019	-0.347
-0.564	-0.310	0.448	-0.063	0.511
-0.038	0.586	0.501	-0.176	0.676
-1.363	-1.707	0.220	-0.250	0.471
-1.084	-0.648	-0.035	-0.057	0.022
-2.010	-2.079	1.925	0.582	1.343
-1.783	-1.705	-0.295	0.458	-0.752
1.810	2.226	-0.150	0.010	-0.160
-2.963	-3.331	0.010	0.860	-0.851
1.955	2.333	0.262	-0.579	0.841
0.028	-0.540	-0.502	-0.159	-0.343
-0.016	0.067	0.059	-0.211	0.270
-0.452	-0.099	1.218	0.203	1.016
0.559	1.606	0.557	0.427	0.130
-1.069	-0.177	0.315	-0.163	0.478
-1.402	-0.625	-1.301	-0.456	-0.845
-0.183	0.118	0.250	0.135	0.115
-0.244	-0.702	0.219	0.736	-0.517
-1.940	-1.680	0.672	0.752	-0.081
-1.250	-1.200	-0.064	-0.632	0.569
-1.568	-1.888	0.477	0.169	0.308
-2.421	-1.940	-0.126	-0.242	0.116
-0.028	0.419	0.895	-0.309	1.205
-3.606	-2.712	0.973	-0.034	1.007
-1.632	-0.536	0.304	-0.777	1.081
-1.955	-2.190	-0.014	-0.336	0.322
0.330	-0.240	0.311	-0.037	0.348
-2.209	-1.730	-0.632	0.841	-1.473
-0.449	-0.381	0.605	0.097	0.508
-1.410	-1.349	0.226	-0.193	0.419
0.362	-0.594	-0.842	-0.247	-0.594

-2.700	-1.932	-0.261	-0.510	0.249
-0.860	-0.202	0.144	-0.232	0.376
-3.251	-2.200	-0.299	-0.582	0.283
-0.803	-0.973	0.129	0.052	0.077
2.491	1.419	-0.129	0.057	-0.186
2.057	2.203	0.416	-0.197	0.613
0.112	0.468	0.289	-0.513	0.802
0.538	-0.580	0.133	0.147	-0.014
0.899	0.517	0.398	-0.405	0.803
-0.472	1.141	-0.627	-0.341	-0.286
-0.408	-1.365	0.387	0.322	0.064
1.567	0.960	0.427	0.631	-0.204
-1.347	-0.641	-0.421	-0.200	-0.221
-1.693	-1.081	0.733	-0.219	0.952
-1.988	-1.488	0.615	-0.565	1.180
0.728	0.598	0.567	-0.132	0.700
-1.908	-1.675	0.451	0.668	-0.217
-1.977	-1.464	-0.306	-0.320	0.014
0.830	0.321	0.571	-0.082	0.653
-1.531	-1.211	0.308	-0.351	0.659
-1.143	-1.658	-0.323	0.184	-0.507
-0.838	-1.055	-0.070	-0.187	0.118
-2.062	-1.196	0.295	-0.449	0.744
-2.965	-1.748	0.920	0.061	0.859
-1.183	-0.868	0.444	0.194	0.251
-1.267	-1.607	0.291	0.105	0.185
-0.954	-1.049	0.001	0.146	-0.145
-0.332	-1.119	-0.003	-0.087	0.084
0.516	0.878	0.530	0.001	0.529
-2.767	-2.256	-0.577	-0.079	-0.497
1.480	1.913	0.916	-0.515	1.431
-0.240	0.193	1.161	0.555	0.606
-3.917	-3.717	-0.296	0.346	-0.642
-2.549	-2.119	0.256	0.198	0.059
1.032	0.009	-0.563	-0.319	-0.244
-1.148	-0.665	0.080	0.210	-0.130
-0.476	-0.791	0.288	0.339	-0.051
-1.112	-0.740	1.218	0.278	0.940
2.449	2.779	-0.047	-0.335	0.288
-2.295	-2.696	0.444	0.761	-0.317
-0.110	0.000	0.403	0.443	-0.040
0.564	0.473	0.335	0.929	-0.593
-1.036	-1.059	0.232	0.523	-0.291
-2.485	-2.182	0.273	0.252	0.021
0.011	0.958	-0.079	-1.796	1.717
0.128	0.283	0.147	-0.147	0.293
-1.303	-0.605	-0.799	-0.250	-0.549
-0.054	-0.156	0.209	0.443	-0.234
-2.829	-1.441	-0.017	-0.124	0.107
-2.661	-2.555	-0.419	-0.448	0.029
-1.197	-1.106	0.316	0.000	0.316

-1.736	-2.304	0.071	0.670	-0.599
-0.165	1.580	-0.257	-0.224	-0.034
0.385	0.140	0.009	0.289	-0.280
-2.348	-1.765	-0.398	-0.483	0.085
-0.799	0.043	0.198	0.039	0.158
-1.631	-2.103	0.047	0.075	-0.028
-0.996	-0.651	0.634	0.181	0.453
-1.571	-1.168	0.510	0.431	0.079
0.544	1.237	0.457	-0.460	0.917
-1.554	-2.325	-0.310	0.107	-0.417
-0.585	-0.662	0.249	-0.171	0.420
-1.718	-1.599	0.379	-0.410	0.789
-1.234	-1.612	0.059	-0.099	0.157
-3.467	-4.085	-0.110	-0.250	0.141
-0.170	-0.412	-1.528	-0.678	-0.850
-2.540	-2.188	-0.095	0.275	-0.370
-0.159	-0.511	0.074	-0.420	0.494
-0.805	0.194	0.448	-0.012	0.460
-0.155	-1.635	0.436	0.572	-0.136
0.848	1.417	0.125	-0.184	0.309
-0.384	-1.171	0.698	-0.005	0.702
-0.574	-0.889	0.444	0.156	0.288
-2.174	-2.460	0.176	-0.239	0.415
-1.321	-1.319	0.115	-0.145	0.260
1.784	2.201	-0.094	0.261	-0.355
-3.355	-1.608	-0.440	-0.452	0.012
1.000	0.293	0.327	-0.316	0.643
0.073	0.107	0.400	0.125	0.275
0.887	1.749	0.023	-0.518	0.541
2.878	1.333	0.484	0.508	-0.024
2.054	0.922	0.143	0.517	-0.374
-0.235	-0.191	-0.248	-0.495	0.247
0.487	-0.109	-0.113	0.356	-0.469
2.689	2.202	0.284	-0.522	0.806
-1.875	-1.168	0.131	-0.504	0.635
-1.570	-1.971	0.220	0.300	-0.080
-0.954	-0.675	0.133	0.143	-0.010
-0.246	-0.742	0.057	-0.031	0.088
-0.966	-1.039	0.350	0.380	-0.030
-1.002	-1.513	0.227	0.526	-0.298
-0.679	-1.018	0.348	-0.162	0.511
-0.791	-1.034	0.368	-0.388	0.757
-1.588	-1.456	-0.114	0.147	-0.260
-0.859	-1.277	0.270	0.392	-0.122
-1.353	-1.315	0.258	0.059	0.199
-1.204	-1.157	0.359	0.154	0.205
-2.276	-1.210	-0.442	-0.945	0.503
-0.845	-1.993	0.041	-0.348	0.389
1.810	1.486	0.195	0.616	-0.422
-0.815	-0.461	-0.545	0.129	-0.674
-1.218	-1.700	-0.325	0.032	-0.356

0.248	0.592	0.058	0.188	-0.130
-0.808	-0.255	-0.213	-1.045	0.832
-0.890	-1.272	-0.573	-0.237	-0.336
-0.191	-1.143	-0.130	0.475	-0.604
-1.101	-1.609	0.019	-0.110	0.128
-1.691	-1.926	-1.445	-0.578	-0.867
-0.419	-0.586	-0.124	0.364	-0.488
0.979	0.775	-0.584	0.073	-0.657
-3.681	-2.253	-0.257	-0.127	-0.130
-2.635	-1.147	-0.294	-0.827	0.533
-1.373	-0.914	-0.718	-0.461	-0.257
2.163	1.990	-0.841	-0.109	-0.731
-2.765	-2.157	-0.225	-0.371	0.147
0.357	0.489	0.199	0.209	-0.010
-2.477	-2.033	-0.632	0.292	-0.924
1.212	2.118	0.322	0.071	0.252
-2.642	-1.474	-0.756	-0.829	0.072
-0.521	-0.220	0.756	0.092	0.665
0.518	0.450	0.372	0.005	0.367
-1.613	-1.744	-0.054	-0.464	0.410
0.305	0.271	-0.062	-0.079	0.017
-1.666	-0.855	-0.085	-0.336	0.251
0.056	-0.625	0.090	-0.012	0.102
0.993	0.653	0.491	0.173	0.318
-1.117	-0.073	-0.065	-0.363	0.298
-1.002	-1.129	0.572	-0.154	0.727
-1.670	-1.276	0.116	-0.178	0.293
0.299	-1.074	-0.133	0.585	-0.718
0.196	0.808	-0.044	-0.395	0.350
-2.334	-1.177	-0.351	0.272	-0.623
-0.863	-1.834	0.269	0.075	0.193
-0.144	-1.432	0.170	0.432	-0.262
-2.531	-2.799	-0.103	0.718	-0.821
0.386	0.115	0.269	0.374	-0.105
-0.065	0.435	0.146	-0.384	0.530
-0.474	0.613	-0.375	-0.629	0.254
1.806	2.385	0.718	-0.033	0.751
2.892	2.431	0.018	0.651	-0.633
1.525	1.993	0.106	-0.128	0.234
0.176	-0.370	0.281	-0.099	0.381
0.142	-0.831	0.270	-0.087	0.357
-1.408	-1.197	0.215	-0.132	0.347
-0.888	-1.262	0.505	0.727	-0.222
-0.949	-1.402	-0.091	0.160	-0.251
0.629	-0.288	0.085	0.424	-0.339
-0.536	-1.853	0.000	-0.121	0.121
1.301	0.204	0.181	0.391	-0.210
-1.669	-1.396	0.074	-0.417	0.491
1.700	1.636	-0.927	-0.884	-0.044
0.911	0.942	-1.113	-0.772	-0.341
-0.810	-1.306	-0.506	-0.277	-0.229



-0.683	-1.169	-0.079	-0.456	0.376
-1.683	-1.432	-0.040	0.103	-0.143
0.918	0.543	0.081	0.747	-0.666
-0.785	-0.493	0.106	-0.240	0.347
-2.049	-1.483	0.077	-0.531	0.607
-2.288	-2.877	0.293	-0.208	0.501
-0.139	0.406	0.652	-0.443	1.095
-2.397	-0.021	0.282	-0.201	0.482
1.671	1.288	0.321	0.504	-0.183
2.546	1.892	0.423	0.398	0.025
-1.726	-0.961	-0.372	-0.755	0.383
1.669	0.424	0.571	-0.091	0.662
-0.534	0.213	-0.297	-1.073	0.776
0.916	0.336	-1.074	-0.230	-0.843
-0.008	-0.353	-0.403	-0.391	-0.012
-0.235	-0.155	0.582	-0.127	0.709
-2.865	-2.296	-0.283	0.016	-0.299
-2.391	-1.857	0.157	-0.466	0.624
-1.773	-1.674	-0.026	-0.925	0.899
-2.521	-2.178	0.082	-0.512	0.595
-1.390	-1.081	-0.063	0.310	-0.373
0.063	0.730	0.465	0.354	0.110
-1.521	-1.003	-0.063	0.280	-0.343
1.273	-0.275	-0.297	0.236	-0.533
-2.054	-2.073	-0.071	-0.189	0.119
0.100	-0.951	-0.285	-0.134	-0.151
0.878	1.278	0.148	-0.103	0.251
-1.032	-1.873	-0.262	-0.087	-0.175
1.086	0.521	0.206	-0.392	0.598
-2.515	-2.254	0.748	-0.326	1.075
0.870	0.427	-0.446	-0.556	0.109
-1.590	-1.032	0.427	-1.369	1.796
-3.258	-2.689	-0.350	-1.574	1.224
2.042	1.515	-0.249	-0.093	-0.156
-3.040	-2.515	0.052	0.777	-0.725
2.062	1.780	0.205	0.087	0.118
1.512	1.895	0.206	-0.735	0.941
-0.387	0.054	0.936	-0.114	1.051
-2.352	-2.351	-0.512	-0.353	-0.159
1.173	0.920	0.233	0.499	-0.266
2.203	1.966	0.054	-0.347	0.401
0.391	0.815	-0.315	-0.362	0.047
0.127	-0.299	-0.202	0.052	-0.254
-1.057	0.665	0.014	-0.833	0.847
1.573	0.723	0.338	0.610	-0.272
1.985	1.795	-0.059	-0.148	0.089
2.096	1.306	0.366	0.047	0.318
1.920	1.965	0.006	-0.650	0.657
1.353	2.028	0.027	-1.291	1.318
1.096	2.081	0.823	-0.910	1.733
1.791	1.288	0.246	-0.179	0.426

1.490	1.017	0.434	0.699	-0.266
-0.842	-0.494	0.123	-0.356	0.479
1.483	1.511	-0.861	0.148	-1.009
-0.054	-0.546	-0.094	-0.403	0.309
2.349	2.302	0.211	0.236	-0.025
1.446	1.668	0.097	0.471	-0.374
1.353	1.285	0.183	0.137	0.046
0.026	-0.195	0.286	-0.735	1.021
1.298	2.124	-0.159	-0.511	0.352
2.271	2.449	-0.856	-0.383	-0.473
-1.162	-1.265	0.295	0.744	-0.449
-1.399	-1.077	0.559	1.038	-0.479
-0.451	-0.034	0.347	0.780	-0.433
-3.181	-3.293	-0.191	-0.357	0.166
1.692	0.758	0.360	0.471	-0.112
0.398	-0.071	0.074	0.162	-0.088
-1.376	-2.404	0.112	-0.048	0.160
2.257	1.629	0.136	-0.131	0.268
-2.001	-1.683	0.155	-0.453	0.608
-1.666	-1.910	0.095	-0.234	0.330
1.380	1.334	0.268	0.146	0.121
0.394	-0.163	0.397	0.065	0.332
-1.597	-2.465	0.317	0.056	0.261
-2.126	-1.933	-0.161	0.088	-0.249
-1.096	-0.370	0.428	-0.267	0.695
-2.604	-1.694	-0.349	-0.481	0.132
-0.119	0.128	-0.013	0.011	-0.023
-0.932	-0.675	1.038	0.492	0.547
0.968	0.257	0.476	0.141	0.335
-0.687	-0.154	0.397	0.249	0.147
-0.944	-1.062	1.309	0.729	0.580
0.384	0.353	0.657	0.097	0.559
-0.498	-0.071	0.588	0.257	0.331
1.446	0.563	-0.068	0.797	-0.865
1.472	0.438	0.176	1.592	-1.416
0.135	0.111	0.975	0.376	0.599
2.461	0.422	0.476	0.042	0.435
-0.267	0.863	0.219	0.226	-0.007
-1.347	-0.851	0.792	0.623	0.170
1.042	0.327	0.534	0.805	-0.271
0.000	-0.761	-0.271	-0.315	0.043
-0.234	-0.904	0.067	-0.047	0.114
-1.638	-1.975	0.234	0.289	-0.054
-1.890	-2.579	0.099	0.370	-0.271
-0.788	-1.347	0.494	0.120	0.374
-1.758	-1.430	0.348	0.227	0.121
1.103	0.940	-0.831	-0.226	-0.606
-1.750	-2.305	0.442	0.011	0.432
1.048	0.959	0.081	-0.257	0.339
0.924	0.130	0.093	-0.014	0.107
0.366	-0.188	0.396	0.277	0.119

0.126	0.186	0.004	-0.018	0.022
-1.371	-1.216	1.056	0.424	0.632
-1.306	-1.467	0.332	-0.059	0.392
1.927	0.531	0.539	0.515	0.024
-0.287	-1.195	-0.500	0.080	-0.579
-1.375	-0.657	0.075	-0.151	0.226
0.649	0.448	-0.598	-0.359	-0.239
-1.797	-1.726	-0.909	-0.716	-0.193
-0.280	0.044	0.256	-0.316	0.572
-0.811	-0.517	-0.107	-0.473	0.366
0.326	-0.994	-0.501	0.347	-0.848
0.532	1.206	-0.164	-0.079	-0.085
-0.655	-0.365	1.436	0.370	1.067
-2.711	-2.824	-0.014	-0.025	0.012
-2.584	-2.109	-0.425	-1.163	0.739
-3.917	-2.644	0.098	0.291	-0.192
-2.490	-1.988	-1.079	-0.185	-0.894
-1.284	-1.954	-1.044	-0.877	-0.166
0.461	0.397	0.256	0.174	0.082
-2.815	-2.909	-1.375	-0.640	-0.734
1.770	0.827	0.554	0.195	0.358
1.283	0.871	0.814	0.139	0.675
2.415	2.489	-0.535	-1.091	0.557
-0.407	-0.790	0.128	0.173	-0.046
0.900	1.545	0.227	0.223	0.004
-0.251	0.025	0.770	-0.146	0.916
1.933	1.769	0.043	0.252	-0.209
-0.118	0.291	0.395	-0.254	0.650
-4.499	-1.795	-0.497	-1.316	0.819
-3.968	-3.862	-0.021	0.148	-0.169
-1.270	-1.860	0.021	0.360	-0.339
0.303	0.300	-0.216	0.366	-0.582
-2.799	-2.351	0.512	-0.779	1.292
-2.099	-1.695	-0.249	0.038	-0.287
-1.299	-1.234	0.118	-0.381	0.499
-0.248	0.298	-0.433	-0.304	-0.129
-0.225	-0.746	0.308	0.635	-0.327
-1.063	-1.574	0.068	0.055	0.013
-0.446	-0.192	0.146	0.352	-0.206
-1.224	-0.049	-0.099	0.357	-0.456
0.154	0.340	0.438	1.086	-0.647
1.704	1.095	0.232	0.495	-0.263
1.587	1.257	-0.002	0.272	-0.274
1.191	1.119	0.138	0.640	-0.503
1.347	0.877	0.216	0.729	-0.513
1.992	2.117	0.084	-0.361	0.445
-0.908	-1.478	-0.126	-0.105	-0.021
-1.359	-1.302	-0.086	-0.527	0.442
0.048	1.921	-0.018	-0.142	0.124
-0.424	-0.864	0.320	-0.428	0.749
-1.346	-0.717	-0.358	-0.621	0.263

0.316	0.863	0.086	-0.227	0.314
0.816	-0.535	0.328	0.319	0.010
2.694	1.446	-0.590	0.286	-0.877
-0.561	-0.228	-0.017	-0.395	0.378
1.916	1.799	-0.461	-0.660	0.199
-2.499	-1.682	-0.142	-0.488	0.347
-2.202	-2.743	-0.081	0.189	-0.270
-0.796	-0.550	0.762	0.502	0.260
-1.936	-0.785	0.151	0.142	0.008
-2.121	-0.394	0.169	0.028	0.141
-0.963	-1.231	0.259	0.104	0.155
-1.721	-1.903	0.028	-0.150	0.177
0.507	0.862	0.197	-0.308	0.505
1.345	0.955	0.067	-0.356	0.423
-0.212	-0.564	0.971	0.232	0.739
-2.697	-3.169	-0.558	1.168	-1.726
1.163	1.720	-0.167	-0.202	0.035
2.180	2.286	0.096	0.151	-0.055
-1.645	-1.555	0.038	-0.238	0.276
-1.690	-1.327	-0.055	-0.458	0.403
1.069	0.745	0.793	0.390	0.403
2.658	2.192	0.029	-0.197	0.227
0.168	0.296	0.227	-0.168	0.395
2.110	2.584	0.173	-0.249	0.421
0.524	1.043	0.640	0.262	0.378
1.791	2.144	0.026	-0.604	0.630
2.307	2.611	0.382	-0.197	0.579
2.620	2.178	-0.410	-0.074	-0.335
1.284	1.735	0.330	0.525	-0.195
2.902	2.201	-0.018	0.289	-0.307
-1.488	-0.836	0.271	0.025	0.245
1.437	1.707	0.046	0.272	-0.226
0.199	0.446	0.322	-0.028	0.349
0.887	-0.161	-0.105	-0.205	0.100
0.926	1.123	0.311	-0.247	0.558
-0.690	-0.755	-0.101	0.264	-0.366
-2.649	-2.092	0.111	-0.616	0.727
0.053	0.796	0.381	-0.150	0.531
-1.499	-0.956	-0.234	0.444	-0.678
1.598	1.677	0.088	0.424	-0.335
-1.337	-1.040	0.203	-0.435	0.638
-2.322	-1.629	0.093	0.871	-0.778
-1.470	-0.090	-0.271	-0.583	0.312
-1.692	-1.556	0.312	0.066	0.246
-0.120	-0.252	-0.122	0.048	-0.170
-1.237	-1.904	-0.092	0.474	-0.566
-1.825	-1.217	0.510	-0.382	0.892
1.641	1.967	0.412	-0.423	0.835
0.247	0.376	-0.189	-0.227	0.038
2.883	2.206	0.198	-0.652	0.849
-0.212	0.873	-0.162	-1.516	1.354

-2.545	-1.270	-0.508	-0.147	-0.361
-0.740	-1.604	0.138	0.344	-0.205
0.564	0.032	0.117	0.359	-0.242
1.358	1.733	0.310	-0.008	0.318
0.541	0.286	0.450	0.816	-0.366
-1.823	-0.684	-0.571	-0.898	0.327
-2.962	-2.433	0.426	0.447	-0.021
-1.684	-1.610	-0.130	0.211	-0.341
-2.153	-2.811	-0.279	-0.615	0.337
1.260	0.935	0.375	0.379	-0.004
1.582	0.021	0.366	0.761	-0.395
-2.675	-1.558	-0.218	-0.265	0.048
-0.667	-0.931	-0.493	-0.149	-0.344
-1.035	-0.857	-0.458	-0.631	0.173
1.079	0.232	0.331	0.574	-0.243
2.403	1.546	0.082	0.032	0.050
-0.403	-0.224	0.623	0.059	0.563
-0.178	0.301	-0.013	-0.570	0.557
2.006	0.621	-0.246	-0.222	-0.024
-1.410	-1.146	0.274	-0.652	0.926
0.080	-0.626	0.048	0.065	-0.016
0.945	1.658	0.069	-0.034	0.102
-1.531	-1.791	0.260	0.906	-0.645
-2.457	-2.145	0.168	-0.341	0.509
-0.125	-1.626	-0.371	-0.157	-0.214
0.557	0.708	-0.364	1.171	-1.536
0.407	0.279	0.308	0.484	-0.176
0.408	0.934	0.401	-0.018	0.419
-1.821	-1.936	0.514	-0.703	1.217
-1.227	-0.043	0.116	-0.042	0.158
-0.732	0.249	-0.261	-0.433	0.172
-0.909	-1.252	0.650	-0.428	1.078
2.858	1.450	0.139	0.149	-0.010
-1.774	-1.244	0.194	-0.249	0.443
1.888	1.261	0.508	0.100	0.408
-2.372	-1.837	0.056	-0.175	0.231
-2.173	-2.010	0.305	0.220	0.084
0.776	-0.327	-0.703	-0.117	-0.586
2.942	2.561	0.618	0.256	0.362
0.565	0.662	0.076	0.260	-0.185
-2.393	-1.231	0.029	-0.646	0.675
-1.627	-0.883	-0.064	0.031	-0.095
0.066	0.234	0.134	-0.086	0.220
-0.302	-0.672	-0.059	0.232	-0.291
-0.290	0.279	0.180	0.336	-0.157
-0.677	0.550	0.044	-0.002	0.045
-0.944	-0.275	0.181	0.312	-0.131
-2.934	-2.435	-0.220	-0.579	0.359
-2.994	-2.435	-0.126	-0.562	0.436
1.973	1.009	0.489	0.816	-0.327
0.608	1.083	0.041	-0.249	0.290

-2.141	-1.435	-1.574	-0.654	-0.920
-0.624	-0.638	0.993	-0.148	1.140
-2.337	-2.070	-0.047	-0.186	0.138
-1.571	-1.776	0.087	-0.570	0.657
-3.365	-2.720	-0.116	-0.364	0.247
-0.248	-0.219	0.134	-0.571	0.704
-0.859	0.630	-0.111	-0.604	0.494
-2.454	-2.804	0.091	0.175	-0.084
0.187	1.042	-0.231	-1.007	0.775
0.857	0.259	-0.080	-0.165	0.085
-0.686	-1.815	-0.561	-0.497	-0.064
-1.603	-0.538	0.465	-0.593	1.057
-1.492	-0.566	-0.018	-1.104	1.086
-2.198	-2.188	0.012	-0.429	0.441
0.388	0.679	-0.706	0.097	-0.803
-0.721	-1.154	0.109	-0.441	0.550
-1.836	-1.958	0.136	-0.260	0.396
-2.508	-2.160	-0.230	-0.098	-0.132
1.440	0.943	0.134	0.212	-0.078
-2.844	-2.427	0.192	-0.812	1.004
2.167	2.108	-0.656	-0.672	0.016
-0.300	-0.122	0.282	-0.482	0.763
1.694	1.595	0.471	-0.247	0.719
2.289	2.341	0.104	-0.764	0.868
1.298	0.672	-0.241	0.172	-0.413
-1.565	-1.635	0.218	0.249	-0.031
0.002	-0.588	0.262	0.085	0.177
-3.066	-1.318	-0.365	-0.460	0.095
-0.365	0.471	0.312	0.148	0.164
1.191	0.427	0.548	-0.287	0.835
0.857	-0.043	0.068	0.228	-0.160
-0.831	-1.268	-0.030	0.324	-0.354
0.891	0.063	0.319	0.062	0.257
0.095	0.281	0.537	-0.111	0.647
-2.946	-2.142	-0.127	-0.347	0.220
-0.715	-0.195	0.243	-0.239	0.482
-0.109	0.274	0.614	0.376	0.237
3.102	2.013	0.185	0.342	-0.156
-1.180	-1.421	0.612	0.680	-0.069
-0.891	-0.091	-0.062	-0.072	0.010
-1.208	0.241	0.104	-0.192	0.296
-0.117	-0.060	0.132	-0.168	0.299
-1.079	-0.611	0.057	-0.224	0.281
1.957	2.110	-0.233	-0.071	-0.162
0.485	-0.161	0.414	0.264	0.151
-0.955	-0.380	0.115	-0.552	0.667
1.019	1.635	-0.312	-0.221	-0.090
0.604	-0.073	0.075	-0.026	0.101
1.162	-0.053	0.065	0.018	0.047
-0.492	-0.661	0.011	-0.205	0.215
-0.183	-0.786	0.163	0.012	0.151

-0.512	-1.593	0.108	-0.148	0.256
0.548	0.663	0.380	-0.070	0.450
0.245	-0.397	0.302	0.779	-0.477
1.275	1.121	-0.464	1.303	-1.767
-1.392	-0.731	0.625	0.467	0.159
-0.319	0.107	-0.419	0.180	-0.599
-1.407	-0.175	-0.313	-0.513	0.200
0.159	0.230	-1.007	0.241	-1.248
-1.051	-0.530	-0.723	0.486	-1.209
0.500	0.027	0.214	0.386	-0.172
0.371	0.208	-0.319	0.791	-1.109
-0.981	-0.054	-1.161	0.203	-1.364
-0.705	0.241	-0.708	0.233	-0.941
-0.788	-0.278	0.129	-0.351	0.480
-0.982	-0.835	0.061	-0.276	0.338
-1.400	-1.732	-0.355	-0.291	-0.064
-1.248	-1.701	-0.187	-0.632	0.445
-1.954	-1.532	0.224	-0.173	0.398
0.899	1.120	0.295	0.069	0.226
-2.459	-1.884	0.177	-0.448	0.626
-0.261	-1.059	0.419	-0.446	0.866
-1.325	-2.072	0.313	0.265	0.048
-2.592	-2.038	-0.112	-0.260	0.148
-1.566	-1.080	0.068	-0.422	0.490
-1.565	-0.931	0.007	-1.490	1.497
0.028	0.124	0.122	0.465	-0.343
0.922	0.126	0.002	0.104	-0.102
0.227	-0.537	0.295	0.611	-0.316
-3.153	-2.737	-0.262	-1.082	0.821
-1.290	-1.134	-0.180	-0.201	0.020
0.016	-0.289	0.594	0.089	0.505
0.335	-0.622	0.245	0.505	-0.260
-1.069	-1.465	0.279	0.320	-0.042
-1.521	-1.521	0.176	-0.075	0.251
-1.305	-1.341	0.012	-0.040	0.052
-2.610	-2.212	0.263	-0.256	0.520
-2.379	-2.142	-0.291	-0.401	0.109
-1.388	-1.089	-0.788	-0.666	-0.121
-1.715	-2.073	0.051	-0.043	0.094
-3.679	-3.493	-0.118	-0.235	0.117
-2.861	-2.052	-0.636	-0.786	0.151
-0.105	-0.056	0.656	-0.315	0.971
-1.291	-1.607	0.166	0.121	0.045
-1.452	-1.316	0.605	-0.283	0.888
-0.923	-0.774	0.122	-0.151	0.273
-0.094	0.480	0.534	-0.372	0.906
0.040	0.112	0.385	-0.471	0.856
-1.963	-1.954	0.266	-0.088	0.354
-0.101	-0.354	0.351	-0.197	0.548
-0.121	0.303	0.134	-0.407	0.541
-2.042	-1.196	-0.046	-0.475	0.430

0.855	0.286	-0.756	-0.207	-0.549
1.706	1.513	0.386	0.209	0.177
-3.637	-1.627	-0.471	-0.382	-0.090
-0.047	-0.389	-0.603	-0.463	-0.140
-1.049	-1.641	0.275	0.188	0.088
-0.700	-0.448	0.340	-0.311	0.650
-0.440	-0.813	-0.607	-0.450	-0.157
-4.176	-3.466	-0.227	0.016	-0.244
-2.089	-2.345	-0.118	-0.282	0.164
0.504	0.790	-0.254	-0.430	0.176
-1.042	-0.810	0.220	-0.957	1.177
-3.000	-2.551	-0.203	-0.535	0.331
-2.958	-0.752	0.688	0.245	0.443
-4.195	-3.627	-0.127	-0.722	0.595
-2.474	-2.144	0.190	-0.271	0.461
-3.430	-2.540	-0.017	-0.575	0.559
-3.007	-2.517	-0.172	-0.736	0.564
-3.488	-3.254	-0.146	-0.415	0.269
-2.156	-2.098	0.089	-0.130	0.219
-4.460	-4.025	-0.144	-0.296	0.152
-4.238	-3.288	-0.182	-0.075	-0.107
-4.096	-3.525	-0.369	-0.673	0.304
-0.412	-0.851	-0.105	0.283	-0.388
2.235	1.303	-0.007	1.020	-1.027
0.067	-0.453	-0.224	-0.672	0.448
1.192	0.208	-0.197	-0.043	-0.154
1.526	0.111	0.439	0.515	-0.076
-1.736	-1.143	-0.280	-0.379	0.098
0.375	-0.930	-0.271	0.476	-0.747
-1.519	-0.968	0.524	0.098	0.426
1.050	-0.485	0.369	0.459	-0.090
-0.421	-0.671	0.352	0.097	0.255
0.159	-0.128	0.108	0.379	-0.271
1.073	0.413	-0.526	1.134	-1.660
-1.427	-0.919	-0.192	-0.066	-0.125
0.022	-0.863	0.056	0.419	-0.363
-1.102	-1.383	0.160	-0.066	0.225
-0.251	0.227	0.006	-0.120	0.127
-0.224	0.346	0.348	-0.369	0.716
-0.720	-1.019	0.293	0.025	0.269
1.513	2.261	0.144	-0.008	0.151
-0.284	0.216	0.319	0.187	0.132
2.305	2.247	0.605	0.274	0.330
-0.116	-0.540	-0.255	-0.031	-0.224
-0.672	0.788	-0.022	-0.047	0.025
-0.137	-0.711	-0.306	0.164	-0.470
0.687	0.791	0.385	0.081	0.304
-0.210	-0.061	-0.800	-0.730	-0.070
-1.483	-1.933	0.120	0.258	-0.139
-1.093	-1.348	-0.195	0.332	-0.526
1.373	0.709	0.218	0.399	-0.181



-2.133	-1.605	0.398	-0.179	0.577
-0.718	-1.036	-0.941	-0.383	-0.558
-1.047	-0.839	-0.095	-0.273	0.178
1.043	1.934	0.294	0.348	-0.055
0.042	-0.505	0.212	-0.104	0.317
2.229	1.652	0.473	0.018	0.455
-1.423	-2.059	-0.439	-0.340	-0.099
-0.473	-0.007	0.154	-0.286	0.440
-1.462	-1.005	-0.380	-0.226	-0.154
0.710	0.813	-0.031	-0.214	0.183
1.188	0.530	-0.856	-0.283	-0.573
-4.193	-3.315	-0.369	-0.341	-0.028
-2.955	-2.351	-0.112	-0.897	0.785
-2.726	-3.262	0.408	-0.948	1.356
3.021	1.963	0.388	0.239	0.149
2.021	1.989	0.676	0.102	0.573
-2.723	-1.469	-0.485	-0.682	0.197
-0.989	-1.526	0.043	0.058	-0.015
-1.336	-1.507	-0.128	-0.592	0.464
-0.949	-0.744	-0.509	0.129	-0.638
-2.040	-1.904	-0.211	-0.883	0.672
0.016	-0.644	0.372	0.437	-0.065
-1.359	-1.139	1.033	-0.320	1.353
-0.232	-0.685	0.866	0.210	0.656
-2.137	-1.679	-0.448	-0.488	0.039
-1.962	-0.922	-0.674	-0.350	-0.324
2.246	2.181	-0.370	-0.026	-0.344
0.768	0.169	0.487	0.317	0.170
-0.884	-0.795	-0.164	-0.497	0.332
-2.456	-1.965	-0.381	0.022	-0.403
-1.722	-1.367	0.347	-0.397	0.744
-1.645	-2.555	0.121	0.309	-0.188
-0.911	-1.305	0.002	0.231	-0.229
-1.653	-1.588	0.111	0.386	-0.275
-0.485	-0.298	0.062	-0.019	0.081
-2.323	-0.556	0.027	0.066	-0.038
0.149	-1.007	0.131	0.269	-0.138
-0.197	-1.442	0.207	0.407	-0.199
1.825	2.206	-0.174	-0.123	-0.051
2.405	1.546	-0.068	0.119	-0.187
1.749	0.700	0.986	0.217	0.769
-0.820	0.274	0.293	-0.592	0.885
0.877	-0.559	0.072	0.182	-0.110
0.236	0.970	0.109	-0.555	0.664
-0.311	0.232	-0.248	-0.647	0.399
1.237	0.803	0.362	0.110	0.252
0.593	1.535	0.122	-0.392	0.514
1.142	-0.186	-0.006	0.093	-0.099
-0.926	-1.104	-0.234	0.658	-0.891
-0.240	1.154	0.185	-0.348	0.533
-1.861	-0.883	0.730	-0.682	1.412

1.719	1.871	0.611	0.319	0.292
-0.877	-1.050	0.385	0.296	0.089
2.125	2.067	0.480	-0.036	0.517
1.916	1.761	0.896	0.089	0.808
-2.168	-1.117	-0.284	-0.230	-0.053
-1.335	-1.684	0.170	-0.129	0.299
-1.246	-1.005	0.146	-1.275	1.421
-2.955	-1.555	-0.319	-0.587	0.269
2.897	2.390	0.472	-0.201	0.673
-1.492	-1.617	0.052	0.312	-0.260
2.302	2.311	0.180	0.121	0.059
-0.977	-1.208	0.243	-0.270	0.513
-1.369	-1.633	0.095	0.274	-0.179
-0.710	-0.477	0.211	-0.848	1.059
1.515	1.913	-0.414	-0.791	0.377
2.338	1.689	0.206	0.414	-0.209
-0.237	-0.734	0.409	-0.270	0.679
0.414	0.547	0.285	0.207	0.078
1.155	0.693	-0.089	0.236	-0.324
0.007	0.832	-0.162	0.406	-0.567
0.497	0.938	0.120	-0.113	0.233
-1.500	-1.281	-0.669	-0.617	-0.052
0.973	1.273	-1.558	-0.471	-1.088
0.479	-0.068	-0.711	-0.615	-0.096
0.908	-0.837	-0.012	-0.070	0.059
2.075	2.633	-1.085	-0.624	-0.461
-0.572	-0.627	-0.325	-0.559	0.234
0.299	0.543	-0.143	-0.223	0.081
0.275	0.983	0.028	0.504	-0.476
-0.318	-1.306	-0.128	-0.251	0.123
1.356	0.938	-0.116	0.156	-0.272
-1.548	-1.131	0.528	-0.396	0.924
-1.969	-1.485	0.118	0.002	0.116
0.696	1.409	0.016	-0.212	0.228
-0.170	-0.746	0.036	-0.070	0.106
0.202	-0.066	0.657	0.849	-0.193
-2.092	-0.747	-0.562	0.076	-0.638
-1.782	-1.518	-0.650	-0.460	-0.190
0.740	0.827	0.198	0.264	-0.066
-2.411	-1.150	-0.252	-0.109	-0.142
-0.390	-0.931	-0.545	-0.248	-0.298
-1.291	-1.048	-0.128	0.492	-0.620
-0.511	-0.436	0.106	0.157	-0.050
-0.371	0.510	-0.476	-0.104	-0.372
-0.997	-0.548	-0.396	-0.453	0.056
1.007	0.701	0.518	0.372	0.147
2.058	1.264	-0.777	0.209	-0.986
-0.178	0.646	-0.422	-1.311	0.889
-1.650	-1.420	-0.287	-0.676	0.388
0.391	0.774	0.331	-0.586	0.916
-2.921	-2.446	-0.157	-0.426	0.269

0.873	0.840	0.338	0.403	-0.065
0.133	-0.364	0.066	0.309	-0.243
-1.033	-0.638	0.153	0.138	0.015
0.829	0.264	-0.275	-0.151	-0.123
-0.688	-1.627	-0.073	0.479	-0.552
0.066	-1.101	-0.415	-0.122	-0.293
0.245	0.387	0.670	-0.055	0.725
0.467	0.677	-0.019	-0.117	0.097
-3.237	-2.596	-0.100	-0.493	0.392
-0.993	-0.489	0.119	-0.209	0.328
0.149	0.313	-0.184	-0.325	0.141
-4.001	-3.382	-0.263	-0.228	-0.035
-0.882	-1.355	0.542	0.601	-0.059
-0.400	-0.703	0.284	-0.065	0.349
-2.620	-1.167	0.118	0.393	-0.274
-1.301	-1.527	0.209	0.263	-0.054
-1.582	-1.419	0.450	0.563	-0.113
0.106	-0.929	-0.212	0.491	-0.703
-1.561	-1.198	0.471	-0.414	0.884
2.888	2.802	-0.453	-0.279	-0.175
-1.898	-1.416	-0.535	-0.218	-0.318
1.424	0.656	-0.202	-0.038	-0.164
1.738	1.331	0.102	-0.317	0.419
0.292	-0.077	0.859	0.032	0.827
0.531	0.907	-0.111	-0.287	0.176
0.539	0.693	-0.324	-0.044	-0.280
-2.669	-2.397	-0.333	0.527	-0.860
0.411	-0.007	0.601	0.431	0.170
-0.310	-0.066	-0.400	-0.597	0.197
-0.157	0.078	0.598	-0.049	0.647
0.081	0.296	-0.055	-0.299	0.244
-1.650	-1.607	0.328	-0.404	0.732
-1.592	-1.552	0.201	0.138	0.064
0.183	0.582	1.026	0.633	0.393
0.163	0.338	0.204	-0.509	0.713
-0.022	-0.625	-0.298	-0.131	-0.167
-1.889	-1.521	-0.469	-0.322	-0.147
-1.638	-0.636	-0.417	-0.418	0.001
-0.279	-1.279	-0.123	0.132	-0.254
0.786	0.999	0.229	0.033	0.196
-3.754	-3.215	-0.392	-0.695	0.303
-2.539	-2.336	-1.288	-0.641	-0.647
-0.458	-0.975	-0.816	-0.305	-0.511
-3.105	-2.720	-0.352	-0.945	0.593
-2.267	-2.354	0.161	0.364	-0.204
1.159	0.625	-0.171	0.061	-0.232
0.173	0.518	0.004	0.198	-0.193
0.392	0.854	0.472	-0.199	0.671
1.772	0.903	0.629	0.248	0.381
-1.174	-0.673	0.414	-0.160	0.574
2.619	1.517	-0.022	0.418	-0.440

0.806	0.886	-0.322	-0.111	-0.211
1.609	1.097	0.654	-0.100	0.754
-0.856	0.668	-0.369	-0.452	0.083
1.912	1.566	0.006	0.198	-0.192
-0.754	-1.631	0.108	0.644	-0.536
0.631	2.562	-0.366	-0.852	0.485
-1.558	-1.408	0.025	-0.224	0.248
0.617	0.343	-0.028	-0.263	0.235
-1.597	-1.118	0.214	-0.578	0.791
0.998	0.981	-0.284	-0.403	0.119
-0.863	-0.189	0.290	-0.508	0.798
0.065	-0.354	0.296	0.458	-0.162
0.234	0.079	-0.507	0.239	-0.746
0.518	0.832	-0.145	0.017	-0.162
-2.889	-2.547	-0.054	-0.415	0.361
1.936	2.578	0.106	0.276	-0.170
0.860	1.396	0.142	-0.260	0.402
-1.455	-0.958	0.048	-0.256	0.304
-1.119	-0.964	0.675	-0.353	1.027
-3.337	-2.946	-0.624	-0.309	-0.315
0.266	1.632	0.113	-0.307	0.421
-1.074	-1.181	-0.001	0.074	-0.074
0.893	1.569	0.298	-0.592	0.890
-1.621	-1.949	-0.376	-0.232	-0.144
1.005	0.239	-0.346	0.577	-0.923
-0.033	0.656	-0.037	-0.169	0.132
-1.658	0.013	-0.210	-0.608	0.398
-2.309	-2.278	-0.381	0.149	-0.530
0.592	-0.227	0.313	0.773	-0.460
-1.785	-1.297	0.235	-0.255	0.490
-1.218	-0.522	0.180	-0.059	0.239
-1.921	-1.067	0.084	0.917	-0.833
0.707	1.388	0.683	-0.349	1.032
0.201	0.232	-0.557	-1.165	0.609
-1.926	-1.406	0.023	-0.020	0.042
-0.879	-0.218	-0.467	-1.543	1.076
1.392	0.861	0.431	0.182	0.249
0.560	-0.275	-0.334	0.276	-0.610
1.610	0.676	0.387	-0.025	0.412
-1.429	-1.169	-0.144	-0.651	0.506
-1.168	-1.421	0.059	0.117	-0.058
-0.875	-1.316	0.047	0.425	-0.379
-1.531	-0.976	0.569	-0.142	0.710
0.913	0.610	-0.132	-0.150	0.019
-0.383	-1.173	-0.166	0.016	-0.182
0.936	0.586	0.069	-0.177	0.246
0.920	1.509	0.509	0.084	0.425
-0.348	-0.521	-0.231	0.294	-0.524
-0.615	-0.686	0.130	0.235	-0.105
0.225	0.295	0.123	0.134	-0.011
-0.690	-0.779	0.461	-0.788	1.249

2.332	1.813	-0.305	0.294	-0.599
1.347	0.094	-0.476	-0.203	-0.273
-0.466	-1.745	0.393	-0.328	0.721
1.233	1.572	0.386	-0.140	0.526
1.901	1.188	0.232	0.418	-0.186
2.740	2.594	0.118	-0.172	0.291
1.785	1.003	0.143	0.310	-0.167
1.051	0.294	-0.198	0.078	-0.276
1.104	1.471	0.301	-0.218	0.519
1.390	0.161	0.898	0.365	0.532
-1.901	-1.409	0.185	-0.180	0.365
-0.172	-0.047	0.576	-0.383	0.959
-1.548	-0.391	0.045	0.326	-0.281
-1.513	-1.275	-0.039	-0.196	0.157
-3.204	-2.752	0.364	-0.157	0.521
0.203	-0.888	-0.208	-0.054	-0.154
1.810	1.329	-0.064	0.184	-0.249
-2.178	-1.579	0.092	-0.209	0.302
-0.526	-0.647	0.472	-0.294	0.767
1.473	0.670	0.642	0.678	-0.035
1.531	1.398	0.220	-0.122	0.342
-0.536	-1.361	-0.212	-0.044	-0.169
-1.347	-1.529	0.040	-0.288	0.327
-3.215	-2.609	0.145	-0.653	0.798
-1.312	-0.688	-0.302	-0.704	0.401
-0.775	-0.856	0.266	-0.063	0.329
-1.479	-0.812	0.687	-0.540	1.227
0.488	0.036	-0.227	0.486	-0.713
-0.396	-0.396	0.344	-0.261	0.605
1.322	0.813	-0.063	0.140	-0.203
0.141	-0.441	-0.550	-0.461	-0.090
-0.713	-0.417	0.219	-0.268	0.487
1.294	1.764	-0.533	-0.733	0.200
-2.430	-1.843	-1.337	-0.215	-1.122
-0.283	-0.062	0.157	0.041	0.116
1.553	0.628	0.924	0.284	0.640
-2.843	-1.637	0.165	0.067	0.097
-2.606	-1.771	-0.981	0.659	-1.640
-1.036	-0.439	-0.265	-0.901	0.636
-1.775	-1.785	0.139	0.294	-0.155
-0.103	0.236	0.338	1.070	-0.731
-0.885	-0.494	-0.155	0.629	-0.784
0.517	-0.083	0.421	0.402	0.019
-0.562	-1.364	0.554	1.099	-0.545
0.730	0.872	-0.235	0.289	-0.524
-0.270	0.215	-0.317	0.196	-0.514
2.813	2.166	0.943	0.348	0.595
-0.624	-1.544	0.138	0.516	-0.378
0.783	1.423	-0.036	0.276	-0.312
1.047	1.115	0.180	0.574	-0.394
-2.559	-1.312	-0.055	0.549	-0.604

2.371	2.466	0.163	-0.066	0.229
1.225	1.052	0.420	0.148	0.271
-0.592	-0.166	0.280	-0.061	0.341
-0.063	-0.937	0.385	0.605	-0.220
-1.211	-0.614	-0.042	-0.435	0.392
0.460	0.557	0.225	0.276	-0.051
-1.581	-1.397	0.085	0.732	-0.647
0.882	0.434	0.304	-0.167	0.471
-1.964	-1.425	-0.133	-0.071	-0.061
0.139	-0.844	0.378	0.470	-0.093
-0.729	-1.521	0.346	0.733	-0.387
-0.131	0.341	-0.264	-0.125	-0.140
-1.323	-1.535	0.265	0.531	-0.266
-0.652	0.004	-0.132	-0.195	0.063
-0.380	-0.347	0.250	0.443	-0.193
-1.303	-1.000	0.384	0.212	0.172
0.712	0.386	0.172	0.090	0.082
2.129	0.839	0.134	0.105	0.030
-0.550	-0.088	0.137	-0.528	0.665
-1.484	-1.687	0.092	-0.259	0.351
-1.534	-0.998	-0.086	-0.741	0.655
1.671	1.739	0.538	0.144	0.394
1.364	1.874	0.896	-0.195	1.091
-0.531	0.025	-0.211	-0.086	-0.126
2.001	2.969	0.427	-0.130	0.557
-2.526	-3.153	-0.138	0.052	-0.190
2.689	2.232	0.037	0.267	-0.230
-0.921	-0.534	0.178	-0.369	0.547
1.915	0.794	0.047	0.274	-0.227
0.865	0.789	-0.309	-0.534	0.225
1.703	0.597	0.275	0.123	0.151
-0.688	-0.184	0.073	-0.001	0.073
1.669	0.587	0.246	0.606	-0.360
1.977	1.468	0.194	-0.065	0.260
2.424	1.643	0.448	0.393	0.055
-3.144	-3.201	-0.817	0.130	-0.947
-0.224	-1.244	0.217	0.519	-0.302
0.166	-0.250	-0.654	-0.320	-0.333
-0.463	-0.239	0.247	0.081	0.165
-1.655	-2.112	-0.177	-0.410	0.232
-1.241	-1.512	-0.003	-0.403	0.401
0.437	0.054	-0.029	-0.041	0.012
0.568	0.673	0.210	-0.100	0.310
2.129	2.129	0.690	-0.110	0.800
0.053	0.040	0.145	0.188	-0.043
-0.152	-0.500	0.635	-0.103	0.738
0.389	0.229	0.249	-0.224	0.473
-0.042	0.719	-0.140	-0.581	0.442
-1.772	-1.101	0.104	-0.491	0.595
-1.274	-1.142	-0.578	-0.548	-0.030
1.035	1.477	0.357	0.002	0.355

0.821	1.285	-0.262	0.174	-0.435
-1.275	-0.963	0.143	-0.135	0.278
-1.649	-0.802	0.243	-0.336	0.579
0.572	0.633	0.374	0.141	0.234
-0.592	-0.372	-0.245	-0.341	0.096
0.508	0.671	-0.305	-0.606	0.301
1.363	0.436	-1.178	-0.021	-1.157
0.146	0.324	-0.200	-0.240	0.040
-0.534	0.449	0.289	0.134	0.155
-3.322	-2.958	-0.085	-0.605	0.520
0.658	1.122	0.193	0.575	-0.382
-0.045	0.292	0.346	-0.175	0.521
-0.169	0.053	0.048	-0.329	0.377
0.316	0.662	-0.094	-0.372	0.278
-2.532	-2.136	0.136	-0.893	1.029
-1.264	-0.859	-0.412	-0.013	-0.399
-1.572	-1.493	0.136	-0.714	0.851
0.429	0.802	0.485	-0.179	0.664
-1.009	-0.465	0.428	0.157	0.271
-0.417	-0.199	0.114	-0.540	0.654
-1.493	-1.018	-0.616	0.026	-0.642
-0.719	-0.241	0.214	0.007	0.207
-1.757	-1.479	-0.100	-0.289	0.189
-0.252	-0.147	0.311	-0.161	0.473
1.358	0.492	-0.059	0.750	-0.809
1.086	0.115	0.218	0.578	-0.360
-0.906	-0.657	-0.040	0.360	-0.400
0.331	-0.116	0.059	0.794	-0.735
0.651	0.817	0.636	0.361	0.275
2.036	1.512	0.372	0.174	0.199
2.267	1.665	0.142	0.202	-0.060
0.364	0.742	0.170	-0.447	0.617
0.382	-0.061	-0.189	-0.603	0.414
0.486	0.118	0.558	0.480	0.078
-0.967	-0.483	0.062	0.226	-0.165
-0.632	0.032	0.027	0.143	-0.117
0.678	-0.089	0.258	0.657	-0.399
1.417	0.702	0.732	0.876	-0.143
0.982	0.771	0.342	0.646	-0.304
0.535	-0.035	0.480	1.054	-0.574
-1.236	-1.153	0.187	-0.056	0.243
0.128	0.321	-0.662	0.696	-1.359
-0.288	-0.872	0.304	0.403	-0.099
-0.119	-1.404	0.184	0.491	-0.307
1.767	0.832	0.734	0.727	0.007
1.041	1.313	0.837	-0.761	1.598
1.808	1.987	0.163	0.171	-0.008
0.971	0.410	0.045	0.251	-0.206
-2.482	-2.902	0.596	-0.258	0.855
1.072	0.752	0.320	-0.050	0.370
1.248	0.750	0.349	0.619	-0.270

0.836	1.590	-0.169	-0.050	-0.119
-0.341	-0.656	-1.346	-0.494	-0.852
0.534	-0.355	0.243	0.248	-0.005
0.969	0.600	0.586	0.316	0.270
-0.305	0.109	0.162	0.257	-0.095
2.168	2.269	-0.108	-0.233	0.125
2.030	1.330	0.324	0.503	-0.179
-1.575	-1.422	-0.414	-0.013	-0.400
0.878	0.720	-0.832	-0.544	-0.287
-0.195	-0.975	0.405	0.506	-0.101
-0.500	-0.960	0.439	0.664	-0.225
-0.580	-0.774	-0.312	-1.051	0.739
-0.498	-1.016	-0.055	0.477	-0.531
0.241	0.189	0.175	-0.019	0.194
-1.455	-0.577	0.395	-0.528	0.923
1.063	1.700	0.199	0.037	0.162
-0.920	0.892	0.233	-0.535	0.769
-1.592	-2.697	0.486	0.719	-0.233
-1.765	-1.002	-0.158	-1.099	0.941
-1.111	-0.458	0.128	0.516	-0.389
1.871	2.274	0.990	-0.137	1.126
0.287	1.596	0.279	-0.626	0.904
2.163	2.628	0.171	-0.218	0.389
1.646	1.662	0.585	-0.287	0.872
-1.017	-0.801	-0.080	-0.639	0.559
-0.531	-1.578	-0.310	0.431	-0.741
-0.749	0.279	0.018	-0.419	0.437
1.931	1.521	0.312	0.207	0.105
0.240	-0.748	-0.215	-0.092	-0.123
0.685	1.334	-0.344	-0.432	0.089
2.075	0.679	0.146	0.506	-0.360
1.541	0.624	-0.118	0.473	-0.591
0.194	-0.915	0.430	0.102	0.328
1.794	1.770	0.225	-0.056	0.281
-1.362	-0.346	1.772	-0.414	2.185
-0.060	-1.384	0.166	-0.284	0.450
-1.757	-1.794	0.242	0.929	-0.687
-1.469	-1.519	0.285	0.095	0.191
-1.017	-1.121	-0.077	-0.150	0.073
1.412	1.594	0.053	0.335	-0.282
-3.165	-2.672	-0.300	-0.089	-0.211
-0.776	-0.530	0.043	-0.152	0.195
0.052	-0.971	0.633	0.546	0.087
-2.462	-1.828	0.187	-0.118	0.305
0.647	0.209	0.285	-0.191	0.476
-0.072	0.543	-0.566	-0.556	-0.011
-1.002	-0.799	0.636	0.329	0.307
1.676	0.853	-0.307	-0.178	-0.129
-1.565	-1.373	-0.287	-0.317	0.030
0.587	-0.926	-0.186	0.508	-0.695
-0.769	-0.145	-0.185	-0.032	-0.153



-1.338	-1.429	0.181	-0.839	1.020
0.523	0.070	0.464	0.654	-0.190
1.702	2.363	0.064	-0.254	0.317
-3.102	-2.876	-0.358	-0.405	0.047
2.371	1.394	0.248	0.093	0.155
-2.173	-1.932	-0.257	-0.408	0.151
-0.591	-0.730	0.320	-0.266	0.586
-3.430	-3.280	-0.139	0.127	-0.266
-2.275	-1.812	0.240	0.651	-0.412
-1.333	-0.640	0.144	0.209	-0.065
1.141	0.958	0.669	-0.063	0.732
-1.270	-1.979	-0.463	-0.092	-0.371
-0.883	-1.602	0.717	0.069	0.649
0.545	-0.553	-0.133	0.580	-0.713
1.616	2.350	-0.048	-0.900	0.852
-2.413	-1.250	0.235	-0.591	0.826
0.405	0.981	0.446	0.160	0.287
1.442	0.859	0.118	0.520	-0.402
-2.135	-1.922	0.199	0.322	-0.123
-4.004	-3.547	0.022	0.734	-0.712
-0.264	-0.180	0.386	0.622	-0.236
-0.371	-1.004	1.246	0.410	0.835
-1.393	-1.036	0.874	-0.144	1.018
-1.131	-0.588	-0.036	-0.509	0.473
0.292	0.601	-0.815	-0.210	-0.605
-0.184	0.074	-0.211	0.449	-0.660
-2.219	-1.633	0.061	-1.187	1.249
0.316	-0.508	0.208	0.412	-0.204
-1.077	-0.504	0.151	0.006	0.145
1.156	1.726	-0.153	-0.144	-0.009
-1.200	-0.354	0.372	0.603	-0.231
-0.486	-0.222	-0.379	-0.030	-0.349
-0.483	-0.360	0.054	-0.050	0.104
-1.416	-1.060	-0.080	-0.886	0.806
-2.166	-1.592	0.491	-0.481	0.973
-0.929	-0.809	0.253	0.528	-0.275
0.639	0.357	0.092	0.179	-0.087
0.486	-0.032	-0.780	0.221	-1.001
0.852	0.372	-0.087	0.198	-0.285
2.034	1.477	-0.823	-0.528	-0.295
-0.435	0.055	0.382	-0.427	0.808
1.776	0.773	0.118	0.642	-0.523
1.015	0.597	0.320	0.246	0.074
-1.445	-0.243	-0.223	-0.717	0.494
0.428	0.367	0.806	-0.013	0.819
-0.693	-0.084	-0.007	-0.339	0.332
2.358	2.320	0.403	0.497	-0.094
-0.652	-0.233	-0.326	-0.082	-0.245
-1.302	-1.057	0.230	-0.140	0.370
1.233	0.759	0.310	0.304	0.005
1.782	1.106	0.401	0.647	-0.246

0.214	0.813	-0.256	-0.543	0.288
-2.078	-1.669	-0.119	-0.045	-0.074
-1.957	-2.043	1.831	-0.125	1.955
-0.727	-0.493	0.555	0.073	0.482
-1.976	-1.830	-0.265	-0.028	-0.237
0.817	1.139	-0.323	-0.542	0.219
-0.450	-0.415	-0.754	-0.572	-0.182
0.536	0.163	0.212	-0.062	0.274
-1.883	-1.716	0.242	-0.350	0.592
-2.706	-2.464	0.026	-0.119	0.146
-0.836	-0.011	-0.068	-0.313	0.245
-3.623	-3.104	-0.620	-1.451	0.832
-1.368	0.206	-0.120	0.154	-0.274
-2.241	-1.535	0.190	-0.660	0.849
1.536	0.128	-0.117	0.005	-0.122
-1.238	-0.984	-0.183	-0.441	0.259
0.836	-0.452	0.151	0.797	-0.645
0.914	-0.347	0.002	0.331	-0.328
-2.918	-2.530	0.450	-0.582	1.032
-0.457	-1.385	0.280	-0.294	0.574
-1.335	-0.509	0.145	0.209	-0.064
0.925	0.155	-0.155	0.210	-0.365
0.813	0.345	-0.359	0.055	-0.414
-0.585	-1.405	-0.043	-0.764	0.720
-3.569	-2.929	0.262	-0.916	1.179
-1.364	-1.567	0.116	0.240	-0.124
-2.014	-1.161	0.111	-0.324	0.435
-0.129	0.067	0.315	0.028	0.287
-0.721	-1.396	0.278	-0.247	0.524
0.240	0.047	-0.378	-0.103	-0.275
3.587	2.507	0.634	0.248	0.386
2.551	1.495	-0.183	0.439	-0.622
0.404	-0.289	-0.328	0.677	-1.005
1.399	0.882	0.539	0.058	0.480
0.626	0.772	-0.299	0.490	-0.789
-3.178	-3.193	0.079	-0.004	0.083
0.911	1.349	0.725	-0.232	0.957
2.146	1.576	0.475	0.256	0.220
-2.165	-1.770	0.031	-0.183	0.214
1.535	0.620	0.235	0.411	-0.176
-0.877	-0.870	0.000	-0.407	0.407
-1.329	-0.332	-0.041	-0.607	0.567
-0.554	-1.213	-0.031	0.049	-0.080
-1.017	-1.786	0.226	0.575	-0.349
2.058	1.418	0.357	0.339	0.018
-1.718	-1.493	0.281	-0.528	0.810
-1.389	-0.632	-0.769	-0.880	0.111
-0.709	-0.694	-0.282	-0.394	0.112
-1.328	-0.825	-0.194	-0.805	0.611
-0.813	-1.286	0.357	-0.285	0.642
1.791	1.346	-0.837	-0.916	0.079

2.028	1.744	-0.673	-0.542	-0.132
-0.272	-0.909	0.339	-0.451	0.790
0.077	-0.050	0.483	-0.536	1.019
0.863	1.200	0.262	-0.320	0.583
2.352	2.180	0.062	0.253	-0.191
-0.793	-0.811	-0.315	-0.480	0.164
-0.858	-0.312	-0.439	-1.024	0.586
-1.666	-0.954	0.220	-0.948	1.168
0.775	0.859	-0.728	-0.308	-0.420
1.019	1.010	0.267	0.055	0.212
0.501	1.082	-0.734	-1.043	0.309
-2.046	-1.383	0.282	-0.378	0.661
-2.584	-2.770	-0.421	-0.428	0.007
-1.170	-0.522	-0.071	-0.490	0.419
-1.701	-0.845	0.292	-0.134	0.426
-1.333	-0.467	0.220	0.006	0.214
-0.883	-1.223	0.115	-0.043	0.159
0.907	1.078	0.412	1.012	-0.601
-0.310	-0.862	0.096	0.839	-0.742
-2.605	-2.547	0.371	0.013	0.358
0.315	-0.198	0.131	0.159	-0.028
0.566	0.120	0.997	0.961	0.036
-0.621	-0.710	0.637	0.014	0.623
0.549	1.283	0.373	0.148	0.225
-1.488	-0.692	0.364	-0.052	0.416
-3.138	-2.029	0.162	-0.269	0.431
-2.034	-1.990	0.053	-0.884	0.937
-3.363	-3.635	-0.262	0.402	-0.664
2.411	1.734	0.223	-0.023	0.246
-0.773	-0.161	0.283	-0.521	0.804
2.845	1.914	-0.254	-0.192	-0.063
3.328	2.252	0.273	0.183	0.090
-2.096	-1.883	0.139	-0.505	0.644
0.261	0.378	-0.012	-0.248	0.236
-0.191	-0.742	0.174	0.842	-0.668
-0.615	-0.167	-0.021	-0.405	0.384
0.659	0.740	0.369	-0.252	0.622
2.231	2.095	0.091	0.778	-0.687
-0.386	-0.088	-0.614	-0.824	0.210
-0.826	-1.459	-0.017	0.024	-0.041
0.107	0.095	0.072	-0.265	0.338
1.628	0.632	0.498	0.159	0.338
0.915	0.682	0.164	0.118	0.046
-0.382	0.018	0.051	-0.256	0.307
1.153	0.682	-0.184	-0.069	-0.114
-1.400	-1.659	0.104	-0.307	0.410
-1.024	-1.592	0.178	0.065	0.113
1.408	1.542	-0.517	-0.057	-0.460
0.616	0.552	0.445	0.124	0.321
-2.645	-2.541	0.071	-0.108	0.179
-1.068	-0.426	-0.117	-0.447	0.330

-1.565	-1.712	-0.169	-0.773	0.604
-0.270	-0.813	0.333	-0.019	0.353
0.409	0.877	-0.545	0.014	-0.559
-0.837	-0.618	-0.047	-0.714	0.668
-2.657	-1.309	0.012	-0.583	0.595
-1.568	-1.609	0.055	0.051	0.004
0.439	0.609	-0.339	-0.416	0.077
-2.711	-2.274	0.329	-0.123	0.452
-2.333	-1.643	-0.017	-1.046	1.029
-1.092	-0.993	-0.070	-0.081	0.010
-1.003	-0.749	-0.435	-0.662	0.227
-0.106	-1.643	0.261	0.522	-0.261
0.006	0.219	-0.190	-0.137	-0.053
-0.498	0.056	-0.062	0.197	-0.260
1.013	0.295	-0.468	-0.520	0.051
-0.243	-0.038	-0.200	-0.558	0.358
1.492	0.308	-0.398	0.137	-0.535
-2.124	-1.325	-0.356	-0.770	0.414
0.739	0.010	-1.338	-0.814	-0.523
2.454	2.005	-1.217	-0.315	-0.902
-2.104	-1.823	-0.441	0.328	-0.769
-0.831	-0.990	0.067	-0.245	0.312
-2.253	-1.007	0.027	-0.778	0.805
-2.489	-2.259	0.215	0.807	-0.592
-1.543	-0.801	0.079	0.138	-0.058
-0.913	-1.986	-0.010	0.140	-0.150
-1.832	-1.494	0.203	0.889	-0.685
-0.081	0.582	0.106	-0.317	0.423
-0.147	-0.363	-0.965	-0.820	-0.146
0.459	0.781	0.171	0.494	-0.324
-1.895	-1.407	0.466	-0.929	1.395
-0.604	-0.349	0.440	-0.114	0.553
-0.933	-1.598	1.145	0.662	0.483
-0.691	-0.551	-0.421	0.223	-0.644
-0.830	-2.067	0.373	0.384	-0.011
1.094	0.689	1.283	0.519	0.765
-2.666	-1.320	-1.999	-1.839	-0.159
-2.165	-1.461	0.078	-0.631	0.709
0.228	0.390	-0.899	-0.233	-0.666
-1.720	-1.537	-0.287	-0.520	0.233
0.457	0.808	0.232	0.015	0.216
0.788	0.975	0.122	-0.255	0.377
0.519	0.655	-0.629	-0.678	0.049
1.480	-0.027	-0.132	0.052	-0.184
-0.234	-0.303	-0.091	-0.118	0.027
1.166	0.681	0.679	1.107	-0.427
-0.045	-0.063	0.203	0.133	0.071
-2.716	-2.242	-0.415	-0.594	0.180
2.404	1.461	0.014	0.680	-0.665
1.301	0.344	0.181	0.328	-0.147
1.546	1.232	0.144	0.211	-0.068

0.408	0.018	-0.189	-0.126	-0.062
-1.662	-0.290	-0.104	-0.034	-0.069
0.953	1.457	0.341	0.176	0.165
0.314	1.454	-0.069	-0.054	-0.015
0.719	0.708	0.427	0.163	0.264
1.165	1.849	0.165	0.021	0.144
-1.705	-1.115	-0.121	0.019	-0.140
-1.863	-2.135	-1.533	-0.513	-1.020
0.730	0.887	0.689	0.320	0.369
0.336	0.475	0.168	-0.508	0.676
1.023	0.820	-0.045	-0.803	0.758
-1.767	-0.668	0.157	-0.161	0.317
-0.058	0.132	0.255	0.134	0.121
-0.701	-1.178	0.053	0.418	-0.365
-1.624	-1.147	0.107	-0.189	0.297
0.192	-0.499	0.214	0.191	0.023
-1.717	-1.202	-0.193	-0.106	-0.087
-2.574	-3.069	0.554	0.527	0.027
2.399	1.280	0.144	0.270	-0.126
1.684	1.088	0.082	-0.071	0.153
1.160	1.433	0.092	-0.018	0.110
0.320	0.065	0.252	0.157	0.094
-1.344	-1.402	0.004	0.091	-0.087
-1.984	-1.313	-0.182	0.057	-0.239
-0.634	-0.235	0.032	0.175	-0.143
-0.696	-0.719	-0.088	0.043	-0.131
1.472	1.227	0.516	0.162	0.354
1.716	0.693	-0.158	-0.102	-0.056
-1.251	-1.183	-0.361	-0.531	0.170
-1.288	-1.694	-0.035	0.172	-0.207
-0.898	-1.140	0.295	0.487	-0.192
-2.261	-2.594	0.170	0.469	-0.299
-0.355	0.616	-0.048	0.461	-0.509
-0.128	0.185	0.203	-0.222	0.426
-1.265	-1.120	0.118	-0.041	0.159
-3.363	-3.262	-0.033	0.739	-0.772
-2.000	-1.638	-0.034	0.101	-0.135
-2.790	-2.000	-0.404	-0.368	-0.037
-2.882	-2.610	-0.167	-0.315	0.149
-1.700	-1.525	0.145	-0.111	0.255
-1.668	-0.882	0.040	0.958	-0.918
-2.561	-2.097	-0.164	-0.437	0.273
-0.352	-0.494	0.054	-0.293	0.347
-1.533	-1.616	0.102	-0.219	0.321
-0.970	-0.801	-0.270	-0.325	0.056
-1.530	-1.465	0.191	0.000	0.192
-1.074	-1.357	0.005	0.670	-0.665
-0.844	-1.929	0.183	0.606	-0.423
-2.650	-0.589	-0.494	-0.585	0.091
-0.852	-1.247	0.286	-0.406	0.692
-1.165	-0.686	-0.454	-0.914	0.461

-1.690	-1.855	-0.812	-0.332	-0.480
-0.784	-0.598	0.238	0.083	0.155
0.080	0.655	0.368	0.686	-0.318
-1.075	-1.669	0.227	0.244	-0.017
-0.417	-0.231	-0.085	0.248	-0.333
-2.281	-1.956	-0.199	0.199	-0.398
-0.201	-1.034	0.027	0.337	-0.310
-3.252	-3.133	-0.237	-0.093	-0.145
-2.243	-0.861	0.828	1.404	-0.576
-3.073	-2.604	-0.168	-0.324	0.156
1.933	1.943	0.528	0.094	0.434
-0.259	0.109	0.271	0.746	-0.475
0.697	0.683	-0.276	-0.658	0.382
1.816	1.122	0.056	0.371	-0.315
2.249	1.606	0.214	0.331	-0.117
1.383	1.624	-0.027	-0.479	0.451
0.144	0.780	-1.212	-0.464	-0.748
0.476	1.364	-0.369	-0.151	-0.218
-1.060	-0.156	-0.220	-0.073	-0.147
1.274	1.330	-0.818	-0.405	-0.414
2.241	1.222	-0.008	-0.443	0.435
0.373	1.069	-0.056	-0.227	0.171
-0.028	-1.519	-0.511	-0.046	-0.465
-0.861	-0.784	0.326	-0.371	0.697
1.638	1.680	-0.190	-0.001	-0.189
0.566	0.081	-0.288	-0.310	0.022
0.114	-1.584	-0.227	0.181	-0.408
-0.625	-0.166	0.670	-0.268	0.938
-1.325	-0.599	0.107	-0.484	0.591
-1.139	-0.774	-0.051	-0.481	0.430
-0.507	-1.242	-0.417	-0.047	-0.371
1.097	0.461	-0.161	0.223	-0.385
0.608	0.075	-0.319	-0.330	0.011
0.282	-0.206	-0.121	-0.236	0.115
0.187	0.094	0.195	0.189	0.006
-1.580	-1.727	-0.053	-0.045	-0.007
-3.484	-1.821	-0.131	-0.736	0.605
1.090	1.262	0.090	-0.216	0.306
-0.771	-0.742	0.089	-0.601	0.690
1.044	0.577	1.311	0.519	0.792
-1.698	-0.807	-0.416	-0.505	0.088
-0.911	-0.240	0.516	-0.339	0.856
1.623	0.490	0.449	0.265	0.185
-1.406	-1.240	-0.315	0.181	-0.496
-4.295	-3.042	-0.475	-0.604	0.130
0.046	-0.772	-0.107	0.517	-0.624
-0.674	-0.380	-0.314	-1.036	0.722
-0.587	-0.343	0.548	-0.436	0.984
0.355	1.706	0.037	0.195	-0.158
-0.512	-0.087	0.266	-0.029	0.294
-2.172	-1.752	-0.449	0.061	-0.510

-1.685	-0.164	0.363	-0.121	0.483
-1.843	-1.218	-0.094	-0.303	0.209
-2.617	-2.315	0.234	0.159	0.075
-0.866	-0.845	0.025	-0.270	0.296
0.304	-0.144	-0.286	0.256	-0.542
0.218	-0.336	-0.189	0.317	-0.506
0.913	-0.079	-0.413	0.098	-0.511
-2.411	-1.958	0.749	0.216	0.533
1.726	1.200	0.012	-0.033	0.045
-0.158	-0.404	0.266	-0.022	0.288
0.431	0.876	-0.742	-0.625	-0.116
1.297	0.294	-0.321	0.159	-0.481
-2.535	-1.984	-0.006	-0.256	0.250
1.175	1.778	0.260	0.342	-0.082
0.427	1.113	-0.092	0.052	-0.144
0.669	0.622	0.386	-0.240	0.625
0.512	0.261	0.354	0.139	0.215
-0.422	0.486	0.326	0.070	0.256
-1.768	-1.733	-0.057	0.316	-0.374
-0.773	-0.721	-0.062	0.585	-0.647
-0.531	-0.097	-0.160	-0.128	-0.031
-2.153	-1.814	-0.224	-0.470	0.245
0.775	0.216	0.682	0.093	0.589
0.232	-0.494	0.754	0.497	0.256
-2.123	-1.475	-0.140	-0.663	0.523
1.889	0.541	0.100	-0.010	0.110
1.150	0.228	0.446	0.282	0.164
1.282	1.126	0.067	0.039	0.027
1.442	0.869	-0.176	0.087	-0.264
1.112	1.749	0.036	-0.151	0.187
1.470	1.666	0.950	0.564	0.385
-1.432	-1.167	-0.259	-0.351	0.092
-2.286	-1.473	-0.439	-0.645	0.206
-0.284	-0.079	-0.326	-0.573	0.247
2.164	1.728	0.193	-0.054	0.247
1.651	0.999	0.373	0.040	0.332
-2.084	-1.076	0.068	-0.416	0.484
1.209	1.487	0.147	0.012	0.135
1.176	1.415	0.534	-0.602	1.136
1.530	1.547	0.146	0.387	-0.241
0.201	-0.210	0.034	0.588	-0.554
0.062	-0.858	-0.127	-0.269	0.142
-1.262	-0.893	0.232	-0.027	0.259
0.132	-0.893	-0.557	0.138	-0.695
-0.958	-0.564	0.488	-0.598	1.086
-0.814	-0.128	-0.145	-0.289	0.144
0.998	-0.541	-0.074	0.334	-0.408
-0.495	-0.112	0.113	-0.142	0.255
0.645	0.077	-0.247	0.360	-0.607
0.322	0.660	-0.046	0.029	-0.075
1.322	0.306	0.348	0.372	-0.024

1.055	1.682	0.757	0.990	-0.233
-1.641	-1.274	0.033	-0.492	0.525
-0.926	-0.338	-0.154	-0.162	0.008
0.114	0.083	0.129	0.082	0.048
2.161	1.081	0.434	0.314	0.120
1.555	0.726	-0.088	0.160	-0.248
2.063	1.335	0.837	0.826	0.011
2.459	1.346	0.313	0.117	0.197
1.105	0.008	0.163	-0.219	0.382
-0.566	-0.136	-0.096	-0.353	0.257
-2.094	-1.537	-0.286	0.003	-0.290
-0.708	-1.757	-0.171	0.341	-0.512
-2.824	-2.248	0.185	-0.360	0.545
-3.666	-3.399	-0.380	-0.318	-0.063
0.830	-0.224	0.211	-0.167	0.378
1.577	1.181	-0.783	-0.393	-0.390
-2.637	-2.147	-0.084	-0.509	0.425
-0.081	0.129	-0.460	-0.212	-0.249
-1.386	-2.086	-0.117	-0.079	-0.038
2.251	1.962	-0.686	0.034	-0.721
0.787	0.552	-0.172	0.267	-0.439
0.430	-0.320	-0.511	0.189	-0.701
-0.175	-0.777	-0.286	-0.111	-0.175
0.899	-0.289	-0.145	-0.014	-0.130
-1.080	-0.110	-0.057	0.172	-0.229
-2.758	-2.810	-0.574	-0.304	-0.269
2.278	1.835	0.124	0.314	-0.190
-1.403	-0.905	0.791	-0.153	0.944
-1.357	-1.599	0.263	0.537	-0.274
-0.191	-1.278	0.184	0.305	-0.121
-1.883	-2.094	0.093	0.132	-0.039
-2.432	-1.735	0.320	0.420	-0.100
0.278	0.380	-2.164	0.106	-2.270
-1.586	-1.113	-0.145	-0.061	-0.084
-0.663	-0.569	-0.501	-0.031	-0.470
0.326	-0.323	-0.294	-0.148	-0.146
0.605	0.247	0.013	0.296	-0.283
1.765	1.054	0.231	0.727	-0.496
-1.206	-1.521	0.021	-0.065	0.086
-2.546	-1.963	-0.192	-0.449	0.257
0.465	-0.030	-0.008	-0.023	0.015
-3.561	-3.139	-0.080	-0.704	0.624
1.154	-0.142	-0.101	-0.081	-0.021
0.476	0.050	0.328	0.326	0.002
1.051	1.122	-0.603	-0.515	-0.088
2.096	1.402	-0.032	-0.115	0.083
-1.396	-1.428	1.077	0.285	0.793
0.776	0.217	0.753	0.295	0.458
0.825	0.361	0.705	-0.045	0.751
0.952	1.223	0.161	0.271	-0.110
-0.137	-1.159	0.030	-0.246	0.276



-0.629	0.069	0.452	-0.586	1.038
-1.657	-0.482	-0.349	-0.861	0.513
-1.194	-0.255	0.451	0.477	-0.026
-2.661	-2.167	0.289	0.832	-0.543
1.150	0.905	-0.205	0.191	-0.396
0.101	-0.274	0.118	-0.063	0.181
1.344	-0.119	0.082	0.302	-0.220
0.742	0.298	-0.231	-0.331	0.100
0.239	0.713	0.052	-0.213	0.265
0.967	0.127	0.152	0.296	-0.144
0.730	-0.708	-1.488	0.074	-1.562
-0.329	-1.441	0.060	-0.003	0.064
1.134	0.249	-0.041	-0.018	-0.024
0.126	0.524	0.182	0.104	0.078
2.829	1.944	0.359	0.089	0.271
1.401	1.106	1.036	0.785	0.251
-2.107	-1.912	-0.354	-0.720	0.366
-1.135	-0.965	-0.033	0.180	-0.213
0.991	1.089	0.194	-0.078	0.272
-1.596	-1.237	-0.014	0.234	-0.248
0.476	0.790	0.091	-0.221	0.312
-2.900	-2.385	-0.178	-0.425	0.247
1.810	1.832	0.113	-0.757	0.869
-1.742	-1.211	0.049	-0.327	0.376
-2.193	-2.089	0.070	-0.309	0.379
-2.340	-2.226	0.138	0.170	-0.032
2.090	2.685	-0.160	0.170	-0.330
1.663	1.345	-0.080	0.444	-0.524
2.442	1.536	-0.090	0.263	-0.353
2.002	1.836	0.160	0.135	0.025
-1.244	-1.488	-0.012	-0.182	0.170
1.517	0.760	0.220	0.233	-0.014
-0.751	-0.703	0.216	0.144	0.072
-1.557	-1.796	0.200	0.270	-0.070
-0.460	-0.112	-0.223	0.244	-0.467
-0.640	-0.517	-0.845	-0.270	-0.575
-2.174	-1.597	0.403	-0.893	1.295
2.962	2.177	-0.173	0.260	-0.433
0.249	0.037	0.418	-0.208	0.626
-0.091	-0.319	0.712	0.591	0.121
-2.447	-1.844	-1.273	-0.391	-0.882
2.462	3.622	0.291	-0.432	0.723
-2.538	-2.463	-0.336	-0.019	-0.317
-2.470	-1.945	-0.566	-0.199	-0.366
-2.303	-1.893	-0.297	-0.798	0.501
-0.837	-1.042	-0.357	-0.171	-0.186
1.850	1.412	-0.106	-0.035	-0.071
-2.121	-1.806	-0.037	-0.490	0.453
0.744	0.753	0.630	0.205	0.426
-1.740	-1.456	-0.564	-0.461	-0.103
-1.874	-0.074	0.834	0.147	0.687

-2.167	-1.737	0.064	0.096	-0.033
0.876	1.907	0.133	-1.213	1.346
0.065	0.796	-0.317	-0.980	0.663
-0.215	0.191	0.062	-0.500	0.562
-0.564	-0.222	0.167	-0.418	0.585
1.103	-0.008	0.149	-0.082	0.231
-0.313	-0.132	0.915	0.479	0.436
1.900	2.351	0.225	-0.136	0.361
-1.479	-1.075	0.567	-0.086	0.653
1.733	1.119	0.333	0.270	0.063
1.916	1.342	-0.991	-0.692	-0.299
1.772	1.426	0.178	0.097	0.082
2.486	1.480	0.320	-0.317	0.637
1.651	1.711	-0.312	-0.572	0.260
0.580	1.008	0.025	-0.422	0.447
1.040	1.408	-0.722	-0.348	-0.374
1.412	1.807	0.604	-0.788	1.392
2.658	2.387	-0.085	-0.275	0.190
2.314	1.388	0.177	-0.326	0.504
0.878	0.827	0.627	1.093	-0.465
-0.357	-0.150	-0.348	-0.429	0.081
-0.182	-1.080	-0.266	-0.373	0.107
1.946	1.311	-0.243	0.668	-0.911
0.573	-0.345	-0.964	-0.516	-0.448
-1.367	-1.103	-0.560	-0.147	-0.414
2.321	1.277	0.063	0.241	-0.178
1.018	1.042	-0.010	-0.293	0.283
-0.349	-0.504	0.189	-0.250	0.439
0.568	-0.087	-0.310	-0.293	-0.018
2.063	1.507	0.007	-0.005	0.012
0.744	0.305	0.222	0.147	0.075
2.076	1.969	-0.155	0.005	-0.160
-1.034	-0.618	-0.186	-0.198	0.012
-2.739	-1.963	0.030	-0.877	0.907
0.397	-0.451	-0.394	0.004	-0.398
0.298	1.401	-0.391	-0.464	0.074
-0.156	2.389	-0.131	-0.290	0.159
1.308	2.015	-0.379	0.037	-0.416
0.083	-0.517	0.407	0.759	-0.352
-0.625	-0.020	0.525	0.269	0.256
0.258	0.624	-0.215	-0.759	0.543
0.399	0.614	0.269	-0.316	0.585
1.781	0.677	0.504	0.180	0.325
0.177	0.256	-0.401	-0.644	0.242
1.450	0.430	0.942	0.302	0.640
-0.734	-0.888	0.628	0.711	-0.082
1.841	1.154	0.463	0.192	0.271
-0.792	-0.611	0.088	0.204	-0.116
1.728	1.239	0.052	-0.035	0.087
1.207	1.181	-2.327	-0.107	-2.220
1.846	0.774	-0.486	0.106	-0.592

-0.159	0.624	0.071	-0.444	0.515
-0.146	-0.427	0.711	0.599	0.113
-2.687	-2.474	0.038	-0.303	0.341
-2.150	-1.837	-0.328	0.236	-0.564
0.863	1.774	-0.062	0.012	-0.074
-1.183	-0.843	-0.060	0.221	-0.281
1.282	0.107	0.495	0.493	0.002
-0.351	-1.416	0.222	-0.067	0.289
-1.496	-0.653	0.049	-1.558	1.606
0.738	0.753	0.457	0.257	0.200
0.844	0.617	-0.101	-0.492	0.391
-1.338	-1.910	0.199	0.401	-0.202
2.322	1.608	0.050	0.378	-0.328
0.194	0.652	-0.531	-0.171	-0.360
-1.623	-1.711	-0.054	-0.087	0.033
1.209	-0.226	0.486	0.437	0.049
-0.412	-0.287	0.185	-0.129	0.315
-1.183	-1.857	-0.402	-0.539	0.137
0.014	0.883	-0.075	-0.377	0.302
-2.121	-0.897	0.639	-0.400	1.039
-1.135	-1.682	-0.045	0.975	-1.020
1.325	0.573	0.163	0.504	-0.341
-1.903	-1.697	-0.128	0.094	-0.222
0.183	0.666	0.181	0.043	0.138
0.338	0.858	0.371	-0.187	0.559
-2.063	-1.694	-0.204	-0.765	0.561
-2.447	-2.106	0.907	-0.199	1.106
0.436	-0.951	0.249	0.223	0.026
1.642	1.342	0.289	0.009	0.279
-2.094	-2.417	-0.076	0.037	-0.113
-0.899	-1.196	0.263	0.237	0.026
-1.320	-0.445	0.332	0.382	-0.051
2.215	0.519	0.166	0.211	-0.044
2.695	1.610	0.083	0.483	-0.400
1.868	1.106	0.186	0.269	-0.083
1.405	2.151	-0.163	-0.669	0.506
1.989	1.086	0.129	-0.274	0.402
-1.142	-1.408	0.576	0.267	0.309
0.350	0.483	0.532	0.475	0.056
-1.274	-0.775	-0.073	-0.209	0.136
1.233	1.100	0.474	0.531	-0.057
-0.216	-0.181	-1.422	-1.068	-0.354
-2.025	-1.970	0.072	-0.083	0.155
2.232	1.003	1.209	0.817	0.392
-1.620	-1.062	-0.617	-0.312	-0.306
-1.585	-1.290	0.276	0.158	0.118
0.512	0.199	0.461	0.963	-0.502
2.194	2.220	0.425	0.539	-0.114
-1.996	-1.743	0.582	-0.133	0.715
0.646	0.977	-0.056	-0.004	-0.052
1.830	0.407	0.503	0.909	-0.406

-1.576	-1.000	-0.159	-0.372	0.214
-1.558	-1.688	-0.254	0.643	-0.897
0.586	1.010	0.057	0.290	-0.233
0.957	0.442	0.200	0.021	0.179
0.999	1.734	-0.424	-0.542	0.118
2.585	1.436	0.296	0.515	-0.218
2.480	2.695	-0.340	-0.312	-0.028
3.115	2.428	-0.137	-0.301	0.164
-1.077	-1.770	-0.055	0.349	-0.404
-2.132	-2.695	0.294	0.291	0.003
-2.805	0.360	0.303	0.145	0.158
0.984	1.816	0.279	0.409	-0.130
0.252	0.212	0.261	-0.239	0.501
0.744	0.917	0.335	-0.028	0.363
0.995	0.712	0.294	0.418	-0.124
-1.001	-0.823	-0.351	-0.298	-0.054
0.636	0.630	0.253	-0.086	0.339
2.025	2.381	-0.271	-0.334	0.063
0.479	0.912	0.503	-0.203	0.706
-0.320	-1.521	-0.618	0.660	-1.278
0.081	0.664	0.140	0.031	0.110
0.948	0.391	0.695	0.542	0.152
-1.161	-1.108	-0.110	0.294	-0.404
-3.117	-1.162	-0.307	-0.709	0.402
2.336	1.917	0.646	0.285	0.361
-0.654	-0.721	-0.960	-0.402	-0.558
-0.721	-0.388	-1.502	0.045	-1.547
0.666	-0.534	-0.851	-0.265	-0.587
-0.722	-0.694	-0.087	-0.212	0.125
-0.765	-1.618	0.060	-0.510	0.570
-1.632	-2.063	0.479	0.059	0.420
1.280	1.676	0.040	-0.132	0.172
0.276	-0.587	0.312	0.087	0.225
-1.317	-1.165	0.415	-0.081	0.496
-1.622	-1.739	0.018	0.092	-0.073
2.547	2.277	0.488	0.126	0.362
1.908	2.253	-0.032	0.111	-0.144
0.846	1.595	0.306	0.124	0.182
1.342	1.054	-0.194	-0.606	0.412
-0.320	0.356	0.169	-0.576	0.745
0.453	-0.305	0.025	0.269	-0.244
0.970	-0.298	0.229	0.679	-0.449
-0.763	-1.582	0.491	0.562	-0.071
-2.967	-2.611	0.228	-0.229	0.457
-3.506	-2.998	-0.109	-0.545	0.435
-1.350	-1.370	-1.260	-0.140	-1.120
-2.834	-2.802	0.233	0.197	0.036
-1.846	-1.388	-0.365	-0.724	0.358
1.604	0.836	0.021	-0.096	0.117
-0.218	-0.110	0.429	-0.235	0.664
2.123	0.522	0.512	0.642	-0.130

0.724	0.560	0.365	-0.099	0.464
0.762	0.048	0.128	0.433	-0.305
-0.269	-0.245	0.071	-0.337	0.408
-1.798	-1.636	0.301	-0.165	0.465
0.610	0.069	-0.075	0.225	-0.300
0.606	-0.218	0.494	0.002	0.491
1.567	0.735	0.482	0.721	-0.239
0.415	-0.577	0.266	0.479	-0.212
-0.112	0.100	0.360	-0.256	0.616
1.066	0.664	-0.013	-0.520	0.507
1.251	0.983	0.254	-0.076	0.330
-2.505	-1.847	-0.118	-0.283	0.165
-1.823	-2.051	0.137	0.155	-0.018
-0.273	-0.722	0.194	0.152	0.042
-1.036	-0.316	0.459	0.278	0.181
-2.553	-2.261	0.087	-0.276	0.363
1.994	1.303	0.211	0.726	-0.515
2.530	1.613	0.289	0.848	-0.559
2.796	2.187	0.207	0.001	0.206
2.869	2.117	-0.083	0.640	-0.723
-4.060	-3.485	-0.306	-0.002	-0.305
-0.870	-0.583	0.868	0.151	0.716
-3.373	-2.006	-0.156	-0.597	0.440
0.063	0.102	0.484	-0.185	0.669
-1.875	0.161	-0.182	-0.034	-0.148
0.110	0.645	-0.796	0.181	-0.977
-0.499	0.136	-0.124	-0.475	0.351
1.138	0.812	-0.174	0.933	-1.107
-1.207	0.603	0.219	0.097	0.122
-1.239	0.243	-0.505	-1.043	0.537
1.298	1.424	0.321	-0.488	0.809
2.920	2.595	0.533	-1.025	1.558
0.032	0.483	0.026	-1.459	1.485
-0.356	0.688	-0.826	-1.329	0.503
1.057	-0.058	0.363	0.018	0.345
0.780	1.034	0.277	0.134	0.143
0.368	0.966	-0.256	-0.695	0.438
0.031	-0.018	1.058	-0.017	1.076
-0.216	-0.238	-0.005	-0.311	0.306
2.811	1.270	0.312	0.166	0.146
3.154	2.015	-0.249	-0.153	-0.097
2.844	1.963	0.435	-0.010	0.444
-2.013	-1.648	0.389	-0.591	0.981
1.908	2.046	0.252	-0.054	0.306
0.501	0.208	0.063	0.480	-0.416
0.811	1.265	0.317	-0.351	0.668
0.747	0.894	-0.436	-0.483	0.047
-1.355	-0.861	-0.284	-0.706	0.422
1.010	0.533	0.188	-0.023	0.211
-0.112	-0.543	0.409	-0.256	0.665
2.162	0.980	0.278	0.255	0.022

0.566	-0.747	0.205	0.092	0.113
2.515	1.949	0.103	0.395	-0.292
1.714	1.875	-0.180	-0.399	0.219
2.019	0.962	0.227	0.048	0.179
2.626	2.723	0.384	0.660	-0.276
0.863	0.250	-0.057	-0.149	0.092
0.041	-0.651	0.235	0.309	-0.074
-0.099	0.136	0.011	0.096	-0.085
2.554	2.092	0.399	-0.171	0.570
-1.374	-1.070	0.240	-0.067	0.307
1.231	0.565	0.451	0.244	0.207
2.194	2.583	-0.465	-0.563	0.099
1.771	0.881	0.377	-0.147	0.524
-0.645	-1.041	-0.256	-0.204	-0.051
0.488	-0.001	-0.121	-0.415	0.294
-1.570	-1.861	0.666	-0.210	0.876
0.833	0.136	0.075	-0.053	0.128
1.908	1.320	0.237	-0.138	0.375
-1.631	-0.995	-0.293	0.037	-0.330
-0.152	0.266	0.082	-0.609	0.691
1.974	1.386	0.530	0.218	0.312
-0.864	-0.728	-0.344	-0.539	0.194
-1.506	-1.118	1.194	-0.225	1.419
-2.621	-2.960	-0.694	0.299	-0.993
-2.307	-1.657	-0.644	-0.975	0.331
-0.784	-1.795	0.402	0.224	0.178
-0.741	-0.540	0.415	0.298	0.117
0.952	0.594	-0.002	-0.134	0.131
-1.434	-1.101	0.458	-0.041	0.499
-2.276	-1.969	0.439	0.635	-0.195
-0.742	-1.010	0.348	-0.052	0.400
-1.195	-0.624	0.075	-0.599	0.675
2.436	1.826	0.081	-0.617	0.698
-1.248	-0.991	0.391	-0.273	0.664
0.273	-0.616	-0.082	-0.067	-0.015
2.135	2.634	-0.289	0.083	-0.372
4.786	2.562	0.628	-0.090	0.718
3.619	2.150	0.467	0.327	0.140
2.137	2.134	0.545	0.744	-0.198
-0.296	-1.374	0.398	0.412	-0.014
0.749	0.277	-0.552	-0.109	-0.443
-0.146	-0.952	-0.703	-0.196	-0.507
-0.554	-0.936	0.222	-0.456	0.678
-0.727	0.427	0.045	-0.622	0.667
1.227	0.327	0.289	0.692	-0.403
2.546	2.364	0.160	0.279	-0.119
0.643	-0.552	0.198	0.099	0.099
2.162	2.018	-0.871	-0.245	-0.626
-0.506	-0.275	-0.656	-0.339	-0.317
-0.922	-1.049	0.628	0.197	0.431
-1.270	-2.081	-0.027	-0.178	0.151

-0.141	0.118	-0.321	-0.620	0.299
-2.053	-1.682	-0.222	-0.586	0.365
-1.396	0.010	0.047	-0.367	0.414
-1.785	-1.621	-0.068	0.053	-0.121
1.558	1.552	0.057	0.299	-0.242
-0.801	0.020	0.070	0.141	-0.071
-1.352	-1.259	-0.315	-0.397	0.082
-2.158	-0.447	-0.370	-0.953	0.583
-1.293	-0.925	-0.492	-0.634	0.142
-0.119	0.347	-0.122	-0.520	0.398
-1.381	-1.020	0.298	-0.432	0.730
0.088	0.133	0.120	-0.023	0.143
2.113	1.790	0.359	-0.131	0.490
2.580	2.057	0.560	0.343	0.217
-2.332	-1.120	0.159	0.134	0.025
-2.855	-2.323	-0.023	-0.394	0.371
2.302	1.698	0.210	0.249	-0.039
0.645	1.243	-0.263	-0.734	0.470
2.992	2.809	-0.283	-0.592	0.309
-0.404	0.092	-0.349	-0.244	-0.105
0.518	-0.519	-0.174	0.126	-0.300
0.062	0.342	0.467	0.437	0.029
-4.068	-2.709	-0.697	0.212	-0.909
-3.333	-1.732	-0.047	-0.268	0.221
-4.194	-3.527	0.291	0.012	0.279
-2.772	-1.371	-0.247	0.375	-0.622
-0.681	-0.827	-0.290	0.147	-0.437
-1.239	-1.163	-0.501	-0.288	-0.213
-2.764	-1.895	-0.144	-0.379	0.235
0.025	0.030	-0.957	0.214	-1.171
1.880	2.213	0.617	-0.027	0.644
0.816	-0.711	0.160	0.317	-0.157
0.685	0.917	0.444	-0.238	0.682
1.043	1.029	0.002	-0.202	0.204
-0.948	-0.509	-0.155	0.036	-0.191
0.253	0.977	1.511	0.193	1.317
-1.155	-1.021	0.038	-0.086	0.124
0.741	0.888	-0.192	-0.695	0.503
1.011	0.634	0.482	-0.733	1.215
1.903	1.560	0.400	-0.286	0.686
-0.331	0.031	0.344	-0.459	0.803
-0.271	0.076	-0.221	0.871	-1.092
0.460	0.550	0.481	1.408	-0.927
-2.169	-1.668	-0.129	-0.231	0.102
-2.759	-2.175	0.208	-0.218	0.426
0.553	-0.345	0.263	0.348	-0.084
0.500	0.979	-0.273	-0.152	-0.121
1.711	1.747	-0.673	-0.329	-0.344
-0.189	0.380	0.459	-0.024	0.483
-1.865	-1.628	-0.029	-0.595	0.567
-1.545	0.138	-1.365	-1.134	-0.232

0.268	-0.180	-0.087	0.038	-0.125
-0.187	-0.147	0.369	0.117	0.253
-1.796	-2.052	0.474	0.341	0.133
0.881	0.800	-0.525	1.142	-1.666
-2.751	-0.211	0.396	-1.041	1.438
0.465	0.508	0.455	0.136	0.318
-0.124	0.362	0.315	-0.201	0.516
-0.785	-1.451	0.585	0.669	-0.084
-0.672	-1.077	0.191	-0.047	0.238
1.311	0.226	-0.276	0.134	-0.410
1.294	0.382	-0.112	0.360	-0.472
2.007	0.194	-0.028	0.063	-0.091
2.377	1.320	0.804	0.522	0.282
-0.312	-0.394	-0.318	0.001	-0.319
1.158	0.729	0.077	0.357	-0.280
-2.341	-1.371	-0.480	-0.465	-0.015
-2.488	-3.111	-0.015	-0.649	0.635
1.247	0.940	-0.826	-0.968	0.142
-2.309	-0.626	-0.637	-0.135	-0.502
1.477	1.523	-0.201	0.115	-0.316
1.002	0.664	-0.251	-0.361	0.110
2.403	3.745	-0.892	-1.737	0.844
1.076	1.390	0.293	-0.746	1.039
1.827	1.979	-0.324	-0.837	0.513
2.026	2.487	-1.094	-0.617	-0.477
-0.402	0.417	-0.509	-0.128	-0.381
0.342	0.598	0.133	0.241	-0.108
1.018	1.422	-0.384	-0.621	0.237
2.557	2.380	0.193	-0.104	0.296
1.510	2.156	0.086	-0.632	0.718
0.492	1.278	-0.109	-0.170	0.062
2.123	0.379	-1.263	-0.169	-1.095
2.858	2.010	-0.107	0.319	-0.425
-0.401	0.135	-0.153	-0.310	0.157
0.528	0.556	0.028	-0.547	0.575
-1.753	-0.662	-0.741	-0.765	0.024
1.525	1.950	-1.231	-0.648	-0.583
-0.692	-0.370	0.184	-0.214	0.398
-0.636	-0.059	-0.228	-0.174	-0.054
-1.932	-1.331	0.061	-0.482	0.543
-2.059	-1.625	0.274	0.033	0.241
1.841	2.466	-0.303	-0.291	-0.013
-2.717	-2.802	-0.029	0.138	-0.167
-0.783	-0.449	0.267	-0.133	0.400
2.428	1.370	0.715	0.744	-0.029
2.982	0.982	0.154	0.397	-0.243
0.902	0.776	0.492	0.490	0.002
2.122	1.016	0.807	0.867	-0.060
-1.839	-1.082	-0.333	-0.235	-0.098
-2.462	-1.973	0.848	0.033	0.816
0.687	-0.265	-0.404	-0.134	-0.269



0.636	-0.133	-1.585	-0.550	-1.035
0.028	0.759	-0.987	-0.952	-0.035
-1.106	1.497	-0.683	-0.129	-0.553
-2.274	-1.579	-0.569	-0.077	-0.492
0.498	0.391	0.189	-0.062	0.252
-0.101	0.622	-0.197	-0.570	0.373
1.942	1.988	0.661	-0.169	0.830
-1.533	-0.444	0.230	0.560	-0.330
3.239	1.878	-0.031	0.178	-0.209
-0.614	-0.364	0.113	0.022	0.091
-2.384	-2.471	0.274	0.566	-0.292
-0.572	-1.294	0.108	0.150	-0.042
1.053	0.864	0.572	0.079	0.493
-1.308	-0.622	-0.277	0.008	-0.286
-1.017	-0.815	0.113	-0.295	0.408
-1.089	-0.481	0.545	-0.406	0.951
-1.068	-0.599	-0.054	0.990	-1.044
0.004	0.518	-0.491	-0.524	0.033
-2.553	-1.804	0.425	0.762	-0.338
2.953	2.047	-0.158	-0.093	-0.065
2.664	2.175	-0.136	0.157	-0.293
2.452	1.778	0.105	0.327	-0.222
0.252	0.038	0.014	-0.078	0.092
-0.990	-0.857	0.144	-0.215	0.360
-1.587	-2.015	0.166	0.388	-0.222
-1.258	-0.956	0.096	0.127	-0.031
-4.350	-2.413	-0.165	-0.264	0.099
0.985	1.166	-0.624	-0.169	-0.455
0.245	0.774	-0.114	-0.379	0.265
-1.106	-2.285	0.127	0.210	-0.083
1.866	2.489	-0.029	-0.213	0.184
2.730	1.368	0.228	0.307	-0.080
1.728	1.828	-0.203	-0.342	0.140
1.231	1.511	0.325	-0.443	0.767
1.149	1.625	0.324	-0.451	0.775
0.442	-0.812	-0.103	0.480	-0.583
0.543	-0.498	-0.557	-0.014	-0.543
1.099	0.143	0.510	0.281	0.229
-3.970	-3.074	-0.434	-0.481	0.047
-2.246	-0.910	-0.954	-0.759	-0.195
-1.669	-0.394	-0.212	-0.109	-0.103
1.502	0.807	-0.099	0.165	-0.264
-3.593	-2.335	0.150	-0.146	0.295
-1.900	-1.639	-0.260	0.123	-0.383
-1.795	-0.248	-0.444	-0.022	-0.422
1.287	0.234	0.219	0.422	-0.204
-0.556	-0.305	0.086	0.191	-0.105
-0.367	-0.774	0.448	0.245	0.203
-0.205	-0.093	0.336	-0.238	0.574
-1.188	-0.483	0.751	-0.011	0.762
0.210	0.462	-0.630	0.204	-0.835

-0.376	-0.337	0.817	-0.434	1.250
-1.123	0.098	0.015	-0.209	0.224
1.257	1.850	-0.565	-1.227	0.662
-2.506	-1.899	0.152	-1.296	1.448
-0.694	-0.305	-0.178	-0.097	-0.081
-3.177	-1.033	-0.645	-1.476	0.831
-1.887	-1.638	-0.387	-0.619	0.232
-2.095	-1.835	0.033	-0.472	0.504
0.916	0.365	0.208	-0.113	0.320
-0.675	-0.225	0.439	0.296	0.143
0.217	1.026	0.235	0.102	0.133
0.916	-0.254	-0.099	0.399	-0.498
1.205	1.274	-0.110	0.108	-0.219
0.463	0.392	0.021	-0.010	0.031
1.267	1.353	-0.279	-0.024	-0.255
1.724	0.928	0.085	0.377	-0.292
-2.286	-1.973	-0.211	-0.355	0.144
-2.487	-1.894	0.524	-0.458	0.982
2.013	0.643	0.060	-0.236	0.296
-1.959	-1.656	-0.098	0.466	-0.565
0.185	-0.103	-0.308	-0.002	-0.306
-2.839	-2.368	-0.357	1.059	-1.417
2.020	1.241	0.173	0.232	-0.059
-3.447	-2.156	-0.177	0.644	-0.820
0.383	0.138	0.126	-0.191	0.317
0.236	-0.118	0.165	0.009	0.156
3.505	2.508	-0.640	-1.083	0.442
0.677	1.757	0.378	-0.464	0.842
0.584	-0.160	-0.606	0.186	-0.792
-3.437	-3.175	0.290	-0.171	0.460
-0.377	0.010	0.530	-0.835	1.365
-1.134	-0.140	1.151	0.229	0.923
0.751	1.587	-0.245	-0.173	-0.072
1.371	1.643	0.302	-0.101	0.403
0.323	0.197	0.494	0.191	0.304
-0.117	0.962	0.109	-0.541	0.650
-0.899	-0.456	-0.136	0.159	-0.296
0.132	0.210	0.079	-0.030	0.108
-0.565	-0.108	-0.635	-1.054	0.419
-0.706	-0.030	0.184	0.561	-0.378
0.802	0.975	-0.069	-0.469	0.400
-0.454	0.197	0.096	0.124	-0.028
-1.408	-1.974	-0.003	-0.519	0.516
0.294	-0.041	-0.244	0.297	-0.541
-0.204	-0.055	-0.122	0.298	-0.421
-2.135	-1.546	-0.368	-0.494	0.126
2.436	2.171	0.104	-0.076	0.180
-1.570	-1.265	0.884	0.824	0.060
0.124	0.345	0.193	-0.553	0.746
-0.090	-0.887	-0.019	0.044	-0.063
-1.494	-2.359	0.255	-0.014	0.270

-0.352	-0.986	1.166	-0.324	1.490
-3.135	-2.755	-0.200	-0.703	0.503
0.493	0.006	0.196	0.136	0.060
-0.722	-0.830	0.230	-0.047	0.277
0.319	0.369	-0.258	0.340	-0.598
2.448	2.257	0.421	0.157	0.264
-1.751	-2.715	0.010	0.834	-0.824
0.089	-1.178	-0.615	0.041	-0.656
-0.294	-0.798	-0.264	0.332	-0.596
0.947	-0.300	0.130	-0.311	0.441
0.808	0.667	0.244	-0.008	0.252
1.008	1.324	0.638	0.358	0.279
0.147	1.681	0.948	-0.892	1.840
-1.647	-0.689	0.282	-0.289	0.571
-1.389	-1.832	0.028	0.489	-0.461
-1.552	-1.916	0.212	-0.235	0.447
-0.266	0.094	0.282	-0.126	0.408
-0.268	-0.112	0.440	-0.465	0.904
-1.326	-2.031	0.203	0.330	-0.126
2.728	3.048	0.563	-0.159	0.722
1.681	1.609	0.291	0.463	-0.173
0.556	0.591	0.638	0.042	0.595
2.224	2.373	-0.217	0.096	-0.312
0.322	0.439	0.910	0.538	0.373
1.652	0.404	0.472	0.661	-0.189
-1.233	-0.825	0.165	-0.318	0.483
-1.452	-1.048	0.771	-0.331	1.102
1.076	0.091	0.076	1.137	-1.062
0.111	-0.544	0.427	0.615	-0.188
1.630	1.914	0.204	-0.301	0.505
1.520	1.895	0.728	-0.069	0.797
0.339	-0.507	0.139	-0.024	0.163
-1.106	-0.733	0.098	-0.187	0.285
0.650	0.599	-0.276	-0.091	-0.185
1.459	1.845	-0.461	-0.223	-0.238
-2.906	-2.354	-0.169	0.183	-0.353
-1.032	-0.543	-0.060	-0.032	-0.028
-1.816	-2.229	-0.064	-0.065	0.001
-0.383	-0.487	0.462	0.569	-0.106
-0.422	-0.537	0.662	-0.199	0.861
-1.614	-1.023	0.650	1.003	-0.353
-1.121	-0.741	0.417	-0.135	0.552
-1.102	-0.852	-0.103	-0.308	0.206
-1.921	-2.258	0.071	-0.015	0.086
-0.961	-0.308	0.011	-0.014	0.024
-0.026	-0.228	0.257	0.433	-0.176
0.561	-0.277	0.406	0.057	0.350
-1.622	-2.157	-0.055	-0.613	0.558
-0.333	-0.178	0.029	0.039	-0.009
1.114	1.193	-0.127	-0.081	-0.045
-2.058	-1.725	0.214	-0.123	0.337

-1.812	-1.213	-0.447	-0.800	0.353
-1.022	-0.690	-0.890	-0.688	-0.203
0.911	1.436	0.165	0.226	-0.061
1.356	1.364	0.607	0.055	0.552
0.167	-0.760	-0.221	-0.293	0.071
-2.108	-1.997	0.302	0.406	-0.104
-1.224	-1.201	-0.258	-0.357	0.099
0.085	0.184	-0.280	0.133	-0.413
0.420	0.773	0.556	0.199	0.357
-0.722	-0.235	0.693	0.671	0.021
2.340	1.321	0.450	0.259	0.191
2.039	1.200	0.560	0.769	-0.209
-0.412	-0.733	0.127	0.220	-0.093
0.531	0.776	0.015	0.503	-0.488
1.475	1.581	-0.277	-0.097	-0.180
-1.773	-1.386	0.356	-0.401	0.757
0.347	1.394	0.325	-0.323	0.648
-1.910	-2.132	0.650	0.380	0.271
-2.358	-2.931	0.228	-0.249	0.477
-1.406	-1.148	0.467	0.125	0.342
0.018	-0.573	-1.086	-0.869	-0.217
-1.744	-1.567	0.366	0.322	0.045
-2.539	-2.449	0.346	-0.462	0.807
-2.538	-2.665	0.147	0.297	-0.150
-0.111	0.733	0.625	-0.141	0.766
0.725	-0.620	0.129	0.210	-0.081
-0.254	0.010	-0.585	-0.665	0.080
1.818	1.789	0.256	0.340	-0.084
0.615	0.657	0.698	0.282	0.416
0.933	1.300	0.066	-0.730	0.797
-2.597	-2.120	-0.270	-0.642	0.372
-0.537	-1.005	-0.254	0.630	-0.884
-0.814	-0.788	-1.311	-0.683	-0.628
0.053	0.027	0.373	0.025	0.348
0.137	0.213	-0.375	0.118	-0.493
-1.895	-1.696	-0.515	-0.260	-0.255
1.227	-0.016	-0.325	-0.672	0.347
-1.289	-0.086	-0.235	-0.412	0.177
1.650	1.515	0.424	0.216	0.208
0.397	1.161	-0.546	-0.383	-0.163
-1.138	-2.721	-0.079	0.180	-0.259
-0.411	0.308	0.221	-0.195	0.416
-2.024	-2.104	0.083	-0.370	0.453
-2.097	-1.805	-0.276	-0.394	0.119
0.105	0.550	-0.122	-0.129	0.007
-0.646	-0.284	0.436	-0.227	0.662
-0.335	-1.121	0.089	0.243	-0.154
0.138	0.997	-0.528	-0.269	-0.259
2.457	2.422	0.477	-0.193	0.670
3.016	1.576	0.607	0.529	0.078
0.012	-1.072	0.291	0.271	0.020

-2.528	-1.452	0.007	-0.308	0.315
1.020	-0.032	0.284	0.161	0.123
1.163	0.875	0.566	0.291	0.276
1.334	-0.035	-0.429	0.320	-0.749
-1.825	-0.181	-0.336	-0.522	0.185
-0.717	-0.671	-0.058	-0.629	0.570
-1.061	-0.678	-0.029	-0.320	0.291
-2.452	-0.656	-0.663	-0.765	0.102
-2.345	-1.953	0.176	-0.509	0.685
0.132	-1.250	0.404	0.316	0.089
-1.137	-1.456	0.236	-0.531	0.767
1.228	0.579	0.519	0.615	-0.096
-3.404	-3.025	-0.211	0.094	-0.305
-0.798	-2.385	0.051	0.152	-0.100
-3.157	-1.871	-0.996	0.122	-1.118
-1.117	-0.706	0.274	-0.145	0.420
-1.222	-1.245	0.204	0.424	-0.220
-2.877	-2.615	0.083	0.157	-0.074
-0.186	-0.229	0.118	0.226	-0.108
0.074	-0.257	-0.133	-0.060	-0.073
-1.138	-1.273	-0.849	-0.428	-0.421
-0.226	-1.192	-0.140	-0.109	-0.031
-1.345	-1.942	0.307	0.392	-0.085
1.204	0.263	0.203	0.315	-0.112
-1.304	-0.622	-0.078	-0.199	0.121
0.277	-0.572	-0.035	0.624	-0.660
-0.933	-1.064	0.060	-0.080	0.140
-2.136	-1.241	-0.229	0.050	-0.279
0.563	0.603	-0.549	-0.609	0.060
-1.109	-0.364	-0.659	0.321	-0.980
1.841	1.466	0.134	-0.368	0.502
-1.529	-1.614	0.027	0.055	-0.028
-0.367	0.104	0.020	0.822	-0.801
-2.635	-0.944	-0.415	0.280	-0.694
-1.613	-1.342	0.304	0.561	-0.258
2.026	0.922	0.400	-0.141	0.540
1.515	0.851	0.460	-0.058	0.518
-0.120	-1.724	0.057	-0.218	0.274
0.677	0.744	0.558	0.494	0.063
0.014	-0.662	-0.064	-0.084	0.019
-0.440	-1.112	0.178	-0.181	0.359
-0.773	-0.448	0.058	-0.067	0.125
0.187	0.475	-0.287	-0.191	-0.096
1.829	1.489	-0.030	-0.057	0.027
-0.161	-0.251	0.055	-0.202	0.257
0.705	0.792	0.124	-0.365	0.489
-0.065	0.353	0.100	0.397	-0.297
-2.299	-1.478	-0.197	-0.746	0.549
1.956	0.639	-0.110	0.320	-0.430
0.636	0.978	-0.152	-0.446	0.294
-0.724	-0.669	0.280	0.005	0.275

1.010	-0.106	0.573	0.116	0.457
-0.055	0.570	0.275	0.121	0.154
-2.568	-1.125	-0.357	0.596	-0.953
-0.216	0.592	0.216	0.441	-0.224
1.824	1.476	0.574	0.182	0.392
-0.357	-0.909	-0.011	-0.134	0.123
-0.179	0.563	-1.090	-0.758	-0.332
-0.053	-0.678	-0.175	-0.170	-0.005
0.716	-0.508	-0.477	0.683	-1.160
1.810	2.184	-0.238	-0.127	-0.112
-0.201	-0.222	0.674	0.340	0.334
-1.958	-1.363	-0.220	-0.198	-0.023
-1.604	-1.220	0.197	-0.322	0.518
-0.140	-0.188	-0.028	-0.325	0.297
-0.535	-0.298	-0.370	-0.490	0.121
-1.592	-1.583	0.492	-0.441	0.933
0.119	-0.061	-0.201	0.607	-0.808
0.156	0.256	-0.100	0.264	-0.365
-2.653	-2.315	0.392	0.112	0.280
0.633	1.098	-0.329	-0.278	-0.051
2.378	1.544	0.130	0.353	-0.224
1.606	0.549	-0.263	0.665	-0.928
-2.323	-1.298	0.667	-0.362	1.029
1.197	0.918	0.011	-1.043	1.055
1.515	1.516	0.371	0.087	0.284
2.521	2.354	-0.343	-0.429	0.086
0.716	-0.604	0.726	0.447	0.279
3.236	2.520	0.620	0.285	0.335
0.424	1.079	-0.036	-0.026	-0.010
1.130	0.178	0.186	0.618	-0.432
1.003	0.969	-0.255	-0.105	-0.150
1.128	1.435	-0.714	-0.400	-0.314
1.879	2.087	0.642	0.589	0.052
-1.512	-1.082	-0.179	-0.532	0.353
-2.841	-2.184	-0.708	-0.084	-0.624
-0.517	-0.012	0.360	-0.400	0.760
1.262	0.283	0.045	-0.297	0.341
-0.295	0.099	0.274	-0.279	0.553
-2.792	-2.285	0.111	-0.074	0.185
-3.166	-2.516	0.007	-0.740	0.747
0.184	0.100	-0.475	-0.349	-0.126
-1.878	-1.267	-0.084	-0.701	0.618
0.030	-0.133	0.010	0.205	-0.195
1.369	0.717	-0.590	-0.624	0.034
0.802	0.914	0.441	-0.309	0.749
0.979	0.881	-0.053	-0.221	0.168
-1.288	-0.742	-0.361	-0.016	-0.346
-1.147	-0.661	-0.019	-0.616	0.596
1.517	0.818	0.085	0.304	-0.219
0.901	0.288	-0.357	0.206	-0.563
-1.231	-0.796	-0.120	-0.802	0.682

-3.301	-2.455	-0.535	-0.559	0.024
-1.377	-0.611	0.395	0.052	0.343
0.127	0.263	0.890	-0.150	1.040
-1.696	-1.213	-0.103	-0.788	0.685
-2.205	-1.673	-0.768	-0.170	-0.598
-0.355	-0.215	0.199	-0.215	0.413
1.787	0.615	0.566	-0.140	0.706
-1.183	-1.485	0.012	-0.182	0.194
-0.237	-0.204	0.376	-0.648	1.024
1.225	1.627	0.298	-0.132	0.430
3.079	3.339	0.021	-0.176	0.198
-2.901	-1.442	0.241	-0.323	0.564
0.463	0.368	-0.213	-0.209	-0.004
-2.143	-1.740	0.059	-0.689	0.749
-0.440	-0.962	0.017	0.273	-0.256
-2.003	-2.025	0.206	-0.179	0.386
-1.652	-1.474	0.058	-0.320	0.378
-1.204	-1.094	-0.381	-0.326	-0.056
0.796	0.005	-0.192	-0.265	0.073
-1.427	-1.260	-0.628	-0.991	0.363
-1.607	-1.886	-0.401	-0.558	0.157
-2.572	-1.694	-0.313	-0.057	-0.256
-3.255	-3.160	-0.233	-0.261	0.028
-3.412	-2.686	-0.353	-0.341	-0.012
-2.192	-1.630	0.092	-0.383	0.475
-0.562	-0.414	0.272	1.040	-0.768
-2.145	-1.826	-0.292	-0.708	0.416
0.889	0.605	0.141	0.039	0.102
0.561	-0.021	-0.133	0.208	-0.341
-2.707	-2.369	-0.082	-0.230	0.149
-0.332	-0.412	0.201	0.036	0.165
1.740	1.216	0.039	0.118	-0.080
-1.166	-0.697	0.489	-0.286	0.775
-1.197	-0.772	0.159	0.195	-0.035
-2.348	-2.471	0.285	0.086	0.199
-0.534	-1.166	0.243	0.350	-0.107
-1.466	-1.813	0.360	-0.307	0.668
0.390	-0.886	0.171	-0.035	0.206
-1.214	-0.784	0.016	-0.452	0.469
-0.497	-0.273	0.519	0.278	0.241
0.860	0.463	0.240	0.619	-0.379
-1.021	-0.577	-0.146	-0.691	0.545
-1.734	-1.353	0.330	-0.177	0.506
0.551	0.637	0.357	0.670	-0.312
0.389	0.458	-0.089	-0.280	0.191
0.494	-0.276	0.222	0.264	-0.042
3.706	2.608	0.212	0.435	-0.223
-1.344	-0.817	0.036	0.073	-0.037
-2.464	-1.888	0.450	1.071	-0.621
-1.584	-1.013	-1.074	-0.855	-0.219
-0.476	-0.961	0.409	-0.093	0.501

1.117	1.439	0.376	0.173	0.204
-0.090	0.359	0.174	-0.188	0.362
-0.214	-1.014	0.009	0.306	-0.298
1.141	1.563	0.440	-0.050	0.490
-1.318	-0.752	-0.644	-0.074	-0.570
-0.320	-0.759	0.226	-0.003	0.229
0.725	1.030	0.164	0.008	0.156
-1.050	-1.339	0.349	-0.071	0.420
-2.336	-1.886	0.389	-0.738	1.127
-0.546	-1.484	0.494	-0.160	0.654
-0.808	-0.078	-0.212	0.343	-0.556
0.860	0.091	0.170	0.669	-0.499
0.846	0.575	-0.086	-1.199	1.113
-0.814	-1.321	0.214	0.519	-0.305
-0.420	-0.155	0.284	0.150	0.133
-1.599	-0.984	0.052	0.441	-0.389
2.348	1.883	0.254	0.353	-0.099
-4.705	-3.756	-0.299	0.286	-0.585
-0.780	-0.471	-0.912	-0.493	-0.419
-1.838	-0.294	-0.642	-1.458	0.816
-1.039	-0.504	-0.214	-0.281	0.068
-1.191	-1.463	-0.415	0.063	-0.477
1.536	1.857	-0.098	-0.749	0.651
-2.187	-0.527	-0.114	0.165	-0.279
-1.042	-0.867	0.160	0.324	-0.164
-2.290	-1.686	0.286	0.662	-0.377
1.410	1.856	0.335	0.199	0.136
-1.354	-1.027	0.238	-0.566	0.804
0.940	-0.121	0.109	-0.480	0.589
-0.765	-1.120	0.081	0.037	0.043
-1.241	-0.882	0.205	-0.178	0.383
-1.327	-1.188	-0.576	0.539	-1.115
-1.356	-1.248	-0.129	0.295	-0.423
-2.082	-1.548	0.304	-0.832	1.136
-1.248	-0.842	0.283	-0.911	1.194
3.047	2.834	0.727	-0.291	1.018
-1.027	-0.640	0.292	0.322	-0.029
1.102	1.120	-0.062	0.224	-0.286
-1.210	-1.937	0.098	0.219	-0.121
-3.303	-3.209	-0.212	0.620	-0.832
-1.496	-1.964	0.365	0.033	0.332
0.693	0.454	0.193	0.322	-0.129
-0.618	-0.632	0.095	-0.012	0.107
-1.557	-1.056	0.308	0.036	0.272
0.637	-0.440	-0.691	0.209	-0.901
-1.768	-1.149	-0.166	-0.583	0.417
-0.579	-0.340	0.249	-0.071	0.320
-2.779	-2.344	-0.049	0.056	-0.105
0.872	0.057	-0.064	0.209	-0.273
-0.278	-0.779	-0.620	0.023	-0.643
-4.145	-3.599	-0.154	-0.015	-0.139



-2.182	-2.049	0.047	0.045	0.002
0.604	1.330	-0.212	-0.233	0.021
-1.140	-0.001	0.539	-0.693	1.232
1.099	0.216	0.554	0.675	-0.121
-0.468	1.642	-0.753	-1.099	0.346
-0.831	-1.025	-0.368	-0.102	-0.266
-1.579	-0.936	0.147	-0.535	0.682
-1.338	-0.716	0.814	-0.189	1.003
-1.520	-1.894	0.295	0.404	-0.109
-1.598	-1.310	-0.045	-0.394	0.349
0.804	0.909	0.044	-0.349	0.394
-1.627	-1.389	-0.177	-0.127	-0.051
-0.414	0.544	-0.006	0.051	-0.057
-0.819	0.131	-0.107	-0.488	0.382
-1.745	-1.674	0.235	-0.030	0.265
-1.467	-1.630	0.001	-0.302	0.303
-0.479	-0.154	0.108	-0.675	0.783
-3.451	-2.706	-0.091	0.102	-0.193
-2.481	-1.671	0.205	-0.124	0.329
-1.713	-2.090	-0.350	0.140	-0.490
1.062	0.863	0.402	-0.152	0.554
-0.897	-1.177	0.361	-0.076	0.437
1.959	2.215	-0.042	-0.391	0.350
-1.332	-0.846	-0.045	0.075	-0.120
1.367	0.400	0.584	0.980	-0.396
0.556	0.643	0.521	-0.102	0.623
0.643	-0.551	0.068	0.375	-0.308
1.416	0.626	-0.038	0.027	-0.065
1.128	0.528	0.342	0.512	-0.170
1.923	1.656	0.233	-0.074	0.307
-0.938	-0.684	-0.631	-0.485	-0.146
-0.041	2.152	-0.177	-0.920	0.744
-2.730	-1.559	0.274	-0.546	0.819
2.464	1.620	0.060	-0.315	0.375
1.706	1.121	0.392	0.861	-0.469
-1.780	-1.003	-0.810	-0.140	-0.670
1.077	1.114	-0.016	0.152	-0.168
1.666	1.634	0.362	0.916	-0.554
1.892	0.798	0.237	0.392	-0.155
-0.872	-1.582	0.065	0.210	-0.145
1.952	1.223	0.411	-0.002	0.412
0.380	-0.169	-0.610	-0.279	-0.331
-0.693	-0.456	0.229	-0.810	1.038
0.242	-0.048	0.227	0.173	0.054
0.886	0.834	0.242	0.698	-0.456
0.607	0.757	0.203	0.385	-0.182
0.784	0.094	-0.373	-0.007	-0.366
1.102	-0.020	-0.136	0.159	-0.295
0.824	-0.312	0.432	0.495	-0.063
0.820	0.869	-0.496	-0.623	0.127
1.942	1.661	0.229	-0.277	0.506

-1.262	-0.682	0.743	-0.608	1.350
-1.115	-0.088	-0.168	-1.026	0.858
-1.944	-1.623	-0.267	-0.355	0.088
-1.441	-1.694	-0.305	0.221	-0.526
-0.214	0.171	-0.154	0.124	-0.277
1.000	1.616	0.343	-0.322	0.665
0.956	1.251	0.812	-0.392	1.204
2.358	2.160	0.161	-0.482	0.643
1.216	1.044	0.079	0.098	-0.019
-2.138	-1.383	-0.252	-0.114	-0.138
0.013	0.485	-0.382	-0.103	-0.280
0.327	0.390	0.783	0.155	0.627
-0.192	-0.387	0.439	-0.282	0.721
-1.796	-0.771	-0.331	-0.761	0.430
0.817	-0.088	0.123	-0.027	0.150
0.037	0.088	0.167	-0.750	0.917
0.287	0.086	-0.669	-0.359	-0.310
-1.442	-1.787	0.280	0.155	0.126
0.319	-1.332	0.031	0.246	-0.215
-0.708	-0.391	-0.658	-0.323	-0.336
-3.118	-3.001	0.439	0.624	-0.186
-2.207	-1.731	0.073	-0.217	0.289
1.964	2.126	-0.389	-0.545	0.156
0.521	0.675	-0.979	-0.517	-0.462
-2.823	-2.334	0.301	0.280	0.021
-1.482	-0.919	-0.120	-0.599	0.480
-1.244	-1.277	-0.075	-0.400	0.325
0.960	1.228	-0.472	0.194	-0.666
-0.687	-0.303	-0.068	0.021	-0.089
1.721	0.861	-1.102	-0.093	-1.010
3.356	1.208	0.404	0.395	0.009
0.327	1.087	0.200	-0.181	0.381
-2.309	-1.036	0.227	0.210	0.017
1.969	-1.895	-0.448	-0.346	-0.103
3.152	-1.539	-0.497	-0.213	-0.283
4.078	-1.228	-0.574	-0.651	0.077
2.832	-2.059	-0.416	-0.083	-0.332
1.669	-1.546	-0.554	-1.872	1.318
2.214	-3.090	-0.901	-0.294	-0.607
1.006	-1.653	-0.958	0.239	-1.197
2.171	-2.545	-0.810	0.053	-0.863
2.107	-3.173	-0.348	0.132	-0.480
-1.534	-0.311	-0.328	-0.533	0.204
1.898	-1.095	-0.734	-0.113	-0.621
1.819	-2.294	-0.560	-0.589	0.029
4.116	-0.196	-0.646	-0.812	0.166
3.726	-1.779	-0.796	-0.384	-0.413
1.362	-0.840	-1.114	-1.141	0.027
0.344	-4.347	-0.633	-0.328	-0.305
3.827	-2.759	-0.449	-0.032	-0.417
1.437	-0.697	-0.397	0.241	-0.638

1.139	-0.685	-0.232	-0.708	0.476
2.100	1.746	0.115	-0.011	0.126
2.136	1.608	0.176	0.556	-0.380
0.849	0.749	0.074	0.266	-0.192
-0.772	0.299	0.271	0.227	0.044
0.987	0.739	-0.012	0.314	-0.326
-2.120	-1.524	-0.501	0.052	-0.552
-1.900	-1.419	-0.331	-0.136	-0.195
-1.799	-1.495	-0.270	0.103	-0.373
-1.228	-0.862	-0.058	0.070	-0.128
2.028	1.384	0.650	0.193	0.457
-0.668	-1.782	-0.090	0.459	-0.549
-1.677	-1.245	0.021	-0.278	0.299
0.867	0.589	0.160	-0.234	0.395
-1.436	-1.269	-0.203	-0.253	0.050
0.976	0.128	-0.568	0.005	-0.574
-1.907	-1.249	0.367	-1.695	2.063
-4.310	-3.162	-0.377	0.616	-0.992
-3.560	-3.103	0.135	0.348	-0.213
-2.726	-2.082	0.327	1.022	-0.695
-0.834	-0.734	0.018	-0.535	0.553
0.985	-0.056	0.273	0.487	-0.215
0.879	0.164	1.439	0.884	0.555
-2.910	-2.542	-0.476	0.337	-0.813
-2.482	-0.205	0.192	1.042	-0.850
-2.299	-1.771	-0.118	0.154	-0.272
2.216	1.552	0.203	-0.120	0.323
0.531	0.674	-0.109	-0.205	0.096
0.869	0.345	0.157	-0.160	0.318
-0.202	0.137	0.362	-0.115	0.478
-2.786	-2.799	0.266	0.456	-0.189
-1.468	-1.056	1.170	0.401	0.768
-0.117	0.392	0.375	-0.366	0.741
-2.274	-1.964	0.153	-0.188	0.341
0.911	0.424	-0.385	-0.231	-0.154
0.940	1.142	0.410	-0.523	0.933
1.357	0.958	0.133	0.462	-0.329
-3.519	-2.357	-0.020	0.566	-0.587
-2.352	-1.902	-0.421	-0.228	-0.192
-2.149	-2.061	0.037	0.884	-0.847
-3.569	-2.023	-0.324	0.382	-0.706
1.206	1.162	0.410	0.466	-0.056
-2.102	-1.926	-0.264	0.399	-0.663
-3.093	-1.262	-0.490	-0.016	-0.474
-1.427	-1.379	0.051	1.003	-0.953
-1.548	-1.134	0.264	0.246	0.017
-2.536	-1.707	0.233	0.748	-0.515
-0.830	-0.595	0.495	0.848	-0.353
-2.236	-1.770	0.121	0.825	-0.704
-1.814	-0.807	-0.290	-0.178	-0.113
-1.731	-0.838	-0.411	-0.665	0.254

-2.247	-0.488	-0.263	0.070	-0.334
0.414	-0.246	0.010	0.104	-0.094
-0.495	-0.205	0.525	0.100	0.425
2.068	0.685	-1.107	-0.589	-0.518
-0.281	-0.164	-0.451	-0.020	-0.431
-2.627	-1.819	0.298	-0.394	0.692
0.955	1.241	0.172	0.370	-0.199
-0.572	-1.213	-0.551	-0.319	-0.231
-0.821	-1.253	0.215	0.397	-0.182
0.124	0.204	0.694	0.380	0.314
-1.583	-0.756	0.586	-0.553	1.139
0.231	0.005	-0.234	-0.874	0.639
0.921	1.379	-0.233	-0.355	0.122
0.868	1.607	0.825	-0.105	0.929
2.296	1.932	1.026	-0.099	1.125
0.642	1.184	1.262	0.302	0.960
1.246	1.383	0.204	-0.116	0.320
0.564	1.282	0.109	-0.197	0.305
-0.014	0.549	0.854	-0.037	0.891
-0.419	0.444	0.193	-0.253	0.445
0.497	0.878	0.479	-0.286	0.766
1.747	1.714	-0.300	-0.766	0.466
1.212	1.424	0.771	-0.135	0.906
-0.184	0.544	0.069	-0.294	0.363
1.247	1.484	0.217	-0.469	0.686
1.484	1.572	0.124	-0.384	0.508
0.658	0.618	0.117	-0.530	0.647
-1.153	-1.623	0.002	-0.111	0.113
-1.599	-1.088	-0.098	-0.520	0.422
-1.284	-0.864	0.124	0.116	0.008
1.187	1.547	-0.127	-0.210	0.083
-3.057	-3.116	0.428	-0.292	0.720
-1.200	-0.908	-0.029	-0.175	0.146
1.959	1.040	-0.013	-0.135	0.122
2.078	1.958	0.155	-0.397	0.552
1.839	0.784	-0.029	-0.075	0.046
2.549	2.718	0.216	-0.384	0.600
-0.630	-0.709	-0.557	0.503	-1.060
-0.120	0.457	0.030	0.059	-0.029
-1.179	0.016	0.695	-0.381	1.075
1.964	2.746	-0.944	-1.278	0.333
-3.625	-3.508	-0.337	-0.162	-0.175
-0.645	-0.257	0.315	-0.469	0.784
0.859	-0.094	0.010	0.466	-0.456
1.123	-0.357	-0.842	0.163	-1.006
-2.907	-2.873	0.321	-0.397	0.718
-1.310	-0.824	-0.144	-0.549	0.404
-2.475	-1.937	0.250	-0.099	0.350
1.205	1.693	-0.275	0.417	-0.692
-3.137	-2.479	-0.428	-0.219	-0.209
-1.188	-1.396	0.100	-0.334	0.434

-0.394	-0.697	-0.563	-0.560	-0.004
-1.118	-1.305	0.050	0.595	-0.544
-1.136	-1.473	0.880	0.804	0.076
-1.163	-0.866	-0.280	-0.833	0.553
-1.391	-0.818	0.046	-0.229	0.274
1.956	1.153	0.251	0.110	0.141
-1.420	-1.341	0.408	0.362	0.046
-1.813	-0.955	-0.539	-0.702	0.163
-0.909	-1.331	0.032	0.175	-0.143
-0.652	-0.744	0.175	0.012	0.163
-1.273	-1.529	1.050	1.653	-0.603
-1.726	-1.580	-0.003	1.064	-1.067
-2.172	-2.024	-0.648	0.981	-1.629
1.749	1.297	-0.516	-0.230	-0.286
2.405	1.349	0.396	0.697	-0.301
0.800	0.120	0.099	0.106	-0.007
1.059	1.171	-0.137	0.075	-0.211
-1.562	-1.864	0.119	0.570	-0.451
-0.279	-1.230	0.335	1.187	-0.852
0.742	0.130	-0.428	0.746	-1.174
0.524	0.147	0.165	1.063	-0.898
-1.270	-1.419	0.150	0.831	-0.681
-4.037	-2.881	-0.257	-0.822	0.566
-3.144	-2.811	0.235	-0.268	0.503
-1.838	-0.943	-1.945	-1.191	-0.754
-1.783	-1.543	-0.235	0.127	-0.362
1.151	1.019	0.495	-0.196	0.691
-3.090	-2.535	0.213	-0.434	0.647
-1.122	-1.432	0.140	1.663	-1.523
-0.402	-1.117	0.823	0.857	-0.035
-1.312	-1.465	-0.254	-0.564	0.310
-1.636	-0.763	0.496	0.347	0.149
0.136	0.535	-0.333	0.282	-0.615
-0.532	-0.125	0.034	-0.726	0.760
0.152	1.477	0.431	-0.153	0.584
0.906	1.035	0.180	0.229	-0.050
-0.947	-1.109	0.387	-0.375	0.762
0.520	0.919	-0.018	0.549	-0.567
2.112	2.007	-0.259	0.090	-0.350
1.676	2.111	-0.170	-0.448	0.277
-1.980	-1.411	-0.336	0.320	-0.656
-0.285	-0.394	-0.285	-0.701	0.416
1.218	0.489	0.175	0.277	-0.102
0.597	-0.407	0.401	1.352	-0.951
1.355	0.133	0.218	0.189	0.029
1.772	2.101	0.092	0.010	0.083
-0.735	-0.493	-0.104	-0.563	0.459
0.090	0.573	-0.150	-0.707	0.557
1.911	1.681	0.289	0.117	0.171
1.531	1.835	0.231	-0.317	0.548
-2.301	-1.938	0.063	-0.843	0.905

-0.659	0.108	-0.043	-1.381	1.338
1.714	1.008	0.589	-0.280	0.869
-0.250	0.716	-1.092	-1.877	0.785
0.219	-0.903	0.286	0.475	-0.189
-0.261	-0.952	-0.808	-0.040	-0.768
-1.694	-1.405	-0.358	-0.579	0.221
-0.999	-1.439	0.067	0.338	-0.272
-2.618	-2.063	-0.500	-0.129	-0.371
-2.882	-2.002	-0.334	-0.717	0.383
-1.570	-1.940	1.281	0.521	0.760
0.056	-0.223	0.717	-0.075	0.792
1.413	2.140	0.095	-0.968	1.064
0.997	1.868	0.189	-0.512	0.701
-2.163	-2.127	0.323	-0.609	0.932
2.627	2.600	-0.085	-0.342	0.257
2.241	2.964	-0.786	-2.126	1.340
-2.106	-1.660	-0.048	-0.185	0.137
-2.496	-2.000	-0.585	-0.308	-0.277
-2.951	-2.435	-0.377	-0.165	-0.211
-2.232	-1.721	-0.806	-0.627	-0.179
-2.984	-2.552	0.538	-0.351	0.889
-2.650	-0.805	-0.024	-0.166	0.142
-4.060	-0.748	-0.532	-0.106	-0.426
-3.705	-1.293	-0.113	0.592	-0.705
0.628	0.130	-0.239	0.363	-0.602
0.571	0.660	0.414	0.111	0.303
1.236	0.522	-0.210	0.253	-0.463
-0.448	-0.288	0.182	-0.634	0.816
-0.486	-0.273	0.173	-0.606	0.779
-0.956	-0.712	-0.057	-0.581	0.525
-0.899	-0.278	0.615	0.417	0.198
-0.194	0.116	0.600	-0.086	0.686
-0.130	0.055	0.838	0.502	0.336
-1.473	-1.128	0.380	-0.251	0.631
-1.566	-0.951	0.154	0.041	0.113
-1.812	-1.648	1.135	-0.296	1.431
-1.311	-1.369	0.658	0.001	0.657
-1.566	-2.089	1.053	0.215	0.837
-1.769	-2.264	1.428	-0.156	1.584
-0.373	-1.402	0.597	0.444	0.153
-1.376	-1.574	0.578	0.822	-0.244
-0.942	-1.353	0.928	0.830	0.097
-0.428	-0.359	0.136	-0.209	0.345
1.881	1.667	-0.114	-0.088	-0.025
-0.439	-0.691	0.219	0.010	0.209
0.173	0.556	0.084	0.189	-0.105
0.918	-0.622	-0.111	0.675	-0.786
0.774	1.040	-0.168	0.911	-1.080
0.511	0.727	-1.241	-0.321	-0.920
-3.741	-1.901	-0.894	-0.810	-0.083
-3.156	-2.422	-0.533	-0.976	0.443

-3.168	-2.915	-0.226	-0.842	0.615
-1.376	-0.859	0.165	-0.863	1.028
0.396	0.840	0.133	-0.117	0.250
-1.657	-0.821	-0.273	-0.646	0.373
-3.628	-2.185	-0.010	1.047	-1.057
-0.686	-0.848	0.270	0.287	-0.017
1.534	0.632	0.463	0.478	-0.015
1.033	1.217	-0.036	-0.236	0.200
-1.053	-0.531	-0.591	-0.468	-0.122
-0.441	-0.187	-0.107	-0.273	0.166
2.629	1.691	-1.087	0.043	-1.130
0.421	-0.109	0.670	-0.228	0.898
-0.853	-0.662	-0.338	-0.563	0.225
1.473	1.180	-0.089	0.201	-0.289
0.511	0.709	-0.442	-0.540	0.098
1.001	1.171	0.224	0.263	-0.039
1.607	1.654	0.383	0.165	0.218
-1.069	-0.767	0.224	-0.761	0.985
-1.474	-1.399	-0.098	-0.717	0.619
0.408	1.024	-0.225	0.269	-0.493
1.205	1.181	-0.054	0.132	-0.186
1.518	0.295	1.188	1.341	-0.153
2.579	1.249	1.911	1.058	0.853
-1.453	-1.528	0.262	0.204	0.058
0.044	0.354	0.261	0.363	-0.102
-1.928	-1.438	0.128	-0.314	0.441
-2.205	-1.325	0.274	-0.035	0.309
-1.233	-0.981	-0.156	-0.519	0.362
-2.601	-2.423	0.662	-0.008	0.670
-1.200	-1.532	0.221	-0.388	0.609
-0.226	-0.786	-0.012	0.451	-0.463
2.145	2.387	0.532	-0.262	0.795
0.043	0.727	0.040	-0.767	0.808
-1.455	-2.319	-0.014	-0.088	0.074
-1.450	-0.924	-0.133	-0.875	0.742
-0.760	-1.526	-0.299	-0.444	0.145
1.084	-0.145	-0.026	0.481	-0.507
-1.731	-1.179	-0.190	-0.103	-0.087
-1.732	-1.693	0.025	-0.439	0.464
0.451	-0.071	0.106	0.218	-0.113
0.149	0.009	-0.078	0.026	-0.104
-0.433	0.247	-0.366	-0.107	-0.260
1.226	1.444	-0.062	-0.152	0.090
0.812	1.508	0.282	-0.106	0.388
-0.256	-0.739	-0.126	-0.133	0.007
-2.271	-1.848	0.024	-0.237	0.261
1.195	1.248	0.625	-0.293	0.918
-1.516	-0.849	-0.611	-0.815	0.204
0.395	1.006	-0.141	-0.124	-0.017
-1.261	-1.003	-0.340	-0.688	0.348
-2.616	-2.197	0.038	-0.548	0.587

0.990	1.330	0.326	0.102	0.224
0.695	0.424	-0.026	-0.105	0.079
-1.026	-0.946	0.275	-0.551	0.825
-0.529	-0.589	0.354	-0.309	0.664
0.811	1.215	0.134	-0.832	0.966
0.604	0.115	0.542	0.169	0.373
-1.191	-0.903	-0.049	-0.269	0.220
0.419	0.599	0.101	-0.265	0.367
-0.198	0.240	-0.070	-0.138	0.068
-0.624	-1.218	-0.603	-0.135	-0.467
-0.734	-1.210	-0.880	-0.124	-0.756
-0.957	-1.448	-2.466	-1.707	-0.760
2.024	1.524	0.303	-0.032	0.335
-1.068	-0.468	0.114	0.012	0.101
-0.377	-0.971	-0.033	-0.400	0.367
-1.429	-1.235	0.342	0.264	0.077
1.729	0.342	0.460	0.383	0.077
-0.400	-0.172	-1.031	-0.474	-0.558
-0.585	-0.864	0.069	0.276	-0.208
2.349	2.515	-0.097	-0.092	-0.006
1.121	-0.013	-0.066	0.170	-0.237
1.179	0.118	0.306	0.401	-0.094
-0.079	-0.894	0.222	0.518	-0.296
0.086	0.103	0.470	0.078	0.391
1.359	1.071	-0.051	0.279	-0.330
1.299	1.576	0.592	0.195	0.396
-0.016	0.164	0.291	-0.258	0.549
0.896	-0.154	0.189	0.533	-0.345
0.640	0.805	0.185	-0.200	0.385
-0.714	-0.484	0.502	0.336	0.165
1.095	0.271	0.470	0.489	-0.020
1.657	0.692	0.770	0.715	0.055
0.827	0.191	0.381	0.325	0.056
0.500	0.409	0.073	0.337	-0.264
0.952	0.622	0.451	0.232	0.219
1.436	1.044	0.380	0.115	0.265
-2.153	-2.326	-0.263	-0.314	0.051
1.377	1.781	0.710	0.253	0.457
-0.126	-0.073	0.695	0.066	0.629
0.996	0.117	-0.284	1.074	-1.358
-0.019	-0.136	-0.392	-0.214	-0.178
1.337	1.876	0.462	-0.030	0.492
-1.860	-1.052	0.172	-0.119	0.291
-0.187	-0.552	0.046	-0.267	0.313
1.540	0.398	-0.025	0.361	-0.386
-1.072	-0.763	0.022	0.095	-0.073
0.531	0.231	0.307	-0.107	0.414
1.184	1.618	0.028	-0.729	0.757
2.845	2.195	0.316	0.022	0.294
2.196	2.381	0.786	-0.187	0.973
-1.971	-1.545	0.339	-0.363	0.703



-1.120	-1.073	0.732	0.283	0.449
0.203	0.355	-0.205	-0.311	0.106
2.615	2.252	0.001	0.201	-0.200
2.195	1.754	-0.782	-0.841	0.059
0.271	1.615	-0.089	-0.725	0.635
0.880	1.237	0.155	-0.912	1.067
-0.714	-0.497	0.435	-0.102	0.537
-1.134	-0.898	0.075	-0.597	0.672
-1.779	-1.177	0.442	-0.173	0.615
-1.394	-1.097	-0.161	-0.062	-0.099
1.749	1.874	-0.088	0.309	-0.397
1.140	2.089	0.292	-0.606	0.898
-1.652	-1.758	0.286	-0.143	0.429
-1.837	-1.425	-0.040	-0.879	0.839
2.412	2.311	0.182	0.327	-0.145
0.870	-0.661	0.053	0.055	-0.002
-0.218	-1.136	-0.120	0.373	-0.493
-0.127	0.025	0.177	0.108	0.069
-0.934	-0.401	-0.336	-0.911	0.575
-0.883	-0.693	0.576	-0.299	0.875
0.549	1.054	-0.259	0.050	-0.309
1.459	1.886	0.100	0.141	-0.041
1.580	0.399	-0.060	0.812	-0.872
-1.498	-1.539	0.832	-0.279	1.111
1.589	0.135	-0.305	0.493	-0.798
-0.184	-0.949	-0.545	0.550	-1.095
-1.847	-1.477	0.706	-0.685	1.391
-3.007	-3.027	0.275	0.004	0.271
0.270	0.455	0.031	0.218	-0.187
1.581	0.388	-0.092	0.417	-0.509
-1.846	-0.445	-0.352	-0.349	-0.004
-2.629	-2.159	-0.339	-0.479	0.140
-2.489	-1.569	-0.003	-0.747	0.744
-0.491	0.070	-0.092	-0.238	0.146
0.250	0.330	-0.815	-0.778	-0.037
0.817	0.893	0.017	-0.069	0.086
1.325	1.636	0.195	-0.419	0.614
1.523	1.070	-0.624	0.201	-0.826
0.720	0.349	0.290	0.746	-0.456
0.266	0.857	-0.106	-0.012	-0.094
2.525	2.778	-0.423	-0.594	0.171
2.362	1.725	-0.314	-0.285	-0.028
-1.285	-0.864	-0.058	0.248	-0.307
-0.192	-0.558	0.000	0.391	-0.391
1.607	1.697	0.087	0.273	-0.186
0.745	-0.275	-0.009	0.067	-0.076
-0.092	0.174	0.156	0.020	0.136
1.717	1.006	-0.593	-0.347	-0.246
0.314	0.966	-0.506	-0.318	-0.188
1.275	1.278	0.298	0.049	0.249
0.989	0.564	-0.047	0.248	-0.295

0.784	-0.154	0.668	0.326	0.342
1.053	1.238	-0.300	0.048	-0.348
-1.654	-1.896	-0.319	-0.143	-0.175
1.281	1.655	-0.654	-1.039	0.385
0.580	-0.053	0.096	-0.407	0.502
0.378	0.164	0.269	0.530	-0.262
0.300	0.598	-0.053	-0.412	0.359
0.832	1.207	0.555	-0.126	0.681
0.486	0.851	-1.485	-1.070	-0.415
1.592	0.675	0.077	-0.004	0.081
0.740	0.906	-1.204	-0.676	-0.528
-2.009	-1.410	0.002	-1.095	1.097
2.222	1.630	-0.754	-0.457	-0.297
1.294	2.511	0.122	-0.348	0.471
0.775	0.932	0.098	0.393	-0.295
2.587	2.110	0.387	-0.157	0.544
-1.891	-1.580	0.060	-0.676	0.736
1.703	2.067	-0.418	-0.873	0.455
2.208	2.499	-0.281	-1.038	0.757
1.460	2.152	-0.197	-1.107	0.909
-1.896	-0.877	-0.231	0.354	-0.584
1.981	1.692	0.195	0.368	-0.173
0.521	0.917	0.217	0.192	0.025
1.673	1.416	-0.196	-0.389	0.193
2.327	1.815	0.144	-0.137	0.281
1.684	1.165	0.170	-0.057	0.227
-0.301	-0.774	0.110	-0.001	0.111
1.048	1.148	0.064	0.331	-0.267
-1.578	-1.248	-0.437	-0.213	-0.225
-0.311	0.195	0.168	0.161	0.007
0.087	-0.904	0.111	0.365	-0.255
-1.334	-0.889	0.235	-0.544	0.780
1.930	1.503	0.342	0.599	-0.257
0.969	1.160	-0.038	0.276	-0.314
-0.635	-0.542	-0.054	0.166	-0.220
-0.889	-0.134	-0.441	-0.619	0.179
-1.352	-0.503	0.446	-0.080	0.526
0.250	-0.483	-0.261	-0.138	-0.123
-0.065	-0.419	0.049	-0.040	0.089
-1.337	-0.944	-0.315	-0.738	0.423
0.160	0.269	0.299	-0.585	0.884
-0.165	-0.462	-0.383	-0.525	0.141
2.697	2.295	0.510	0.101	0.410
2.489	2.298	0.240	0.123	0.117
3.111	2.103	1.105	0.674	0.431
2.937	2.025	0.897	0.558	0.339
-1.254	-0.910	0.173	0.025	0.148
-0.293	0.284	-0.703	-0.600	-0.103
1.610	2.472	0.032	-1.231	1.263
0.462	0.928	-0.254	-0.445	0.190
0.710	0.921	-0.137	-0.856	0.718

-1.023	-0.545	-0.235	-0.161	-0.074
-0.867	-0.320	-0.731	-0.310	-0.420
2.470	2.397	0.533	-0.325	0.859
1.950	2.331	0.127	-0.555	0.682
0.148	0.167	-0.363	0.029	-0.392
1.387	2.054	0.482	0.167	0.316
1.720	0.921	-0.161	-0.004	-0.157
-1.739	-0.976	-0.481	-0.593	0.112
1.084	1.270	-0.692	-0.654	-0.038
-1.237	-0.908	0.444	0.096	0.348
1.279	0.907	0.541	-0.052	0.593
1.056	1.270	-0.555	-0.417	-0.138
2.145	1.348	-1.067	-0.338	-0.729
2.044	1.817	-0.218	0.011	-0.229
0.198	-0.544	0.438	0.233	0.204
1.018	1.085	-0.063	-0.375	0.312
2.453	3.207	0.415	-0.135	0.550
-0.420	-0.271	0.186	0.061	0.125
-0.204	-0.630	0.161	-0.159	0.320
0.755	-0.696	0.123	0.304	-0.181
-3.740	-2.539	-0.582	-0.264	-0.318
-0.801	-0.628	-0.547	-0.591	0.043
-0.289	-0.109	-0.036	-0.856	0.820
-0.708	-0.927	-0.177	0.287	-0.464
-0.470	-0.753	-0.811	-0.140	-0.671
0.726	1.104	0.168	0.380	-0.213
1.353	1.207	0.139	-0.402	0.541
1.244	0.782	0.565	0.718	-0.153
1.078	1.121	0.140	0.385	-0.245
0.339	0.885	0.088	0.230	-0.142
-0.125	0.112	0.526	-0.007	0.533
0.844	0.456	0.267	0.320	-0.053
1.227	0.585	0.370	0.551	-0.182
1.512	0.977	0.310	0.638	-0.328
-0.302	-0.029	0.026	0.002	0.024
3.181	2.282	0.299	0.269	0.029
-0.454	1.198	-0.374	-0.658	0.284
1.508	1.717	0.753	0.196	0.557
0.637	0.278	-0.378	-0.112	-0.266
1.058	1.097	0.363	0.257	0.106
0.377	0.703	0.540	-0.661	1.201
-1.519	-1.219	-0.178	-0.143	-0.035
-0.473	-0.176	-0.381	-0.053	-0.328
0.700	0.807	0.212	0.236	-0.024
-1.549	-0.704	-0.240	0.006	-0.247
-1.778	-2.211	0.059	0.588	-0.529
2.104	1.879	-0.129	0.112	-0.241
1.490	1.616	0.317	0.249	0.068
-3.072	-3.078	0.687	-0.480	1.167
-0.832	-0.675	0.162	0.002	0.160
-0.163	-0.424	0.427	-0.201	0.628

0.364	0.641	-0.116	-0.047	-0.069
-1.478	-0.845	-0.188	-0.419	0.232
0.576	-0.427	-0.316	0.228	-0.543
0.837	0.893	-0.086	-0.204	0.118
1.874	1.031	0.338	0.623	-0.285
2.271	2.249	0.088	-0.102	0.190
0.667	0.684	0.442	0.007	0.434
0.464	1.125	-0.035	-0.289	0.255
1.027	0.902	-0.369	-0.407	0.038
0.353	0.447	-0.445	0.091	-0.536
1.285	1.382	0.477	0.079	0.397
0.882	0.529	0.249	0.136	0.113
0.933	0.735	0.018	0.177	-0.159
1.037	0.802	0.096	0.291	-0.195
0.290	-0.713	-0.216	0.112	-0.328
1.084	1.235	-0.706	-0.766	0.060
0.869	-0.453	0.299	0.289	0.010
0.874	0.935	0.945	-0.028	0.973
0.953	0.254	0.017	0.379	-0.362
-0.428	-1.249	0.036	0.226	-0.190
-0.713	0.263	-0.239	-0.184	-0.054
0.929	0.643	1.186	0.465	0.721
0.944	0.966	0.259	1.153	-0.894
1.007	0.093	-0.276	-0.315	0.040
2.254	0.818	0.635	0.275	0.360
0.348	0.802	0.899	0.355	0.544
0.513	0.365	0.490	0.080	0.410
0.097	0.523	-0.033	0.079	-0.112
1.045	0.724	0.299	0.689	-0.390
0.263	0.915	0.162	-0.309	0.471
1.731	1.006	0.391	0.436	-0.045
-0.626	-0.781	0.489	0.362	0.128
1.067	-0.424	-0.232	0.117	-0.348
1.125	0.386	0.454	0.782	-0.328
-1.590	-1.983	-0.230	-0.271	0.041
1.259	0.938	0.856	0.476	0.381
2.076	2.229	-0.027	0.508	-0.536
-1.356	-1.353	-0.314	0.036	-0.350
0.206	-0.012	-0.243	-0.086	-0.158
1.761	1.151	-0.168	0.282	-0.450
-0.043	0.190	0.381	-0.194	0.575
-0.526	-1.162	-0.396	0.005	-0.401
0.784	0.299	0.270	0.212	0.059
2.057	1.119	0.434	0.469	-0.035
0.219	-1.094	0.189	0.205	-0.016
1.874	0.942	-0.270	0.102	-0.372
-0.363	-0.775	-0.236	0.261	-0.496
1.165	-0.207	0.422	0.232	0.190
0.258	1.153	-0.172	-0.206	0.034
-0.750	-1.826	0.393	0.366	0.028
1.225	1.408	-0.176	0.433	-0.609
-0.835	-1.189	0.497	0.477	0.020

-0.551	-0.725	0.448	0.437	0.012
0.542	0.708	-0.098	-0.239	0.140
0.645	1.066	-0.282	0.070	-0.353
-1.462	-2.151	-0.054	-0.373	0.319
0.295	-0.987	0.090	-0.240	0.330
1.052	0.695	0.450	0.587	-0.138
1.319	0.480	0.645	-0.086	0.731
2.388	1.095	-0.248	-0.358	0.109
-0.168	-0.571	0.581	-0.104	0.685
1.944	1.136	-0.117	0.220	-0.337
3.648	2.699	0.364	-0.263	0.627
-1.346	-1.111	0.278	0.255	0.023
1.328	1.620	0.064	-0.726	0.790
1.094	1.022	0.213	0.232	-0.020
1.000	0.734	0.050	0.887	-0.837
-0.455	-1.050	0.239	0.360	-0.121
1.601	1.205	0.215	0.147	0.068
-0.016	-0.019	0.035	0.516	-0.481
-0.062	-0.382	0.313	0.531	-0.218
-0.564	-0.907	0.208	0.369	-0.162
0.403	0.324	0.135	0.327	-0.192
0.077	-0.545	0.542	0.474	0.068
0.049	-0.022	-0.130	-0.191	0.061
1.327	1.047	0.691	0.690	0.001
-1.535	-0.888	0.058	-0.022	0.080
0.272	0.135	0.166	0.239	-0.073
-1.594	-1.225	0.014	0.599	-0.585
-0.185	-0.217	0.300	0.572	-0.272
-1.804	-1.518	0.161	-0.182	0.343
-0.919	-1.431	-0.061	-0.006	-0.054
1.575	1.403	1.355	0.779	0.576
0.886	1.301	-0.247	-0.462	0.215
1.591	1.751	-0.717	-0.110	-0.607
0.114	-0.808	0.091	0.513	-0.422
0.403	0.192	0.298	0.131	0.167
-0.947	-0.685	1.142	0.844	0.298
2.046	2.229	0.156	0.283	-0.126
1.277	1.122	0.702	0.197	0.506
0.008	-0.127	0.416	0.964	-0.547
-1.347	-1.659	-0.199	0.908	-1.107
0.033	0.220	0.458	0.003	0.455
0.192	0.543	1.475	-0.131	1.606
0.417	0.746	0.923	0.546	0.377
0.245	0.714	0.229	-0.196	0.425
-1.599	-1.227	0.197	-0.212	0.409
-1.311	-1.417	0.338	-0.236	0.574
0.807	0.589	0.217	0.339	-0.122
1.833	0.572	0.011	0.041	-0.030
-0.988	-0.747	0.335	-0.200	0.534
-2.572	-1.721	0.293	-0.553	0.845
-1.172	-1.075	0.279	0.141	0.138

-1.377	-0.492	0.153	-0.271	0.425
2.701	2.569	-0.038	-0.122	0.084
2.616	1.885	-0.031	-0.274	0.244
1.801	1.803	0.124	0.265	-0.141
1.099	1.680	-0.473	-0.557	0.083
-1.201	0.357	-1.157	-1.988	0.831
1.854	1.001	0.291	0.134	0.157
3.461	2.732	-1.217	-1.178	-0.039
-0.391	-0.263	-0.439	-0.054	-0.385
2.026	1.150	-0.203	-0.458	0.255
2.450	2.001	-0.465	0.275	-0.740
2.200	1.483	-0.329	-0.379	0.050
0.757	-0.156	-0.873	-0.299	-0.574
-0.009	-0.464	0.390	-0.263	0.653
-2.489	-2.067	0.177	-0.225	0.402
-0.002	0.708	0.180	-0.107	0.287
2.238	1.220	0.736	0.300	0.436
-0.984	-0.821	0.981	-0.161	1.142
3.700	1.976	1.040	-0.305	1.345
0.624	0.104	-0.025	0.503	-0.528
2.426	1.702	0.099	0.420	-0.321
3.282	1.613	0.105	-0.108	0.213
-1.203	-0.625	0.292	-0.684	0.977
2.396	2.034	0.402	0.173	0.229
0.623	0.201	-0.255	-0.567	0.312
1.481	1.762	-0.083	-0.001	-0.082
1.737	1.588	0.135	-0.305	0.441
1.512	1.587	0.854	0.058	0.796
2.234	1.365	-0.020	-0.086	0.067
1.760	1.917	0.312	-0.495	0.807
1.294	1.701	0.546	-0.277	0.823
2.619	1.646	-0.025	0.043	-0.067
0.668	1.119	-0.496	-0.139	-0.357
-1.874	-1.865	-0.593	-1.018	0.426
2.030	2.297	0.168	-0.641	0.808
1.140	0.338	0.326	0.260	0.066
0.364	-0.164	0.209	-0.159	0.368
1.928	0.883	0.257	0.141	0.116
3.196	2.155	0.626	0.265	0.361
1.287	0.316	-0.112	0.083	-0.196
1.195	0.575	0.338	0.391	-0.052
-0.125	-0.999	0.052	0.934	-0.882
1.615	0.936	0.365	0.936	-0.571
-0.448	-0.569	0.031	0.070	-0.039
1.547	-0.466	0.848	0.946	-0.098
0.350	0.209	0.282	0.042	0.240
0.669	0.626	-0.403	0.291	-0.693
-0.982	-0.684	-0.020	-0.340	0.320
-1.789	-2.605	-0.089	-0.059	-0.030
0.031	0.524	-0.240	0.056	-0.296
-0.307	-0.524	1.134	0.244	0.891

-0.830	0.370	-0.051	0.140	-0.190
-0.427	-1.322	-0.703	-0.085	-0.617
-2.128	-2.881	-0.094	0.198	-0.292
-1.651	0.110	-0.451	-1.211	0.760
-2.477	-1.949	-1.840	-0.437	-1.404
-1.751	-1.184	-0.583	0.854	-1.437
-2.375	-1.645	-0.238	-0.234	-0.004
-2.492	-2.046	0.023	0.796	-0.773
-0.010	0.177	-0.124	0.078	-0.202
-4.197	-3.185	-0.065	-0.527	0.462
0.286	0.522	0.159	-0.044	0.203
-3.007	-2.869	0.295	1.047	-0.751
-2.620	-1.910	0.178	-0.919	1.097
-0.997	-1.133	-0.119	-0.559	0.440
-0.594	0.150	-1.260	-0.087	-1.173
-0.206	-0.760	0.345	0.503	-0.157
1.263	1.641	0.142	0.033	0.110
0.575	0.251	0.364	0.337	0.027
1.091	-0.071	0.016	-0.219	0.234
1.216	0.903	0.484	0.337	0.147
-2.290	-2.428	0.256	-0.160	0.417
-3.362	-2.711	0.143	-0.544	0.687
-0.958	-0.350	0.128	-0.072	0.199
0.653	0.371	-0.431	0.508	-0.940
-0.996	-0.561	-0.832	0.328	-1.160
-0.777	-0.443	-1.861	-0.330	-1.531
0.539	0.470	-0.509	0.446	-0.955
-0.551	0.003	-0.285	0.062	-0.347
-1.570	-0.402	-0.263	0.147	-0.409
-0.184	-0.544	0.148	0.587	-0.438
-2.058	-1.589	0.219	-0.568	0.787
-1.737	-1.125	-0.275	-0.467	0.193
-1.660	-2.164	-1.345	-0.329	-1.016
-0.001	-1.416	-0.398	0.069	-0.467
-0.146	-0.145	0.286	0.026	0.261
-1.384	-1.391	0.384	0.246	0.138
-1.890	-1.989	-0.539	-0.284	-0.255
-1.922	-2.174	-0.256	0.053	-0.309
1.048	1.668	-0.338	-0.047	-0.292
0.433	-0.210	0.156	-0.154	0.310
0.536	-0.745	0.302	0.664	-0.362
0.409	0.061	-0.328	-0.363	0.034
1.676	2.068	0.348	-0.424	0.772
-2.646	-2.422	0.668	0.571	0.097
0.296	-0.194	-0.038	0.407	-0.445
0.970	0.953	-0.419	0.588	-1.008
-2.337	-1.587	-0.083	-0.107	0.024
-2.442	-2.111	0.325	0.341	-0.016
2.578	1.402	0.463	0.608	-0.145
2.396	2.178	-0.193	-0.464	0.271
-0.506	-0.367	-0.600	-0.456	-0.144

0.596	-0.679	0.087	0.130	-0.043
0.265	-1.123	0.460	-0.211	0.671
-1.548	-0.906	0.063	-0.301	0.364
2.611	2.209	0.446	0.011	0.435
0.847	0.636	0.345	-0.378	0.723
0.223	0.779	0.050	-0.340	0.389
-1.458	-1.516	0.458	0.790	-0.332
-0.943	-0.947	0.000	0.356	-0.356
-0.463	-0.060	0.287	-0.475	0.762
1.567	1.454	0.333	0.000	0.332
-1.540	-1.321	-0.131	-0.228	0.098
0.922	1.116	0.102	-0.243	0.346
0.885	2.353	0.338	-0.486	0.824
2.475	2.426	0.258	0.361	-0.102
-0.208	0.203	-0.294	-0.667	0.373
2.833	1.245	-0.009	0.188	-0.197
-2.309	-1.100	0.136	-0.520	0.656
-1.285	-0.192	0.230	-0.095	0.325
1.890	2.178	-0.348	-0.653	0.306
-2.337	-2.073	0.429	0.362	0.067
1.101	-0.251	0.469	0.390	0.079
-0.274	0.039	-0.118	-0.052	-0.066
-0.742	-0.683	-0.571	-0.222	-0.348
0.044	0.167	0.405	-0.196	0.601
1.411	1.811	-0.430	-0.399	-0.030
0.113	0.546	-0.386	-0.198	-0.188
0.099	0.321	0.039	0.624	-0.585
-0.642	-0.669	-0.132	-0.852	0.720
-3.714	-3.059	-0.513	-0.518	0.005
-2.981	-2.727	-0.533	-0.574	0.041
0.933	1.501	0.047	-0.269	0.317
0.119	-0.168	0.359	0.160	0.199
1.454	1.163	0.254	-0.539	0.793
-0.874	0.083	-0.140	-0.126	-0.014
2.691	1.272	0.036	0.209	-0.173
0.520	0.320	-0.728	-0.489	-0.240
2.559	2.012	-0.415	0.048	-0.463
-1.880	-1.552	-0.084	-0.800	0.716
0.779	0.779	0.561	-0.522	1.083
1.304	1.796	0.124	0.035	0.089
-1.619	-1.882	0.046	-0.586	0.633
2.518	0.692	0.421	0.709	-0.288
-1.913	-1.203	0.083	0.159	-0.076
1.261	1.112	0.040	-0.008	0.048
2.172	1.471	0.385	0.265	0.120
0.649	-0.145	0.303	0.766	-0.463
0.046	-0.271	-0.229	0.470	-0.698
2.135	1.890	-0.510	0.023	-0.534
-0.879	0.242	-0.237	-0.727	0.491
-1.191	-0.409	-1.269	-1.620	0.351
0.966	1.267	0.484	0.248	0.236



-1.926	-2.507	-1.056	-0.113	-0.944
-1.975	-1.155	0.201	-0.815	1.017
0.397	0.024	-0.084	-0.268	0.184
0.903	0.243	0.058	0.173	-0.115
-2.847	-2.419	0.413	-0.348	0.760
-0.810	-1.791	0.045	-0.609	0.654
0.186	-0.790	0.483	0.300	0.183
-1.906	-1.420	0.096	-0.166	0.262
1.649	1.746	1.256	0.124	1.132
-2.360	-1.856	-0.156	-2.206	2.049
-0.629	-0.065	-0.050	-0.526	0.476
-0.795	-0.299	0.564	-0.142	0.706
-0.151	0.249	0.055	0.159	-0.105
1.141	1.312	-0.907	-0.419	-0.489
2.161	2.101	0.293	-0.679	0.972
-2.522	-2.311	-0.504	-0.366	-0.138
2.522	2.403	-1.091	-0.786	-0.304
-1.527	-1.419	0.659	-0.973	1.631
1.958	1.513	0.657	0.354	0.303
-0.705	-1.264	-0.487	0.115	-0.602
1.373	1.196	1.323	0.400	0.923
1.070	0.971	0.620	-0.590	1.210
-1.293	-1.227	-0.018	-0.259	0.242
-1.341	-1.815	0.317	-1.034	1.351
-1.620	-1.480	0.417	-0.357	0.774
-1.415	-0.529	-0.116	-0.312	0.197
-0.074	-1.524	-0.452	0.049	-0.502
-1.505	-0.967	-0.300	-0.381	0.082
1.933	1.496	0.437	0.036	0.401
1.568	1.138	0.326	0.108	0.219
-1.021	-0.753	-0.077	-0.557	0.481
-1.148	-1.942	0.322	0.232	0.090
1.543	-0.133	0.244	0.266	-0.022
-1.482	-0.941	0.000	-0.477	0.477
-1.738	-1.264	-0.569	-0.413	-0.156
-0.404	-0.381	0.249	-0.229	0.477
-1.361	-0.798	-0.035	-0.263	0.228
-1.431	-1.005	0.329	-0.710	1.039
-0.105	-0.084	-0.184	-0.054	-0.130
-0.531	-0.766	-0.135	0.348	-0.483
2.032	2.016	-0.589	-0.254	-0.335
0.470	0.330	-0.201	-0.915	0.714
2.888	1.168	-0.881	0.065	-0.946
1.830	0.865	0.215	0.179	0.035
0.174	0.288	0.488	-0.652	1.141
-0.425	0.741	0.691	-0.243	0.935
-1.163	-0.968	0.571	-0.853	1.423
0.524	0.965	0.632	-0.160	0.792
-0.609	-0.838	-0.135	-0.519	0.384
1.122	1.096	-0.204	0.067	-0.271
0.886	1.247	-0.963	-0.234	-0.730

0.555	0.576	0.448	-0.615	1.063
-0.539	-0.586	0.006	-0.896	0.902
-0.387	-1.092	0.407	-0.128	0.535
1.308	1.566	0.982	-0.220	1.202
-0.918	-0.211	-1.221	-0.889	-0.332
2.123	1.392	0.563	-0.859	1.422
0.691	0.952	-0.579	-0.871	0.292
0.325	0.359	0.069	0.023	0.046
2.473	2.164	0.501	-0.252	0.753
1.137	1.425	0.096	-0.685	0.781
-1.378	-0.750	0.033	-0.854	0.887
1.304	1.094	-0.388	-0.385	-0.003
1.220	0.960	0.538	-0.802	1.340
1.784	1.998	-0.254	-0.950	0.696
-0.324	0.322	0.386	-1.059	1.445
-1.270	-0.725	0.302	0.175	0.127
-1.670	-1.131	0.086	-0.684	0.770
-0.347	-0.256	-0.031	-0.234	0.203
-2.691	-2.491	-0.150	-0.069	-0.081
1.833	2.223	0.097	-0.143	0.240
-2.231	-1.653	0.029	-0.707	0.736
-1.434	-0.913	0.608	-0.311	0.920
1.355	1.716	-0.794	0.094	-0.888
-1.945	-1.325	0.511	-0.121	0.632
1.053	0.723	-0.842	-0.443	-0.399
-1.341	-1.156	-0.167	-0.765	0.597
1.547	1.997	1.308	0.376	0.932
1.888	1.334	-0.461	-0.209	-0.251
2.561	1.627	-0.114	-0.054	-0.060
0.622	0.422	0.435	-0.327	0.762
-2.253	-1.830	-0.058	-0.465	0.407
0.808	0.419	-0.305	-0.249	-0.056
-0.087	0.169	0.720	-0.552	1.272
0.577	0.437	-0.298	-0.762	0.464
0.067	-0.313	1.125	0.437	0.688
0.366	0.324	0.797	-0.565	1.362
1.026	0.865	0.098	-0.459	0.557
1.096	0.506	0.091	-0.489	0.580
1.406	1.966	0.004	-0.340	0.344
1.564	1.796	-0.011	-1.141	1.130
-0.049	0.075	0.527	-0.587	1.114
-0.411	0.055	0.158	-0.012	0.171
1.339	1.252	0.512	0.486	0.026
0.483	0.208	-0.010	0.506	-0.515
1.722	-0.414	-0.123	-0.656	0.533
-1.668	-1.351	0.228	-0.002	0.231
-0.028	-0.084	0.279	-0.079	0.359
-1.131	-0.523	-1.650	-1.018	-0.632
0.906	0.840	0.901	0.044	0.857
-2.518	-1.631	-0.422	-0.651	0.229
0.473	0.727	0.303	-0.395	0.699
1.261	1.306	0.577	-0.238	0.814

1.535	1.369	-0.130	-0.253	0.123
-2.586	-2.373	0.158	0.489	-0.331
-1.260	-1.473	-0.414	-0.763	0.349
1.127	0.580	0.347	-0.532	0.879
0.168	0.389	0.198	0.673	-0.475
-1.347	-1.703	-0.187	-0.074	-0.113
1.178	1.225	-0.334	0.068	-0.402
1.460	1.491	-0.297	-0.013	-0.284
-1.667	-1.509	0.258	-0.687	0.945
1.430	1.062	0.371	-0.477	0.848
2.046	1.906	0.922	0.484	0.439
-1.164	-1.589	1.244	-1.235	2.479
1.091	1.267	0.214	0.008	0.206
-0.517	0.030	0.094	-0.418	0.512
-3.327	-2.814	-0.549	-0.739	0.190
1.382	0.785	0.372	-0.310	0.683
1.309	0.971	0.111	-0.302	0.413
0.053	1.143	-0.482	0.725	-1.208
1.602	2.232	-0.263	-1.422	1.159
-1.064	-1.100	0.312	-0.913	1.225
1.000	0.970	0.283	-0.251	0.535
-0.882	-0.623	-0.277	-0.840	0.563
0.333	-0.412	-0.009	0.046	-0.055
-0.988	-1.226	0.200	-0.575	0.775
-3.507	-1.575	-0.334	-0.957	0.623
2.016	2.040	-0.241	-0.325	0.084
1.822	0.812	0.376	0.196	0.181
1.234	1.041	-0.146	-0.844	0.698
-0.861	-0.025	0.142	-0.277	0.419
0.906	0.234	0.420	-0.004	0.424
1.027	0.342	0.434	0.074	0.359
1.116	0.626	0.229	0.278	-0.048
0.483	-0.288	-0.374	0.249	-0.623
-0.683	-0.340	-0.493	0.145	-0.638
0.194	0.850	0.233	-0.232	0.465
-1.806	-1.530	-0.912	-0.065	-0.847
-2.591	-1.441	-0.629	-0.789	0.160
0.516	-0.623	-0.076	-0.075	-0.001
0.623	0.887	0.280	0.007	0.273
1.145	0.537	0.410	0.416	-0.006
0.810	0.388	0.262	-0.167	0.429
0.797	0.025	-0.807	-0.546	-0.261
0.871	-0.053	-0.984	-0.181	-0.803
-2.674	-1.951	-0.740	-0.690	-0.050
1.716	0.810	0.194	0.855	-0.662
0.435	0.034	-0.113	-0.021	-0.092
-0.476	-0.892	0.372	0.409	-0.037
-2.169	-1.575	-0.167	-0.478	0.311
1.973	2.541	0.809	-0.874	1.683
2.043	2.599	-0.360	-0.722	0.362
0.524	0.076	0.433	0.385	0.048
1.181	0.915	0.229	0.104	0.124

1.914	1.091	0.330	-0.280	0.610
2.443	1.419	-0.046	-0.319	0.273
0.416	0.911	-0.192	0.145	-0.337
0.100	0.715	0.198	-0.018	0.215
-0.768	-1.459	-0.731	0.100	-0.831
2.583	1.855	0.331	1.058	-0.727
0.370	1.060	-0.120	-0.872	0.752
0.977	1.017	-0.058	0.415	-0.473
-0.089	0.371	-0.324	-0.741	0.416
2.102	0.975	0.227	0.536	-0.309
0.914	0.313	-0.112	-0.069	-0.044
-0.139	0.176	0.058	-0.325	0.383
1.311	0.171	0.106	0.456	-0.350
1.978	1.575	0.387	0.049	0.338
0.338	0.168	0.544	0.034	0.510
1.556	1.686	0.609	-0.056	0.665
0.211	-0.448	0.067	0.273	-0.205
1.161	1.346	0.192	-0.162	0.355
-0.088	-0.029	0.568	-0.862	1.431
0.120	-0.075	0.194	-0.613	0.808
-0.616	-1.947	0.123	0.277	-0.154
0.330	0.450	0.260	0.057	0.203
0.348	0.388	0.373	-0.044	0.417
-0.509	0.027	0.758	0.402	0.356
-0.754	-0.594	-0.195	-0.107	-0.089
-0.533	-0.823	0.636	0.760	-0.125
0.231	0.546	0.416	-0.097	0.514
1.528	-0.002	-0.355	0.442	-0.798
-0.892	-0.809	-0.305	-0.017	-0.288
1.221	1.517	0.370	-0.273	0.643
1.585	1.921	-0.299	-0.489	0.190
2.744	1.695	0.539	0.235	0.304
3.117	2.342	0.732	-0.010	0.742
2.201	2.432	0.026	-0.152	0.178
-1.031	0.277	-0.059	0.359	-0.419
-2.208	-2.105	-0.080	-0.091	0.010
2.452	2.760	-0.067	-0.150	0.083
-1.355	-0.545	0.227	0.002	0.225
-0.854	-0.681	0.776	-0.592	1.368
-1.481	-0.686	0.500	-0.072	0.571
0.088	0.283	0.122	-0.151	0.272
-1.454	-1.391	0.302	-0.250	0.552
2.159	2.591	0.523	-0.488	1.011
1.414	0.467	0.293	-0.219	0.512
-1.800	-1.695	-0.266	-0.363	0.097
-2.191	-2.045	0.092	0.093	-0.001
-0.881	-0.733	-0.156	-0.477	0.322
-3.164	-2.723	0.161	-0.306	0.467
-2.961	-2.307	0.059	0.160	-0.101
-3.005	-2.537	-0.066	-0.350	0.284
-3.649	-3.263	0.264	-0.568	0.832

-1.284	-1.620	0.018	-0.671	0.689
-3.158	-2.514	-0.363	-0.593	0.230
-2.728	-2.065	0.247	-1.385	1.632
-1.780	-0.803	0.401	-0.206	0.607
-0.952	-0.503	0.600	0.166	0.435
-0.203	-0.757	0.209	-0.233	0.442
0.468	0.313	-0.307	0.832	-1.139
-1.236	-0.169	0.082	-0.137	0.219
-1.375	-0.272	-0.187	-0.690	0.504
0.225	0.937	0.209	-0.210	0.419
2.281	0.470	0.322	0.705	-0.383
-2.823	-1.832	-0.020	0.097	-0.117
-2.730	-0.860	0.874	0.201	0.673
-1.511	-1.412	0.026	0.146	-0.120
-2.814	-1.882	0.344	0.140	0.204
1.148	0.900	0.262	0.369	-0.107
-3.235	-2.602	-0.375	-0.935	0.560
-0.352	0.011	-0.357	-0.804	0.447
-3.680	-3.034	0.051	-0.183	0.234
1.485	1.105	0.014	0.113	-0.099
0.564	0.767	-0.932	-0.544	-0.388
-2.240	-1.687	-0.580	-1.012	0.432
0.257	-0.257	-0.061	-0.382	0.321
-0.354	-2.626	-0.261	0.516	-0.777
-2.563	-2.515	0.018	0.667	-0.649
-0.656	-1.198	-0.125	-0.104	-0.021
-1.374	-1.618	0.043	-0.553	0.596
-0.027	-0.316	1.029	0.817	0.213
-1.698	-1.482	0.185	-0.684	0.869
-2.260	-2.620	-0.220	0.166	-0.386
-1.764	-2.257	-0.050	-0.182	0.132
0.972	1.705	-0.233	-0.427	0.193
-0.389	-0.499	0.452	-0.341	0.794
-0.124	-1.270	0.548	0.043	0.505
-0.785	-1.409	0.657	-0.355	1.012
-1.848	-2.530	1.469	0.069	1.400
0.669	0.885	0.461	-0.048	0.509
0.309	0.829	-0.602	-0.521	-0.081
-0.481	-0.738	-0.077	0.657	-0.734
0.547	0.566	0.624	1.057	-0.432
-1.506	-0.822	-0.164	-1.001	0.837
-1.289	-0.536	0.331	-0.142	0.473
-0.948	-1.813	0.591	0.045	0.546
2.434	2.526	0.761	-0.132	0.893
-1.685	-1.233	0.345	-0.403	0.748
0.042	0.459	0.295	0.151	0.144
1.880	2.094	0.174	-0.650	0.824
-0.910	-0.476	-0.094	-0.538	0.444
-1.391	-0.867	-0.438	0.181	-0.618
-0.175	0.385	-0.608	-0.749	0.141
0.184	0.457	-0.149	0.526	-0.675

-0.405	-0.125	-2.077	-0.786	-1.291
-1.341	-0.843	-0.448	-0.288	-0.160
1.044	2.208	0.373	-0.025	0.398
0.888	0.799	0.093	0.246	-0.153
1.706	1.284	0.317	0.375	-0.058
-2.751	-2.180	0.095	0.295	-0.200
-3.261	-2.996	0.208	0.149	0.059
-0.575	-1.561	-0.145	0.522	-0.668
-1.669	-2.283	-0.020	0.026	-0.046
-4.564	-4.233	0.090	-0.024	0.113
-1.375	-1.039	0.074	-1.124	1.198
1.362	-0.098	0.559	0.528	0.031
0.419	-0.107	-0.650	0.019	-0.669
1.832	1.839	-0.796	-0.331	-0.465
1.466	1.399	-0.910	-0.256	-0.654
0.877	1.586	-0.221	-0.255	0.033
1.485	0.593	-0.402	0.246	-0.648
2.082	0.785	0.321	0.569	-0.248
0.407	0.965	0.016	-0.451	0.467
2.221	0.318	0.182	0.849	-0.667
-0.462	-0.151	-0.814	-0.074	-0.741
-0.964	-0.400	-0.184	-0.312	0.128
0.241	0.688	-0.482	0.017	-0.499
-1.174	-0.961	-0.193	-0.004	-0.189
1.947	1.387	0.082	0.021	0.061
-2.018	-1.513	-0.448	0.331	-0.779
2.099	1.239	0.546	0.194	0.352
1.745	2.239	-0.461	-0.110	-0.350
-1.685	-1.244	-0.337	-0.613	0.276
1.894	1.744	0.115	1.055	-0.941
-1.155	-0.570	-0.637	-0.212	-0.425
0.532	0.805	-0.677	-0.139	-0.538
-1.443	-0.545	0.029	0.137	-0.108
1.188	1.657	0.048	-0.492	0.541
-0.824	-0.830	-0.560	-0.217	-0.343
-2.488	-1.864	0.253	-0.286	0.539
0.145	1.582	-0.208	-0.873	0.664
2.859	2.080	0.996	0.080	0.916
-1.287	-0.449	-0.208	-0.553	0.346
0.145	-0.501	0.188	0.293	-0.105
-0.662	-0.182	-0.485	-0.641	0.156
1.878	0.450	0.415	0.219	0.196
0.346	0.801	-0.303	-0.805	0.502
0.533	1.135	-0.683	-0.850	0.167
-0.800	-0.520	0.866	-0.044	0.911
0.126	0.064	0.473	0.165	0.308
-0.071	0.275	-0.292	-0.563	0.271
1.313	0.009	-0.196	-0.106	-0.090
0.915	1.379	-1.045	-0.673	-0.371
2.309	1.781	0.316	0.283	0.033
1.097	0.451	0.285	-0.056	0.341

-0.650	-0.191	0.014	0.137	-0.122
1.327	0.525	-0.035	-0.068	0.033
1.542	1.243	0.297	-0.006	0.303
0.783	1.413	-0.732	-0.002	-0.730
-0.863	-0.027	-0.830	0.007	-0.837
-1.792	-1.376	0.478	-0.378	0.856
0.578	-0.484	0.717	0.578	0.139
-0.658	-0.025	-0.343	0.327	-0.670
-0.642	-1.858	0.114	0.329	-0.215
1.738	2.092	0.950	0.102	0.848
-1.230	-1.313	-0.350	-0.173	-0.177
-2.002	-0.365	-0.115	-0.206	0.091
-1.136	-1.270	-0.003	0.396	-0.399
0.768	0.114	0.044	-0.048	0.092
0.908	1.367	-0.029	-0.585	0.555
-0.031	0.413	0.717	-0.380	1.098
1.127	0.714	0.209	-0.085	0.294
0.149	-0.002	-0.683	-0.457	-0.226
-1.869	-1.238	0.151	-0.681	0.832
2.073	2.076	-0.356	-0.423	0.068
2.842	1.354	0.028	0.964	-0.936
1.514	2.439	-0.030	-0.258	0.228
-0.263	-1.087	0.005	-0.623	0.628
-1.076	-0.581	-0.478	0.281	-0.759
-0.872	-0.244	0.851	-0.205	1.056
-0.218	-0.661	-0.031	-0.187	0.155
-1.471	-1.414	-0.528	-0.223	-0.304
0.220	0.672	-0.475	-0.852	0.377
-0.469	-0.193	-0.058	-0.302	0.245
-0.534	-0.739	-0.455	-0.488	0.033
0.435	0.691	0.434	0.040	0.394
0.240	-0.160	0.477	0.516	-0.039
-0.857	-1.233	0.056	0.157	-0.101
-2.617	-1.865	0.731	-0.337	1.069
0.993	0.674	-0.258	-0.008	-0.250
-0.722	-0.813	0.033	-0.294	0.327
0.249	0.287	0.644	-0.722	1.367
0.268	-0.033	-0.531	-1.205	0.674
-0.392	-0.267	0.262	-0.116	0.379
1.232	0.283	-0.241	-0.042	-0.199
1.018	-0.251	0.610	0.294	0.315
1.808	1.367	-0.269	0.303	-0.573
1.608	1.884	0.180	-0.421	0.601
0.052	-0.035	0.003	0.325	-0.323
-1.087	-1.182	-1.064	-0.197	-0.867
0.597	0.010	0.064	-0.021	0.084
0.129	0.325	-0.173	-0.639	0.466
-0.385	-0.527	-0.065	-0.276	0.211
-1.078	0.230	0.296	-0.680	0.976
-1.477	-0.972	0.017	0.278	-0.261
3.190	2.699	0.208	-0.162	0.370

1.468	1.852	-0.245	-0.454	0.209
0.419	0.713	-0.319	-0.164	-0.155
0.172	0.632	0.596	-0.465	1.061
1.197	0.205	0.400	-0.007	0.407
3.364	2.923	-0.353	0.144	-0.497
-1.610	-2.153	0.152	0.151	0.001
-1.688	-0.796	0.261	-0.424	0.685
2.325	2.106	0.135	-0.220	0.355
-0.778	-1.642	0.543	1.190	-0.647
-0.041	-0.114	-0.034	-0.120	0.086
-0.090	0.203	0.248	0.217	0.031
-0.045	0.015	-0.026	-0.130	0.104
-1.886	-1.285	0.049	-0.642	0.691
0.597	-0.101	0.453	-0.022	0.475
3.278	2.363	0.395	0.290	0.105
1.024	1.116	0.057	-0.358	0.415
-3.072	-2.707	0.224	-0.278	0.503
0.538	0.991	0.260	-0.205	0.465
1.130	0.629	0.268	-0.094	0.362
2.276	1.697	0.223	0.468	-0.245
-2.892	-0.756	-0.150	-0.641	0.491
-2.106	-2.654	0.034	-0.120	0.154
1.716	0.777	-0.621	-0.142	-0.479
1.098	-0.227	-2.270	-0.566	-1.703
2.257	0.923	-0.719	-0.117	-0.602
0.666	-0.638	-1.064	-0.149	-0.916
2.739	1.738	0.497	-0.482	0.978
0.969	-0.122	0.400	0.393	0.007
-1.276	-0.532	0.075	-0.468	0.543
2.368	1.513	0.486	0.188	0.299
0.597	-0.480	-0.232	0.099	-0.331
1.427	1.235	0.303	0.131	0.173
0.849	-0.436	0.038	0.044	-0.006
1.289	1.685	0.277	0.170	0.107
0.861	1.240	-0.228	0.544	-0.772
0.619	1.136	0.690	-0.229	0.920
-1.186	-1.276	-0.326	0.449	-0.775
-1.317	-1.301	0.178	0.077	0.101
-0.048	0.367	0.060	-0.243	0.303
-0.122	0.230	-0.590	-0.271	-0.319
1.349	0.632	-0.456	0.308	-0.765
1.291	1.379	0.265	-0.372	0.637
1.760	1.478	0.313	0.198	0.115
1.011	0.306	0.205	0.241	-0.036
-0.196	0.057	-0.018	0.255	-0.273
0.280	0.311	-0.421	-0.010	-0.411
1.172	1.121	0.264	0.472	-0.208
-0.369	-0.392	0.239	0.231	0.008
-1.390	-0.819	-0.242	-0.147	-0.095
0.838	0.343	-0.071	0.307	-0.379
-1.137	-0.877	-0.295	-0.177	-0.118



0.101	-0.379	0.064	-0.108	0.172
0.699	0.001	-0.043	0.223	-0.267
-2.345	-1.854	0.165	-0.246	0.410
1.040	0.284	0.237	0.234	0.002
1.824	1.134	0.332	0.761	-0.429
-1.726	-1.402	0.225	-0.319	0.544
-2.282	-1.989	-0.021	0.160	-0.181
-1.196	-1.454	-0.305	0.037	-0.342
-0.443	0.422	0.155	0.330	-0.175
0.070	-0.598	0.254	-0.225	0.479
-1.319	-1.574	-0.045	0.213	-0.258
-1.434	-1.156	-0.250	-0.568	0.319
-0.141	-0.515	1.183	0.355	0.829
1.868	1.040	0.036	0.063	-0.027
0.965	0.279	-0.255	-0.640	0.385
0.717	0.564	0.003	0.428	-0.425
-0.820	-1.448	0.271	-0.907	1.178
-0.668	-1.009	-0.250	-0.191	-0.058
-1.267	-1.902	0.054	0.412	-0.357
-1.624	-0.990	0.442	-0.404	0.846
-1.848	-1.790	0.129	0.230	-0.101
1.796	0.979	-0.288	0.180	-0.467
0.582	1.690	-0.237	0.044	-0.281
-0.339	0.033	0.115	-0.744	0.860
1.271	0.831	0.293	0.606	-0.312
-0.143	-0.448	0.204	-0.334	0.538
1.353	1.803	0.474	-0.600	1.074
-0.651	-0.209	0.174	0.349	-0.175
3.090	1.326	0.022	0.510	-0.488
2.396	1.709	0.170	0.248	-0.078
0.462	-0.055	-0.325	0.158	-0.483
-1.914	-0.786	-0.103	-0.207	0.104
-0.852	-0.256	1.045	-0.185	1.229
-0.014	-0.549	0.344	0.067	0.277
1.309	1.270	0.668	0.235	0.434
-0.960	-0.676	0.791	-0.191	0.981
1.285	0.744	0.217	-0.167	0.384
-1.235	-1.781	0.317	-0.129	0.445
-0.542	-0.063	-0.252	-0.077	-0.175
1.148	0.416	0.230	0.058	0.172
-1.288	-0.544	-0.082	-0.248	0.166
-1.021	-0.069	0.741	-0.201	0.942
2.521	2.352	0.189	-0.476	0.665
-1.024	-0.707	-0.255	0.502	-0.757
-1.111	-1.302	0.130	0.109	0.021
-0.519	-0.285	0.254	0.040	0.214
-0.843	-2.102	0.112	-0.778	0.890
-1.213	-0.787	0.021	0.541	-0.520
-2.991	-2.891	0.088	-0.586	0.674
-0.319	-0.504	0.350	0.104	0.247
2.135	1.599	0.875	0.059	0.816

-0.996	-0.676	-0.030	-0.526	0.495
0.615	1.341	0.014	-0.535	0.549
0.493	-0.292	-0.734	0.018	-0.753
0.438	1.021	0.615	-0.076	0.691
-2.277	-0.986	-1.005	-0.402	-0.603
-0.730	-0.514	0.024	0.190	-0.166
2.346	1.315	0.126	0.048	0.078
0.476	0.136	-0.196	-0.254	0.058
1.128	1.374	-0.120	-0.252	0.132
-1.024	-1.494	0.162	0.100	0.062
0.157	-0.192	0.238	0.600	-0.362
-0.774	0.039	-0.598	-0.544	-0.054
1.048	1.599	-0.294	-0.059	-0.235
1.553	1.834	0.262	-0.514	0.776
1.166	1.652	-0.057	0.424	-0.481
2.482	1.206	-0.192	0.624	-0.816
0.757	-0.027	0.258	0.129	0.128
2.079	1.780	0.456	0.002	0.454
-0.353	-0.815	0.233	0.348	-0.114
-1.637	-0.920	0.730	-1.063	1.794
1.307	1.877	-0.599	-0.860	0.262
0.890	0.908	0.443	-0.171	0.613
-0.297	-0.570	0.397	-0.359	0.756
1.097	1.210	0.004	0.047	-0.042
0.917	0.629	0.934	0.364	0.570
0.603	0.651	0.447	0.209	0.237
-1.613	-1.495	-0.333	-0.001	-0.332
0.779	0.469	0.311	0.035	0.277
0.692	0.496	0.170	-0.194	0.364
0.018	0.313	-0.256	-0.820	0.564
-0.369	-0.881	0.012	-0.194	0.206
-0.671	-0.463	-0.405	-0.628	0.223
0.317	0.230	0.596	-0.417	1.012
-0.009	-0.191	0.006	-0.035	0.041
0.256	-0.105	-0.275	0.041	-0.316
-0.130	-0.260	-0.194	-0.074	-0.121
1.731	1.074	-0.166	-0.244	0.079
-3.357	-3.161	-0.097	-0.163	0.066
-0.834	-0.870	0.219	0.203	0.016
0.654	0.353	-0.098	-0.128	0.030
0.666	0.266	0.149	0.053	0.096
0.542	0.264	-1.448	-1.014	-0.434
2.686	2.216	-0.068	-0.166	0.098
1.514	1.555	0.210	-0.857	1.067
0.581	0.914	0.213	0.356	-0.143
-2.624	-1.738	-0.772	-0.607	-0.165
3.483	2.032	-0.312	0.192	-0.504
-2.624	-2.495	-0.211	0.201	-0.412
-2.087	-1.478	0.184	0.001	0.183
3.920	2.534	-0.151	-0.225	0.074
0.720	-0.522	-1.157	-0.168	-0.989

0.353	0.493	-0.115	0.172	-0.288
-0.952	-1.417	-0.053	0.224	-0.277
-2.347	-1.747	-0.125	-0.230	0.106
0.743	0.012	0.368	-0.209	0.577
-2.600	-1.848	-0.644	-0.732	0.088
-0.574	-0.224	0.034	-0.238	0.271
-0.912	-0.652	-0.276	-1.049	0.773
2.384	2.542	0.621	-0.138	0.759
1.776	1.658	0.358	0.093	0.265
1.150	0.295	0.534	-0.078	0.612
1.385	1.313	0.316	0.012	0.304
2.854	1.640	0.281	0.638	-0.357
1.728	1.941	-0.042	-0.227	0.185
3.260	2.575	0.256	-0.252	0.508
-1.455	-0.582	0.291	-0.756	1.047
1.479	1.169	0.157	0.656	-0.500
-1.235	-0.515	0.261	-0.435	0.696
1.389	1.499	0.676	0.088	0.587
1.886	1.977	0.587	0.283	0.304
-2.433	-1.259	-0.001	0.107	-0.107
0.912	0.453	0.287	0.356	-0.069
-1.634	-0.901	0.418	-0.711	1.129
-0.178	0.977	0.382	-0.445	0.826
-2.881	-2.945	-0.558	-0.985	0.427
-2.621	-2.186	-0.266	-0.577	0.311
-3.640	-3.183	-0.135	-0.325	0.190
-0.449	-0.271	-0.215	0.282	-0.497
1.682	0.199	0.124	0.452	-0.328
-1.350	-0.327	0.683	-0.115	0.797
-0.680	-0.398	-0.043	-0.025	-0.018
-1.347	-0.954	0.131	-0.315	0.447
0.937	0.953	0.092	0.336	-0.244
-0.177	0.121	-0.329	-0.399	0.069
-0.635	-0.315	0.236	-0.739	0.975
0.011	0.161	0.105	-0.001	0.106
2.470	1.867	0.519	0.245	0.274
1.372	2.023	0.646	-0.782	1.428
-0.920	-0.344	-0.764	-1.129	0.365
-2.385	-2.057	0.172	-0.311	0.483
-0.956	-1.832	0.324	-0.314	0.638
-0.506	0.759	0.172	-0.803	0.975
2.917	1.316	0.665	0.496	0.169
-0.721	-0.578	-0.149	-0.474	0.325
-2.267	-1.941	0.361	-0.496	0.857
1.120	0.807	0.051	0.031	0.019
-1.682	-0.679	-0.988	-0.778	-0.210
-2.798	-2.034	0.093	0.446	-0.353
2.722	2.127	1.049	0.330	0.720
2.455	1.820	-0.146	-0.001	-0.145
-0.177	-0.517	0.651	0.796	-0.145
-0.446	-0.988	0.434	0.122	0.312

-0.339	-1.090	-0.857	-0.846	-0.011
-0.576	-0.715	0.239	0.108	0.131
-1.408	-1.364	0.296	-0.123	0.420
-0.987	-1.071	0.224	0.700	-0.477
-2.627	-2.363	0.351	-0.154	0.504
1.015	0.139	-1.418	-0.630	-0.788
-0.351	0.422	0.687	1.413	-0.726
-2.274	-2.629	-0.134	0.603	-0.737
0.129	-0.013	0.063	-0.329	0.392
0.477	0.842	-0.840	-0.335	-0.504
1.450	1.103	-0.230	0.278	-0.508
1.154	-0.059	0.239	0.137	0.102
-0.449	-0.188	-0.237	0.175	-0.412
-1.545	-1.326	-0.521	-0.879	0.358
-0.902	-0.855	0.400	0.745	-0.345
-0.546	-0.697	0.088	0.037	0.051
1.093	0.572	0.125	-0.233	0.358
-1.123	-0.896	0.223	-0.386	0.609
3.224	1.813	0.247	0.107	0.140
-0.501	-0.334	-1.182	-0.559	-0.623
-0.937	-1.818	0.443	-0.507	0.950
-2.606	-2.996	0.144	0.176	-0.032
-2.561	-2.044	-0.154	-0.303	0.149
-0.219	-0.757	0.010	-0.231	0.241
1.523	0.816	0.332	0.293	0.039
-0.576	-0.304	0.183	0.177	0.006
0.589	0.598	0.349	0.731	-0.382
0.266	1.353	0.078	-0.025	0.103
0.806	0.780	0.405	0.426	-0.021
0.416	1.056	0.204	-0.158	0.361
-0.188	0.855	0.035	0.304	-0.269
0.543	1.254	-0.398	-0.725	0.327
0.305	-0.186	0.223	-0.009	0.232
-0.144	-0.562	0.142	0.209	-0.067
0.302	-0.465	0.056	0.066	-0.011
0.625	0.660	0.287	0.545	-0.258
-0.749	-0.520	-0.009	-0.088	0.078
-1.419	-0.652	0.214	-0.541	0.755
0.621	0.399	0.386	-0.042	0.428
0.624	2.108	0.006	-0.329	0.335
2.002	2.119	0.304	-0.230	0.533
-1.033	-0.756	0.556	0.144	0.413
-0.364	-0.504	0.256	0.240	0.016
-1.856	-1.876	0.009	0.202	-0.193
-0.074	-0.931	-0.079	-0.653	0.574
-0.984	-2.307	-0.267	0.070	-0.337
-0.334	0.117	0.057	-0.459	0.517
0.678	1.476	-0.993	-1.110	0.117
-0.414	-0.266	-0.180	-0.489	0.310
-1.031	-1.127	-0.046	-0.737	0.691
2.110	0.739	-0.104	-0.166	0.061

2.040	2.271	-0.508	-0.631	0.123
-2.532	-2.660	0.391	-0.024	0.416
-2.585	-2.363	0.334	-0.376	0.709
-3.490	-3.378	0.129	-0.707	0.836
-0.330	0.532	-0.173	-0.478	0.305
0.565	0.565	-0.098	-0.277	0.179
-0.481	-1.648	0.137	-0.372	0.509
-0.348	-1.553	-0.346	-0.035	-0.310
0.924	1.686	0.101	-0.059	0.160
0.932	1.407	0.929	0.298	0.631
1.891	1.134	-0.109	-0.094	-0.015
0.972	1.375	0.368	-0.185	0.553
1.004	0.501	-0.263	-0.210	-0.054
-3.292	-3.080	0.090	-0.173	0.263
3.039	2.770	0.180	-0.182	0.362
0.786	0.991	-0.426	-0.066	-0.361
1.120	1.504	0.242	-0.168	0.410
1.999	0.921	0.301	0.528	-0.227
0.616	1.437	-0.279	-0.026	-0.253
0.746	-0.548	0.428	0.451	-0.023
0.049	0.043	0.450	0.350	0.100
-2.368	-2.392	-0.308	1.375	-1.684
-2.068	-2.174	-0.037	0.330	-0.367
-0.087	0.212	1.030	-0.032	1.062
-2.488	-2.058	1.348	0.168	1.180
-0.334	-1.314	-0.232	-0.429	0.197
0.337	-1.368	-0.023	-0.109	0.085
-1.764	-0.857	-0.227	-0.889	0.662
-0.867	-0.611	-0.744	-0.345	-0.399
-1.888	-1.455	-0.399	-0.305	-0.094
0.797	0.109	0.594	0.942	-0.348
-1.976	-1.635	-0.190	-1.325	1.135
-3.313	-2.410	0.268	0.703	-0.435
-3.351	-3.009	-0.056	0.012	-0.068
-1.621	-0.931	0.101	0.697	-0.595
1.322	-0.090	-0.123	-0.122	0.000
-0.536	-0.384	-0.520	-0.462	-0.058
-0.223	-0.258	0.240	-0.843	1.083
-1.011	-1.235	-0.431	-0.573	0.142
-1.419	-1.203	0.561	0.222	0.339
-0.436	-0.523	0.492	-0.348	0.840
0.483	-0.492	0.730	0.572	0.158
-0.187	-1.442	0.181	0.268	-0.087
0.047	-1.235	0.135	0.191	-0.056
0.386	0.163	0.486	-0.339	0.825
0.079	0.166	0.067	0.376	-0.309
-0.008	0.575	-0.177	-0.784	0.606
-2.491	-1.819	-0.413	-0.808	0.395
-0.232	0.099	0.012	-0.726	0.738
-0.369	-0.374	0.010	-0.041	0.051
0.960	1.249	-0.157	-0.006	-0.151

-1.163	-0.698	-0.277	0.321	-0.598
-0.461	-1.474	-0.138	0.451	-0.589
-0.198	-0.673	0.278	-0.109	0.388
-0.219	0.171	0.389	0.072	0.318
1.262	1.317	0.028	0.251	-0.223
-1.378	-1.320	0.292	0.072	0.220
-0.503	-0.255	-0.269	-0.206	-0.063
1.333	1.784	0.543	-0.452	0.995
-2.912	-3.073	-0.480	0.028	-0.507
-0.461	-0.193	-0.066	-0.231	0.165
-2.778	-2.382	-0.466	0.107	-0.574
-1.193	-0.600	0.197	-0.373	0.570
-2.516	-2.782	0.011	-0.362	0.373
1.258	1.589	0.856	-0.368	1.224
-0.001	-0.284	0.181	0.229	-0.048
-0.077	0.329	-0.322	-0.251	-0.071
0.379	0.527	0.473	-0.034	0.507
-2.106	-1.695	0.313	-0.507	0.821
-1.589	-2.056	-0.133	0.039	-0.171
-2.809	-1.905	-0.146	-0.475	0.329
-2.591	-2.125	0.379	-0.289	0.668
-3.239	-2.836	0.100	-0.744	0.845
-2.558	-2.209	0.021	0.016	0.005
-3.177	-2.373	-0.046	-1.062	1.016
-3.089	-2.412	-1.190	-0.568	-0.622
0.400	1.017	0.110	-0.528	0.639
-2.241	-1.648	0.161	-0.460	0.620
-1.497	-1.804	-0.045	0.107	-0.152
-2.635	-2.794	-0.203	0.434	-0.637
-1.399	-1.736	0.170	-0.123	0.293
-2.480	-1.722	-0.014	-0.147	0.132
1.590	1.916	0.446	-0.630	1.076
0.113	-0.440	0.272	0.336	-0.063
1.593	1.702	0.284	0.154	0.130
-2.045	-1.567	0.060	-0.426	0.486
-1.610	-1.333	0.066	-0.421	0.487
-3.171	-3.153	0.108	0.104	0.005
-2.401	-1.786	-0.238	-0.862	0.624
-2.879	-2.404	-0.058	0.187	-0.245
-1.441	-0.727	-0.307	-1.381	1.074
-2.401	-2.883	-0.126	-0.266	0.141
-0.536	0.439	0.402	-0.565	0.967
1.717	1.647	0.558	-0.054	0.611
-0.740	-0.681	0.233	-0.242	0.475
-0.256	-0.810	-0.383	-0.508	0.124
-0.509	0.225	0.399	-0.445	0.844
-3.562	-3.572	0.069	-0.297	0.366
-2.881	-2.607	0.075	0.177	-0.102
-2.329	-1.933	0.431	-0.066	0.497
1.299	0.889	1.135	0.713	0.422
-1.598	-1.084	0.043	-0.709	0.752

-2.805	-2.236	0.044	-0.446	0.490
-2.290	-1.500	0.362	-0.698	1.059
-1.331	-0.795	0.314	-1.250	1.564
-1.382	-0.691	-0.030	-0.954	0.924
-1.530	-1.256	0.164	-0.513	0.677
-2.134	-2.232	-0.157	0.110	-0.268
-1.814	-1.412	0.035	-0.362	0.397
0.245	0.657	-0.208	-0.689	0.482
-0.680	-0.763	1.742	-0.377	2.119
-2.481	-1.687	-0.061	-0.379	0.318
-0.871	-0.594	-0.003	-0.097	0.094
0.029	0.148	0.329	0.832	-0.502
-0.985	-0.468	0.177	-0.390	0.567
-1.116	-1.067	0.115	-0.240	0.355
-3.111	-2.848	-0.430	0.606	-1.035
0.722	1.343	0.488	-0.414	0.902
-0.812	-0.429	0.203	0.039	0.163
-4.180	-4.026	-0.388	-0.295	-0.093
-1.585	-1.668	0.400	-0.277	0.677
0.172	0.379	0.328	-0.092	0.420
-0.729	-0.153	0.434	-0.577	1.010
0.579	0.207	0.267	0.046	0.221
-1.252	-0.675	0.414	-0.382	0.795
0.132	0.023	-0.433	-0.046	-0.388
-2.610	-2.505	0.598	0.488	0.109
-0.780	-0.546	0.699	-0.456	1.156
-1.111	-0.354	0.270	-1.216	1.486
-2.026	-2.526	0.160	-0.101	0.262
-3.761	-3.246	-0.372	0.595	-0.967
-2.842	-2.408	-0.273	0.064	-0.337
-0.958	-0.730	0.613	-0.089	0.702
-3.012	-2.733	0.025	-0.224	0.249
-0.958	-0.849	0.104	0.019	0.086
-1.133	-1.916	-0.265	-0.463	0.198
-0.344	0.104	0.168	0.292	-0.124
2.291	1.954	0.328	0.089	0.239
2.010	2.086	0.738	0.399	0.340
1.600	0.622	0.104	0.203	-0.098
0.291	-0.429	0.969	0.594	0.375
0.737	-0.107	0.265	0.356	-0.090
2.245	1.761	0.674	0.601	0.074
0.021	-0.233	-0.046	0.038	-0.084
1.466	0.809	0.139	-0.021	0.160
3.326	2.717	0.034	-0.169	0.202
-1.242	-1.393	0.506	0.538	-0.032
1.965	1.914	-0.187	0.186	-0.373
-1.799	-0.462	-0.920	-0.681	-0.238
1.904	0.773	1.462	0.114	1.348
-2.129	-1.737	-0.468	0.634	-1.103
-1.150	-0.221	-0.536	-0.044	-0.492
1.512	1.868	0.656	-0.454	1.110

-1.267	-1.045	-0.471	-0.905	0.434
1.403	0.663	-0.216	0.203	-0.419
-0.038	-1.960	-0.160	-0.105	-0.055
0.349	0.860	0.038	-0.651	0.689
0.920	0.737	-0.120	-0.054	-0.066
-3.762	-2.254	-0.110	-0.011	-0.099
-3.637	-3.091	-0.917	-0.481	-0.436
-4.531	-1.833	-1.140	-1.032	-0.107
-1.116	-0.123	-0.240	-0.775	0.535
-1.083	-1.006	-0.194	-0.282	0.088
-2.203	-2.022	-0.030	0.110	-0.140
0.630	0.132	-0.387	0.098	-0.485
-0.376	-1.320	0.409	-0.131	0.540
-2.223	-2.000	-0.132	-0.013	-0.119
-2.750	-2.542	0.277	-0.197	0.474
-2.191	-1.899	-0.582	-0.166	-0.416
0.404	-0.298	-0.613	-0.167	-0.446
2.396	1.883	0.406	0.449	-0.043
0.349	0.287	0.603	-0.183	0.785
1.089	1.355	0.223	0.406	-0.182
-0.421	-0.270	0.349	0.050	0.299
1.293	1.098	0.324	0.398	-0.074
0.594	-0.464	0.378	-0.053	0.431
-0.677	-0.717	0.067	-0.346	0.413
-0.289	0.256	-0.085	-0.516	0.430
-0.025	-1.046	-0.865	-0.325	-0.540
-0.786	-0.405	0.129	-0.171	0.301
-0.669	-0.584	-0.158	0.433	-0.591
0.367	0.287	-0.136	-0.146	0.010
-1.101	-1.819	-0.075	0.136	-0.211
1.162	1.094	0.934	0.459	0.476
1.851	1.625	-0.208	-0.572	0.364
-1.893	-2.200	0.037	0.136	-0.098
-0.367	-0.494	0.504	-0.288	0.792
0.465	-0.152	0.480	0.043	0.437
0.320	0.588	-0.730	-0.269	-0.460
1.472	0.528	0.248	0.241	0.007
-1.111	-0.919	0.331	-0.075	0.406
2.581	1.451	0.643	0.551	0.092
-1.640	-1.259	-0.643	-0.533	-0.110
-0.372	-1.377	0.052	-0.162	0.214
1.235	1.165	0.320	0.325	-0.005
2.147	1.643	-0.172	-0.057	-0.116
1.174	-0.671	-0.102	0.397	-0.499
1.194	0.283	-0.790	-0.233	-0.557
0.029	0.242	-0.036	-0.354	0.318
0.020	-0.304	-0.089	-0.067	-0.022
0.637	0.938	-0.248	0.383	-0.630
2.056	1.403	0.548	-0.272	0.820
1.585	0.831	-0.032	0.017	-0.049
-0.304	-0.403	0.269	-0.202	0.471



-1.322	-1.674	0.506	0.264	0.241
1.023	0.068	-0.054	0.047	-0.101
-0.006	0.919	-0.014	-0.064	0.049
1.853	0.909	-0.168	0.374	-0.542
-1.314	-1.162	0.030	0.009	0.020
-2.006	-0.937	0.118	-0.426	0.544
0.421	-0.638	0.243	-0.066	0.308
-1.279	-0.060	-0.403	-0.284	-0.118
1.955	1.989	0.070	-0.174	0.244
1.022	1.219	-0.210	-0.300	0.089
-1.624	-1.595	-0.088	-0.376	0.288
0.812	0.123	-0.076	0.799	-0.875
-1.920	-1.424	-0.145	-0.195	0.050
-2.354	-1.399	0.585	0.050	0.535
-1.765	-1.246	1.028	0.288	0.740
-1.356	-0.832	0.549	0.312	0.238
0.969	0.178	0.435	-0.097	0.532
-0.189	-0.097	-0.428	-0.981	0.553
-1.107	-0.406	-0.791	-0.711	-0.080
-0.469	-1.211	0.074	-0.142	0.215
-1.234	-1.071	-0.030	-0.287	0.257
-1.182	0.362	-1.026	-0.513	-0.513
-0.807	-0.442	-0.232	-0.246	0.014
-0.362	-1.176	0.081	-0.148	0.229
-1.504	-0.690	0.192	-0.541	0.733
2.224	1.951	-1.095	-1.313	0.218
1.165	0.627	0.494	0.891	-0.396
-2.839	-2.144	0.473	-1.175	1.649
0.443	0.333	0.094	1.015	-0.921
-1.272	-0.305	-0.141	0.767	-0.908
-1.494	-1.362	-1.090	-0.266	-0.823
-1.653	-1.574	0.062	0.481	-0.419
-1.541	-0.683	0.521	-0.520	1.040
-3.557	-3.029	-0.091	-0.628	0.537
-2.274	-1.567	0.179	-0.447	0.626
-2.742	-1.998	0.170	-0.557	0.728
2.056	1.583	0.415	-0.193	0.608
-1.043	-1.772	-0.374	0.010	-0.384
2.015	1.019	0.063	-0.099	0.161
0.755	1.086	0.201	0.183	0.017
0.348	0.515	-0.059	-0.163	0.104
0.050	-0.689	0.206	0.873	-0.667
-0.585	-0.216	-1.181	-0.664	-0.517
0.442	0.491	-1.569	-0.424	-1.145
0.031	0.039	-0.258	0.211	-0.470
0.672	0.085	0.188	0.784	-0.596
0.244	-0.132	0.021	1.047	-1.027
1.870	1.004	0.292	0.134	0.158
1.056	1.640	0.250	0.172	0.078
0.854	0.707	-0.017	0.198	-0.215
1.358	1.218	-0.635	-0.232	-0.404

0.228	-0.849	0.256	-0.085	0.341
0.807	1.116	0.310	-0.231	0.540
-1.656	-2.212	0.271	-0.583	0.855
-3.351	-2.433	-0.276	-0.329	0.053
-3.677	-3.065	0.000	-0.102	0.103
1.828	1.482	0.020	-0.081	0.102
1.248	0.453	-0.034	0.737	-0.772
0.470	0.153	0.280	0.296	-0.016
0.685	1.093	-0.562	-0.403	-0.160
0.098	-0.157	-0.398	0.106	-0.504
-0.582	0.080	0.743	-0.232	0.975
-2.134	-0.954	-0.130	-0.721	0.591
-0.519	-1.314	0.431	0.431	0.000
-0.042	-0.664	0.288	0.219	0.069
-2.232	-1.897	0.287	-0.189	0.476
1.254	-0.107	0.282	0.365	-0.082
1.027	0.038	-1.362	-0.498	-0.863
0.064	-0.557	0.125	0.303	-0.178
-0.182	-0.018	0.540	-0.502	1.043
1.448	1.847	0.195	0.469	-0.275
-0.341	-1.575	0.330	0.758	-0.429
0.182	1.452	0.350	-0.374	0.724
-0.303	-0.191	0.180	-0.571	0.751
1.006	0.433	-1.189	-0.426	-0.762
0.866	1.140	0.351	-0.179	0.531
-3.731	-2.931	-0.162	0.663	-0.825
-0.711	-0.293	-0.098	-0.533	0.435
0.925	0.978	0.062	0.008	0.053
-0.265	0.318	-0.443	-0.320	-0.123
0.429	-0.289	0.209	-0.236	0.445
-0.927	-0.469	-0.413	-0.696	0.283
-2.825	-3.411	0.299	0.022	0.277
0.333	-0.051	0.239	-0.430	0.669
0.139	0.100	-0.035	-0.163	0.128
-2.017	-1.524	0.670	-0.053	0.723
1.636	2.028	-0.039	-0.205	0.165
0.435	0.783	-1.329	-0.873	-0.456
1.550	1.795	0.326	-0.239	0.565
-1.269	-2.023	-0.020	0.919	-0.939
1.674	0.897	0.085	-0.188	0.273
-1.895	-1.418	-0.293	-0.343	0.050
-3.096	-2.588	-0.174	0.721	-0.895
-0.613	-0.634	0.044	-0.305	0.349
1.258	1.166	-0.493	-0.035	-0.458
-1.992	-1.548	-0.325	-0.105	-0.220
1.396	0.498	0.426	0.478	-0.052
-1.378	-1.774	0.179	0.269	-0.091
-2.802	-2.071	-0.106	-0.393	0.286
-1.378	-0.812	-0.218	-0.211	-0.007
-0.551	-0.087	-0.102	-0.476	0.374
1.311	0.292	0.337	0.162	0.175

-1.338	-1.609	0.164	0.139	0.026
-1.198	-1.523	-0.092	-0.013	-0.079
-3.239	-2.154	-0.100	0.562	-0.662
2.182	1.873	1.486	0.607	0.878
0.083	0.260	0.024	0.346	-0.322
-0.928	-0.608	0.549	-0.507	1.056
0.291	1.050	-0.107	-0.928	0.820
-0.238	1.177	-0.469	-0.505	0.036
-0.504	-0.149	0.325	-0.693	1.017
1.438	1.504	-0.402	0.024	-0.426
1.212	1.172	-0.865	-0.220	-0.645
1.264	0.622	0.165	0.453	-0.288
0.873	0.330	0.485	0.776	-0.291
1.278	0.305	0.639	0.635	0.004
-0.045	0.138	0.122	-0.073	0.195
-1.314	-1.887	0.029	0.279	-0.250
0.720	0.440	-0.522	0.417	-0.939
0.205	-0.125	0.101	0.395	-0.294
0.242	0.179	-0.281	-0.111	-0.171
0.376	-0.181	-0.200	0.164	-0.364
-1.243	-2.251	0.186	0.761	-0.575
0.294	-0.276	0.173	0.214	-0.042
-1.292	-1.423	-0.081	-0.087	0.006
-1.341	-1.056	0.045	-0.283	0.328
0.011	-0.164	0.104	0.159	-0.055
-0.002	0.225	-0.157	-0.269	0.112
-0.237	0.034	0.095	-0.079	0.174
2.640	1.743	-0.873	0.127	-1.000
2.617	1.873	0.605	0.121	0.484
0.931	1.561	-0.452	-0.580	0.128
1.938	0.278	-0.052	0.266	-0.319
0.946	0.704	0.065	0.210	-0.145
0.970	1.431	0.190	0.128	0.061
-0.759	0.258	0.302	-0.090	0.392
-2.008	-0.863	-0.038	0.941	-0.979
-0.341	0.955	-0.316	-0.466	0.150
1.313	0.673	-0.237	0.424	-0.661
2.570	1.443	-0.378	0.522	-0.900
1.041	0.435	0.336	0.435	-0.099
1.001	-0.117	0.361	0.687	-0.326
0.526	0.872	-0.180	0.100	-0.280
0.234	1.065	0.343	0.507	-0.164
1.601	0.468	-0.032	0.151	-0.182
0.330	0.262	0.252	0.497	-0.245
-1.115	0.715	-0.625	-0.698	0.073
1.339	0.328	-0.579	0.315	-0.894
-0.229	-0.117	-0.042	-0.467	0.425
-1.212	-1.112	-0.100	0.233	-0.333
-1.988	-2.430	0.432	0.306	0.126
0.720	1.917	0.059	-0.331	0.389
-0.367	-0.127	0.348	0.051	0.297

-2.189	-2.704	-0.420	-0.756	0.336
-0.398	-1.680	-0.298	-0.503	0.205
1.700	2.018	-0.080	-0.838	0.758
0.421	1.077	0.195	-0.055	0.250
-1.751	-1.299	-0.511	-0.131	-0.380
-1.229	-0.792	-0.330	-0.119	-0.211
-1.629	-0.949	-0.183	-0.118	-0.065
0.567	0.928	-0.114	0.148	-0.262
1.533	2.068	-0.058	-0.224	0.166
-4.185	-3.292	-0.236	-0.287	0.052
-0.586	-0.712	0.329	-0.004	0.333
-2.924	-1.103	-0.142	-0.718	0.575
-2.538	-2.227	0.199	-1.263	1.462
-3.497	-2.848	-0.211	-1.273	1.062
-3.295	-3.066	-0.061	-0.810	0.750
-3.821	-2.830	-0.127	-1.044	0.917
-3.768	-3.490	-0.023	-0.051	0.028
-3.438	-3.401	0.664	1.052	-0.388
-1.622	-1.230	0.029	-0.433	0.462
-3.613	-2.948	-0.030	-1.457	1.427
-1.512	-1.247	-0.146	-0.404	0.258
-2.048	-2.218	-0.271	-0.277	0.006
-2.824	-2.521	0.152	-0.794	0.946
0.411	0.460	0.162	0.119	0.043
-3.170	-2.602	-0.516	0.196	-0.712
-2.463	-1.105	-0.536	-1.107	0.570
-1.435	-1.665	0.392	-0.042	0.434
-3.968	-3.046	-0.023	0.026	-0.049
-3.146	-2.116	-0.150	-0.450	0.301
-3.446	-2.783	0.060	-1.319	1.379
-3.641	-3.145	0.619	-0.630	1.248
-2.658	-2.335	0.054	0.286	-0.232
-2.965	-2.517	-0.565	-0.222	-0.343
-1.578	-2.564	0.048	-0.842	0.890
-3.235	-3.298	0.037	-0.787	0.824
-2.169	-1.531	-0.165	-0.774	0.609
-3.471	-2.940	0.067	-0.786	0.853
-3.205	-2.781	0.364	-0.380	0.744
-2.956	-2.242	0.122	-0.854	0.976
0.172	-0.395	0.240	0.201	0.039
-1.423	-1.297	0.007	-0.228	0.235
-2.722	-2.247	0.107	-0.187	0.294
-2.598	-2.231	0.311	-0.489	0.801
-3.750	-3.321	0.340	0.063	0.277
-3.688	-2.698	0.713	-1.136	1.849
-3.286	-0.846	-0.307	-0.736	0.429
-3.246	-2.420	0.351	-1.290	1.641
-2.062	-1.488	0.031	-0.624	0.656
-3.373	-3.135	-0.064	0.136	-0.200
-0.868	0.358	-0.094	-0.009	-0.086
-0.421	0.592	0.551	-0.091	0.642

-1.807	-1.254	0.251	-0.478	0.729
-1.309	-1.605	0.766	0.478	0.288
1.271	1.227	0.327	0.160	0.166
0.011	-0.833	0.179	0.437	-0.258
1.121	-0.151	0.404	0.341	0.063
0.848	0.543	0.241	-0.084	0.326
2.972	2.316	-0.026	-0.086	0.059
-1.565	-0.923	0.726	-0.287	1.013
0.105	-0.873	-0.075	-0.175	0.101
-0.586	-0.973	0.139	0.177	-0.038
-0.832	-1.484	1.064	0.425	0.639
-0.826	-1.064	0.464	0.399	0.065
0.909	0.329	0.386	0.182	0.205
0.523	0.823	0.174	-0.228	0.402
1.537	-0.723	0.394	0.275	0.119
0.911	0.661	-0.283	-0.154	-0.129
-1.599	-0.714	-0.020	-0.757	0.737
0.647	0.224	0.493	0.378	0.115
-1.354	-0.994	0.251	0.586	-0.334
-2.084	-1.578	-0.207	-1.395	1.188
0.516	0.836	-0.483	0.616	-1.099
-1.006	-0.356	0.756	1.532	-0.776
0.615	0.075	-0.397	-0.072	-0.325
2.747	1.964	-0.030	0.367	-0.397
0.462	0.728	0.607	0.108	0.499
3.273	2.332	0.279	0.466	-0.188
-0.506	-0.079	0.119	-0.517	0.636
0.320	0.458	0.472	-0.041	0.513
-0.359	0.158	0.210	-0.171	0.381
-2.368	-1.259	-0.397	0.519	-0.916
1.545	0.624	0.498	0.738	-0.240
-0.268	0.072	-0.147	-0.712	0.564
0.731	0.554	-0.637	0.001	-0.637
1.203	1.594	-0.060	-0.534	0.475
0.722	0.810	0.204	0.145	0.059
2.071	1.435	0.414	0.444	-0.030
1.329	1.821	-0.139	0.507	-0.646
2.157	2.016	-0.585	-0.062	-0.523
1.532	0.813	-0.227	-0.424	0.197
0.852	0.669	0.006	-0.083	0.089
-0.537	1.248	-0.189	-0.572	0.383
3.100	3.504	0.311	-0.052	0.363
-1.364	-0.107	0.080	-0.702	0.783
0.534	0.663	-0.160	0.263	-0.422
-1.831	-1.203	0.352	-0.315	0.667
0.863	-0.433	0.252	-0.145	0.397
-2.827	-2.036	0.403	-0.382	0.785
1.196	1.466	0.309	-0.430	0.740
-1.091	-0.272	0.233	-0.070	0.303
-0.087	-0.869	0.231	0.359	-0.128
0.725	0.722	-0.111	-0.033	-0.077

0.923	1.275	0.642	0.167	0.476
-2.358	-2.404	0.198	0.205	-0.008
1.119	0.639	-0.148	-0.055	-0.093
0.131	-0.235	0.189	0.111	0.079
2.766	2.160	0.089	0.224	-0.135
-1.582	-2.266	0.591	0.411	0.181
-2.001	-1.775	-0.361	-0.128	-0.232
-1.375	-1.099	-0.215	-0.055	-0.160
-2.536	-2.385	-0.568	0.100	-0.669
-0.053	-0.595	0.285	-0.165	0.450
0.954	1.525	0.346	0.334	0.013
-1.008	-1.048	-0.800	-0.661	-0.139
1.565	0.052	0.166	-0.073	0.239
-0.060	-0.679	-0.198	0.086	-0.283
-3.020	-2.571	-0.031	0.394	-0.425
-1.900	-1.393	-0.043	-0.117	0.074
1.536	1.139	0.259	0.472	-0.213
1.419	1.373	0.564	-0.055	0.619
0.176	0.222	-0.204	-0.154	-0.050
0.864	1.455	0.156	-0.925	1.081
0.118	0.312	0.326	-0.225	0.551
0.212	0.227	0.178	-0.121	0.299
1.695	0.917	0.279	0.482	-0.203
0.839	0.355	0.064	-0.008	0.073
0.203	-0.056	0.471	0.056	0.415
1.237	0.567	0.313	1.006	-0.693
-2.539	-2.233	0.119	-0.655	0.774
-0.799	-1.167	1.012	-0.398	1.410
0.010	0.482	0.508	-0.309	0.817
0.398	0.837	-0.045	-0.374	0.329
-2.956	-2.996	-0.022	-0.217	0.195
-1.384	-1.171	-0.299	-0.749	0.450
-3.000	-3.016	0.085	0.042	0.043
0.829	2.235	-0.255	-0.926	0.671
-0.429	-0.651	0.360	-0.067	0.427
-1.659	-0.665	-0.154	-0.063	-0.091
2.205	2.059	0.056	0.606	-0.550
-0.764	-0.661	0.634	0.320	0.314
0.690	1.138	-0.347	-1.039	0.692
-0.740	-1.129	-0.108	-0.575	0.467
0.328	1.351	0.597	0.191	0.406
0.107	-0.607	0.699	0.169	0.531
0.132	-0.249	0.257	0.436	-0.179
1.127	1.264	0.002	-0.268	0.270
1.102	1.514	0.422	0.193	0.229
-0.826	-1.709	-0.290	0.324	-0.614
-2.761	-2.401	0.043	-0.383	0.426
-2.748	-1.760	-0.043	-0.467	0.424
1.732	1.687	0.260	0.005	0.255
-0.210	-0.671	0.837	-0.184	1.022
-0.333	0.132	-0.166	-0.660	0.494

-0.821	-0.632	0.237	-0.616	0.853
0.543	0.773	-0.030	-0.101	0.070
-0.148	-0.168	0.204	-0.005	0.209
0.272	0.540	-0.369	-0.232	-0.137
0.881	0.077	-0.249	0.962	-1.211
1.183	0.992	0.234	-0.223	0.457
0.325	0.494	-0.239	0.012	-0.252
-2.071	-1.555	-0.195	0.365	-0.560
-0.149	-1.462	0.227	0.579	-0.352
-2.937	-2.009	-0.308	-0.493	0.185
1.751	1.834	-0.092	-0.370	0.277
1.722	2.314	-0.416	-0.566	0.150
-1.837	-2.069	0.154	0.035	0.119
0.047	-0.747	0.442	0.760	-0.318
-2.158	-1.918	-0.047	0.045	-0.092
-1.146	-0.513	0.293	-0.722	1.014
0.609	0.909	0.073	0.062	0.011
-3.006	-2.712	-0.087	0.052	-0.140
-0.090	-0.390	0.286	0.525	-0.238
0.788	0.657	0.411	-0.557	0.968
-2.220	-2.446	-0.677	0.212	-0.889
0.175	0.425	-0.123	-0.039	-0.084
-0.091	-0.107	-0.544	0.908	-1.452
0.035	0.137	-0.841	0.718	-1.559
0.070	-0.018	-1.052	1.199	-2.251
-1.210	-1.388	0.037	0.536	-0.499
-1.220	-0.771	0.180	-0.631	0.812
-2.323	-1.748	-0.345	0.151	-0.496
-1.214	-1.055	-0.272	-0.499	0.227
-0.704	0.144	0.073	0.313	-0.240
-0.983	0.678	-0.542	0.285	-0.826
-2.909	-3.037	-0.071	0.244	-0.315
-2.655	-0.890	-0.453	-0.658	0.205
1.029	1.081	-0.043	-0.039	-0.004
1.889	1.542	-0.224	0.781	-1.005
0.067	0.572	-0.167	-0.023	-0.145
-0.353	-0.157	-0.935	0.020	-0.955
-0.385	0.128	-0.706	-0.762	0.055
1.054	0.531	0.481	0.329	0.151
0.540	0.309	-0.082	0.324	-0.406
-3.388	-2.829	-0.098	-0.155	0.058
-1.799	-0.792	-0.185	-0.992	0.807
0.339	0.138	0.085	0.137	-0.052
-0.273	-0.065	0.518	0.045	0.472
-0.564	-0.805	-0.745	-0.427	-0.318
0.870	0.868	0.122	-0.088	0.209
-3.625	-3.482	-0.307	1.376	-1.683
-3.779	-3.689	-0.267	-0.679	0.412
0.998	-0.065	0.037	-0.155	0.192
-1.659	-1.717	0.123	-0.008	0.131
-2.105	-1.096	-0.479	-0.672	0.193

-0.525	-0.879	-0.311	0.067	-0.378
1.045	0.714	-2.043	-0.854	-1.189
-0.838	-0.605	-0.080	0.035	-0.115
-1.316	-1.439	-0.692	-0.402	-0.290
-1.820	-1.346	0.045	-0.687	0.732
-2.287	-0.820	-1.083	-1.134	0.051
3.263	1.760	-0.426	-0.319	-0.107
-2.030	-1.417	-0.264	-0.699	0.435
-0.087	0.454	0.522	-0.230	0.752
-0.424	-0.983	0.605	0.157	0.448
1.269	0.700	0.444	0.462	-0.018
-0.891	-0.449	0.025	-0.685	0.711
1.573	1.864	-0.412	-0.455	0.043
1.579	1.623	-0.121	-0.451	0.330
0.910	1.337	0.099	-0.843	0.942
3.061	1.594	0.141	0.479	-0.338
2.054	1.430	0.212	0.122	0.090
0.682	0.681	-0.440	-0.548	0.108
1.133	1.394	-0.853	-0.491	-0.363
1.724	1.243	-0.525	-0.409	-0.115
0.790	0.994	-0.485	-1.239	0.754
0.275	-0.852	-0.358	-0.208	-0.150
-2.389	-2.242	0.119	-0.305	0.424
-0.588	-0.076	-0.023	-0.157	0.134
0.675	0.020	-0.251	0.719	-0.970
-0.269	-0.405	0.129	0.194	-0.066
-0.693	-0.663	0.569	0.587	-0.017
1.125	1.170	0.138	-0.202	0.340
-0.243	-0.508	-0.175	0.461	-0.636
-1.963	-0.819	0.456	-0.930	1.386
2.589	1.431	-0.052	0.361	-0.413
-1.118	-0.497	0.393	-0.210	0.603
1.198	1.094	-0.068	0.199	-0.267
-0.645	0.566	0.214	0.108	0.106
-3.631	-3.451	0.148	1.018	-0.870
1.393	1.203	0.461	0.674	-0.213
0.407	0.645	1.100	0.497	0.603
0.130	-0.792	0.159	0.851	-0.692
-1.352	-0.972	0.105	0.183	-0.078
0.262	-0.513	0.200	1.420	-1.220
-1.011	-1.236	0.252	-0.183	0.435
-0.168	-0.556	-0.122	-0.080	-0.042
-1.829	-1.623	-0.115	-0.627	0.512
-2.110	-1.954	0.188	-0.177	0.366
-2.068	-2.020	0.064	-0.434	0.498
-3.148	-1.070	-0.108	0.808	-0.915
1.374	0.860	0.347	-0.062	0.409
1.087	-0.042	0.164	0.290	-0.126
0.869	0.790	0.182	0.174	0.008
-2.354	-1.802	-0.326	0.009	-0.335
0.293	-0.265	0.080	0.132	-0.052



-2.034	-0.979	0.429	-0.449	0.878
-0.122	-0.362	0.406	0.195	0.211
-1.487	-1.851	0.262	0.197	0.066
-0.094	0.249	0.477	-0.087	0.564
-0.653	-1.471	0.753	-0.276	1.029
-2.150	-1.556	0.003	-0.552	0.554
1.796	1.816	-0.744	-0.852	0.108
0.168	-0.729	-1.023	-0.002	-1.021
-0.507	0.003	-0.121	-0.972	0.851
-1.901	-1.767	0.287	0.021	0.265
-1.579	-1.123	0.017	-0.588	0.606
-0.156	0.383	-0.288	-0.055	-0.233
1.953	1.464	-0.151	0.208	-0.359
-1.226	-1.186	0.121	-0.326	0.446
1.418	2.350	-0.297	-0.138	-0.158
2.356	1.824	0.332	0.331	0.001
1.871	2.101	0.536	-0.293	0.828
-2.525	-2.424	0.274	0.202	0.072
-2.206	-1.915	-0.160	-0.275	0.115
-1.978	-1.492	-0.101	-0.423	0.323
-0.163	-0.521	0.257	0.197	0.059
-1.744	-1.063	-0.238	-0.128	-0.110
-3.705	-3.409	-0.097	0.508	-0.605
-1.678	-2.076	-0.539	-0.008	-0.532
-2.301	-1.497	0.104	0.601	-0.497
-0.386	-1.010	0.091	0.267	-0.176
-0.111	-0.231	0.320	-2.927	3.247
2.356	2.164	0.207	0.119	0.088
-2.172	-1.299	-0.009	-0.208	0.199
1.413	0.398	0.446	0.007	0.438
-0.351	-0.636	0.195	-0.091	0.286
-1.866	-0.866	0.363	-0.445	0.808
-2.071	-2.012	-0.424	0.238	-0.662
0.077	0.811	0.538	0.061	0.477
-1.603	-0.868	0.027	-0.450	0.477
0.623	0.944	0.363	-0.681	1.043
0.279	0.162	-0.322	-0.547	0.225
-1.180	-0.739	0.535	0.209	0.326
-0.534	-1.784	0.129	0.103	0.026
-0.891	-0.489	0.613	-0.849	1.462
-1.820	-1.888	0.220	0.042	0.178
0.665	0.438	-0.383	-0.585	0.202
-1.964	-1.471	-0.067	-0.787	0.721
-0.870	-0.771	0.080	-0.076	0.157
-2.272	-2.412	0.124	0.179	-0.054
-1.513	-0.854	-0.149	0.941	-1.090
2.024	1.114	0.008	0.099	-0.091
-0.574	0.294	-0.133	0.515	-0.648
-1.064	-0.894	-0.211	0.084	-0.295
0.212	0.446	-0.334	-0.485	0.151
-0.457	-0.880	-0.077	0.419	-0.495

1.268	0.209	0.321	0.379	-0.058
2.091	1.176	0.345	0.424	-0.079
1.484	0.141	0.009	0.288	-0.279
1.796	0.830	0.230	0.525	-0.295
0.028	0.196	-0.245	0.281	-0.526
1.493	0.700	0.245	0.528	-0.283
0.246	0.460	-0.377	0.363	-0.740
0.321	1.155	-0.240	0.629	-0.870
-0.778	-1.649	-0.085	0.748	-0.833
-1.733	-2.245	-0.038	-0.174	0.136
-0.735	-1.175	-0.030	-0.120	0.091
2.821	1.925	0.873	0.916	-0.043
-0.866	-1.667	-0.016	0.100	-0.116
1.814	2.810	-0.109	-0.228	0.119
-0.724	-1.152	-0.165	-0.336	0.171
-1.326	-1.361	0.295	-0.081	0.376
-1.004	-0.963	0.122	0.226	-0.104
-0.442	-0.140	-0.098	-0.330	0.233
1.109	0.539	0.638	0.589	0.049
0.403	-0.884	0.129	0.084	0.045
2.298	1.581	-0.059	0.052	-0.110
-3.614	-2.891	0.294	-0.845	1.139
-2.744	-2.830	-0.214	0.472	-0.686
-2.578	-1.066	0.078	0.289	-0.211
-0.818	-1.172	0.371	0.058	0.313
-1.070	-0.781	0.078	-0.011	0.089
1.106	1.504	0.424	-0.171	0.595
-0.946	0.877	-0.272	-0.990	0.718
2.018	2.089	0.251	-0.263	0.513
-1.208	-1.818	-0.022	-0.031	0.009
-0.983	-0.478	-0.707	-0.957	0.250
-0.277	-0.282	0.718	0.406	0.312
-0.075	-0.624	0.221	0.488	-0.267
-2.787	-2.354	-0.156	-0.766	0.611
-2.236	-1.849	0.173	-0.638	0.811
-0.516	-0.074	0.416	0.259	0.156
-0.472	0.070	-0.254	-0.080	-0.174
-0.856	-0.513	0.297	-0.848	1.144
-1.866	-1.971	-0.164	-0.091	-0.073
-3.358	-2.908	-0.272	-0.255	-0.017
0.887	0.108	0.237	-0.050	0.287
-0.993	-1.057	0.299	0.067	0.233
-1.358	-0.813	0.482	0.222	0.260
-0.621	-0.579	0.828	0.734	0.095
2.222	1.741	0.070	0.686	-0.616
-0.321	-0.403	0.464	0.496	-0.032
1.004	1.296	-0.244	0.585	-0.829
-0.619	-0.424	-0.329	-0.065	-0.264
0.033	-0.276	0.143	-0.104	0.247
-0.431	-0.226	0.454	-0.868	1.322
0.240	1.383	0.026	-0.301	0.328

1.027	-0.208	-0.379	-0.402	0.023
-1.645	-1.464	0.166	-0.492	0.659
1.449	0.478	0.198	0.577	-0.379
-0.563	-0.995	0.623	-0.097	0.720
-3.099	-3.111	0.472	0.900	-0.429
2.273	2.491	-0.972	-1.015	0.044
-0.046	1.128	0.335	-0.564	0.899
0.432	0.771	0.934	0.586	0.347
0.749	0.881	-0.695	-0.674	-0.022
1.353	1.751	-0.219	-0.385	0.165
0.291	-0.499	-0.069	-0.326	0.256
-0.264	-0.962	-0.023	0.939	-0.962
0.320	-0.345	0.060	0.088	-0.028
-0.852	-0.587	0.541	-0.310	0.850
3.097	2.205	-0.828	-0.492	-0.336
-2.040	-1.094	0.155	-0.249	0.403
0.812	1.773	-0.007	-0.218	0.212
1.682	1.735	0.733	0.484	0.249
-0.122	-0.129	0.423	-0.285	0.708
-2.242	-1.513	0.195	-0.660	0.855
0.367	0.457	0.076	-0.080	0.156
-0.541	-1.250	0.150	0.082	0.067
-1.389	-1.851	-0.010	0.514	-0.524
0.011	-0.625	0.375	-0.013	0.388
0.392	-0.223	-0.316	-0.097	-0.219
-1.472	-1.549	-0.052	-0.283	0.231
-1.152	-1.268	0.076	-0.111	0.188
-0.817	-0.455	0.164	-0.186	0.350
-1.817	-1.023	-0.189	-0.313	0.124
-1.237	-0.794	-0.512	0.196	-0.708
1.385	1.305	0.141	0.146	-0.005
-1.413	-0.597	-0.227	-0.145	-0.081
1.107	0.561	-0.296	-0.121	-0.175
2.763	1.735	0.348	0.583	-0.235
-0.016	-0.872	-0.036	-0.147	0.111
1.308	1.839	0.177	-0.170	0.347
0.146	-0.477	0.285	0.116	0.169
-1.101	-0.836	-0.324	-1.211	0.887
0.091	-0.326	-0.160	-0.054	-0.106
0.202	-1.156	-0.065	0.204	-0.269
-0.274	-1.020	0.150	0.238	-0.088
-1.244	-0.836	2.268	0.366	1.902
-2.175	-1.905	0.138	-0.241	0.379
1.385	0.452	-0.477	-0.266	-0.212
1.073	1.586	-0.283	-0.793	0.509
2.363	1.172	0.568	0.125	0.443
0.782	0.614	0.076	0.618	-0.542
1.201	1.685	0.234	-0.520	0.754
-2.419	-1.606	-0.172	-0.449	0.277
-0.244	-0.347	-0.116	-0.733	0.618
-1.843	-2.068	-0.025	-0.398	0.373

-0.140	-1.311	0.013	0.348	-0.335
-2.358	-2.007	0.179	-0.177	0.355
1.815	1.747	0.310	-0.263	0.573
-0.572	-0.628	0.912	0.090	0.822
1.345	0.352	-0.660	0.048	-0.708
-0.748	-0.176	-0.597	-0.270	-0.327
-1.553	-2.428	-0.951	-0.425	-0.526
0.779	1.165	-0.087	0.260	-0.348
-0.260	-0.107	0.047	0.155	-0.108
-0.599	-0.925	-0.187	0.446	-0.633
0.266	-0.204	-0.011	-0.168	0.158
1.599	0.593	0.204	0.158	0.046
2.441	2.448	0.142	0.058	0.084
1.261	1.095	0.196	0.256	-0.060
-1.440	-0.836	0.251	-0.015	0.266
1.223	1.603	-1.152	-1.030	-0.121
-0.904	-1.694	-0.045	0.083	-0.128
-0.408	-0.464	-0.034	0.223	-0.257
-0.262	0.294	-0.186	-0.152	-0.033
-0.774	-0.534	-0.162	-0.464	0.302
-2.472	-2.134	-0.190	1.090	-1.280
0.135	0.332	-0.291	-0.241	-0.050
-0.191	-0.644	0.193	0.379	-0.186
-1.122	-0.556	-0.922	-0.658	-0.264
-0.590	-1.385	0.185	0.079	0.106
-2.203	-1.051	-0.484	-0.477	-0.007
0.160	0.686	0.132	-0.570	0.702
-0.431	-0.135	0.254	-0.047	0.302
-1.869	-1.485	0.203	-0.217	0.420
-2.087	-1.294	0.421	0.716	-0.294
0.642	-0.001	0.431	0.168	0.263
0.531	-0.291	-0.413	-0.132	-0.281
-2.516	-1.890	0.159	-0.481	0.639
1.619	1.260	-0.002	-0.020	0.018
-3.258	-2.679	-0.117	-0.442	0.324
-3.267	-3.058	-0.016	0.634	-0.650
-2.322	-2.583	0.021	0.652	-0.630
-1.908	-2.333	-0.124	0.205	-0.329
-0.327	-0.410	0.326	-0.165	0.491
-0.216	-0.162	0.185	0.040	0.144
-1.943	-2.008	0.399	0.529	-0.131
0.901	0.246	0.207	0.467	-0.260
-1.389	-0.619	-0.209	-0.691	0.482
1.988	1.456	0.389	0.366	0.022
-0.134	-0.171	-0.163	-0.068	-0.095
-0.429	0.318	-0.381	-0.649	0.268
0.112	-0.353	-0.227	0.212	-0.439
0.924	0.940	-0.350	-0.190	-0.160
2.506	1.380	0.267	0.385	-0.118
1.308	1.367	0.138	0.014	0.124
1.378	0.910	0.416	-0.416	0.832

2.335	0.758	-0.773	-0.103	-0.670
0.510	0.824	0.297	-0.346	0.644
2.503	1.815	0.676	0.352	0.324
-0.607	-1.619	-0.729	-0.447	-0.282
0.661	-0.073	0.560	0.461	0.099
1.862	1.727	0.261	-0.067	0.328
-0.086	-1.252	0.170	0.585	-0.416
-0.606	-1.563	0.044	-0.360	0.405
1.737	1.189	0.039	0.489	-0.451
-0.199	-0.284	0.190	0.045	0.145
0.633	0.580	0.297	-0.302	0.598
-0.729	-1.881	0.220	0.099	0.121
1.682	2.548	0.133	-0.444	0.578
0.454	-0.033	0.656	-0.242	0.897
0.930	1.436	0.070	0.135	-0.065
0.196	-0.095	0.214	0.080	0.134
1.465	1.793	1.011	-0.297	1.309
1.075	0.809	0.269	-0.293	0.562
0.301	-0.252	-0.200	0.290	-0.490
-2.066	-1.744	0.135	-0.147	0.282
-1.520	-1.210	-0.073	0.180	-0.252
-1.329	-1.855	0.098	0.369	-0.271
-0.734	-0.593	0.246	0.741	-0.494
-0.149	-0.104	-0.079	-0.226	0.147
1.207	0.732	0.481	0.820	-0.339
-1.087	-0.907	-0.251	-0.468	0.217
-1.465	-1.614	0.278	0.077	0.201
-1.511	-1.100	0.488	-0.171	0.660
0.841	0.260	0.307	0.599	-0.292
-0.713	-0.451	0.782	0.181	0.600
1.862	1.256	0.462	0.329	0.133
1.032	0.854	0.385	0.203	0.182
-0.892	-2.439	0.245	0.125	0.120
2.615	2.615	0.081	-0.527	0.608
-0.630	-0.313	0.022	-0.174	0.195
-2.469	-1.627	0.163	-0.400	0.563
-0.774	-0.530	-0.079	-0.052	-0.027
1.270	1.257	1.026	0.326	0.700
-1.376	-0.859	0.353	0.391	-0.038
1.796	1.844	-0.026	-0.007	-0.018
-0.151	-0.969	-0.145	-0.109	-0.036
2.157	2.001	0.001	0.007	-0.006
0.710	1.133	0.146	0.160	-0.013
0.203	-0.463	0.036	-0.111	0.147
-0.715	-0.835	-0.079	0.188	-0.267
0.776	0.144	-0.204	0.585	-0.789
-1.159	-1.241	-0.578	0.333	-0.911
-0.296	-0.744	0.830	-0.125	0.955
-1.249	-0.862	-0.196	0.181	-0.377
-0.644	-0.262	-0.578	0.037	-0.615
-3.017	-2.108	0.056	-0.517	0.572

-1.607	-1.500	0.408	0.182	0.226
1.473	3.471	0.165	0.066	0.099
-2.629	-1.026	0.488	0.382	0.106
-1.886	-0.311	0.303	-0.286	0.589
-0.162	-0.452	0.251	0.505	-0.254
-1.322	-1.335	-0.122	0.268	-0.390
1.301	1.232	0.111	0.254	-0.143
-1.489	-1.475	0.241	-0.281	0.522
-2.402	-1.081	-0.003	-0.555	0.552
1.061	0.786	0.120	0.007	0.113
0.601	-0.554	-0.330	-0.188	-0.142
-0.083	-0.673	0.220	0.260	-0.040
0.060	-0.061	-0.307	-0.469	0.161
-1.370	-0.659	-0.118	-0.400	0.282
-0.577	0.008	0.311	-0.391	0.703
-0.289	-0.944	0.325	0.710	-0.385
-2.671	-2.762	-0.171	0.142	-0.313
1.422	0.261	0.209	0.386	-0.177
1.857	1.412	0.454	0.063	0.391
-1.521	-1.358	0.110	-0.010	0.120
-2.676	-3.433	0.449	0.444	0.005
-0.031	0.017	0.269	0.224	0.045
2.382	1.628	-0.076	0.117	-0.194
1.520	1.604	-0.305	-0.322	0.016
-2.651	-1.284	-0.287	-0.248	-0.039
0.083	-0.162	-0.255	-0.080	-0.175
0.350	0.751	0.086	-0.050	0.137
0.383	0.806	-1.558	-0.746	-0.812
0.877	0.639	0.253	-0.324	0.576
1.986	1.479	0.109	0.563	-0.453
1.286	1.851	0.338	0.124	0.213
0.990	1.859	-0.329	-0.164	-0.165
0.231	0.580	0.482	0.006	0.476
-4.126	-0.652	-0.051	0.447	-0.499
-2.572	-3.318	-0.390	-0.197	-0.194
0.436	0.738	0.141	0.505	-0.364
-2.175	-2.099	0.043	-0.184	0.227
-1.919	-1.541	0.259	-0.350	0.609
-1.959	-1.907	0.072	-0.156	0.227
-5.061	-4.517	0.027	-0.271	0.298
-0.132	-0.650	0.013	0.519	-0.506
-0.132	-0.033	-0.015	-0.320	0.305
1.391	0.884	0.182	-0.233	0.415
-2.359	-1.812	-0.058	0.818	-0.876
-1.975	-1.511	0.837	0.366	0.471
1.283	0.097	0.700	-0.198	0.897
1.925	0.899	0.197	0.285	-0.089
1.377	0.286	-0.459	0.274	-0.732
1.851	0.494	0.316	0.725	-0.409
0.448	1.338	0.428	-0.566	0.994
2.431	0.879	-0.288	-0.158	-0.130

1.171	0.886	0.478	0.163	0.315
-2.132	-1.610	0.263	-0.127	0.390
2.349	1.879	-0.435	0.050	-0.484
1.881	1.083	-0.563	-0.317	-0.246
2.176	0.930	-0.520	-0.234	-0.286
1.374	0.465	-0.076	-0.238	0.162
2.465	2.739	0.749	-1.203	1.952
1.620	1.320	-0.388	-1.030	0.642
0.862	1.056	-0.015	-0.464	0.449
0.740	1.039	-1.063	-0.328	-0.735
-2.687	-1.937	-0.218	0.300	-0.518
-1.413	-1.398	0.272	0.190	0.082
-0.890	-1.517	0.039	0.201	-0.162
-1.917	-1.318	-0.832	0.503	-1.335
0.463	0.532	-0.272	-0.124	-0.148
-1.166	-0.764	-0.664	-0.540	-0.124
-0.417	-0.444	-0.254	0.217	-0.471
3.220	2.174	-0.702	0.273	-0.976
0.399	-0.978	0.134	0.098	0.036
-1.994	-1.448	0.125	-0.559	0.684
1.376	0.478	0.388	0.101	0.287
0.822	-0.015	-0.766	-0.287	-0.479
-2.246	-2.155	-0.627	-0.479	-0.148
-1.573	-1.226	0.357	-0.796	1.152
-0.791	-0.640	-0.456	-0.607	0.151
0.466	-0.612	-0.068	0.012	-0.080
-2.945	-2.027	-0.399	-0.635	0.236
3.358	2.464	0.976	0.768	0.208
2.261	1.670	0.432	0.199	0.233
1.085	0.961	0.481	0.279	0.201
0.321	0.705	-0.132	-0.766	0.634
1.021	-0.292	0.205	0.373	-0.168
0.614	-0.313	0.085	0.584	-0.499
-1.000	-1.378	-0.753	-0.073	-0.681
-0.031	-0.456	0.073	-0.044	0.117
0.416	0.060	0.188	0.290	-0.102
0.315	0.157	0.504	0.213	0.291
0.008	0.301	-0.756	-0.799	0.043
-1.246	-0.788	-0.090	-0.558	0.469
-3.750	-3.164	0.008	-0.336	0.344
0.375	0.798	0.477	-0.343	0.820
2.746	1.488	-0.820	-0.295	-0.525
-3.118	-2.325	0.223	-0.059	0.282
1.475	1.154	0.241	0.787	-0.546
-2.441	-1.825	0.136	0.538	-0.401
-1.113	-0.969	0.225	0.428	-0.203
-0.232	-0.011	-0.539	-0.197	-0.342
2.504	2.357	0.621	0.755	-0.134
1.882	0.805	0.849	0.358	0.491
-0.237	0.138	0.442	-0.454	0.896
2.732	2.571	0.468	-0.243	0.711

-1.813	-1.211	-0.207	0.186	-0.393
-2.632	-1.470	-0.088	-0.744	0.656
-2.343	-2.076	-0.286	-0.281	-0.006
0.052	0.827	-0.650	-0.690	0.040
0.537	0.340	-0.511	-0.470	-0.041
-0.504	-0.776	-1.070	-0.207	-0.863
-1.508	-1.087	0.065	0.304	-0.240
-0.516	-0.581	0.107	0.078	0.029
1.111	1.344	0.545	0.367	0.178
1.633	0.573	0.153	0.456	-0.303
-0.232	0.324	-0.586	-0.668	0.082
2.711	2.496	0.367	-0.152	0.519
0.195	0.505	0.769	-0.242	1.011
2.255	2.099	0.414	0.175	0.239
1.908	1.298	0.364	-0.075	0.439
-2.081	-0.783	-0.122	-0.205	0.083
-1.908	-1.412	0.116	-0.332	0.448
-1.197	-1.886	-0.058	-0.020	-0.039
0.046	-0.386	-0.259	-0.275	0.016
-0.686	-0.376	0.136	-0.101	0.238
-1.208	-1.963	-0.009	0.098	-0.107
-0.621	-0.726	0.370	-0.029	0.399
-0.455	-0.242	0.358	-0.024	0.382
-0.174	-0.724	0.463	-0.617	1.080
0.123	-0.014	0.197	0.361	-0.164
-1.908	-1.724	0.017	0.677	-0.660
-3.934	-3.410	0.061	-0.857	0.918
-3.715	-3.648	0.150	0.424	-0.274
-3.624	-2.981	0.197	-0.093	0.290
-3.428	-2.738	-0.177	-0.083	-0.094
0.932	0.113	-0.099	0.014	-0.113
1.476	1.728	0.258	-0.046	0.305
0.492	0.833	0.524	0.464	0.060
-1.380	-0.892	-0.112	-0.408	0.296
-0.640	-0.637	-0.024	-0.214	0.190
-1.151	-0.743	-0.127	-0.168	0.040
-2.964	-2.307	-0.525	-0.375	-0.150
-1.835	-1.720	0.072	-0.359	0.431
-0.837	-0.597	0.179	-0.381	0.561
0.487	0.441	-0.024	-0.182	0.158
2.210	2.010	0.998	0.264	0.733
2.756	2.378	0.495	0.411	0.084
-0.985	-0.789	0.394	0.064	0.331
0.900	-0.175	-0.049	0.472	-0.521
-1.115	-1.151	-0.100	0.841	-0.941
-2.061	-1.032	-0.185	-0.810	0.625
-0.770	-0.623	-0.275	-0.351	0.076
0.514	-0.552	0.002	0.199	-0.197
0.451	-0.491	0.358	0.361	-0.003
1.135	0.241	-0.193	0.086	-0.280
0.171	0.397	0.080	-0.164	0.245



0.131	0.471	0.409	0.109	0.299
-2.581	-3.425	-0.276	-0.225	-0.050
0.202	0.613	-0.038	-0.254	0.216
0.027	0.138	0.207	-0.172	0.379
0.752	-0.378	-0.121	-0.478	0.357
-0.369	-0.114	-0.193	-0.015	-0.177
-0.244	-0.131	0.539	0.552	-0.013
-1.886	-1.411	-0.323	1.117	-1.440
-1.494	-1.307	-0.169	-0.386	0.217
-0.492	0.102	-0.693	-0.447	-0.245
0.683	0.493	0.605	0.095	0.510
-1.833	-1.459	0.552	-0.175	0.727
-0.560	-0.282	-0.693	0.072	-0.766
1.045	1.548	0.221	-0.278	0.499
1.430	2.427	0.293	-0.073	0.366
-0.649	-0.637	0.360	0.819	-0.459
1.466	1.609	-0.066	-0.003	-0.064
1.026	0.125	-0.109	0.391	-0.500
1.673	1.804	-0.047	0.014	-0.061
-1.464	-1.020	-0.340	-0.606	0.266
0.026	0.408	0.453	0.071	0.382
2.421	1.276	-0.106	0.115	-0.221
-0.036	-0.498	-0.084	0.532	-0.616
0.513	0.889	-0.547	-0.082	-0.465
1.489	2.138	-0.094	-0.180	0.086
1.014	0.813	0.401	0.958	-0.557
0.086	0.436	0.098	-0.195	0.294
-0.650	-1.977	-0.032	0.174	-0.206
0.560	0.228	-0.623	-0.753	0.129
0.270	0.450	0.558	0.425	0.133
-2.218	-1.811	0.031	-0.765	0.796
1.105	0.231	0.659	0.684	-0.024
0.757	0.454	0.462	0.153	0.309
0.795	0.846	0.127	0.140	-0.013
1.655	0.534	-1.051	-0.568	-0.483
0.057	0.595	0.294	-0.668	0.963
-2.564	0.747	-0.730	-1.807	1.077
0.314	0.762	0.262	-0.341	0.603
0.944	1.498	0.314	0.353	-0.039
2.442	1.668	-0.677	-0.028	-0.649
-1.595	-1.092	0.117	-0.578	0.695
2.027	1.240	0.205	0.001	0.204
2.150	1.475	-0.375	0.038	-0.413
-2.767	-2.161	-0.321	-1.177	0.856
0.025	0.663	0.256	-0.157	0.413
-0.082	-0.564	0.576	0.273	0.302
0.477	-0.819	0.761	0.454	0.307
-2.083	-1.702	0.825	0.063	0.763
0.661	1.099	0.451	0.374	0.078
-0.407	0.485	-0.032	-0.109	0.077
0.145	-1.160	0.287	-0.132	0.419

-0.002	0.109	0.131	0.315	-0.185
-0.565	-0.433	0.095	0.092	0.003
1.416	1.675	0.205	-0.072	0.277
2.041	1.229	0.284	0.181	0.103
1.164	0.479	0.043	-0.155	0.198
-1.375	-1.136	0.140	-0.047	0.187
0.753	1.050	0.312	-0.450	0.762
-2.489	-2.368	0.552	0.208	0.345
-0.052	-0.908	-0.164	0.119	-0.283
-0.314	0.342	0.162	-0.478	0.639
-1.079	-0.618	-0.093	-0.479	0.387
-1.099	-0.120	-0.662	-0.284	-0.378
0.299	0.369	0.205	-0.508	0.713
2.287	0.960	0.250	0.108	0.142
-0.331	-0.834	0.301	0.002	0.300
1.912	1.884	0.621	0.277	0.344
-0.989	-1.055	-0.522	0.163	-0.685
0.931	0.667	0.092	0.780	-0.688
-1.545	-1.659	-0.245	-0.834	0.589
-0.744	-1.918	-0.103	0.194	-0.297
1.278	0.913	0.227	-0.404	0.630
2.213	1.916	-0.079	-0.204	0.126
0.527	-0.612	-0.220	0.139	-0.359
-0.989	-0.657	0.079	0.398	-0.319
-2.343	-2.030	0.191	0.296	-0.105
-1.688	-0.950	0.609	0.120	0.488
-0.249	0.170	0.352	0.049	0.303
-2.127	-1.962	-0.474	-0.033	-0.441
-1.447	-1.333	-0.111	0.163	-0.274
1.503	1.137	0.098	-0.543	0.641
1.719	1.410	-0.791	-0.208	-0.583
-0.991	-1.409	0.091	-0.302	0.393
-0.502	-0.772	0.077	0.189	-0.111
-2.582	-2.174	-2.587	-0.322	-2.265
1.741	0.154	0.287	0.699	-0.412
1.112	1.192	-0.232	-0.303	0.071
-0.038	-0.918	0.208	0.259	-0.052
2.464	1.084	0.358	0.192	0.166
1.576	0.835	0.468	0.121	0.348
0.543	1.001	0.318	-0.115	0.433
-1.127	-0.389	-0.537	-0.718	0.181
0.220	-0.283	-0.487	0.183	-0.670
2.935	2.080	0.095	0.446	-0.351
1.618	0.783	0.249	0.369	-0.120
-0.146	0.231	0.393	0.078	0.315
-1.250	-0.918	-0.411	-0.589	0.178
-0.782	-0.686	0.227	-0.150	0.376
0.206	0.796	-0.872	-1.229	0.357
-3.210	-2.562	-0.279	-0.452	0.173
-2.757	-1.298	-0.142	1.328	-1.470
-0.009	0.414	-0.441	1.870	-2.311

-1.523	-1.207	0.107	-0.121	0.228
-0.364	-0.313	-0.390	-0.198	-0.192
1.819	2.291	0.586	0.135	0.451
1.082	1.166	0.007	-0.143	0.150
0.785	0.408	-0.127	0.580	-0.707
1.380	1.012	-0.058	-0.179	0.121
1.432	2.145	-0.293	-0.494	0.201
-2.611	-2.260	-0.253	-0.106	-0.147
1.060	1.105	0.301	-0.288	0.589
-1.499	-1.417	-0.166	-0.367	0.201
-1.814	-1.464	0.515	0.162	0.354
-2.309	-2.571	-0.451	-0.362	-0.089
-1.184	-0.887	0.100	-0.500	0.600
-1.424	-0.598	0.842	-0.113	0.955
0.027	0.257	-0.274	0.135	-0.409
1.198	2.020	0.165	-0.841	1.006
0.664	1.195	0.491	0.391	0.101
-0.209	-1.533	-0.011	0.177	-0.188
0.445	0.727	0.365	0.180	0.186
0.943	0.252	0.677	0.223	0.454
-0.995	-0.452	-0.934	-1.052	0.117
-2.191	-1.857	0.449	-0.783	1.232
-1.638	-1.091	-0.228	-0.728	0.500
-1.876	-1.148	0.125	-0.570	0.695
0.604	-0.660	0.359	0.328	0.030
-1.288	-0.724	0.332	-0.525	0.856
0.513	0.116	-0.009	-0.378	0.369
1.899	1.281	-0.006	0.502	-0.508
-1.829	-0.948	-0.096	-0.580	0.484
1.594	1.316	0.303	0.156	0.147
0.837	0.322	-0.641	-0.193	-0.449
1.733	1.839	0.173	-0.125	0.298
-1.397	-0.629	-0.104	-0.151	0.047
0.383	-0.826	-0.231	0.066	-0.297
-1.057	-0.435	0.576	-0.439	1.015
0.228	-0.222	0.325	0.237	0.087
1.227	1.721	-0.292	-0.092	-0.201
2.132	2.092	-1.218	-0.853	-0.365
0.014	0.750	-0.037	-0.478	0.441
-2.352	-1.227	-0.364	-0.153	-0.211
-0.785	-0.531	0.012	-0.351	0.363
0.526	-0.228	-0.163	0.134	-0.297
-0.941	0.000	-0.226	-0.215	-0.011
0.628	1.304	-0.184	0.106	-0.290
0.509	0.373	-0.048	-0.419	0.370
2.746	1.836	0.308	-0.039	0.347
0.952	0.726	-0.132	-0.231	0.099
-1.281	-0.862	0.196	-0.359	0.555
-1.833	-1.278	-0.348	-0.552	0.204
0.664	1.147	-0.356	-0.542	0.186
-0.751	-1.525	-0.146	-0.006	-0.140

-0.098	1.363	0.124	0.661	-0.538
-0.602	-0.368	0.299	0.261	0.038
1.160	0.325	-0.310	-0.584	0.274
-2.007	-2.374	-0.088	0.017	-0.105
-0.003	-0.590	0.084	0.379	-0.295
0.727	0.876	-0.120	-0.154	0.035
0.621	-0.121	-0.693	-0.511	-0.182
3.723	2.750	0.557	0.284	0.273
1.122	2.007	0.153	-0.120	0.273
1.652	1.562	-0.308	0.078	-0.387
-0.044	0.097	0.207	0.166	0.041
-0.071	0.498	0.000	-0.927	0.927
-1.640	-1.245	0.247	-0.482	0.729
0.262	1.022	0.282	-0.464	0.747
1.473	1.638	0.531	0.384	0.147
-2.640	-2.704	-0.224	-0.394	0.170
-1.248	-0.958	-0.334	-0.402	0.068
-2.019	-1.311	0.177	-0.005	0.182
-1.149	-1.310	-0.148	-0.405	0.257
1.988	1.177	0.255	-0.104	0.359
-0.867	-0.669	0.316	-0.311	0.627
2.035	1.207	0.504	0.587	-0.083
-0.392	-0.234	-0.341	-0.307	-0.034
0.556	1.024	0.269	0.462	-0.193
0.346	-0.509	-0.364	0.552	-0.916
-1.356	-0.519	-0.624	-0.485	-0.138
-3.573	-2.926	-0.646	-0.756	0.109
-0.457	-1.131	0.180	-0.105	0.285
-0.331	-1.024	0.238	0.238	0.000
0.129	-0.680	-1.366	-0.362	-1.004
-1.023	-1.220	0.406	-0.365	0.771
-2.479	-1.840	-0.221	-0.001	-0.220
0.730	1.073	0.556	-0.010	0.566
0.122	0.942	0.112	-0.253	0.365
-0.077	0.118	0.482	0.332	0.149
0.095	0.504	0.092	0.215	-0.123
0.397	1.023	-0.185	-0.397	0.212
0.916	-1.006	0.228	0.190	0.038
2.334	1.747	0.407	-0.216	0.623
0.000	0.104	-0.316	-0.294	-0.022
-2.770	-2.435	0.136	-0.546	0.682
-1.428	-1.056	0.383	-0.923	1.306
1.174	1.541	-0.101	-0.604	0.503
-3.052	-2.853	-0.518	-0.576	0.057
0.302	1.117	0.179	-0.063	0.242
-0.795	-1.156	0.152	-0.044	0.197
0.119	-0.677	0.373	0.241	0.132
1.276	0.899	0.334	0.332	0.002
-0.608	-0.362	0.488	0.734	-0.246
0.236	0.531	-0.997	-0.101	-0.896
-2.596	-1.870	0.034	-0.479	0.513

-2.060	-1.632	0.275	0.567	-0.292
-1.839	-1.173	-0.346	-0.858	0.512
-2.124	-1.709	0.606	-0.162	0.768
1.611	1.979	0.269	0.010	0.259
-4.287	-2.659	0.372	0.797	-0.426
-1.986	-1.907	0.134	-0.257	0.391
-0.202	-0.060	0.214	-0.116	0.330
-1.419	-0.467	-1.152	-1.089	-0.063
-0.220	-0.027	0.639	0.286	0.352
-2.457	-2.235	-0.086	-0.397	0.311
-1.200	-0.735	-0.105	-0.187	0.082
-0.052	-0.707	0.607	0.307	0.300
-2.016	-2.049	-0.098	-0.456	0.358
-1.554	-2.217	0.230	1.177	-0.947
1.584	1.752	-0.275	0.024	-0.298
0.714	0.818	0.161	-0.331	0.492
0.071	-0.916	0.505	0.014	0.491
-0.755	-1.316	0.393	0.463	-0.070
1.115	1.597	-1.072	-0.033	-1.039
0.666	1.201	-0.366	-0.645	0.279
1.537	0.998	-0.208	0.109	-0.317
0.313	0.745	0.704	-0.046	0.750
2.713	2.365	0.034	0.091	-0.057
2.043	0.928	0.390	0.332	0.058
2.109	2.255	0.351	0.055	0.296
0.630	0.118	0.254	0.584	-0.330
-0.569	-0.681	0.281	-0.020	0.301
-2.118	-2.488	0.104	-0.463	0.567
-1.535	-1.000	-0.279	-0.155	-0.124
-2.492	-1.401	-0.060	-0.024	-0.035
1.344	1.034	0.699	0.614	0.084
-0.889	-0.443	-0.070	-0.992	0.922
0.204	0.467	0.190	-0.138	0.328
-1.088	-0.819	0.276	0.204	0.072
0.006	0.264	-0.029	0.388	-0.418
-1.484	-1.879	-0.119	0.422	-0.542
-0.496	-0.294	-0.020	0.045	-0.066
-2.472	-2.190	-0.317	-0.165	-0.152
0.088	0.174	0.081	0.489	-0.408
1.719	1.414	0.094	-0.074	0.168
0.590	0.502	-0.129	0.289	-0.417
0.533	-0.091	0.174	-0.137	0.311
0.034	-1.036	0.276	0.211	0.065
0.317	0.557	0.140	-0.046	0.186
-1.532	-1.040	-0.183	-0.605	0.421
0.591	0.157	0.335	0.348	-0.014
0.712	0.960	0.088	0.627	-0.539
2.539	2.088	0.100	0.161	-0.060
-0.576	-0.368	0.333	-0.107	0.441
0.506	0.786	0.195	-0.437	0.633
0.014	0.090	0.361	-0.084	0.445

-1.200	0.150	-0.049	0.483	-0.532
0.487	0.004	0.200	0.334	-0.134
-2.187	-2.071	-0.525	-0.673	0.148
1.320	1.240	0.321	0.111	0.211
-1.940	-1.482	-0.205	-0.199	-0.006
-3.702	-3.147	-0.175	-0.618	0.444
-2.705	-2.485	0.415	-0.236	0.651
-2.096	-1.881	0.195	-0.422	0.617
-3.002	-2.122	0.012	-1.148	1.161
-2.662	-2.023	-0.469	0.030	-0.499
-1.660	-1.222	-0.600	-0.174	-0.426
-0.891	-0.703	-0.083	0.022	-0.106
-4.033	-3.895	-0.089	-0.379	0.290
-2.778	-1.986	-0.126	-1.197	1.071
0.587	0.246	0.180	0.200	-0.019
1.903	1.068	0.477	0.738	-0.261
-1.487	-1.244	-0.133	-0.090	-0.043
-0.364	-0.156	0.117	-0.127	0.244
1.348	1.400	-0.255	-0.306	0.051
-0.500	-0.998	-0.208	-0.501	0.294
-1.900	-2.534	-0.155	0.586	-0.741
-0.949	-0.711	0.168	-0.320	0.488
1.523	2.033	0.804	0.330	0.474
-2.932	-2.511	-0.157	-0.001	-0.156
-0.385	0.137	0.199	0.929	-0.730
-0.550	-0.528	0.414	-0.237	0.650
-2.697	-2.398	0.532	-0.433	0.965
-0.707	-0.298	0.096	-0.058	0.154
-0.635	-0.151	0.201	-0.006	0.207
-0.256	-0.469	-0.478	-0.022	-0.456
0.435	0.046	0.726	0.735	-0.009
-0.628	-0.141	-0.679	-0.223	-0.457
-0.031	0.272	0.305	-0.581	0.886
0.553	1.169	0.333	-0.825	1.158
-0.315	-0.224	-0.219	-0.248	0.030
-1.687	-1.191	-0.456	-0.480	0.024
-1.698	-1.513	-0.032	-0.261	0.229
-0.208	-1.047	0.181	0.164	0.016
2.506	3.169	0.088	-0.247	0.336
-2.166	-2.355	0.071	0.591	-0.521
-1.759	-2.121	0.317	-0.124	0.441
-0.180	-0.222	-1.345	-0.769	-0.577
1.247	0.437	0.000	0.013	-0.013
-2.127	-0.969	-0.175	-0.333	0.158
0.610	0.730	-0.508	-0.515	0.008
2.478	1.843	-0.115	-0.267	0.152
1.711	1.326	0.525	0.041	0.484
0.373	0.856	0.434	-0.062	0.496
0.235	0.545	0.102	-0.311	0.412
1.772	1.378	-0.461	-0.295	-0.166
1.233	1.221	-0.452	-0.121	-0.331

-0.266	-1.618	0.354	0.555	-0.201
-0.101	0.211	0.453	-0.423	0.876
-1.023	-0.706	0.338	-0.222	0.560
-4.436	-1.602	-0.096	-1.515	1.419
0.487	-0.220	0.463	0.132	0.331
-0.334	0.169	-0.097	-0.494	0.397
-0.308	-0.797	-0.849	-0.454	-0.394
-1.279	-1.787	0.143	-0.072	0.215
-2.370	-2.319	-0.360	1.298	-1.659
-1.615	-1.077	-0.077	-0.078	0.001
-2.963	-2.255	-0.328	-0.240	-0.089
-3.558	-3.089	0.316	0.176	0.140
-1.546	-1.276	0.328	-0.297	0.625
0.825	1.386	0.145	-0.262	0.407
-2.249	-1.501	0.214	1.356	-1.142
-3.322	-2.944	0.145	-0.198	0.343
-1.799	-1.771	-0.510	-0.452	-0.058
0.806	1.445	0.178	0.120	0.058
-1.341	-1.369	0.316	0.039	0.277
-2.612	-2.482	-0.044	0.224	-0.268
0.158	0.214	-0.051	0.408	-0.459
0.820	-0.737	-0.533	0.404	-0.938
0.562	1.103	-0.073	0.762	-0.835
1.451	0.826	0.179	0.181	-0.002
2.412	2.082	0.229	0.167	0.063
2.185	1.773	0.191	0.216	-0.025
-0.886	-0.798	-0.278	-0.312	0.035
-1.218	0.000	0.487	-0.210	0.698
0.297	0.176	0.232	0.255	-0.023
1.102	-0.245	-0.103	-0.434	0.331
1.903	1.077	-0.323	0.376	-0.699
-0.554	-0.417	0.275	-0.443	0.718
-3.298	-2.861	-0.885	-0.115	-0.770
-1.889	-1.671	-0.315	-0.377	0.062
-1.695	-1.342	-0.314	-1.078	0.764
-0.280	-1.473	0.357	-0.267	0.624
-0.518	-0.636	-0.108	-0.206	0.098
0.817	0.843	-0.096	-0.198	0.102
-2.684	-2.094	0.203	0.038	0.165
-0.700	-1.261	-0.167	0.592	-0.759
-0.070	-0.315	0.272	0.290	-0.018
-1.392	-0.676	-1.164	-1.013	-0.150
0.386	0.622	0.280	-0.267	0.546
-2.362	-1.403	-0.078	-1.118	1.041
-2.799	-2.201	0.652	0.147	0.505
-0.815	0.016	0.022	-0.085	0.107
3.037	2.079	-0.223	-0.697	0.474
-0.118	0.333	0.985	-0.196	1.181
0.237	0.794	0.184	-0.028	0.212
-1.739	-2.300	-0.684	-0.318	-0.366
0.006	-0.420	0.392	-0.040	0.432

1.550	1.932	-0.258	0.074	-0.332
-1.841	-1.062	-0.349	-1.342	0.993
-0.614	-0.179	0.186	-0.671	0.858
2.485	1.993	0.704	0.204	0.500
2.634	2.094	-0.507	-0.492	-0.014
-0.475	-0.163	0.562	-0.139	0.702
-2.783	-2.189	-0.131	-0.570	0.439
0.281	0.102	0.269	0.108	0.162
-0.221	0.416	0.118	-0.332	0.451
0.566	0.156	0.545	0.066	0.479
0.018	-0.195	0.175	0.057	0.118
-2.226	-2.052	0.055	-0.209	0.264
0.786	-0.018	-0.085	0.225	-0.310
-1.325	-0.624	0.511	0.038	0.473
-0.111	-0.552	0.007	-0.372	0.379
1.204	1.830	0.066	-0.353	0.419
-0.171	0.088	0.073	-0.413	0.486
-0.859	-1.419	0.214	-0.282	0.496
-2.958	-2.420	-0.311	-0.366	0.055
0.169	-0.600	0.231	0.176	0.055
-0.946	-0.474	0.682	-0.224	0.907
-0.634	-1.376	0.149	0.107	0.042
-1.494	-0.601	-0.246	0.039	-0.285
0.117	-0.367	0.032	0.741	-0.709
0.645	-0.285	0.175	0.451	-0.276
-0.054	0.097	0.190	0.027	0.163
-0.310	-0.725	0.088	-0.033	0.121
-1.402	-0.734	-0.580	-0.198	-0.383
-1.044	-0.587	0.055	-0.581	0.636
3.205	2.153	0.714	0.359	0.355
1.335	1.001	0.088	-0.680	0.768
0.998	-0.344	0.099	1.288	-1.189
-1.597	-1.110	0.008	-0.248	0.256
-1.077	-0.518	-0.039	-0.078	0.039
-1.524	-0.526	-0.577	-0.131	-0.446
-0.220	0.008	0.089	-0.336	0.425
0.688	-0.683	0.056	0.150	-0.094
1.206	2.102	-0.338	-0.032	-0.306
-2.271	-2.486	-0.451	0.150	-0.601
1.638	0.066	-0.902	-0.809	-0.093
-0.069	-0.206	0.417	-0.202	0.619
-2.983	-2.358	0.129	-0.490	0.619
0.242	1.236	0.280	-0.698	0.978
0.711	0.918	0.500	-0.103	0.603
-0.842	-1.177	0.172	-0.485	0.658
-0.318	0.098	0.117	-0.214	0.331
-2.766	-0.617	0.054	-1.038	1.092
0.427	0.820	0.932	0.757	0.174
-1.049	-1.266	-0.341	0.124	-0.466
1.163	1.469	-0.039	-0.023	-0.016
-0.696	-0.820	0.149	0.311	-0.163



0.898	0.194	0.215	0.283	-0.068
0.818	1.021	-0.139	0.020	-0.159
1.145	1.107	0.175	0.158	0.017
2.002	1.829	0.720	0.234	0.486
-2.518	-2.282	-0.176	-0.207	0.030
-3.099	-2.563	-0.321	-0.375	0.055
-1.574	-2.197	0.333	0.317	0.016
-1.785	-1.628	-0.154	-0.479	0.325
-3.898	-3.218	0.118	-0.201	0.320
-2.811	-2.375	-0.295	0.353	-0.649
-1.684	-1.348	0.120	-0.164	0.284
-2.436	-2.059	-1.099	-0.275	-0.824
0.017	1.039	0.276	0.140	0.136
0.796	-0.599	-0.162	0.287	-0.449
0.042	0.438	-0.660	-0.423	-0.237
0.951	0.991	-1.814	-0.940	-0.874
-0.952	-0.334	0.246	-0.369	0.615
1.357	1.524	-0.012	-0.674	0.662
-1.676	-2.006	-0.122	0.119	-0.241
-1.582	-2.032	-0.058	-0.149	0.091
0.673	-0.377	0.139	0.222	-0.083
0.868	-0.266	0.121	-0.204	0.325
-0.275	-0.444	-0.289	-0.221	-0.067
0.774	-0.332	0.100	0.212	-0.112
-2.807	-0.532	-0.669	-0.878	0.209
0.101	-0.659	-0.005	0.259	-0.264
-2.576	-2.304	-0.138	-0.218	0.079
0.349	0.197	0.428	-0.168	0.595
-0.752	-0.991	-0.242	-0.014	-0.228
-0.565	0.046	-0.450	-0.272	-0.178
1.136	-0.057	-1.219	-0.230	-0.989
-1.149	-1.530	0.406	0.029	0.377
0.308	0.331	-0.367	-0.179	-0.187
-0.620	0.322	0.278	-0.252	0.530
-3.216	-2.737	-0.605	-1.278	0.674
-0.007	-1.022	0.102	0.606	-0.504
-2.844	-1.674	-0.164	-0.105	-0.059
-0.383	0.604	0.159	-0.202	0.362
-0.842	0.260	0.703	-0.183	0.886
2.006	0.616	-0.156	0.112	-0.268
1.185	0.571	0.023	0.670	-0.647
-1.923	-2.330	-0.225	-0.494	0.268
1.009	0.941	-0.508	-0.266	-0.242
-2.251	-1.872	-0.203	-0.126	-0.077
2.343	2.153	0.465	0.221	0.243
-0.991	-0.803	0.047	-0.261	0.309
-0.247	-1.152	-0.236	-0.285	0.049
-0.807	-1.209	0.371	0.668	-0.297
1.568	1.442	-0.655	-0.601	-0.054
-1.318	-1.044	0.204	-0.158	0.362
1.178	0.758	-0.023	-0.092	0.069

-0.701	-0.397	-0.408	-0.308	-0.101
0.264	-0.504	-0.673	0.850	-1.523
0.376	0.051	0.115	-0.151	0.266
-0.840	0.199	-0.364	-0.241	-0.123
0.132	-0.378	0.027	-0.266	0.293
-1.915	-1.415	-0.045	-0.141	0.096
-1.588	-1.304	0.404	0.753	-0.349
-1.345	0.259	0.187	-0.193	0.379
-0.513	-0.814	0.382	0.730	-0.348
-2.391	-1.658	-0.027	0.242	-0.269
0.234	-0.680	0.441	-0.209	0.650
1.870	1.727	0.162	0.072	0.090
-1.336	-1.760	0.362	0.933	-0.571
-0.529	0.020	0.585	1.065	-0.480
-1.574	-0.557	0.115	0.109	0.006
0.876	1.031	0.071	0.455	-0.384
-1.692	-1.746	-0.358	0.234	-0.591
-0.785	-0.991	0.305	0.114	0.190
0.373	1.328	0.178	-0.057	0.235
-1.065	-1.492	-0.081	-0.063	-0.018
-1.500	-1.432	-0.249	0.094	-0.342
0.596	2.218	-0.261	-0.470	0.209
-1.994	-1.925	-0.282	0.580	-0.862
-1.287	-0.151	0.303	-0.362	0.665
1.097	0.890	-0.466	-0.085	-0.382
1.691	1.707	-0.713	-0.497	-0.216
0.795	2.371	0.204	-1.387	1.591
0.216	-0.417	-0.145	-0.114	-0.031
0.026	0.957	-0.198	-0.163	-0.036
0.226	0.991	-0.388	0.015	-0.403
-0.912	-0.148	0.030	0.701	-0.672
0.792	0.198	0.289	0.095	0.194
-0.461	-0.069	-0.102	-0.842	0.741
-1.267	-0.390	0.150	-0.193	0.343
-0.611	0.098	-0.506	-0.395	-0.111
3.231	2.516	-0.285	-0.094	-0.190
-1.379	-0.840	0.101	-0.995	1.096
-2.616	-2.130	-0.973	-1.191	0.218
-1.272	-1.643	0.223	-0.309	0.532
2.263	2.148	0.629	0.429	0.200
-0.934	-0.745	-0.503	0.110	-0.612
-0.007	0.038	0.278	0.428	-0.150
1.783	1.014	-0.029	0.146	-0.175
1.054	0.911	0.102	-0.120	0.222
-0.055	0.282	-0.241	0.042	-0.283
-3.517	-2.267	0.527	0.074	0.453
1.361	1.243	-0.015	0.379	-0.394
-3.373	-2.980	-0.084	0.679	-0.762
1.247	1.425	0.065	-0.425	0.490
-1.789	-1.770	-0.034	-0.121	0.087
-1.107	-1.667	0.745	0.245	0.500

-3.218	-3.195	0.043	0.073	-0.030
-2.524	-2.630	0.180	0.532	-0.352
-2.117	-2.030	0.136	0.238	-0.102
-2.722	-2.624	0.723	0.522	0.201
-2.915	-2.442	-0.064	-0.381	0.317
-1.526	-1.230	0.177	0.003	0.174
-2.042	-1.396	-0.043	-0.516	0.473
-2.049	-2.256	-0.137	-0.325	0.188
-3.217	-2.879	-0.010	-0.482	0.473
-2.007	-1.778	0.128	-1.039	1.167
-0.226	-0.055	0.363	0.081	0.283
-2.860	-2.603	-0.172	-0.482	0.310
-2.015	-2.148	0.296	0.466	-0.170
-1.720	-1.452	0.155	-0.510	0.665
-0.906	-0.949	-0.021	0.233	-0.254
-2.222	-1.698	-0.128	0.355	-0.483
-2.919	-2.101	0.053	0.569	-0.516
-1.686	-1.397	0.013	-0.243	0.256
-1.826	-1.503	0.006	-0.360	0.366
-1.260	-1.836	0.079	0.550	-0.471
-0.097	-0.732	0.105	0.317	-0.212
-1.205	-0.843	0.109	0.419	-0.309
-0.847	-1.453	0.030	0.042	-0.012
-2.206	-2.211	-0.094	0.707	-0.801
-1.718	-1.421	0.235	-0.208	0.444
-1.473	-1.736	0.064	-0.090	0.154
0.026	0.120	0.383	0.519	-0.136
-2.008	-1.576	-0.318	-0.280	-0.038
-2.190	-1.796	-0.154	0.081	-0.235
1.369	0.658	0.167	0.031	0.136
-1.506	-1.912	0.181	0.065	0.115
-0.927	-0.658	0.324	0.237	0.087
-2.267	-1.945	-0.006	0.033	-0.039
-0.872	-0.826	0.446	-0.349	0.795
-2.914	-2.321	0.241	-0.371	0.611
-2.121	-1.551	0.035	0.755	-0.720
-2.521	-2.184	-0.111	-0.261	0.150
1.928	1.019	0.223	0.404	-0.181
-0.954	-0.327	0.117	-0.003	0.119
-2.548	-2.574	0.130	-0.195	0.325
-2.331	-2.531	-0.213	0.075	-0.288
-0.911	-0.415	0.122	-0.418	0.540
-2.413	-1.714	-0.123	-0.840	0.718
-0.396	-0.233	0.348	0.205	0.143
-1.668	-1.851	0.325	-0.152	0.476
-0.168	0.128	-0.411	-0.340	-0.071
-0.387	-0.420	-0.125	0.161	-0.287
1.542	-0.169	-0.790	0.099	-0.888
-1.352	-0.947	-0.134	-0.129	-0.005
0.277	-0.801	0.750	0.104	0.646
-0.086	-1.087	-0.037	0.378	-0.415

1.510	0.829	-0.187	-0.079	-0.108
0.301	-0.355	0.146	0.463	-0.317
1.020	1.009	0.388	0.208	0.180
-0.361	-0.407	-0.217	-0.103	-0.114
-0.734	-0.052	-0.035	-0.264	0.229
0.911	-0.097	0.064	0.506	-0.443
0.704	-0.378	0.265	-0.133	0.399
-2.028	-1.683	0.226	-0.371	0.596
-2.453	-1.874	-0.352	-0.235	-0.117
-3.214	-2.298	-0.038	0.714	-0.753
1.259	1.409	-0.170	0.088	-0.258
-1.311	-1.040	-0.100	-0.072	-0.028
-0.795	-0.916	0.334	-0.292	0.626
-0.537	-0.204	-0.693	0.012	-0.705
0.878	0.499	0.139	-0.097	0.236
0.397	0.448	0.775	-0.034	0.809
-0.795	-0.644	0.084	0.216	-0.131
-3.569	-1.386	-1.062	1.505	-2.567
-4.498	-2.524	-1.026	-0.416	-0.610
-2.373	-1.468	-0.127	-0.546	0.418
-0.826	-0.533	-1.192	-0.710	-0.482
-1.063	-1.439	0.012	0.326	-0.314
2.312	1.795	0.057	0.142	-0.085
-2.285	-2.273	-0.917	-0.622	-0.296
-0.766	-1.588	-0.148	-0.017	-0.131
0.127	-1.858	-0.179	0.322	-0.501
-0.812	-0.110	0.077	-0.587	0.663
-1.086	-1.048	-0.785	-0.430	-0.356
0.453	-0.307	-0.087	0.950	-1.037
0.980	0.929	0.623	0.258	0.365
1.288	0.968	0.315	0.577	-0.261
1.237	0.875	-0.686	-0.116	-0.570
-0.218	0.284	-0.132	-0.429	0.297
-1.166	-0.947	0.697	0.446	0.251
2.043	1.772	0.659	0.340	0.319
-1.643	0.321	0.032	-0.035	0.066
1.221	0.887	0.574	0.313	0.261
1.087	0.722	0.334	0.015	0.319
-0.704	-0.498	-0.158	-0.310	0.152
0.319	0.666	0.104	0.336	-0.231
1.690	1.223	0.402	0.183	0.219
1.376	1.023	-0.244	0.588	-0.831
0.523	0.427	-0.944	-0.096	-0.848
0.249	0.360	-0.073	-0.667	0.594
-0.842	-0.374	-1.135	-0.379	-0.757
-0.438	0.194	0.082	0.189	-0.107
-0.531	0.290	0.339	-1.163	1.501
2.129	2.076	0.513	-0.105	0.618
-2.407	-1.917	0.063	-0.487	0.550
-3.262	-3.143	0.130	-0.240	0.370
-2.463	-2.129	0.258	-0.520	0.778

0.548	0.110	-0.263	-0.430	0.167
-0.725	-0.285	0.294	0.305	-0.011
1.012	0.115	-0.221	0.156	-0.377
1.146	-0.024	0.204	0.229	-0.025
1.505	0.712	-0.165	0.034	-0.199
2.181	1.528	0.235	0.090	0.144
0.054	0.826	0.011	-0.637	0.648
1.406	1.364	0.821	-0.071	0.893
-0.574	-1.273	0.117	0.078	0.039
0.933	-0.552	0.001	0.429	-0.428
-1.178	-0.564	-0.496	-0.869	0.373
0.713	1.077	-0.059	0.350	-0.409
0.582	1.127	-0.308	-0.007	-0.301
2.348	1.052	0.017	0.727	-0.710
0.230	0.387	0.634	-0.830	1.464
-0.604	-1.079	-0.434	-0.198	-0.236
0.667	0.899	0.327	0.293	0.034
1.434	0.697	0.794	0.184	0.610
2.244	2.761	0.343	-0.500	0.844
-0.091	0.394	-0.537	-0.847	0.311
1.085	1.291	-1.047	-0.209	-0.837
-1.566	-1.851	0.112	-0.220	0.332
-1.242	-0.117	0.113	-0.879	0.992
-0.410	0.143	0.126	-0.496	0.622
-1.767	-1.467	-0.272	-0.518	0.246
-2.214	-1.661	-0.233	-0.334	0.101
0.050	0.254	0.490	-0.257	0.747
-0.375	-0.029	0.089	-0.027	0.116
-0.393	-0.464	-0.148	-0.221	0.073
2.806	1.893	-1.010	-0.065	-0.944
1.081	1.385	-0.210	0.044	-0.254
-0.520	-1.618	-0.675	-0.111	-0.564
-0.679	-0.286	-0.195	-0.077	-0.118
-1.038	-0.506	0.069	-0.236	0.305
-1.869	-1.756	0.105	-0.642	0.747
0.119	-0.711	-0.171	-0.254	0.082
-1.168	-0.775	0.076	-0.563	0.639
-1.964	-1.448	0.241	-0.169	0.411
1.881	2.331	0.296	-0.046	0.342
-0.049	-0.493	0.074	0.250	-0.175
1.504	0.971	0.201	0.632	-0.431
-0.308	0.186	-0.077	-0.041	-0.037
1.558	1.745	0.088	-0.014	0.101
-2.354	-1.671	0.128	-0.432	0.559
2.182	1.701	-0.035	0.293	-0.328
-0.704	-0.269	0.618	-0.149	0.767
-1.790	-1.190	-0.777	-0.568	-0.209
-0.423	-0.031	-0.091	-0.544	0.453
-2.613	-1.988	-0.277	-0.347	0.069
-1.242	-2.291	-0.130	0.403	-0.533
-2.181	-2.213	0.191	-0.225	0.415

-1.530	0.360	0.100	-0.448	0.548
1.728	1.346	0.778	0.606	0.172
1.466	0.337	0.362	0.091	0.271
-0.039	0.560	0.150	-0.238	0.388
0.990	1.195	-1.081	-0.277	-0.804
-0.528	-0.952	-0.712	-0.523	-0.190
-2.514	-1.371	0.146	0.301	-0.155
0.357	-0.874	-0.206	-0.062	-0.144
0.207	0.628	-0.601	-0.459	-0.142
-0.451	-1.068	0.110	-0.104	0.214
-1.927	-1.977	0.339	-0.185	0.525
-2.899	-1.782	-0.251	0.250	-0.500
1.991	2.205	0.175	-0.341	0.516
-0.916	-1.379	-0.338	-0.388	0.050
-0.177	-0.233	0.008	-0.357	0.364
0.115	-1.067	0.513	0.099	0.415
-1.102	-0.606	0.129	-0.603	0.733
0.153	-0.304	-0.148	0.088	-0.236
-0.492	-0.889	-0.597	-0.393	-0.204
1.081	0.110	-0.133	-0.686	0.553
-1.583	-2.143	0.112	-0.027	0.139
-1.545	-1.825	-0.357	-0.068	-0.289
3.223	2.127	-0.972	-0.166	-0.807
-0.249	-0.928	-0.432	-0.412	-0.020
0.139	-0.294	0.813	-0.336	1.149
2.612	1.521	0.372	-0.368	0.740
-1.811	-1.328	0.156	-0.083	0.239
-0.176	0.581	0.381	0.089	0.291
0.890	0.955	0.347	-0.283	0.630
0.528	0.171	0.324	0.457	-0.133
1.298	0.013	0.114	0.614	-0.499
0.214	0.855	-0.078	-0.699	0.621
0.581	0.262	0.232	0.090	0.142
0.714	1.039	0.209	-0.401	0.610
1.939	2.593	0.325	-0.276	0.600
-1.313	-1.481	0.271	-0.548	0.819
-1.589	-1.608	-0.240	0.023	-0.264
-2.441	-2.282	0.135	0.450	-0.315
-2.084	-1.270	-0.498	-0.442	-0.057
-1.043	-1.729	0.195	0.696	-0.501
-0.220	0.051	0.265	-0.107	0.372
-1.907	-1.833	-0.114	-0.244	0.130
1.081	0.597	-0.978	-0.346	-0.631
0.159	0.531	0.749	-0.197	0.946
1.182	-0.112	0.207	0.093	0.114
1.343	1.129	0.169	0.333	-0.164
-3.423	-2.697	-0.510	-1.102	0.592
0.983	0.917	0.544	0.387	0.157
-0.911	-0.341	0.284	-0.106	0.390
-1.221	-1.106	-0.095	-0.444	0.349
0.689	0.058	0.190	0.293	-0.103

0.265	-0.401	0.267	0.601	-0.334
1.082	0.459	0.611	0.396	0.215
-1.933	-1.600	0.105	-0.667	0.772
-1.301	-1.558	0.306	-0.099	0.405
1.021	1.148	0.224	0.120	0.103
-1.338	-1.911	-0.201	0.054	-0.254
0.240	0.520	1.621	0.525	1.097
-1.175	-1.005	-0.035	-0.072	0.036
1.067	-0.131	0.272	0.539	-0.267
-0.359	-0.929	0.620	0.281	0.339
0.623	-0.072	0.016	0.295	-0.280
-1.471	-2.031	0.091	0.113	-0.022
-0.239	-1.399	-0.090	0.550	-0.640
-2.735	-2.277	-0.054	-0.806	0.751
-1.648	-1.675	-0.195	0.216	-0.411
-1.416	-1.200	0.148	0.644	-0.495
-0.841	-0.756	0.035	0.048	-0.013
-2.337	-3.060	-0.164	0.234	-0.398
0.039	-0.026	0.238	0.105	0.133
-2.141	-1.904	0.607	0.205	0.402
2.581	1.609	-0.011	-0.400	0.390
-0.165	-1.337	0.390	0.553	-0.163
-0.866	-0.609	0.353	-0.352	0.705
0.280	0.340	-0.229	0.123	-0.352
0.351	0.694	-0.285	-0.829	0.544
-0.600	-0.794	-0.099	0.036	-0.135
1.947	1.652	0.229	-0.066	0.295
1.561	2.156	-0.059	0.036	-0.095
0.328	-0.681	0.274	0.489	-0.215
-2.726	-2.721	-0.092	0.418	-0.510
-2.717	-2.384	-0.079	-0.346	0.267
0.350	0.096	0.187	0.579	-0.392
1.571	0.287	0.166	0.721	-0.555
1.428	0.733	0.464	0.391	0.073
0.773	1.424	-0.335	-0.629	0.294
0.974	0.083	-0.578	-0.439	-0.139
-2.333	-1.791	-0.378	-0.112	-0.266
-1.588	-1.517	0.100	0.494	-0.394
-1.838	-0.237	-0.567	0.419	-0.986
0.352	0.519	0.307	0.037	0.270
1.628	0.533	0.451	0.087	0.364
1.243	0.894	0.224	1.399	-1.175
-0.821	-0.330	0.074	-0.209	0.283
2.704	1.775	0.638	0.568	0.070
-1.038	-1.262	-0.260	-0.076	-0.184
-0.766	-0.353	0.155	-0.336	0.491
-2.103	-1.652	0.664	0.115	0.549
-2.155	-1.204	0.299	0.151	0.148
-1.461	-2.111	-0.241	0.419	-0.661
-0.491	-0.102	-0.189	-0.477	0.287
-0.645	-0.506	-0.418	-0.288	-0.130

-0.608	-1.371	0.323	0.410	-0.087
2.052	1.223	0.057	-0.251	0.309
2.037	2.101	-0.710	-0.969	0.259
0.482	-0.149	-0.326	-0.466	0.139
0.042	0.345	0.719	0.158	0.561
1.296	0.502	-0.597	-0.123	-0.474
1.963	0.730	0.191	0.294	-0.104
1.187	0.781	0.128	0.056	0.072
0.361	1.066	0.028	-0.705	0.733
-1.216	-0.629	-0.857	-0.923	0.066
-1.095	-1.678	-0.096	0.649	-0.746
-1.116	-1.498	-0.344	-0.294	-0.050
1.117	0.187	0.209	0.098	0.111
0.904	-0.614	-0.263	-0.337	0.074
-0.406	-0.184	-0.792	-0.402	-0.390
1.781	1.123	0.284	0.549	-0.265
1.533	0.391	-0.670	-0.688	0.018
-1.055	-0.425	-0.269	-0.845	0.575
-0.939	-0.712	0.273	-0.243	0.516
0.330	0.163	0.744	-0.297	1.041
-1.491	-1.182	-0.216	-0.466	0.250
-0.005	-0.654	-0.002	-0.380	0.378
-0.703	-0.035	0.235	-0.287	0.523
2.057	0.265	-0.439	0.039	-0.477
-0.067	0.751	-0.241	-0.705	0.464
2.017	1.017	-0.472	0.009	-0.481
-0.194	-1.092	0.029	0.229	-0.200
1.058	0.416	0.245	0.428	-0.184
1.168	0.815	0.330	0.601	-0.271
-0.819	-1.356	-0.247	0.739	-0.986
0.616	-0.440	0.209	0.229	-0.020
0.601	0.839	0.159	0.225	-0.066
-1.276	-1.403	-0.214	0.126	-0.340
-0.200	-0.686	0.464	0.515	-0.052
-1.490	-2.322	-0.103	0.106	-0.209
-1.471	-0.587	-0.179	-0.654	0.475
-0.708	-0.362	0.383	-0.665	1.048
-0.688	-0.965	-0.096	0.197	-0.293
-1.571	-1.458	0.976	-0.109	1.085
0.964	-0.264	-0.457	0.149	-0.606
0.371	-0.256	-0.137	-0.106	-0.030
-1.747	-1.177	-0.007	-0.250	0.243
2.129	1.803	0.086	0.075	0.010
1.900	1.554	0.610	0.382	0.227
0.458	0.944	0.056	0.266	-0.210
3.650	2.430	0.120	-0.221	0.341
2.419	2.646	0.353	-0.596	0.949
-1.448	-0.434	0.028	0.077	-0.049
-0.445	-1.129	0.516	-0.267	0.783
-1.169	-0.647	0.301	0.529	-0.228
0.088	-0.085	0.400	0.030	0.370



0.416	1.056	0.423	0.157	0.266
-2.477	-1.951	0.240	0.618	-0.378
-0.187	-0.263	0.046	0.587	-0.541
-1.381	-2.186	0.119	0.419	-0.300
-1.274	-1.186	0.136	0.365	-0.229
-2.502	-2.501	0.531	0.040	0.492
-0.086	0.248	-0.048	-0.078	0.030
-2.874	-2.666	0.476	-0.002	0.478
1.069	1.683	0.679	-0.585	1.265
-1.033	-1.166	0.419	0.282	0.137
0.095	-0.105	0.307	0.695	-0.388
-3.240	-2.509	-0.258	-0.648	0.390
-0.225	-0.942	0.714	0.078	0.636
2.048	1.344	0.280	0.380	-0.100
1.995	1.651	0.182	0.077	0.105
1.626	2.433	0.843	0.954	-0.111
-0.888	-0.984	-0.019	-0.037	0.017
0.270	0.420	0.348	0.011	0.337
-0.772	-1.746	0.497	0.500	-0.003
-2.035	-1.464	0.537	0.017	0.520
-0.625	-1.032	-0.184	0.313	-0.496
-1.312	-1.787	0.401	0.966	-0.565
-2.198	-1.734	0.171	0.077	0.094
0.828	-0.197	0.016	0.809	-0.792
-1.442	0.456	-0.013	-0.841	0.828
-2.078	-0.148	-0.205	-0.640	0.435
-2.928	-2.680	0.217	-0.395	0.612
0.720	-0.183	0.251	-0.275	0.526
2.431	0.944	0.323	0.175	0.147
1.281	1.019	-1.306	-0.806	-0.500
-0.278	-0.543	-0.613	-0.474	-0.139
0.812	0.363	-0.141	-0.416	0.275
-1.531	-1.147	0.281	0.347	-0.066
0.079	0.228	-0.508	-0.184	-0.324
0.198	0.326	0.053	-0.136	0.189
-1.376	-1.110	0.299	-0.215	0.514
-0.503	-1.177	0.082	-0.456	0.537
2.337	2.447	-0.372	-1.108	0.737
0.127	-0.149	-0.289	0.465	-0.754
-1.099	-1.427	0.499	-0.313	0.812
-1.441	-0.699	-0.442	-1.034	0.592
1.290	1.214	-0.315	0.109	-0.424
-0.862	-0.296	0.151	0.164	-0.013
0.953	0.499	-0.018	0.037	-0.055
-1.789	-1.773	-0.138	-0.606	0.468
0.246	-0.263	-1.534	-1.107	-0.427
0.994	0.487	-0.315	0.135	-0.449
0.935	1.069	0.172	-0.645	0.817
-0.213	-0.780	-1.006	0.375	-1.381
0.117	-0.367	-0.969	-0.260	-0.708
0.799	-0.891	0.104	0.231	-0.127

-1.346	-0.999	0.438	0.051	0.387
0.755	0.944	0.030	0.122	-0.092
-0.122	-0.835	-0.574	-0.578	0.005
-1.691	-0.662	0.595	-0.523	1.117
-1.712	-2.784	-0.028	-0.170	0.142
-1.633	-1.068	-0.495	-0.843	0.349
-1.652	-1.907	0.351	-0.153	0.504
-1.933	-1.808	-0.063	-1.020	0.957
1.165	0.319	-0.220	0.296	-0.516
-0.270	0.569	0.415	-0.343	0.757
-0.915	-0.549	1.048	-0.435	1.483
-0.433	-0.457	0.102	-0.736	0.838
-1.135	-0.718	0.013	-0.292	0.305
1.662	1.925	0.085	-0.284	0.369
-0.923	-0.700	-0.637	-0.414	-0.223
-0.695	-0.374	0.182	-0.029	0.211
-0.784	0.719	0.239	-0.059	0.298
1.877	0.937	0.275	0.592	-0.317
-0.739	-0.359	-0.397	0.019	-0.416
1.980	1.460	0.317	0.120	0.197
1.164	0.764	0.553	0.355	0.199
0.513	1.439	-0.424	-0.722	0.298
-2.480	-2.283	-0.118	-0.446	0.329
-0.740	-0.334	-0.071	-0.129	0.057
-1.088	-1.259	0.419	0.532	-0.112
-1.206	-0.881	0.346	-0.126	0.471
-0.765	-1.317	0.311	0.134	0.178
-1.598	-1.607	0.033	-0.172	0.204
-0.913	-1.081	0.714	-0.080	0.795
-2.430	-3.024	-0.298	-0.291	-0.007
-1.805	-0.912	0.362	-0.866	1.228
-0.255	-0.436	-0.283	-0.124	-0.159
0.314	0.055	0.842	1.107	-0.266
0.200	-0.769	0.105	0.260	-0.155
1.305	0.668	-0.106	-0.070	-0.036
-1.463	-0.591	0.306	-0.211	0.517
-1.047	-1.185	-0.323	-0.096	-0.226
1.949	0.971	-0.793	0.054	-0.847
-2.528	-2.108	-0.380	-0.401	0.022
-0.166	-0.100	0.001	-0.155	0.155
-0.833	-0.815	0.643	-0.103	0.746
-0.974	-0.155	0.145	-0.295	0.440
2.293	2.387	0.068	0.092	-0.024
1.326	0.612	0.581	0.426	0.155
-0.268	0.647	0.196	-0.472	0.668
-0.973	-1.276	0.606	-0.088	0.693
1.736	1.819	0.406	-0.054	0.460
-0.934	-0.290	-0.156	-0.457	0.301
-0.885	-0.610	0.264	-0.570	0.834
1.335	0.712	-1.017	-0.793	-0.224
-3.065	-1.847	0.277	-0.062	0.339

-1.268	-0.932	0.220	-0.269	0.490
-0.888	-0.442	0.265	-0.022	0.288
-0.077	0.517	0.316	-0.386	0.702
-1.699	-1.301	-0.047	0.453	-0.499
-3.167	-2.934	-0.040	-0.273	0.233
2.683	3.036	-0.815	-0.893	0.078
1.905	1.322	-0.751	-0.124	-0.627
1.038	1.517	0.203	0.231	-0.028
0.642	-0.595	-0.207	0.192	-0.398
-2.249	-1.835	0.305	-0.316	0.621
-1.594	-1.164	0.327	-1.423	1.750
1.355	1.284	0.117	-0.501	0.618
0.700	2.246	0.030	-0.818	0.849
-0.778	-1.397	0.318	0.174	0.144
-1.683	-1.108	0.275	-0.213	0.488
1.123	0.829	0.032	0.019	0.013
1.210	2.273	-0.933	-1.490	0.557
-0.633	-0.402	0.692	0.038	0.655
-0.353	-0.362	0.147	0.314	-0.167
-0.360	0.145	0.415	0.195	0.220
1.090	1.305	-0.233	-0.198	-0.035
2.136	1.598	0.386	0.337	0.049
2.474	0.626	0.198	0.502	-0.303
0.948	0.303	0.258	0.875	-0.617
-1.421	-1.086	0.115	-0.636	0.751
-0.113	0.654	0.105	-0.438	0.543
-1.324	-0.434	-0.160	-0.304	0.144
1.001	0.530	0.215	0.907	-0.692
-0.698	0.270	0.780	0.416	0.364
-1.659	-0.595	-0.400	-0.550	0.150
1.515	1.087	-0.352	-0.332	-0.020
-0.898	-0.128	-0.218	-0.547	0.329
0.508	-0.566	-1.116	-0.407	-0.709
-2.676	-2.871	0.347	-0.050	0.397
-0.599	-0.805	0.484	0.321	0.163
-0.162	-1.339	0.307	0.150	0.157
2.526	2.479	0.178	0.320	-0.142
0.646	0.549	0.567	-0.503	1.070
1.306	1.365	0.685	0.138	0.547
0.309	-0.250	0.098	0.025	0.074
2.520	1.424	0.582	0.637	-0.055
1.426	0.281	-0.266	0.300	-0.565
-1.610	-0.706	-0.276	-1.135	0.859
2.508	1.220	0.283	0.284	-0.002
1.819	1.627	0.453	-0.093	0.546
0.604	0.345	0.082	-0.080	0.162
1.619	0.608	-1.063	-0.635	-0.429
-0.643	-0.448	-0.136	-0.413	0.277
2.748	-4.911	-0.169	-1.630	1.461
-1.017	-0.771	0.072	-0.286	0.358
-1.665	-1.389	0.365	-0.623	0.988

-1.199	-1.483	0.037	-0.033	0.070
-1.943	-1.618	0.691	-1.104	1.794
-1.642	-0.658	-0.031	0.513	-0.544
1.011	0.688	0.361	0.202	0.159
-1.841	-1.414	-0.388	-0.522	0.134
1.665	0.652	0.269	0.040	0.229
-1.392	-0.908	-0.318	-0.237	-0.081
1.144	1.165	0.571	0.277	0.295
2.158	1.586	0.146	0.484	-0.338
0.080	0.795	-0.398	-0.248	-0.150
-1.014	-1.134	-0.089	-0.533	0.445
-2.476	-2.577	0.144	0.013	0.131
0.810	0.968	-0.192	-0.215	0.024
-1.056	-0.696	-0.260	-0.303	0.044
-1.297	-0.335	-0.110	-0.752	0.643
0.268	-1.196	0.052	0.430	-0.378
0.323	-0.371	-0.543	-0.657	0.113
1.110	1.260	-0.312	-1.020	0.708
-1.715	-2.281	0.036	0.270	-0.234
3.290	2.863	0.557	0.414	0.143
0.581	-0.473	0.072	0.292	-0.220
-0.671	-1.523	0.071	0.002	0.069
2.385	1.544	-0.789	-0.569	-0.220
1.241	1.174	0.222	0.501	-0.280
1.823	1.364	0.507	0.211	0.296
-0.236	-0.346	0.092	-0.023	0.115
1.685	1.127	-0.532	0.095	-0.627
0.201	0.310	-0.007	-0.619	0.612
-3.017	-2.491	0.050	-0.328	0.378
1.634	1.377	0.181	0.203	-0.022
1.785	0.832	0.236	0.214	0.022
-0.273	-1.101	0.109	-0.160	0.270
-3.395	-3.094	-0.187	-0.185	-0.001
2.243	1.478	-0.320	-0.267	-0.053
1.111	1.323	-0.478	-0.038	-0.440
-2.057	-1.211	0.582	-0.334	0.916
2.267	1.475	0.196	0.074	0.122
0.645	0.304	0.063	-0.030	0.093
-1.106	-1.806	-0.096	0.081	-0.178
-0.204	-0.404	0.458	0.583	-0.125
-0.420	-0.461	-0.436	-0.384	-0.052
1.561	1.334	0.184	0.120	0.063
-1.460	-1.183	0.139	-0.031	0.170
-0.545	-0.473	0.816	-0.391	1.207
0.113	0.022	0.048	0.203	-0.154
1.910	2.078	-0.446	-0.122	-0.324
2.766	1.459	-0.075	-0.161	0.087
2.144	0.834	0.278	0.683	-0.405
-1.085	-0.012	0.109	-0.331	0.440
1.337	1.548	0.125	0.746	-0.621
-0.123	0.108	0.378	-0.035	0.413

2.169	2.629	0.352	-0.300	0.652
-1.243	-0.750	-0.128	-0.343	0.215
1.312	0.914	0.169	0.116	0.053
0.050	-0.756	0.774	0.553	0.221
1.546	0.775	-0.281	0.079	-0.360
-0.686	0.052	0.442	0.233	0.209
0.379	0.419	0.183	-0.346	0.528
-1.842	-0.938	-0.591	-0.867	0.275
0.614	0.303	0.392	0.392	0.000
-0.822	-0.187	0.164	-0.175	0.339
0.063	0.104	0.336	-0.070	0.406
-0.014	-0.421	0.305	0.512	-0.207
-0.068	-0.103	0.744	-0.510	1.254
1.648	0.729	-0.259	0.114	-0.373
-2.305	-1.796	-0.452	-0.536	0.084
0.744	-0.014	0.185	0.263	-0.078
1.441	1.271	0.259	0.264	-0.005
-1.372	-1.766	0.209	0.428	-0.219
-1.396	-1.198	0.034	-0.427	0.461
0.347	1.550	0.258	-0.727	0.985
-1.932	-1.782	-0.268	0.025	-0.292
1.210	0.722	-0.287	0.473	-0.760
-0.144	0.094	-0.009	0.377	-0.386
-0.542	-0.199	0.147	0.428	-0.281
-1.799	-0.919	0.057	-0.570	0.627
-4.361	-3.833	-0.289	-0.800	0.512
2.037	2.187	-0.267	-0.180	-0.087
1.814	0.602	0.522	0.021	0.500
-2.680	-1.651	0.299	-0.134	0.433
0.388	0.271	0.500	0.305	0.195
-1.911	-2.129	-0.189	0.256	-0.445
-2.458	-2.555	0.031	-0.268	0.298
-1.417	-1.228	0.122	-0.319	0.440
-0.663	-0.210	-0.046	-0.168	0.122
-0.822	-1.698	-0.032	0.515	-0.546
-1.892	-1.948	0.317	0.664	-0.347
-1.084	-1.629	0.419	0.790	-0.372
-2.194	-2.300	-0.034	-0.421	0.387
-2.339	-2.315	0.114	0.247	-0.133
-0.710	-1.066	0.662	0.400	0.262
-0.488	-0.523	1.514	0.710	0.805
-1.233	-1.450	-0.724	-0.603	-0.121
-2.760	-1.976	-0.169	0.758	-0.927
-2.270	-2.037	-0.072	0.191	-0.263
-3.684	-3.013	0.385	-0.405	0.790
-3.255	-2.553	0.628	0.139	0.489
-1.247	-0.940	0.133	-0.589	0.722
-1.635	-1.310	-0.453	0.255	-0.708
1.234	1.491	0.895	-0.744	1.640
-3.541	-2.651	0.118	0.276	-0.159
-2.922	-2.779	0.129	0.208	-0.079

-1.808	-2.323	-0.171	-0.524	0.353
-3.034	-2.446	-0.079	-0.210	0.131
-3.185	-2.409	0.243	0.261	-0.018
-3.202	-2.728	0.000	0.858	-0.859
-3.376	-2.833	-0.177	0.849	-1.026
-2.489	-2.284	-0.979	-0.783	-0.196
-3.779	-3.462	0.032	-0.304	0.336
-3.032	-2.808	0.368	0.079	0.289
-3.583	-3.210	0.155	0.325	-0.170
-4.150	-3.439	0.010	1.154	-1.144
-2.931	-2.370	0.091	0.693	-0.602
-2.629	-2.409	0.026	0.115	-0.090
-3.023	-2.300	-0.037	-0.109	0.072
-2.571	0.539	-0.094	-1.155	1.061
-1.893	-1.259	0.185	0.948	-0.763
-1.786	-1.249	0.078	0.569	-0.491
-2.141	-2.000	0.229	0.305	-0.076
-2.235	-1.927	0.101	-0.382	0.483
-3.187	-2.837	0.016	0.692	-0.675
-4.540	-4.035	0.102	0.574	-0.471
-3.678	-3.019	-0.065	0.052	-0.118
-2.705	-2.799	0.324	0.081	0.244
-4.047	-3.279	-0.295	-0.201	-0.094
-1.419	-0.416	-0.333	1.151	-1.484
-3.136	-2.256	-0.240	0.133	-0.373
-3.170	-2.611	0.076	-0.493	0.569
-3.002	-2.324	-0.161	-0.341	0.180
-2.210	-2.006	-0.194	0.037	-0.231
-2.176	-1.250	-0.265	0.565	-0.831
-0.146	0.364	0.389	-0.522	0.911
-3.277	-2.899	0.390	1.141	-0.752
-2.476	-2.209	0.279	0.609	-0.330
-2.515	-2.011	0.186	0.755	-0.569
-2.613	-1.769	-0.329	0.083	-0.411
-1.844	-1.680	-0.162	-0.339	0.176
-2.317	-2.494	-0.205	0.293	-0.498
-4.073	-2.327	0.300	0.538	-0.238
-3.611	-0.410	0.171	-0.345	0.515
-1.366	-1.472	-0.180	-0.124	-0.056
1.087	-0.224	-0.724	-0.393	-0.331
1.903	1.690	0.002	-0.067	0.069
1.697	2.223	0.142	-0.500	0.642
0.169	0.230	0.039	-1.124	1.163
-0.952	-1.049	-0.234	-0.415	0.182
1.831	1.472	0.424	-0.136	0.559
-2.053	-1.992	0.412	0.291	0.121
-1.173	-2.016	-1.097	-0.518	-0.579
1.285	1.068	0.304	-0.061	0.365
1.208	1.350	0.097	0.328	-0.231
-3.267	-2.801	-0.252	-0.269	0.017
-3.633	-2.633	-0.312	0.623	-0.934

-3.809	-3.392	0.203	0.107	0.095
-3.588	-3.117	0.043	-0.449	0.493
-3.402	-2.642	0.044	-0.124	0.168
-3.669	-3.077	0.331	1.328	-0.997
-3.239	-2.780	0.154	-0.512	0.667
-3.363	-2.745	0.002	1.051	-1.049
-3.059	-2.482	0.124	-0.642	0.766
-1.865	-1.265	0.512	-0.948	1.461
-2.819	-2.331	-0.060	0.092	-0.152
-4.077	-3.583	0.097	-1.134	1.231
-3.189	-2.755	-0.881	0.193	-1.074
-2.283	-1.524	-0.320	0.519	-0.839
-2.579	-1.957	0.268	-0.338	0.607
-3.170	-2.936	-1.129	0.535	-1.664
-1.943	-1.674	0.192	0.953	-0.761
-3.949	-3.834	0.216	0.094	0.123
-4.392	-2.303	0.649	0.712	-0.063
-3.459	-3.001	0.268	-0.109	0.377
-3.883	-3.447	0.255	0.281	-0.025
-2.161	-1.674	-0.213	1.068	-1.281
-2.595	-2.154	-0.236	-0.177	-0.059
-2.897	-2.467	-0.033	-0.199	0.165
0.265	0.736	0.157	-0.092	0.249
0.793	0.042	-0.409	0.274	-0.683
-2.009	-1.452	-0.417	-0.942	0.525
1.039	0.290	0.279	0.440	-0.162
1.885	1.179	0.814	0.802	0.012
-2.356	-1.697	-0.009	-0.279	0.270
2.508	1.361	0.462	0.676	-0.214
-2.177	-1.894	-0.056	0.588	-0.644
-3.151	-2.699	0.042	0.854	-0.812
-3.211	-2.618	-0.201	0.008	-0.209
0.911	1.244	-0.172	-0.485	0.313
0.300	0.814	0.004	-0.404	0.408
1.712	1.971	0.122	-0.184	0.305
-2.329	-1.801	-0.123	-0.554	0.431
1.744	1.632	0.284	-0.277	0.561
0.566	-0.237	0.007	-0.245	0.252
2.330	2.116	0.039	-0.124	0.163
0.035	-0.020	0.202	-0.260	0.462
3.256	3.255	0.047	0.298	-0.251
-2.269	-1.366	-0.631	-1.349	0.718
-1.364	-1.569	-0.350	0.336	-0.687
-1.926	-0.573	-0.402	0.508	-0.910
1.636	1.898	-0.488	-0.337	-0.151
0.638	0.016	0.332	0.368	-0.036
-0.983	-1.419	-0.242	0.211	-0.453
0.395	-1.296	-0.132	-0.042	-0.090
0.932	0.302	0.147	0.401	-0.253
-0.119	0.188	-0.319	-0.765	0.446
-0.495	0.158	0.207	-0.516	0.723

-0.256	0.000	0.297	0.599	-0.302
-2.091	-2.211	-0.355	0.104	-0.458
1.310	1.077	-0.820	-0.168	-0.652
-0.057	0.195	0.159	-0.062	0.222
-0.742	-0.206	-0.021	-0.121	0.101
-0.788	-0.429	0.202	-0.052	0.253
0.544	1.089	-0.034	-0.294	0.259
-3.236	-2.413	-0.245	-0.215	-0.030
-0.651	1.216	0.107	-0.342	0.449
1.382	1.455	0.095	-0.270	0.365
2.555	1.202	0.738	0.466	0.272
1.539	1.267	0.254	0.005	0.249
-0.619	-0.030	-0.107	0.426	-0.533
0.433	0.544	0.699	-0.214	0.914
-2.290	-2.527	0.044	0.617	-0.573
-2.887	-2.979	0.342	0.956	-0.614
0.328	-0.086	0.193	-0.069	0.262
2.776	2.307	-0.943	-0.772	-0.170
-2.915	-2.936	-0.044	-0.015	-0.030
-3.406	-1.563	0.230	0.478	-0.248
-1.557	-1.225	-0.160	-0.301	0.142
-1.353	-1.497	-0.069	-0.305	0.236
-0.739	-0.724	0.141	-0.008	0.148
0.249	0.378	0.129	-0.080	0.210
0.303	-0.364	0.010	0.452	-0.442
-0.389	-0.030	-0.223	-0.908	0.684
-1.722	-2.016	-0.168	0.060	-0.229
-0.636	0.021	-0.374	-0.760	0.387
0.166	0.034	0.345	0.434	-0.089
1.571	2.177	0.129	-1.088	1.217
-0.371	1.606	-0.187	-0.483	0.296
1.105	0.252	0.335	0.209	0.126
-1.743	-1.479	-0.301	-0.178	-0.123
-1.408	-2.025	0.247	0.218	0.029
-0.289	-0.211	0.049	-0.221	0.270
2.168	2.039	0.393	0.347	0.046
-1.427	-1.175	0.542	-0.324	0.865
1.128	1.743	-0.140	0.077	-0.217
-2.079	-1.572	0.124	0.070	0.054
-2.409	-1.920	0.301	0.040	0.261
-3.906	-3.596	-0.103	0.285	-0.388
2.730	2.288	0.202	0.068	0.134
0.049	0.127	-0.223	-0.637	0.414
0.391	0.513	-0.444	-0.504	0.060
0.896	1.505	0.203	-0.119	0.321
0.365	0.540	-0.124	-0.230	0.107
0.855	0.525	0.221	0.313	-0.092
-0.316	-0.968	-0.155	0.293	-0.448
-3.501	-2.274	-0.377	-0.725	0.348
-4.046	-1.750	-0.225	-0.144	-0.081
-3.560	-2.705	0.089	-0.503	0.592



-2.229	-2.029	0.125	0.014	0.111
-1.803	-1.508	0.013	-0.316	0.329
-3.320	-2.245	-0.904	-0.482	-0.421
-4.673	-3.907	-0.426	-1.300	0.874
-1.894	-1.475	-1.078	-1.476	0.398
1.925	1.426	0.315	0.453	-0.138
1.032	1.262	0.101	-0.524	0.625
-1.809	-1.137	1.459	0.569	0.891
-1.402	-0.517	0.194	0.057	0.138
-0.481	0.612	0.375	-0.546	0.921
0.647	0.084	-0.010	0.075	-0.085
2.465	1.411	0.194	0.362	-0.168
-1.444	-1.179	-0.136	0.118	-0.254
-2.141	-0.534	-0.037	0.305	-0.342
-2.204	-0.534	-0.141	-0.092	-0.049
-1.981	-0.654	-0.029	-0.825	0.796
-1.754	-0.728	-0.044	-0.515	0.471
0.934	1.120	-0.177	-0.587	0.411
1.482	1.428	0.364	0.274	0.089
-1.217	-0.490	-0.549	-0.201	-0.348
2.114	0.838	0.024	-0.138	0.162
-0.761	-1.222	0.015	0.256	-0.241
-1.945	-1.639	0.280	-0.031	0.310
0.227	1.418	0.148	0.484	-0.336
-3.331	-2.798	0.257	-0.114	0.371
-0.790	-0.877	-0.332	-0.024	-0.308
0.071	0.747	0.357	-0.233	0.590
0.483	0.315	0.740	0.057	0.683
0.791	1.140	0.220	0.429	-0.209
0.522	-0.310	0.068	0.199	-0.132
0.383	-0.240	0.133	-0.261	0.393
-2.288	-1.863	0.233	0.397	-0.165
-0.315	0.056	0.257	-0.235	0.492
-1.642	-1.493	0.259	0.304	-0.046
-2.327	-1.381	0.105	-0.116	0.221
0.374	0.338	0.294	-0.139	0.432
1.340	1.027	0.118	-0.007	0.126
-2.072	-2.703	0.346	0.667	-0.321
-1.575	-1.831	0.570	-0.860	1.430
-0.999	-0.366	0.533	-0.309	0.842
1.823	1.219	0.050	-0.140	0.190
1.224	1.235	0.174	0.037	0.137
1.108	1.141	0.010	-0.322	0.331
-2.194	-2.269	0.217	0.494	-0.276
-1.506	-1.371	0.037	0.206	-0.169
-1.424	-0.637	0.167	-0.300	0.467
1.496	0.372	0.169	0.195	-0.026
0.606	-0.011	0.289	0.116	0.173
-0.760	-0.114	-0.147	-0.587	0.439
0.053	-0.922	0.539	0.509	0.031
0.429	2.240	0.020	-0.245	0.264

0.952	0.010	0.479	0.752	-0.273
0.417	0.943	-0.210	-0.333	0.123
1.814	1.419	0.141	0.314	-0.173
0.292	-0.614	0.271	0.022	0.249
-0.060	-1.434	0.017	-0.029	0.046
-3.060	-2.658	-0.420	-0.456	0.036
-2.243	-1.872	-0.447	-0.626	0.179
-1.602	-0.448	0.175	-0.609	0.784
-1.865	-1.310	-0.325	-0.404	0.080
-0.997	0.243	0.398	-1.281	1.680
-1.370	-0.578	-0.082	-0.264	0.181
-0.151	-0.637	0.405	0.053	0.352
1.368	2.047	-0.368	-0.160	-0.209
-0.078	0.754	-0.515	-0.161	-0.354
-0.019	-0.362	-0.147	0.238	-0.385
-1.714	-1.913	-0.134	-0.189	0.055
-0.876	-0.853	-0.085	0.589	-0.674
-0.354	-0.849	-0.037	-0.244	0.206
-2.111	-2.603	-0.169	0.067	-0.236
1.554	1.162	0.002	-0.024	0.025
-0.709	-0.746	0.196	0.412	-0.216
-0.637	-0.137	0.110	-0.208	0.318
0.191	-1.011	-1.492	-0.978	-0.515
0.387	-0.876	-1.267	-0.359	-0.908
-1.730	-0.972	0.120	-0.461	0.581
1.632	1.404	0.114	0.081	0.033
-1.913	-2.437	0.515	-0.169	0.684
-1.074	-1.309	0.365	0.055	0.309
-1.439	-1.304	-0.323	0.216	-0.539
-1.016	-0.346	0.068	-0.171	0.239
-0.391	-0.552	-0.607	-0.282	-0.325
-1.531	-1.288	0.009	-0.645	0.655
-0.943	-1.329	0.183	0.231	-0.048
-1.964	-0.771	0.061	-0.545	0.606
2.033	0.528	0.224	0.937	-0.713
1.912	1.621	0.090	0.067	0.024
-0.518	-1.166	0.123	0.794	-0.672
1.282	1.450	-0.401	-0.494	0.093
0.180	-0.688	0.290	-0.005	0.295
0.889	1.063	0.103	0.040	0.063
-0.254	-0.086	-0.019	-0.460	0.441
-0.269	-1.059	-0.362	-0.009	-0.353
-0.306	0.158	0.074	-0.085	0.159
-1.136	-1.230	0.242	0.103	0.138
2.306	2.064	0.300	0.171	0.129
-0.100	0.968	-0.014	-1.106	1.091
-0.184	0.550	0.011	-0.757	0.768
-1.022	-0.719	-0.005	0.651	-0.655
2.360	2.531	0.237	-0.840	1.077
1.964	2.008	0.524	0.075	0.448
-0.634	-0.188	1.014	-0.197	1.211

-0.272	0.018	-0.514	-0.245	-0.270
-0.065	-0.019	0.450	-0.042	0.492
-1.878	-1.920	0.065	-0.569	0.634
-2.073	-2.045	-0.041	0.173	-0.214
-3.038	-2.851	0.634	0.465	0.170
-0.840	-0.962	-0.229	-0.173	-0.056
-2.881	-2.411	-0.233	0.090	-0.323
-3.764	-3.193	-0.411	-0.116	-0.295
-1.618	-1.252	-0.317	-0.149	-0.168
-0.375	0.423	-0.497	-0.213	-0.284
-0.778	-0.770	0.333	0.025	0.308
-0.597	-0.390	0.065	0.023	0.042
1.737	1.997	0.191	0.209	-0.018
1.685	1.265	0.432	0.158	0.274
-1.809	-1.988	-0.574	-0.852	0.278
-0.005	-0.424	0.044	0.135	-0.091
0.627	-0.405	-1.016	-0.408	-0.608
-0.461	-0.886	0.124	0.305	-0.181
1.337	0.045	0.028	0.375	-0.347
1.077	0.297	0.313	0.326	-0.013
1.269	0.858	0.372	0.602	-0.230
-0.761	-0.685	0.048	0.220	-0.173
0.713	0.009	-0.326	-0.167	-0.159
-0.789	-0.682	-0.393	0.026	-0.419
1.286	1.348	-0.368	-0.028	-0.340
-1.597	-1.477	0.994	0.466	0.528
-2.500	-1.919	-0.226	0.062	-0.288
-3.000	-2.878	-0.146	-0.985	0.839
-1.229	-1.321	0.305	0.409	-0.105
-2.589	-2.159	-0.123	0.895	-1.017
-0.260	-0.226	0.455	0.339	0.116
1.013	0.066	0.329	0.579	-0.250
0.318	0.323	0.064	-0.145	0.209
-0.690	-1.244	0.084	-0.148	0.232
1.808	0.790	-0.060	0.594	-0.654
1.307	0.939	-0.326	0.142	-0.468
-1.532	-1.339	-0.109	-0.199	0.089
-3.582	-3.078	-0.040	-0.168	0.128
-3.324	-2.948	-0.122	-1.205	1.083
-1.432	-0.990	0.053	-0.397	0.451
2.505	2.079	-0.076	0.132	-0.208
-2.234	-2.944	0.295	0.466	-0.172
-0.164	0.476	0.058	0.073	-0.015
1.707	0.728	0.092	0.526	-0.434
-0.042	0.386	0.237	-0.303	0.540
1.012	1.388	0.470	0.032	0.438
0.720	0.815	0.017	-0.288	0.305
0.891	1.383	0.186	0.040	0.146
2.137	1.455	0.261	0.509	-0.248
1.928	0.734	-0.232	-0.019	-0.214
0.804	0.361	0.543	0.100	0.443

2.072	1.115	0.411	-0.210	0.621
-0.744	-1.310	0.267	0.175	0.092
-0.013	-0.925	0.288	0.043	0.245
2.751	2.378	0.565	0.139	0.426
-3.534	-3.563	-0.223	-0.214	-0.010
0.006	0.157	-0.061	-0.003	-0.058
2.396	2.359	0.344	0.020	0.324
-1.476	-0.070	-0.266	-0.410	0.144
1.399	0.306	-0.088	0.118	-0.206
0.273	-0.930	-0.082	-0.028	-0.054
0.701	-0.447	-0.962	0.056	-1.018
-0.151	-0.772	0.224	0.513	-0.289
-1.959	-1.580	-0.568	-0.281	-0.287
-1.559	-1.425	-0.238	-0.002	-0.236
-2.753	-2.967	0.274	0.795	-0.521
0.151	0.177	0.232	0.289	-0.057
-1.011	-0.222	-0.091	-0.306	0.215
-3.267	-2.769	0.659	-0.514	1.172
1.270	0.691	0.210	0.202	0.009
-0.444	-0.905	0.219	0.851	-0.632
-3.823	-3.055	-0.485	0.032	-0.518
-0.561	-0.546	0.253	-0.267	0.521
-0.789	-1.529	-0.317	0.266	-0.583
-2.931	-2.036	-0.216	-0.518	0.302
-0.518	-0.990	-1.066	-0.435	-0.632
-1.108	-1.655	-0.111	-1.066	0.955
-0.612	-0.630	0.379	-0.333	0.712
-1.845	-1.437	0.278	-0.174	0.452
1.016	0.661	-0.779	-0.477	-0.302
-1.030	-0.560	-0.136	0.001	-0.138
-0.561	0.045	-2.381	-0.315	-2.065
-0.610	-1.167	-0.803	0.204	-1.008
2.321	3.103	0.360	-0.861	1.221
2.355	1.871	0.489	-0.134	0.623
2.451	2.635	0.598	-0.298	0.896
1.991	1.050	-0.594	-0.128	-0.466
0.723	0.086	0.661	0.232	0.429
-0.004	0.254	-0.243	-0.448	0.205
2.130	0.378	-0.501	-0.220	-0.281
0.186	-0.194	-0.060	-0.188	0.128
-1.809	-2.251	-0.192	1.111	-1.303
0.126	1.501	0.150	-0.049	0.198
1.327	2.380	0.189	-0.369	0.558
1.265	1.048	0.480	0.622	-0.142
1.365	0.853	0.524	0.048	0.476
-0.458	-0.540	0.718	0.115	0.604
0.930	1.360	0.309	-0.093	0.402
1.233	1.211	0.177	0.070	0.108
0.683	-0.159	-0.244	0.124	-0.369
-0.970	-0.823	-0.351	0.173	-0.524
-0.326	-0.640	-0.367	-0.409	0.041

0.911	1.140	0.167	-0.153	0.321
0.798	0.127	0.230	-0.233	0.463
2.431	2.274	0.260	0.351	-0.090
1.708	1.346	0.493	0.737	-0.244
-1.554	-0.743	-0.280	-0.083	-0.197
-1.508	-0.012	0.124	-0.233	0.358
-1.966	-0.809	0.007	0.323	-0.316
-3.790	-1.976	-0.215	-0.737	0.522
-2.092	-2.293	0.117	0.444	-0.326
1.274	0.379	0.444	0.688	-0.244
-2.172	-1.821	-0.655	-0.291	-0.364
-2.535	-1.468	-0.085	-0.077	-0.008
0.245	0.626	0.503	0.599	-0.096
-1.370	-0.353	0.033	0.199	-0.166
1.247	1.543	-0.155	-1.133	0.977
-0.805	-0.381	0.284	0.093	0.191
1.769	1.468	0.284	0.085	0.199
1.902	1.460	-0.414	-0.178	-0.236
0.778	1.524	0.138	-0.241	0.380
-2.031	-1.474	0.397	0.554	-0.157
-1.053	-1.261	0.141	0.113	0.028
-1.561	-0.137	0.258	-0.047	0.305
-2.589	-2.357	-0.724	-0.668	-0.056
2.079	0.895	-0.212	-0.334	0.122
1.195	0.932	-0.177	-1.034	0.857
-0.304	-1.262	-0.713	-0.430	-0.283
-0.957	-0.905	-0.315	-0.011	-0.304
-2.179	-2.181	-0.408	-0.223	-0.185
-1.934	-2.161	0.375	-0.282	0.657
-1.050	-0.819	-0.518	0.038	-0.555
-0.783	-0.805	0.453	0.371	0.081
-2.038	-2.068	0.086	0.405	-0.318
0.810	0.291	-0.990	-1.060	0.070
3.011	2.086	-0.381	-1.104	0.723
2.235	2.448	0.080	-0.416	0.496
2.986	2.291	0.061	-0.395	0.456
2.516	1.131	-1.127	-0.577	-0.550
-0.713	-0.988	-0.138	0.036	-0.174
-1.261	-1.385	0.753	0.700	0.052
0.239	0.243	-0.841	-0.654	-0.187
1.527	0.726	-0.142	-0.106	-0.036
1.717	2.541	0.179	-0.032	0.210
-0.513	0.222	0.112	-0.381	0.493
-1.181	-0.825	-0.055	-0.646	0.591
-0.879	0.456	0.111	-0.390	0.501
-0.852	-1.977	0.096	0.098	-0.003
-0.956	-0.434	-0.706	-0.374	-0.332
-1.732	-1.301	-0.206	-1.368	1.162
-0.483	-0.026	-0.281	-0.752	0.471
0.416	0.380	-0.404	0.091	-0.495
-1.622	-1.905	-0.957	0.065	-1.021

0.833	-0.296	-0.131	-0.204	0.073
-3.609	-1.996	0.168	-0.511	0.679
-0.269	0.074	0.098	-0.326	0.424
3.007	2.962	-0.850	-0.327	-0.524
0.437	0.489	-0.636	-0.203	-0.433
-0.285	0.296	0.229	0.032	0.197
1.021	0.409	0.277	0.103	0.174
-2.699	-2.117	-0.798	-0.697	-0.101
-1.178	-0.908	-0.567	0.016	-0.583
0.086	-0.358	-0.171	-0.186	0.015
-1.263	-0.604	-0.263	-0.841	0.578
-1.620	-1.137	-0.451	-0.280	-0.172
1.211	1.451	-0.091	0.076	-0.168
1.035	1.350	0.282	0.624	-0.342
2.098	1.624	0.533	0.074	0.459
0.673	0.652	-0.206	0.247	-0.453
1.252	1.768	0.266	-0.123	0.390
-2.281	-1.519	0.177	-0.598	0.775
0.908	1.115	0.184	-0.425	0.610
-0.017	0.207	-0.001	-0.026	0.025
-0.035	-0.467	0.374	0.445	-0.071
-3.291	-1.828	-0.124	0.091	-0.215
-1.337	-0.319	0.588	-0.689	1.277
-2.942	-2.440	-0.647	-0.436	-0.210
-2.369	-1.809	-0.086	-0.591	0.506
-0.883	-0.801	0.195	-0.156	0.351
-1.818	-1.599	-0.131	-0.316	0.185
1.449	0.528	0.082	-0.293	0.375
1.914	2.111	0.214	0.065	0.150
1.228	0.350	0.227	0.649	-0.421
1.683	1.148	0.609	0.637	-0.028
0.448	0.730	0.662	0.000	0.662
2.291	1.871	0.365	0.623	-0.258
0.604	-0.073	-0.130	-0.084	-0.046
2.166	1.894	0.217	-0.047	0.264
2.101	1.972	0.042	-0.468	0.509
-1.294	-0.478	0.177	-0.245	0.422
-1.174	-0.530	0.178	-0.490	0.669
-2.191	-1.281	-0.202	-0.564	0.362
1.648	0.693	-1.062	-1.005	-0.058
1.253	1.244	0.174	0.206	-0.032
1.901	1.971	0.196	0.150	0.046
0.299	-0.545	0.184	-0.342	0.526
-0.387	0.840	-0.002	0.181	-0.183
0.779	1.240	-0.997	-0.702	-0.295
1.483	1.131	0.404	0.555	-0.151
0.010	0.504	-0.173	-0.527	0.355
-0.779	-0.223	0.172	-0.536	0.708
1.592	1.479	0.170	0.172	-0.002
1.794	1.750	0.331	0.464	-0.133
1.191	1.388	-0.070	-0.522	0.452

0.793	-0.026	0.259	0.212	0.047
-2.137	-1.640	0.217	-0.333	0.550
1.109	1.501	0.527	-0.355	0.882
1.532	1.598	0.104	-0.606	0.710
-0.735	-0.812	-0.154	-0.590	0.435
-2.450	-2.003	0.136	-1.039	1.175
0.953	1.231	0.014	-0.133	0.147
-3.312	-2.819	0.067	-0.856	0.923
0.973	0.903	0.603	0.421	0.182
-0.046	1.081	-0.365	-0.533	0.167
2.830	1.648	0.036	0.044	-0.008
1.096	1.440	-0.023	-0.273	0.249
-2.419	-2.653	0.441	-0.547	0.988
-3.072	-3.102	-0.369	0.141	-0.510
-1.004	-1.508	0.694	-0.057	0.751
-0.871	-1.689	0.068	0.269	-0.201
0.919	1.917	-0.773	-0.680	-0.093
2.069	1.147	0.432	0.201	0.231
-0.743	-0.493	0.045	0.337	-0.292
-0.700	-1.327	0.150	0.679	-0.529
-1.805	-1.914	0.049	0.453	-0.404
0.288	-1.384	-0.509	-0.386	-0.123
0.031	-0.203	-0.044	0.434	-0.478
-1.072	-1.024	-0.028	-0.120	0.092
1.796	2.194	0.232	-0.416	0.649
1.544	0.610	-0.747	-0.172	-0.575
1.534	0.105	0.350	0.447	-0.097
0.711	0.612	-0.360	0.097	-0.457
1.087	1.606	-0.428	-0.324	-0.104
-0.097	0.447	1.526	-0.241	1.767
1.438	1.257	-0.420	-0.325	-0.095
2.486	1.400	0.021	0.059	-0.039
0.937	0.248	0.539	-0.371	0.910
0.984	1.056	-0.310	-0.252	-0.058
0.471	0.968	-0.361	-0.312	-0.048
1.259	1.653	0.769	0.065	0.704
1.381	0.251	0.029	0.305	-0.277
1.866	0.967	-0.698	-0.307	-0.390
-0.410	-0.383	-0.263	-0.213	-0.050
-0.144	-0.924	-0.299	-0.194	-0.105
-0.330	0.104	0.055	-0.214	0.269
0.954	0.086	-0.672	-0.249	-0.422
0.530	-0.048	-1.288	-0.181	-1.107
1.038	0.369	0.227	0.661	-0.433
1.036	1.077	-0.303	-0.003	-0.300
0.257	1.038	-0.183	-0.307	0.124
0.510	0.339	-0.119	-0.129	0.010
0.693	0.587	0.335	0.092	0.243
-2.473	-2.073	-0.473	-1.533	1.060
1.539	1.731	0.190	-0.211	0.401
0.208	0.044	0.313	-0.169	0.482

0.980	1.298	0.301	0.217	0.084
0.800	0.506	-0.007	0.099	-0.105
0.642	0.870	-0.593	-0.564	-0.029
-2.612	-1.691	0.143	-0.206	0.349
-2.020	-1.323	-0.117	-0.321	0.205
-2.233	-1.793	-0.316	-0.670	0.355
0.375	-0.056	0.381	0.138	0.243
-0.206	-0.179	0.030	0.184	-0.154
-1.164	-0.782	0.328	0.006	0.322
-0.699	-0.968	0.099	0.242	-0.143
0.719	-0.194	0.183	-0.283	0.466
0.330	0.166	0.457	0.063	0.394
0.483	0.854	-0.241	-0.409	0.168
0.201	0.227	0.115	-0.111	0.226
0.335	0.118	0.537	-0.168	0.706
-2.054	-1.281	0.071	-0.711	0.782
-1.397	-0.096	0.335	-0.426	0.762
1.052	-0.043	-0.161	-0.004	-0.157
0.238	0.366	0.247	-0.334	0.581
-1.211	-1.292	-0.107	-0.419	0.313
1.925	3.494	-0.389	-0.533	0.144
1.649	2.040	-0.272	-0.444	0.172
-1.034	-0.975	0.298	-0.067	0.365
1.826	1.661	-0.366	-0.197	-0.169
1.157	0.034	-0.215	-0.763	0.548
-0.160	-0.341	0.569	0.019	0.550
2.120	0.138	0.267	0.123	0.144
1.771	1.792	-0.319	-0.850	0.531
1.246	1.248	-0.120	0.201	-0.321
-2.220	-1.571	0.185	-0.712	0.897
-0.934	-0.909	-0.074	-0.230	0.156
-0.389	-2.028	-0.519	-0.338	-0.180
-0.896	-0.585	0.296	-0.226	0.522
1.562	1.469	-0.288	-0.564	0.277
0.214	0.572	0.246	-0.172	0.418
0.217	0.194	0.110	0.520	-0.411
-0.482	-1.102	0.026	0.610	-0.584
-0.897	-0.260	-0.462	-0.421	-0.041
0.407	0.552	0.339	-0.346	0.685
3.213	1.446	-0.200	-0.011	-0.189
-2.068	-1.684	0.132	-0.181	0.313
-0.211	-0.096	0.029	-0.935	0.964
0.400	0.333	-0.215	-0.164	-0.051
-0.742	0.025	-0.159	0.141	-0.299
-2.104	-1.488	0.020	-0.465	0.485
-1.551	-1.137	-0.412	-0.168	-0.244
-0.017	1.130	-0.172	-0.303	0.130
0.162	0.876	-0.773	0.055	-0.828
-0.578	-0.124	-0.137	-0.390	0.253
0.534	-0.256	-0.219	-0.529	0.310
1.500	0.947	-0.083	0.552	-0.635



-2.656	-2.026	0.153	-1.022	1.175
1.251	1.534	0.319	-0.017	0.336
-0.746	-0.266	0.364	-0.124	0.489
3.359	2.239	-0.317	0.088	-0.405
0.402	-0.310	-0.073	0.030	-0.103
1.983	0.839	0.164	-0.029	0.192
0.392	-1.153	-0.829	-0.622	-0.207
-0.527	-1.680	-0.082	0.180	-0.263
0.185	0.046	-0.107	-0.153	0.046
1.917	1.786	0.104	0.096	0.009
3.431	2.104	-0.214	-0.185	-0.029
0.001	-0.253	-0.234	0.386	-0.620
0.079	-0.007	-0.209	-0.463	0.253
0.930	-0.701	-0.213	-0.033	-0.180
0.222	0.706	0.519	-0.205	0.725
1.417	0.469	0.602	0.339	0.263
-2.344	-2.009	-0.196	-0.145	-0.051
0.373	0.597	-0.413	-0.196	-0.217
1.291	1.212	0.000	-0.078	0.078
1.466	0.775	-0.411	-0.009	-0.402
1.270	1.935	-0.168	0.000	-0.168
-0.380	0.111	0.026	-0.351	0.378
0.642	-0.044	-0.149	-0.287	0.138
0.609	0.744	-0.341	-0.440	0.099
1.704	2.003	-0.089	0.158	-0.247
1.246	0.890	-0.247	-0.031	-0.216
0.329	0.540	0.604	-0.231	0.835
-0.913	-1.073	-0.414	-0.192	-0.222
0.762	-0.582	-0.123	-0.003	-0.120
1.085	0.952	-0.099	-0.596	0.496
-0.164	0.053	0.273	-0.075	0.348
-0.974	-1.721	0.067	-0.087	0.154
1.219	1.232	-0.020	-0.576	0.556
2.461	1.752	-0.052	-0.157	0.105
-1.335	-1.104	-0.699	-0.461	-0.238
0.887	-0.179	-0.663	-0.038	-0.625
0.517	0.990	-0.176	0.243	-0.419
1.508	0.076	-0.262	-0.049	-0.213
-1.270	-1.564	0.107	0.081	0.026
-0.447	-0.072	-0.095	0.307	-0.402
-0.818	-1.312	0.284	0.050	0.234
-2.279	-2.003	-0.873	-0.383	-0.489
1.896	0.664	-0.241	0.141	-0.381
1.005	0.796	-0.399	-0.759	0.360
-1.840	-0.793	-0.237	-0.724	0.487
1.690	0.627	-0.206	0.131	-0.337
0.159	1.191	0.441	-0.627	1.068
0.646	-0.525	-0.174	0.764	-0.938
0.461	1.081	-0.242	-0.434	0.192
-0.482	-1.436	-0.388	0.106	-0.494
1.586	0.612	-0.897	-0.478	-0.419

-1.191	-0.681	-0.652	-0.596	-0.055
0.125	0.370	-0.142	-0.298	0.156
2.167	0.996	-0.027	-0.043	0.015
-0.092	0.010	-0.511	-0.483	-0.028
-0.697	-0.343	0.027	-0.585	0.612
0.186	0.558	0.384	0.284	0.100
0.445	-0.400	-0.871	-0.117	-0.754
-1.074	-0.731	0.145	-0.214	0.359
0.171	0.203	0.965	0.007	0.958
1.243	1.606	0.113	-0.377	0.490
-0.550	-0.652	-0.432	-0.453	0.021
-0.922	-0.397	0.462	-0.417	0.879
-0.216	-0.848	0.485	0.099	0.386
-2.005	-1.495	0.139	0.009	0.130
2.141	0.205	-0.460	0.164	-0.624
-1.929	-1.476	0.102	-0.531	0.633
-0.909	-0.561	-0.117	-0.495	0.378
2.496	1.246	-0.314	0.342	-0.656
-0.444	-0.432	-0.375	-0.256	-0.119
0.604	-0.240	-0.236	-0.208	-0.029
-1.016	-0.767	-0.780	0.123	-0.903
-1.700	-0.549	-1.029	0.002	-1.031
-1.639	-0.796	-1.904	-0.974	-0.930
1.223	1.181	-0.412	0.012	-0.424
1.049	-0.466	0.029	-0.206	0.235
1.152	-0.094	-0.400	0.246	-0.646
0.575	1.750	-0.819	-0.672	-0.147
1.019	0.594	-0.341	0.005	-0.347
-0.517	-0.579	0.077	-0.698	0.775
-0.927	0.611	-0.302	0.276	-0.578
1.017	1.415	0.596	-0.155	0.751
0.214	0.374	0.188	-0.368	0.557
-1.525	0.500	-0.297	-0.917	0.619
1.284	0.608	-0.751	0.184	-0.935
1.078	1.269	-0.282	-0.162	-0.120
0.564	0.880	-0.617	-0.206	-0.411
-0.364	0.097	-0.483	-0.600	0.118
2.714	1.290	0.303	0.564	-0.261
2.430	1.946	0.698	0.659	0.039
-4.515	-3.849	0.022	-1.054	1.076
-0.539	-0.192	-0.337	0.330	-0.667
1.460	0.351	-0.323	0.078	-0.401
-1.078	-0.756	0.482	-0.963	1.445
-1.726	-2.126	0.227	0.030	0.197
-3.882	-3.465	0.058	-0.259	0.317
-1.766	-0.871	0.104	0.533	-0.428
-2.891	-2.802	0.172	-0.037	0.208
1.087	1.403	0.314	0.246	0.068
2.367	1.666	0.315	0.229	0.086
1.172	-0.095	0.033	0.122	-0.089
1.838	2.308	0.268	0.184	0.084

1.617	0.722	0.036	0.151	-0.115
2.479	0.905	0.061	0.227	-0.165
1.718	2.111	0.267	-0.462	0.730
2.058	1.700	-0.382	-0.296	-0.086
0.959	1.517	-0.546	-0.461	-0.085
0.114	-0.050	-0.027	-0.038	0.011
-0.897	-0.837	-0.064	-0.319	0.255
0.694	0.403	-0.120	0.533	-0.653
-0.557	-0.723	-0.181	0.073	-0.254
-1.966	-0.665	0.024	0.225	-0.201
0.031	-0.953	0.027	0.405	-0.378
0.718	-0.720	0.107	0.142	-0.034
0.649	0.183	0.030	0.043	-0.013
-2.966	-2.238	-0.104	-0.426	0.322
-0.747	-0.620	-0.500	0.374	-0.874
-1.736	-1.090	-0.199	0.214	-0.414
-1.580	-1.540	0.451	-0.020	0.472
-1.759	-1.356	-0.250	-0.011	-0.239
-2.026	-1.519	0.402	-0.198	0.600
-3.776	-3.622	0.097	1.044	-0.947
-1.148	-0.094	0.440	0.877	-0.437
-1.133	-1.084	0.316	0.987	-0.671
-2.196	-1.453	0.499	0.855	-0.356
-1.901	-1.218	0.138	0.549	-0.411
-1.421	-1.528	0.259	0.357	-0.098
-1.263	-1.395	0.331	0.479	-0.149
1.083	0.168	0.233	0.591	-0.358
2.264	2.491	0.310	0.063	0.248
1.960	1.625	0.324	0.105	0.219
2.467	2.312	0.086	0.524	-0.438
1.737	1.291	0.074	-0.046	0.120
1.405	0.489	0.029	0.087	-0.058
1.340	0.687	-0.003	0.314	-0.317
-1.105	-0.611	0.319	0.022	0.296
0.111	0.890	0.599	0.252	0.347
-0.623	-0.274	-0.400	0.096	-0.496
3.173	2.558	0.343	0.182	0.161
-1.774	-1.166	0.263	0.101	0.162
-1.351	-1.009	-0.173	-0.195	0.021
-1.022	0.658	-0.379	0.277	-0.656
-1.502	-0.471	-0.105	-0.589	0.484
1.270	1.534	-0.134	-0.348	0.214
-1.932	-1.152	0.613	-0.298	0.911
0.738	0.926	-1.041	-0.029	-1.012
-0.852	-0.681	-0.668	-0.537	-0.130
-2.922	-2.686	0.287	0.867	-0.580
-1.168	-0.476	0.021	-0.296	0.317
-0.426	-0.889	0.301	0.127	0.175
0.888	0.962	0.195	-0.046	0.241
1.150	1.075	0.563	0.175	0.388
1.429	0.373	0.475	0.056	0.420

-0.349	-0.723	0.287	0.015	0.272
-1.192	-0.818	0.034	-0.261	0.295
1.441	1.477	0.346	0.184	0.162
-0.924	-0.551	0.286	-0.222	0.508
-0.232	0.408	0.023	-0.734	0.757
-1.966	-2.438	-1.735	-1.004	-0.731
-0.919	-1.222	-0.315	-0.241	-0.074
-0.773	-0.792	0.574	-0.036	0.610
1.371	1.532	0.278	-0.158	0.436
-2.371	-2.930	0.250	-0.144	0.394
-1.693	-1.370	0.580	-1.039	1.620
-0.373	-0.991	0.347	-0.127	0.474
-0.088	0.395	0.462	-0.194	0.656
0.117	0.690	-0.023	-0.148	0.125
-0.994	-1.172	0.033	-0.129	0.162
-1.042	-0.800	-0.167	0.076	-0.243
-2.277	-1.794	0.030	-0.047	0.077
-2.847	-2.606	0.264	-0.409	0.673
-1.061	-1.548	0.473	-0.449	0.922
-1.348	-1.070	0.244	-0.419	0.663
-2.661	-1.601	0.273	-1.118	1.391
-3.095	-2.733	-0.219	-0.643	0.424
-3.386	-2.945	0.473	-0.924	1.397
-3.684	-3.166	-0.270	-0.788	0.518
-2.868	-2.821	-0.254	-1.696	1.442
-4.217	-2.707	0.535	-2.285	2.820
1.894	1.801	0.394	0.154	0.240
2.852	1.945	0.049	0.312	-0.263
0.258	0.539	0.231	0.842	-0.611
-0.884	-0.189	0.346	-0.505	0.851
-3.135	-3.338	0.217	0.177	0.040
0.940	1.768	0.762	-0.020	0.782
-1.150	-1.257	-0.004	-0.019	0.016
-2.812	-3.538	-0.232	-0.354	0.123
-2.107	-1.117	0.019	0.105	-0.086
-2.548	-1.857	-0.335	-0.190	-0.145
-2.661	-2.219	-0.141	0.321	-0.461
-3.178	-2.879	0.088	-0.308	0.396
-2.698	-2.669	0.321	0.344	-0.023
-2.954	-2.565	-0.553	0.301	-0.854
-3.308	-2.919	0.187	0.052	0.135
-3.048	-2.473	-0.180	-0.054	-0.127
-2.431	-1.443	0.452	0.035	0.416
-3.627	-2.977	0.708	0.414	0.295
-4.489	-3.206	0.250	-0.076	0.326
-4.048	-3.562	0.146	0.039	0.107
-1.263	-0.670	-0.348	-0.659	0.311
0.560	0.318	-0.225	0.033	-0.259
1.027	0.121	0.061	-0.377	0.439
0.208	0.313	0.186	-0.118	0.304
-3.206	-3.201	0.149	0.408	-0.259

-1.173	-1.101	-0.299	-0.091	-0.207
-1.606	-1.948	0.070	-0.143	0.213
-0.984	-0.872	0.265	-0.250	0.515
-1.884	-1.955	0.303	-0.232	0.535
1.956	0.813	0.453	0.110	0.344
-0.053	-1.063	0.068	0.136	-0.068
-2.108	-1.774	-0.580	-0.470	-0.110
1.500	0.995	0.078	0.238	-0.159
2.117	1.552	0.036	0.034	0.002
-2.784	-3.093	0.052	0.277	-0.225
1.111	1.118	0.233	-0.759	0.991
0.178	-0.150	0.489	0.102	0.386
0.621	-0.317	-0.059	0.267	-0.326
-1.682	-1.287	0.144	-0.345	0.489
-2.817	-2.846	0.191	0.036	0.155
1.408	0.775	0.358	0.003	0.356
1.616	2.024	0.370	0.450	-0.080
-1.392	-2.154	0.072	0.089	-0.018
-0.858	-0.991	0.213	0.418	-0.205
-1.608	-2.729	0.103	0.259	-0.155
-1.585	-0.789	0.402	-0.072	0.474
-0.751	-0.927	-0.392	-0.184	-0.209
0.233	-0.559	-0.825	-0.352	-0.474
2.577	1.805	0.648	-0.043	0.691
2.230	2.405	-0.296	-0.546	0.250
1.542	0.502	-0.105	0.116	-0.221
2.933	1.785	0.433	0.579	-0.146
-0.033	0.235	0.040	0.185	-0.145
-3.392	-2.840	0.047	-0.071	0.118
-0.546	-0.553	0.069	-0.362	0.432
0.539	0.888	0.782	0.426	0.356
1.893	1.814	0.044	0.114	-0.071
-0.139	0.083	-0.534	-0.707	0.173
2.815	2.049	0.071	0.736	-0.664
-0.127	-0.427	-1.246	-0.542	-0.704
-3.248	-1.437	-0.084	-0.893	0.809
-0.819	-1.139	0.001	0.364	-0.363
-0.325	-0.646	-0.255	0.424	-0.679
0.674	0.240	0.544	0.576	-0.032
0.514	-0.382	0.306	0.076	0.231
2.135	1.383	0.512	0.268	0.244
0.948	1.388	0.036	-0.826	0.862
0.022	0.837	-0.223	-0.282	0.058
2.584	1.760	-0.556	-0.302	-0.253
0.249	0.893	-1.081	-0.453	-0.628
1.692	1.317	-0.206	0.185	-0.391
-1.224	-1.253	-1.172	-0.659	-0.513
-0.363	1.514	-0.161	-0.011	-0.150
3.240	1.944	0.294	0.639	-0.345
2.396	1.157	0.754	0.397	0.357
-2.505	-1.881	0.655	0.007	0.648

-0.511	-0.903	0.623	-0.108	0.731
-0.429	-0.745	0.485	-0.280	0.764
0.871	0.849	0.395	0.128	0.267
-2.980	-2.238	-0.049	0.038	-0.088
0.494	-0.136	0.126	0.340	-0.214
0.973	-0.676	-0.702	-0.527	-0.175
2.097	1.534	0.010	0.126	-0.117
-1.832	-1.753	1.491	0.391	1.101
1.919	2.537	-0.415	-0.687	0.272
-1.279	-0.850	0.600	-0.145	0.745
-2.553	-1.805	1.050	0.292	0.758
0.424	1.039	0.781	-0.179	0.960
0.569	-0.082	-0.075	-0.213	0.138
1.110	0.645	0.249	-0.600	0.849
1.237	0.910	0.952	-0.081	1.033
0.289	0.386	0.496	0.301	0.195
-1.267	-1.476	-1.010	0.155	-1.165
0.864	0.987	0.211	-0.153	0.364
-2.171	-1.965	0.170	-0.806	0.976
-3.469	-2.624	-0.407	0.047	-0.453
-2.802	-2.197	-0.394	0.491	-0.885
-1.832	-2.826	-0.153	-0.532	0.379
1.094	0.768	0.117	-0.202	0.319
0.945	0.786	0.530	0.331	0.199
0.758	1.887	0.105	0.257	-0.152
1.376	0.565	0.114	0.224	-0.110
1.675	1.166	0.639	0.578	0.061
-1.363	-1.388	0.093	-0.391	0.484
0.567	0.917	0.380	-0.062	0.443
-0.219	0.171	0.450	-0.588	1.039
-0.501	0.104	0.521	-0.188	0.709
0.595	-0.204	0.710	0.324	0.386
2.143	1.035	0.201	0.100	0.101
0.560	0.959	0.325	-0.251	0.575
1.409	1.546	0.087	0.261	-0.174
2.497	1.531	0.334	-0.141	0.476
-3.232	-2.387	-0.344	-0.485	0.142
1.694	0.686	0.344	0.349	-0.005
-0.686	-0.469	-0.098	-0.454	0.356
-2.774	-2.219	-0.782	-0.923	0.141
1.645	1.006	0.370	0.495	-0.125
1.047	0.091	0.046	0.903	-0.858
0.201	0.741	0.546	-0.083	0.628
1.136	2.243	0.177	-0.022	0.199
-0.309	0.085	-0.160	-0.184	0.024
1.724	0.275	0.218	0.332	-0.114
1.896	1.999	-0.271	-0.413	0.142
2.855	2.309	0.196	-0.559	0.755
-2.299	-0.388	-0.378	-0.506	0.128
-1.621	-1.440	-0.207	-0.081	-0.127
-1.959	-1.989	0.135	-0.147	0.282

2.069	2.250	-0.568	-0.417	-0.151
1.555	1.831	-0.022	-0.377	0.355
-0.764	-0.181	0.179	-0.485	0.664
0.262	0.795	0.245	0.786	-0.541
1.086	0.994	0.594	1.219	-0.624
0.035	0.506	-0.317	0.535	-0.852
-0.171	-0.837	-0.301	-0.144	-0.157
0.410	0.224	-0.032	0.063	-0.094
-1.318	-1.449	0.028	-0.470	0.498
1.466	0.260	-0.043	0.247	-0.290
1.677	0.919	0.333	0.446	-0.112
-1.036	-0.905	0.464	-0.206	0.670
-1.733	-1.530	-0.557	-0.400	-0.157
-0.420	-0.114	0.031	-0.482	0.513
0.638	-0.121	0.377	0.287	0.090
-0.067	0.732	0.129	-0.327	0.456
0.688	1.834	0.153	0.334	-0.182
-1.328	-1.374	-0.392	0.054	-0.446
-1.336	-1.202	0.430	0.472	-0.042
-1.492	-0.819	0.375	-0.137	0.512
-1.689	-1.414	-0.128	-0.283	0.155
0.383	0.490	0.232	0.752	-0.520
-1.713	-2.399	-0.045	0.107	-0.152
-1.417	-0.733	0.050	-0.047	0.096
0.902	0.293	0.414	0.685	-0.271
0.626	0.392	-0.219	-0.377	0.158
1.083	0.845	0.022	0.172	-0.150
-1.670	-2.180	-0.194	-0.845	0.651
-2.367	-2.214	0.384	-0.529	0.914
-2.433	0.656	-0.332	-0.887	0.555
-3.888	-3.297	0.002	0.359	-0.356
0.526	0.675	0.312	0.260	0.052
-2.260	-2.228	0.115	0.284	-0.169
-0.078	0.124	0.025	-0.073	0.099
-0.805	-1.807	-0.011	0.774	-0.785
-2.639	-2.792	0.121	0.379	-0.258
0.454	-0.388	-0.284	-0.044	-0.240
0.555	-0.207	0.436	0.988	-0.552
-2.034	-1.338	-0.312	-0.351	0.039
-2.017	-2.038	-0.082	-0.100	0.018
-0.778	-0.785	-0.188	0.223	-0.410
0.181	-0.001	0.335	0.254	0.081
1.786	1.843	0.555	-0.214	0.769
-3.130	-2.077	0.373	0.029	0.344
-0.052	2.105	-0.240	-0.123	-0.117
0.162	1.039	-0.062	-0.715	0.653
-2.009	-1.330	-0.074	0.382	-0.456
-1.213	-1.925	0.122	0.594	-0.472
-1.181	-1.805	0.197	0.386	-0.189
-1.524	-1.841	-0.214	0.413	-0.627
-1.093	-0.825	-0.172	0.416	-0.589

-1.820	-2.179	0.327	0.350	-0.023
-1.227	0.794	0.193	-0.125	0.318
-0.746	-0.804	0.202	-0.192	0.394
-0.503	-0.857	0.360	0.419	-0.059
-1.801	-1.772	0.036	-0.126	0.162
1.237	1.125	0.130	0.222	-0.092
-2.116	-1.632	0.014	-0.610	0.623
2.447	2.149	-0.076	-0.315	0.238
0.529	0.050	-0.411	0.279	-0.690
1.270	0.654	-0.034	-0.111	0.077
-0.579	-0.317	0.548	-0.065	0.613
-4.459	-3.942	0.483	1.527	-1.044
-3.962	-3.528	0.194	-0.018	0.212
-1.544	-0.231	0.102	0.369	-0.266
-0.688	0.844	0.120	-0.538	0.658
2.823	1.265	0.198	0.442	-0.243
0.957	1.070	-0.223	-0.170	-0.053
1.754	1.258	0.342	0.574	-0.232
-1.129	-0.146	0.039	-0.254	0.293
-2.524	-2.046	0.138	-0.738	0.877
-1.692	-2.547	-0.111	-0.027	-0.084
-1.074	-0.715	-0.144	-0.408	0.263
-1.993	-2.599	-0.496	-0.317	-0.179
-3.340	-2.653	-0.182	-0.515	0.333
-1.262	-0.924	0.370	0.226	0.144
-2.163	-1.573	0.050	-0.612	0.662
-0.004	0.136	0.391	-0.395	0.786
-0.759	-1.783	0.610	0.454	0.157
1.789	1.732	0.267	-0.337	0.605
0.332	0.895	0.139	-0.656	0.795
-2.291	-1.948	0.364	-0.081	0.445
-0.939	-0.570	-0.464	-0.347	-0.118
1.545	1.421	0.169	0.113	0.056
-0.291	0.193	-0.305	-0.400	0.095
-1.245	-0.810	-0.005	0.086	-0.092
-1.877	-1.974	-0.319	0.247	-0.566
-1.594	-1.682	0.240	-0.258	0.498
-0.373	-0.194	0.105	-0.017	0.122
0.800	-0.492	0.175	0.490	-0.315
0.259	-0.728	0.158	0.449	-0.291
-1.668	-1.096	0.447	0.956	-0.510
-1.297	-1.139	-0.269	-0.400	0.131
0.721	1.426	0.249	0.209	0.040
-0.233	-1.351	-0.345	-0.161	-0.184
-1.979	-1.946	0.377	-0.102	0.479
-0.613	-1.189	-0.072	-0.222	0.149
-0.362	0.217	0.511	-0.634	1.145
1.754	1.281	0.355	-0.062	0.418
-0.828	-0.523	-0.320	-0.835	0.515
-1.538	-2.203	0.323	-0.037	0.361
2.437	-0.121	0.165	0.424	-0.259



1.121	0.564	0.093	0.049	0.044
0.882	0.744	0.028	-0.033	0.061
-0.156	-1.147	0.214	0.132	0.082
0.327	0.068	0.156	-0.199	0.355
-0.291	-0.417	0.036	0.300	-0.264
-0.178	-0.080	-0.207	-0.340	0.134
0.524	0.354	-0.512	-0.259	-0.253
-0.813	-0.384	-0.171	0.403	-0.574
1.028	0.637	0.566	0.287	0.279
-0.413	-1.269	0.019	0.265	-0.245
-1.355	-1.699	-0.174	0.711	-0.885
0.770	1.276	-0.767	-0.341	-0.426
0.944	1.070	-0.397	-0.271	-0.126
2.380	1.365	0.570	0.448	0.122
-0.049	0.223	-0.022	0.168	-0.190
1.291	1.023	1.023	0.793	0.230
-1.696	-1.176	-0.010	0.447	-0.457
0.007	0.525	0.285	0.210	0.075
-1.368	-1.147	0.377	-0.020	0.398
0.356	0.445	0.200	-0.382	0.582
1.038	0.655	1.053	0.009	1.043
0.504	-0.810	0.340	-0.244	0.583
-0.899	-0.630	0.009	-0.544	0.553
-0.570	-0.036	0.165	-0.516	0.681
-0.906	-0.316	0.397	-0.417	0.814
0.306	-0.948	0.633	0.238	0.395
-1.148	-0.769	0.579	0.249	0.330
-0.254	0.338	0.390	-0.432	0.821
1.004	1.454	0.205	-0.124	0.328
0.743	0.853	0.845	0.696	0.149
1.629	1.279	-0.619	-0.304	-0.314
0.827	0.001	-0.034	0.004	-0.038
-0.794	-0.790	-0.386	-0.101	-0.284
0.435	-0.076	0.173	-0.177	0.350
-1.158	-0.759	0.132	-0.296	0.428
-2.269	-2.250	-0.040	-0.430	0.391
-1.814	-1.064	-0.087	-0.783	0.695
-2.226	-2.550	-0.164	-0.473	0.308
-2.505	-2.250	0.151	-0.502	0.653
2.316	1.062	0.149	0.108	0.042
2.046	1.549	0.132	0.075	0.056
0.084	0.394	0.553	-0.236	0.789
0.864	1.611	0.071	-0.120	0.191
-2.020	-2.492	0.006	0.417	-0.411
-0.949	-1.449	0.441	0.148	0.292
0.666	-0.306	0.073	0.214	-0.140
0.739	-0.209	0.517	-0.219	0.737
-2.245	-1.402	0.155	-0.325	0.480
-1.117	-1.136	-0.467	0.190	-0.657
0.809	-0.460	-0.004	0.581	-0.585
-1.658	-0.808	0.545	0.419	0.126

-2.691	-1.728	-0.185	-0.504	0.318
-1.323	-1.588	-0.379	-0.303	-0.076
-1.391	-1.476	0.119	-0.354	0.473
-0.077	-0.420	-0.224	-0.250	0.026
-0.090	0.047	0.020	0.150	-0.130
-1.867	-1.316	0.496	-0.714	1.210
0.015	-0.208	0.460	-0.336	0.796
-0.217	-0.398	0.073	0.025	0.048
-1.802	-0.365	-0.210	-0.530	0.321
-1.640	-1.225	-0.139	-0.531	0.392
1.451	1.051	0.501	0.075	0.426
-1.171	-2.152	-0.198	0.001	-0.199
-2.218	-1.986	0.020	0.090	-0.070
-0.734	-0.142	0.525	-0.293	0.818
-1.751	-1.003	-0.222	-0.629	0.406
-1.494	-1.832	0.389	0.357	0.032
0.649	-0.735	0.342	0.561	-0.220
1.813	0.838	-0.060	0.199	-0.259
-0.799	-0.950	-0.709	-0.390	-0.319
-1.214	-2.205	0.128	-0.061	0.189
-2.073	-1.844	0.032	-0.389	0.421
-2.869	-3.274	-0.134	0.432	-0.566
-0.444	-1.051	0.040	0.595	-0.555
-2.409	-2.253	-0.154	-0.136	-0.018
0.050	-0.859	-0.609	0.139	-0.749
-0.877	-1.332	0.093	0.027	0.066
0.522	0.909	0.199	0.225	-0.026
-2.609	-2.155	-0.254	0.239	-0.493
1.402	1.544	0.756	0.437	0.319
-1.776	-1.765	0.295	0.441	-0.146
0.105	0.402	-0.322	0.253	-0.576
0.638	0.973	-0.253	0.746	-0.998
-0.366	0.338	0.887	-0.003	0.891
0.207	0.180	-0.101	-0.001	-0.100
-2.239	-1.864	0.299	-0.140	0.439
0.518	0.294	0.744	1.350	-0.605
-2.689	-2.455	0.127	1.075	-0.949
-2.360	-2.009	-0.133	-0.056	-0.077
0.458	0.413	-0.675	-0.170	-0.505
-1.615	-1.165	-0.480	-0.155	-0.325
2.180	2.547	0.444	0.201	0.242
-0.110	-0.275	0.103	1.127	-1.024
-1.319	-1.166	0.104	-0.109	0.213
-0.451	-0.113	0.684	0.087	0.596
-1.860	-0.682	-0.177	0.222	-0.399
-0.805	0.513	-0.109	0.484	-0.593
1.504	1.463	0.219	-0.180	0.399
-0.373	-0.587	0.273	-0.239	0.512
-2.014	-1.227	-0.314	-0.746	0.432
-2.680	-1.918	0.472	0.101	0.372
-0.095	-0.111	-0.022	-0.266	0.243

0.291	1.197	-0.545	-0.162	-0.383
0.930	0.590	0.189	0.442	-0.253
0.900	1.664	0.277	-0.294	0.571
2.420	1.339	0.303	0.242	0.061
0.607	0.561	0.521	0.110	0.411
0.034	0.489	0.289	-0.748	1.038
0.102	-0.834	0.392	0.452	-0.060
-0.909	-0.772	-0.116	-0.201	0.085
1.265	0.968	-0.821	-0.420	-0.401
1.418	1.228	-0.305	0.704	-1.010
1.238	0.834	-0.073	0.829	-0.902
-1.292	-1.909	-0.030	-0.105	0.075
-0.495	-0.619	-0.303	-0.314	0.011
-0.321	-0.429	0.192	0.363	-0.171
-1.781	-0.461	0.290	-0.419	0.708
0.369	0.386	0.103	-0.339	0.441
-2.648	-2.718	0.006	0.241	-0.235
1.394	1.236	-0.212	0.271	-0.482
-0.791	-0.393	-0.087	-0.378	0.292
1.702	2.000	-0.258	-0.599	0.341
2.910	1.491	0.239	0.127	0.112
-2.791	-2.490	0.109	-0.009	0.118
-0.843	-0.297	-0.168	-0.115	-0.053
-1.404	-1.461	-0.049	0.688	-0.737
-1.025	-0.606	0.149	-0.695	0.844
-0.651	-0.429	-0.585	0.379	-0.964
0.068	0.806	0.140	-0.568	0.707
1.093	1.082	-0.163	0.204	-0.366
1.624	1.418	0.111	0.207	-0.095
0.975	1.212	0.935	1.155	-0.220
0.006	0.953	0.358	0.200	0.158
2.335	1.892	0.494	0.563	-0.068
-1.328	-1.402	-0.343	0.021	-0.364
0.248	0.890	-0.089	0.083	-0.172
1.560	1.350	0.097	-0.132	0.229
-0.623	0.545	-0.576	0.084	-0.659
-0.007	0.169	0.336	-0.065	0.401
0.208	0.472	0.027	-0.225	0.252
2.034	1.544	-0.789	-0.287	-0.502
0.640	0.248	0.211	0.118	0.093
1.315	0.567	-0.672	-0.001	-0.671
0.974	1.530	-0.259	-0.090	-0.169
0.024	1.152	0.067	-0.240	0.308
-0.268	0.170	-0.003	-0.251	0.248
-2.035	-2.193	0.298	0.022	0.276
-0.060	-0.539	0.191	-0.039	0.230
2.381	2.413	0.422	0.010	0.412
-1.537	-1.094	0.408	-0.445	0.853
0.912	0.184	0.337	0.849	-0.512
-2.905	-2.122	-0.334	-1.168	0.834
1.364	1.362	0.313	0.163	0.149

-2.056	-2.043	0.254	-0.421	0.675
-1.382	-2.101	0.038	0.228	-0.190
-3.451	-1.181	0.044	0.595	-0.552
-0.037	-0.716	0.561	-0.175	0.736
0.652	-0.178	0.370	-0.029	0.399
1.302	1.709	0.058	0.168	-0.110
-2.455	-2.372	0.312	-0.287	0.599
1.636	0.076	0.177	0.293	-0.116
-0.149	0.460	-0.022	0.050	-0.072
0.094	0.881	0.036	-0.280	0.316
2.190	1.423	0.133	0.051	0.082
0.622	0.253	0.234	0.252	-0.018
2.390	2.190	-0.416	-0.374	-0.042
-2.313	-0.942	0.048	-0.419	0.468
0.050	0.585	0.600	-0.029	0.629
2.365	1.965	0.437	-0.079	0.516
0.435	0.412	0.270	-0.129	0.399
-2.088	-2.093	0.538	0.074	0.464
-2.704	-3.475	-0.025	0.195	-0.219
-2.789	-2.197	-0.301	-0.233	-0.068
-1.939	-1.219	-0.454	-0.605	0.151
-1.249	-0.901	-0.177	-0.445	0.268
1.901	1.129	-0.587	0.320	-0.907
1.509	1.401	0.404	0.819	-0.415
1.426	0.263	0.352	-0.267	0.619
0.796	-0.363	-1.493	-0.240	-1.253
-1.188	-0.614	0.375	0.125	0.250
-1.257	-0.920	0.553	0.480	0.072
-0.429	-0.501	-0.398	-0.260	-0.138
-0.101	-0.019	-0.292	-0.043	-0.249
-2.029	-1.188	-0.077	-0.813	0.737
2.376	1.390	0.274	0.032	0.242
1.066	0.158	-0.075	0.057	-0.132
-1.032	-0.865	-0.136	-0.106	-0.030
1.013	1.551	0.068	1.021	-0.953
-0.990	-1.353	0.033	0.218	-0.185
0.776	0.875	0.212	0.089	0.123
0.055	-0.414	0.506	0.010	0.496
0.405	0.249	0.791	0.303	0.488
-2.951	-3.026	0.275	0.084	0.191
1.726	1.920	0.066	0.252	-0.187
-1.248	-1.582	0.037	-0.526	0.563
-2.481	-2.674	0.424	0.396	0.027
-0.362	-0.121	-0.380	-0.574	0.194
0.290	0.459	0.079	-0.123	0.202
-1.247	-0.923	0.262	-0.190	0.452
0.995	1.957	0.381	0.304	0.077
1.199	0.402	0.304	0.118	0.185
0.365	0.662	0.307	0.141	0.166
2.168	1.360	0.173	-0.181	0.354
-0.897	-1.593	-0.088	0.004	-0.092

1.435	1.628	0.027	-0.250	0.277
-2.261	-1.405	0.189	-0.368	0.557
-0.845	-1.643	0.534	0.127	0.408
0.454	0.812	0.251	-0.310	0.561
0.537	0.324	0.006	-0.094	0.099
-0.919	-0.035	0.106	-0.330	0.436
0.577	0.702	0.182	-0.357	0.539
0.157	-1.051	0.087	0.450	-0.364
1.828	1.777	-0.196	-0.600	0.404
1.813	2.088	0.401	-0.264	0.665
0.710	0.691	-0.334	-0.219	-0.115
1.469	1.389	-0.583	-0.070	-0.513
1.562	0.771	-1.328	-0.307	-1.020
-0.039	-0.591	-0.993	-0.406	-0.587
-1.704	-1.474	0.112	-0.976	1.088
1.457	1.318	-0.149	-0.495	0.346
2.007	1.334	0.606	0.355	0.251
1.125	1.306	0.346	0.095	0.252
-3.804	-3.010	0.244	0.457	-0.212
-2.402	-2.150	-0.064	-0.455	0.391
2.046	2.222	0.270	-0.750	1.020
1.560	1.569	0.253	0.027	0.226
-0.594	-0.388	0.255	-0.005	0.260
-1.492	-1.623	0.052	-0.077	0.129
2.066	0.912	0.327	0.390	-0.063
0.873	-0.349	0.277	-0.056	0.333
-1.535	-2.068	0.419	0.205	0.214
-1.381	-0.593	0.376	-0.091	0.466
1.082	1.305	0.131	-0.149	0.280
0.331	-0.975	-1.689	-0.569	-1.120
0.844	0.914	-0.008	0.042	-0.049
-1.951	-1.345	0.016	-0.279	0.295
-1.248	-1.611	0.310	-0.460	0.771
-0.490	-0.404	0.382	0.501	-0.119
-0.387	-0.449	-0.291	-0.232	-0.058
-0.938	-0.550	-0.037	-0.298	0.260
-1.404	0.569	0.092	-1.281	1.373
1.644	1.733	0.139	-0.209	0.348
-0.490	-0.004	0.391	-0.628	1.019
-2.267	-2.402	0.301	0.785	-0.484
-1.903	-0.155	0.126	-0.932	1.058
-0.697	-0.359	-0.110	-0.392	0.281
-1.125	-1.015	0.133	0.340	-0.207
-3.054	-2.132	-0.130	0.705	-0.835
-0.934	-0.747	-0.014	0.295	-0.309
0.651	0.591	-0.049	-0.172	0.122
-3.530	-2.956	-0.079	-0.195	0.116
-3.226	-2.590	0.114	-0.845	0.959
0.736	0.655	-0.234	-0.162	-0.072
-0.752	-0.613	-0.112	0.072	-0.184
1.047	-0.584	0.001	0.133	-0.132

1.613	1.671	0.205	0.063	0.142
1.775	1.630	-0.118	0.377	-0.495
-1.526	-0.872	0.104	-0.165	0.269
-0.647	0.143	-0.384	-0.475	0.091
0.529	-0.232	-0.730	-0.008	-0.721
-1.349	-0.630	-0.160	-0.470	0.310
0.759	0.682	0.260	-0.726	0.986
-1.808	-0.958	-0.072	-0.068	-0.004
-1.896	-1.313	-0.192	-0.010	-0.181
-2.473	-1.340	-0.286	0.470	-0.756
-1.105	-1.394	0.143	0.859	-0.717
0.910	0.431	-0.256	-0.411	0.155
-2.127	-1.954	-0.134	-0.096	-0.038
-1.111	-1.251	0.035	0.089	-0.054
-0.800	-0.864	1.454	0.827	0.627
0.912	0.711	0.066	-0.116	0.181
0.308	-0.870	-0.496	0.549	-1.045
1.143	0.787	-0.135	-0.089	-0.047
-0.007	-0.447	0.428	0.151	0.276
-0.741	-1.224	0.277	-0.023	0.300
1.203	1.076	0.691	0.668	0.023
0.673	0.212	-0.007	0.102	-0.109
-0.773	-0.741	0.635	0.042	0.593
1.367	0.331	0.099	0.363	-0.264
-1.739	-1.444	0.014	-0.410	0.424
-1.699	-0.973	0.045	-0.378	0.423
-0.888	-0.169	-0.411	-0.487	0.075
0.171	0.239	0.000	-0.136	0.136
-3.428	-2.820	-0.181	-0.156	-0.025
0.802	0.981	0.127	-0.175	0.301
2.271	1.691	0.596	-0.340	0.936
-0.060	-0.035	-0.142	0.246	-0.389
-0.529	-0.212	0.238	-0.196	0.434
-1.005	-0.505	0.571	0.251	0.320
0.448	0.220	-0.044	0.035	-0.078
0.930	2.111	0.197	-0.450	0.647
-1.637	-1.202	-0.711	-0.157	-0.554
0.060	-0.533	-0.299	0.261	-0.560
-2.266	-1.499	-1.320	-1.390	0.070
0.864	1.760	0.500	-0.417	0.918
1.589	1.417	0.433	0.432	0.000
2.139	1.000	0.130	0.256	-0.126
2.541	1.749	-0.267	-0.174	-0.092
-4.239	-3.472	-0.107	-0.081	-0.026
-0.180	0.003	-0.760	-0.721	-0.039
-1.030	-1.423	0.610	0.391	0.219
-1.934	-2.502	0.433	0.551	-0.118
-0.263	1.317	-0.892	-1.367	0.475
1.326	1.133	-0.117	-0.177	0.060
-1.569	-1.074	-0.151	-1.013	0.862
0.299	0.081	-0.189	-0.467	0.279

0.445	-0.674	-0.095	-0.115	0.020
0.203	0.146	0.141	0.183	-0.042
-0.149	-0.467	0.340	0.693	-0.354
-1.003	-1.168	-0.150	-0.210	0.060
-1.704	-0.539	0.227	-0.066	0.293
-0.274	0.520	0.647	0.020	0.627
-1.393	-1.135	0.401	-0.150	0.552
0.275	0.367	0.427	0.250	0.177
-2.599	-1.780	-0.096	-0.385	0.289
1.105	0.419	-0.407	0.468	-0.875
-1.815	-2.387	0.047	-0.392	0.440
-0.041	2.698	-0.316	-0.670	0.354
-1.779	-0.338	-0.405	-0.967	0.563
2.113	0.378	0.370	0.374	-0.004
1.922	0.853	-1.268	-0.677	-0.591
0.930	-0.289	-0.662	-0.032	-0.631
2.839	2.364	0.387	-0.203	0.590
1.689	1.932	0.028	-0.553	0.581
1.070	1.194	-0.566	0.016	-0.582
-0.220	-0.050	-1.171	-0.104	-1.067
0.689	0.014	0.069	0.291	-0.222
-0.820	-0.474	0.059	-0.174	0.233
1.958	1.196	0.624	0.590	0.034
0.540	-0.492	0.019	0.151	-0.132
1.328	0.387	0.188	0.193	-0.005
2.576	2.563	0.365	-0.214	0.579
0.886	0.301	0.164	-0.120	0.284
1.057	1.253	0.091	-0.343	0.435
0.254	0.860	0.150	-0.647	0.797
0.729	-0.080	0.252	0.689	-0.437
-0.712	-1.781	-0.409	-0.443	0.034
1.489	1.964	0.484	-0.692	1.176
1.972	0.989	0.778	0.511	0.267
3.046	1.759	-0.676	-0.193	-0.483
-0.490	-0.377	0.483	-0.075	0.558
-1.613	-0.508	-0.548	-0.537	-0.012
0.165	0.318	0.730	-0.173	0.903
1.200	0.729	-0.274	0.323	-0.597
-1.909	-2.126	0.249	-0.037	0.285
-0.457	-1.085	0.013	0.794	-0.781
-0.995	-0.897	-0.328	0.629	-0.957
-1.522	-1.345	-0.541	-0.149	-0.392
-2.150	-1.762	-0.093	-0.326	0.233
-4.019	-2.845	-0.028	0.213	-0.241
-1.374	-0.870	0.046	-0.333	0.379
-0.938	-0.348	-0.287	-0.096	-0.190
-0.123	0.110	0.129	0.716	-0.587
-0.353	-0.152	0.038	-0.356	0.395
1.346	0.363	0.592	0.787	-0.195
-0.406	-0.657	0.407	-0.257	0.663
0.678	0.185	0.395	0.365	0.030

-2.117	-1.603	-0.048	-0.249	0.201
-0.108	-1.037	-0.029	0.051	-0.080
0.109	-0.271	0.073	-0.181	0.254
1.585	1.208	0.018	0.463	-0.445
1.592	2.553	-0.273	-0.633	0.360
1.828	1.173	-0.061	0.208	-0.269
1.592	1.236	-0.060	0.757	-0.817
1.735	1.282	0.125	-0.091	0.216
2.196	2.228	0.214	-0.743	0.958
2.156	2.196	-0.419	-0.398	-0.022
1.357	0.949	0.048	-0.026	0.074
-0.363	0.200	0.151	0.113	0.038
-2.149	-1.523	-0.199	-0.173	-0.026
-0.657	-0.215	0.249	-0.938	1.188
1.326	0.985	0.340	0.217	0.124
-3.608	-3.316	-0.405	-0.394	-0.011
-0.618	-0.614	0.062	-0.082	0.143
1.360	1.579	-0.453	-0.513	0.060
-0.307	-0.119	-0.117	-0.079	-0.038
-2.168	-1.574	-0.711	-0.638	-0.073
-0.859	-0.601	-0.099	-0.553	0.454
1.955	1.670	0.490	-0.132	0.622
-0.966	-0.440	0.072	-0.315	0.387
-0.093	0.261	-0.051	-0.388	0.337
-1.508	-1.570	0.145	-0.782	0.927
-3.429	-2.034	-0.237	-0.375	0.139
0.230	1.173	0.126	-0.190	0.316
-1.154	-1.003	0.416	0.191	0.226
-1.834	-1.327	-0.389	-0.623	0.234
0.371	0.501	-0.040	-0.320	0.280
3.564	2.147	-0.221	-0.189	-0.032
-2.679	-2.968	0.342	0.219	0.123
-2.186	-2.383	0.127	-0.099	0.226
0.992	1.530	0.420	0.075	0.345
-0.421	0.118	-0.026	-0.107	0.081
0.173	-0.055	0.229	0.454	-0.225
1.084	0.754	0.246	0.493	-0.247
-1.321	-1.089	-0.502	-0.430	-0.072
0.981	0.991	0.507	-0.150	0.657
-2.374	-1.816	-0.558	-0.531	-0.027
0.864	1.341	-0.173	-0.223	0.050
0.317	0.140	-0.018	0.237	-0.255
-2.256	-1.392	-0.127	-0.926	0.799
0.468	0.755	0.024	-0.336	0.360
0.666	0.237	0.236	0.188	0.048
-0.259	-0.852	-0.551	0.308	-0.859
0.208	-0.330	0.102	0.772	-0.671
-0.064	0.253	-0.274	0.393	-0.667
0.527	0.553	0.162	0.707	-0.545
1.555	0.947	0.136	0.398	-0.262
-1.311	0.023	0.496	-1.157	1.654



-1.772	-2.188	-0.022	-0.367	0.344
2.210	2.108	0.413	-0.165	0.578
0.036	-0.724	-0.221	0.010	-0.231
-1.823	-1.711	-0.777	-0.995	0.218
-0.899	-1.060	0.097	0.339	-0.242
1.344	1.523	0.279	0.040	0.240
0.080	-1.157	-0.177	0.567	-0.744
-0.588	-1.111	-0.317	0.543	-0.861
0.218	0.389	-0.633	-0.052	-0.580
-1.331	-1.640	0.153	0.180	-0.027
-2.113	-1.834	0.125	0.107	0.018
-1.652	-1.900	-0.228	-0.449	0.220
-2.917	-2.983	-0.081	-0.041	-0.041
-1.215	-1.040	0.187	-0.497	0.684
2.242	1.653	0.855	0.278	0.577
0.158	0.623	-0.025	-0.363	0.338
-2.809	-2.698	-0.146	-0.187	0.041
0.950	0.560	-0.070	-0.293	0.223
0.841	1.286	0.232	-0.327	0.559
-1.474	-1.269	-0.403	-0.566	0.162
2.237	1.630	0.105	0.064	0.041
0.077	0.459	-0.139	-0.486	0.347
-0.231	-0.952	-0.116	0.404	-0.521
-1.039	-1.945	-0.399	0.040	-0.439
-0.677	-0.316	-0.394	-0.134	-0.259
-1.436	-2.156	-0.127	-0.246	0.119
-0.242	-1.086	0.185	0.275	-0.089
2.090	0.560	0.456	0.391	0.065
-1.215	-0.700	-0.127	-0.421	0.294
-1.865	-1.406	-0.193	-0.558	0.365
0.554	1.138	0.288	0.225	0.064
-0.910	-2.020	-0.310	-0.022	-0.288
-1.227	-1.622	0.257	-0.110	0.367
1.471	0.117	0.121	-0.312	0.433
-2.380	-1.461	-0.873	-0.586	-0.287
1.290	1.588	0.684	-0.616	1.300
1.503	1.862	0.096	-0.495	0.591
1.085	0.561	-0.365	-0.120	-0.245
2.716	2.011	-0.222	-0.471	0.249
-2.844	-2.378	0.042	-0.692	0.734
-0.007	0.037	0.073	-0.325	0.397
-1.450	-2.143	-0.229	0.228	-0.457
-2.309	-2.381	-0.090	-0.576	0.486
-0.936	-1.002	0.615	-0.181	0.795
1.517	1.771	0.260	-0.284	0.544
-0.385	-0.707	0.699	-0.088	0.787
0.171	0.478	-0.694	-1.024	0.330
-0.297	-0.387	-0.412	0.519	-0.931
-0.496	0.107	-0.359	-0.218	-0.141
-2.839	-1.772	0.513	-0.755	1.268
-0.010	-1.092	0.479	0.292	0.187

0.449	0.227	-0.015	-0.280	0.265
-1.265	-0.429	0.251	-0.058	0.309
1.368	1.532	-0.448	-0.446	-0.003
-3.574	-3.133	0.275	-0.170	0.445
-1.077	-0.554	-0.660	-0.984	0.324
-2.741	-2.244	-0.210	-0.494	0.284
-2.652	-2.693	0.387	-0.180	0.567
-3.524	-3.353	0.212	0.224	-0.011
-3.099	-2.869	0.214	-0.192	0.405
-1.983	-1.532	0.104	-0.235	0.338
-0.390	0.767	-0.074	-1.001	0.927
-0.605	-0.682	-0.512	-1.220	0.707
-1.706	-0.801	0.349	-1.984	2.333
-1.268	-0.685	-0.347	-0.466	0.119
0.380	-0.969	0.099	0.616	-0.517
-0.936	-0.571	0.838	-0.394	1.232
-1.074	-1.049	0.197	0.030	0.167
-1.193	-1.333	-0.351	-0.224	-0.127
-1.256	-1.446	-0.387	-0.359	-0.027
1.103	0.560	0.092	-0.398	0.489
2.251	1.174	-0.106	0.281	-0.386
2.201	1.187	0.151	-0.034	0.185
-0.312	0.061	0.821	0.136	0.684
0.209	0.698	-0.219	0.050	-0.268
2.203	2.295	0.647	-0.543	1.190
-2.019	-1.521	-0.242	-0.759	0.517
-0.890	-0.680	-0.028	-0.348	0.319
0.633	-0.358	-0.014	-0.112	0.098
-0.034	0.427	0.290	0.203	0.087
-0.260	0.458	-0.635	-0.942	0.306
1.688	0.872	-0.345	-0.086	-0.259
1.092	1.224	-0.393	0.003	-0.396
2.076	2.089	0.072	0.229	-0.156
2.694	2.776	0.572	-0.830	1.402
1.809	1.881	0.280	-0.870	1.150
0.356	-0.150	-0.106	0.108	-0.214
0.788	0.241	-0.224	-0.020	-0.204
0.628	-0.461	0.189	0.112	0.077
1.049	0.275	-0.240	-0.362	0.122
0.482	0.620	0.404	0.208	0.197
1.905	1.078	-0.177	0.418	-0.595
-0.304	0.551	-0.193	-0.513	0.320
2.466	2.756	0.401	-0.622	1.023
-3.169	-2.591	-0.396	-0.758	0.362
0.208	0.032	-0.174	-0.418	0.244
-2.986	-2.589	-0.751	-0.825	0.074
-0.578	-1.548	0.004	-0.083	0.087
-1.286	-0.477	-0.539	-0.484	-0.055
-1.274	-1.094	0.122	-0.446	0.569
-2.624	-1.808	0.455	-0.886	1.341
-1.898	-1.336	-0.079	-0.422	0.343

1.988	2.461	0.448	-0.146	0.594
-2.739	-2.702	-0.157	0.080	-0.237
1.838	1.623	0.964	0.772	0.192
0.782	1.331	1.246	0.787	0.460
-0.792	-1.180	-0.041	-0.338	0.296
-1.763	-1.671	0.313	-0.369	0.682
-0.427	-0.405	-0.043	-0.304	0.261
1.035	-0.192	-0.471	-0.331	-0.141
-0.866	-0.784	0.071	-0.313	0.384
1.812	0.247	-0.027	0.319	-0.346
-1.328	-2.248	-0.866	-0.742	-0.124
1.592	1.563	0.616	-0.390	1.006
0.543	0.737	-0.320	0.051	-0.371
-1.002	-2.585	-0.197	-0.334	0.137
0.223	-0.195	-0.049	-0.091	0.042
-1.649	-1.065	-0.290	-0.668	0.377
1.915	1.718	-0.229	0.027	-0.257
-0.383	-1.178	0.155	-0.204	0.359
-0.366	0.307	-0.321	-0.670	0.349
2.356	2.173	-0.298	-0.109	-0.189
-1.659	-2.176	-0.181	-0.177	-0.004
1.993	0.794	0.205	0.425	-0.220
1.494	0.271	-0.263	0.147	-0.410
0.417	-0.044	0.165	-0.244	0.410
-0.743	-0.964	-0.034	-0.106	0.071
-1.572	-2.049	0.024	-0.627	0.650
2.171	2.592	-0.237	-0.822	0.585
-2.198	-1.092	0.096	-1.282	1.378
-1.044	-1.233	0.624	-0.624	1.248
-1.440	-1.679	0.101	-0.249	0.350
0.020	-0.022	0.206	0.171	0.035
-1.203	-1.662	-0.201	0.126	-0.327
-2.284	-0.832	0.083	-0.605	0.688
2.113	2.309	0.846	-0.317	1.163
-0.076	-0.440	-0.215	0.276	-0.491
-0.906	0.171	0.097	-0.083	0.180
-1.207	-0.618	-0.072	-0.045	-0.027
-0.020	-1.225	0.009	-0.170	0.179
-0.437	-0.799	-0.111	-0.355	0.244
1.211	0.552	0.185	-0.148	0.332
0.789	-0.192	1.347	0.626	0.721
-0.137	-0.561	-0.170	-0.562	0.392
-0.360	-0.612	-0.013	0.233	-0.246
0.278	0.258	0.581	-0.155	0.736
1.346	1.649	-0.141	-0.721	0.579
-1.136	-0.875	-0.085	-0.855	0.770
0.315	-0.713	0.232	0.482	-0.250
0.586	0.061	-0.223	-0.035	-0.188
0.024	0.416	0.884	-0.253	1.137
-1.304	-0.380	0.375	-0.286	0.661
-2.813	-2.374	0.066	-0.474	0.540

1.259	1.970	-0.119	0.354	-0.473
-1.439	-0.946	-0.571	-0.677	0.107
-0.116	-0.322	0.102	-0.222	0.324
0.367	0.113	0.232	0.454	-0.222
0.315	-0.057	0.299	-0.027	0.326
-2.084	-2.725	0.174	0.054	0.120
0.282	-0.871	0.203	0.639	-0.436
-1.218	-1.156	0.552	0.413	0.140
-3.522	-2.761	-0.562	-1.293	0.731
-1.937	-1.093	-0.068	0.600	-0.668
1.548	0.507	0.203	0.093	0.110
1.488	0.397	0.627	1.015	-0.388
0.418	-0.329	-0.021	-0.114	0.094
-0.532	0.445	-0.260	-0.424	0.165
0.744	1.202	-0.369	-0.679	0.309
-1.591	-2.621	-0.320	0.038	-0.358
0.440	-0.276	-0.919	-0.139	-0.780
-0.072	-0.715	0.074	0.084	-0.011
2.215	2.054	0.017	-0.048	0.065
-1.087	-0.248	0.218	-0.106	0.323
2.357	1.929	-0.162	-0.295	0.134
2.672	1.773	0.663	0.337	0.326
0.819	0.878	0.117	-0.175	0.292
2.045	1.747	-0.078	-0.047	-0.031
1.611	1.370	0.285	-0.032	0.317
0.784	0.351	-0.386	-0.211	-0.175
-2.399	-1.771	-0.663	-0.650	-0.013
2.245	1.839	0.126	-0.011	0.137
0.455	0.809	0.281	-0.447	0.729
2.114	1.890	-0.453	-0.472	0.019
1.161	1.734	0.130	-0.806	0.936
-0.815	-0.499	-0.523	-0.228	-0.294
-1.487	-0.958	0.403	-0.480	0.883
1.155	1.309	0.328	-0.380	0.708
-0.210	0.440	0.180	-0.205	0.385
1.247	0.633	0.075	0.442	-0.366
0.443	0.993	0.163	0.246	-0.083
1.695	0.384	-0.434	0.103	-0.537
-3.919	-3.357	0.683	0.248	0.436
-2.877	-1.654	0.186	-0.527	0.713
1.386	0.106	0.121	0.802	-0.681
-0.959	-0.606	0.334	-0.305	0.639
0.363	0.077	0.011	-0.159	0.170
1.010	1.496	0.190	0.072	0.118
0.447	0.210	0.335	0.409	-0.074
0.757	0.677	-0.066	0.047	-0.113
0.454	0.775	-0.367	0.301	-0.667
2.010	1.721	-0.789	0.186	-0.975
2.127	1.973	-0.584	-0.463	-0.121
1.326	1.735	0.054	0.199	-0.145
0.024	0.328	0.061	0.060	0.001

0.216	0.608	-0.117	-0.304	0.187
-0.864	-0.467	0.122	-0.323	0.445
-0.409	-1.017	0.081	-0.025	0.106
0.567	0.925	0.126	0.164	-0.039
-1.863	-2.125	0.235	0.331	-0.096
-1.057	-0.819	0.279	-0.114	0.393
-1.843	-1.586	-0.286	-0.483	0.198
-2.577	-1.665	-0.124	0.369	-0.493
1.575	1.748	0.354	0.066	0.288
-0.750	-0.482	0.692	-0.158	0.850
-2.789	-2.454	0.032	-0.591	0.623
-3.002	-2.357	0.225	-0.446	0.671
0.274	-0.574	-0.095	0.224	-0.319
-1.097	-0.213	0.334	0.062	0.272
-1.142	-0.836	0.433	0.720	-0.287
-2.009	-0.950	0.308	-0.566	0.874
0.514	-0.618	0.357	0.568	-0.211
-0.394	-0.583	0.125	0.410	-0.286
0.849	0.996	0.200	0.070	0.130
-0.340	0.017	0.219	-0.512	0.730
1.053	0.055	0.285	0.412	-0.128
2.119	1.636	0.397	0.405	-0.008
1.746	1.581	0.535	0.484	0.050
2.523	1.692	-0.082	0.293	-0.375
1.960	1.133	-0.380	-0.706	0.326
2.373	2.388	-0.080	-0.365	0.285
0.186	0.599	0.340	-0.287	0.627
1.074	1.613	-0.228	-0.295	0.067
0.935	1.521	0.233	-0.460	0.693
0.097	1.703	0.351	-0.324	0.675
-1.248	-1.157	0.231	0.440	-0.208
-2.295	-2.350	0.030	-0.318	0.348
1.076	0.799	0.129	0.454	-0.325
1.556	1.632	0.084	0.495	-0.411
-2.124	-1.767	-0.371	-0.661	0.290
0.114	0.166	0.527	-0.031	0.558
-1.600	-0.542	-0.469	-0.513	0.044
-0.734	-0.146	0.314	-0.571	0.885
1.470	2.086	0.142	0.341	-0.198
3.690	3.168	-0.085	0.075	-0.161
-0.120	0.429	-0.513	-0.568	0.055
-1.752	-1.563	-0.443	-0.293	-0.150
-0.159	0.044	0.012	-0.231	0.243
-0.480	-0.019	0.740	-1.291	2.030
-2.186	-2.096	-0.445	-0.151	-0.294
-2.333	-1.851	-0.083	0.175	-0.257
-2.489	-1.977	-0.126	-0.156	0.030
-3.741	-2.955	-0.681	-0.562	-0.120
-3.045	-2.834	-0.234	0.324	-0.558
-2.281	-1.846	-0.328	0.501	-0.828
-2.196	-1.973	0.170	0.835	-0.665

-1.801	-0.643	-0.494	0.053	-0.547
0.771	-0.375	0.409	0.548	-0.139
1.073	1.149	0.009	-0.308	0.317
-1.810	-1.496	-0.038	1.011	-1.049
-1.988	-1.665	-0.422	-0.515	0.093
-0.071	0.387	-0.353	-0.221	-0.132
-3.185	-2.795	0.358	0.306	0.051
-0.984	-0.588	-0.556	-0.499	-0.057
2.618	2.266	0.222	-0.006	0.228
0.921	0.925	-0.463	-0.539	0.075
-0.260	-0.093	0.103	0.660	-0.557
-0.288	-0.153	-0.167	-0.710	0.542
-0.274	-0.568	0.302	0.514	-0.212
-2.220	-2.066	0.452	-0.136	0.588
-2.025	-2.198	-0.157	-0.055	-0.102
-0.594	0.193	-0.266	-0.743	0.477
0.679	1.714	-0.139	-1.165	1.026
-0.565	-0.251	-0.353	-0.634	0.280
1.110	0.961	0.440	0.351	0.089
-1.296	-0.432	-0.166	0.492	-0.658
1.455	1.368	-0.186	-0.062	-0.124
1.768	1.805	-0.196	-0.377	0.180
1.893	1.415	0.053	-0.134	0.187
2.398	1.954	-0.173	0.222	-0.395
-0.371	0.213	0.194	-0.423	0.617
-0.293	-0.058	0.032	0.029	0.004
0.029	0.062	0.189	-0.226	0.415
1.395	1.132	0.233	0.066	0.167
1.078	0.323	0.574	0.442	0.132
-1.951	-2.945	-0.167	0.297	-0.464
0.727	1.014	-0.807	-0.046	-0.762
-1.190	-0.821	-0.163	-0.047	-0.116
-3.280	-2.351	0.396	-0.729	1.125
1.078	0.703	-0.029	0.109	-0.139
0.955	0.278	0.188	0.287	-0.099
0.583	1.124	0.271	-0.506	0.778
-0.888	-0.688	-0.457	0.112	-0.569
-1.863	-1.212	0.102	-0.076	0.178
0.347	0.467	0.242	-0.631	0.873
-2.268	-2.276	0.121	-0.505	0.626
-1.800	-1.205	-0.006	-1.193	1.188
-1.996	-1.417	0.541	-0.240	0.781
-1.513	-2.031	-0.200	-0.281	0.081
1.730	0.132	0.275	0.323	-0.048
0.430	0.876	-0.025	-0.484	0.459
0.236	-0.536	0.474	0.126	0.348
0.889	1.421	-0.051	0.243	-0.294
0.435	0.777	0.141	-0.161	0.301
1.361	1.302	0.513	-0.246	0.759
3.140	3.133	0.638	-0.052	0.690
0.948	1.333	0.097	-0.415	0.511

0.115	0.946	-0.390	-0.020	-0.370
2.845	2.195	0.192	-0.034	0.227
0.114	0.471	-0.365	0.256	-0.620
0.272	0.270	0.348	-0.268	0.615
0.633	0.769	0.206	0.132	0.075
2.221	0.824	1.010	0.575	0.435
1.040	1.615	0.681	0.564	0.116
0.789	-0.380	0.250	0.259	-0.009
0.119	-0.531	-0.217	0.313	-0.529
0.437	0.367	0.328	0.295	0.034
0.687	1.256	0.391	0.213	0.178
0.616	0.346	-0.041	-0.351	0.310
-1.055	-0.235	-0.090	-0.196	0.106
-2.965	-2.097	-1.159	-0.699	-0.459
0.013	0.332	0.499	-0.116	0.615
3.181	2.512	0.382	0.432	-0.050
0.533	-0.267	0.265	0.532	-0.267
-0.151	-0.246	0.062	0.026	0.036
2.012	0.915	0.637	0.283	0.354
1.017	0.054	-0.097	-0.157	0.060
1.432	1.290	0.490	0.306	0.184
0.795	0.670	0.283	-0.392	0.675
-0.236	0.736	-0.121	0.120	-0.241
-0.479	-0.318	-0.178	0.353	-0.531
1.621	1.722	0.600	-0.515	1.115
-0.363	0.370	-0.183	-0.256	0.073
0.642	0.091	-0.191	0.067	-0.258
0.821	0.332	-0.135	-0.356	0.221
1.209	1.433	0.508	0.365	0.144
0.610	0.934	0.175	-0.068	0.243
0.232	0.680	0.122	-0.080	0.202
0.203	0.545	0.004	-0.784	0.787
0.029	0.533	0.020	-0.644	0.664
1.025	1.135	0.660	-0.302	0.963
1.610	1.165	0.524	0.302	0.222
-0.835	-0.424	0.044	-0.657	0.702
-1.646	-0.860	-0.044	-0.565	0.521
-0.366	-0.241	0.470	0.707	-0.237
1.800	1.070	0.395	1.022	-0.627
-0.518	-0.852	-0.150	-0.278	0.128
-0.832	-0.483	0.264	-0.072	0.336
-2.967	-2.506	-0.283	-0.477	0.194
-0.970	-1.098	0.365	-0.094	0.460
-2.067	-1.475	-0.360	-0.247	-0.113
-1.059	-1.731	0.045	0.242	-0.197
-4.234	-3.611	-2.449	-0.304	-2.145
3.017	2.750	0.729	-0.103	0.833
-0.206	-1.262	0.010	0.240	-0.230
0.124	0.365	-0.299	-0.172	-0.127
-1.187	-1.492	0.405	0.084	0.321
1.391	1.100	0.330	0.184	0.146

-0.018	-0.215	0.007	0.306	-0.299
-0.791	-0.013	-0.593	-0.293	-0.301
1.992	1.108	0.362	-0.059	0.421
-1.515	-1.288	0.209	-0.134	0.344
-1.148	-0.822	0.816	-0.152	0.968
-0.936	-0.749	0.705	-0.620	1.324
1.378	-0.088	0.298	0.153	0.145
-2.137	-1.613	0.107	-0.336	0.443
0.788	-0.749	-0.851	-0.184	-0.667
2.071	0.762	0.341	-0.298	0.639
-0.422	-0.406	-0.354	-0.180	-0.173
1.246	-0.107	0.134	0.169	-0.035
2.603	1.583	-0.074	0.042	-0.116
-2.363	-1.832	-0.387	-0.566	0.179
1.510	1.422	0.398	0.257	0.141
-0.244	-1.302	-1.310	-0.745	-0.565
1.177	1.292	0.652	0.032	0.620
0.910	0.951	0.348	0.143	0.205
-0.540	0.067	-0.170	0.055	-0.225
3.200	2.789	-0.547	-0.178	-0.369
2.998	2.357	-0.494	-0.709	0.215
0.722	0.983	-0.986	-0.879	-0.107
-0.395	0.129	0.073	-0.282	0.355
-2.645	-2.901	-0.588	-0.408	-0.180
-0.163	-0.636	0.094	0.298	-0.204
-1.597	-1.446	0.131	-0.693	0.823
0.078	0.460	-0.176	-0.437	0.261
1.507	1.430	0.584	0.073	0.511
-0.961	-1.573	0.455	0.034	0.421
2.715	2.492	0.045	0.080	-0.036
1.606	1.126	-0.600	-0.372	-0.228
-0.854	-1.484	0.148	0.022	0.127
-0.321	-0.804	-0.254	-0.244	-0.010
-2.186	-1.912	-0.189	-0.844	0.655
0.846	1.799	-0.384	-0.291	-0.093
-1.780	-1.561	-0.137	-0.177	0.040
1.125	1.486	0.324	-0.174	0.498
-1.161	-0.969	0.049	0.141	-0.092
-2.399	-2.363	-0.197	-0.077	-0.120
-0.892	-0.503	0.396	-0.289	0.685
-2.821	-2.256	-0.256	-0.634	0.378
1.663	1.107	0.076	-0.231	0.307
-1.378	-0.684	-0.305	-0.105	-0.200
-0.253	0.287	0.152	-0.365	0.517
-3.193	-2.749	-0.325	-1.087	0.762
2.340	2.091	0.116	-0.173	0.290
-2.486	-1.386	0.152	-0.119	0.271
1.909	1.914	1.493	0.709	0.784
-0.266	-0.417	0.008	0.458	-0.451
-3.203	-1.874	-0.055	-0.088	0.033
-0.756	-0.402	0.001	-0.443	0.444



0.431	0.841	0.220	-0.339	0.559
-0.191	0.022	0.403	-0.486	0.889
-2.915	-2.327	-0.207	-0.316	0.110
2.016	0.984	0.257	0.381	-0.124
2.222	1.662	-0.613	-0.072	-0.541
-3.790	-3.472	-0.248	0.182	-0.430
-0.178	-0.205	0.970	0.535	0.435
-0.375	-0.944	0.396	0.436	-0.039
-0.557	-1.235	0.417	0.564	-0.147
-0.169	-0.771	0.082	0.230	-0.148
-0.535	-0.785	0.221	-0.059	0.280
0.767	0.298	0.392	0.170	0.222
0.438	0.446	-0.053	0.125	-0.178
0.016	-0.500	1.335	0.610	0.725
0.920	-0.047	-0.027	0.226	-0.253
1.495	1.307	-0.475	-0.090	-0.386
0.872	1.036	-0.009	-0.402	0.392
0.980	0.281	-1.427	-0.364	-1.063
-1.497	-0.904	0.138	0.278	-0.140
-1.253	-1.002	0.256	-0.597	0.852
1.269	0.248	0.002	0.088	-0.085
0.938	-0.610	-0.288	0.335	-0.623
-0.902	-0.746	0.186	-0.075	0.261
0.429	-0.556	0.305	-0.434	0.740
-0.979	-1.401	0.546	-0.027	0.573
-0.560	-0.215	0.306	0.000	0.306
-0.313	-0.287	0.496	-0.763	1.259
-1.263	-1.651	0.792	0.476	0.316
1.331	1.191	-0.507	-0.883	0.376
-0.319	-0.179	-0.003	-0.444	0.441
-0.447	-0.305	0.735	0.538	0.198
0.973	0.340	-0.200	0.005	-0.205
2.849	2.687	-0.317	0.057	-0.374
1.308	0.856	0.270	-0.213	0.483
-1.487	-2.463	0.482	0.419	0.063
-0.834	-0.277	0.005	-0.318	0.323
1.351	1.352	0.097	0.071	0.026
-0.842	-0.881	-0.658	-0.407	-0.252
0.469	-0.028	0.444	0.286	0.158
2.472	1.919	0.363	0.178	0.186
-0.286	0.450	-1.250	-0.724	-0.527
-1.145	-1.077	0.439	-0.083	0.522
-1.989	-1.826	0.332	-0.606	0.937
-1.613	-1.253	-0.293	-0.201	-0.092
0.171	0.723	-0.164	0.208	-0.372
-0.810	-0.398	-0.395	0.539	-0.934
0.016	0.382	1.100	-0.435	1.535
-0.583	-0.153	0.209	0.119	0.090
0.293	2.081	0.093	0.796	-0.704
1.294	1.727	0.733	0.275	0.458
1.269	0.357	0.366	0.041	0.325

-0.008	-0.965	0.190	-0.255	0.445
-1.431	-0.743	0.360	0.228	0.132
-1.313	-0.353	0.151	-0.245	0.397
-0.681	-0.258	0.151	0.032	0.119
0.106	-0.251	-0.178	-0.460	0.282
0.644	0.110	0.071	-0.248	0.318
0.301	-0.205	0.240	0.206	0.034
0.390	0.982	0.436	0.176	0.260
-1.859	-0.651	0.002	-0.257	0.259
0.588	0.910	0.305	0.018	0.286
2.104	2.101	-0.140	0.072	-0.212
0.436	0.595	0.589	0.342	0.246
1.649	1.223	0.010	-0.332	0.342
2.546	2.277	-0.805	-1.126	0.322
-1.097	-0.967	-0.034	0.107	-0.141
-0.639	-1.174	-0.444	0.151	-0.594
-0.200	0.376	0.077	-0.207	0.284
-1.884	-3.427	0.241	0.778	-0.537
-2.074	-1.795	0.065	-0.408	0.472
0.443	-0.992	-1.676	-0.291	-1.385
0.117	-0.491	-0.872	-0.580	-0.292
-0.679	-0.753	0.101	-0.098	0.199
-0.581	-1.128	0.326	0.751	-0.426
-4.018	-3.887	-0.454	-0.147	-0.307
-2.192	-1.410	0.125	-0.010	0.135
2.047	1.846	0.223	0.036	0.187
-1.208	-1.224	-0.569	-0.210	-0.359
0.596	0.537	0.798	0.341	0.457
0.148	-0.881	-0.542	0.017	-0.559
-2.729	-2.177	-0.159	-0.667	0.508
-0.557	-1.114	0.694	0.211	0.483
-0.452	-0.894	0.774	-0.266	1.040
-2.807	-2.725	0.224	0.038	0.186
-1.055	-0.427	0.332	-0.549	0.881
0.176	-0.001	-0.010	0.114	-0.124
0.199	-0.286	-0.063	-0.031	-0.032
-3.440	-2.830	0.051	-0.136	0.186
-0.427	0.067	0.198	0.017	0.181
-0.946	-0.651	-0.011	-0.434	0.422
-1.310	-1.258	-0.056	-0.117	0.061
-1.488	-1.129	0.209	0.274	-0.065
0.319	0.777	0.374	-0.190	0.564
1.712	1.357	0.213	0.399	-0.187
-0.670	-1.235	-0.871	-0.379	-0.492
0.040	0.518	0.656	-0.197	0.853
-2.200	-1.757	-0.568	-0.097	-0.472
-2.593	-1.658	0.518	-0.374	0.891
-1.416	-0.740	0.006	-0.395	0.402
-1.416	-2.312	0.284	0.740	-0.456
-1.457	-0.923	0.184	0.589	-0.405
0.592	0.180	-0.105	0.173	-0.278

0.656	1.013	0.113	0.150	-0.037
-1.237	-0.532	-0.211	0.102	-0.313
-1.490	-1.975	0.031	0.347	-0.316
-0.953	-1.582	-0.476	-0.122	-0.354
-0.586	-0.922	-0.107	-0.134	0.028
-3.658	-2.829	-0.311	0.225	-0.536
1.714	-0.028	0.555	0.360	0.196
-0.024	0.205	0.208	-0.366	0.573
-1.384	-1.157	-0.234	-0.237	0.004
1.173	0.795	0.648	-0.494	1.143
1.096	1.166	0.117	0.144	-0.027
-1.438	-0.671	-0.089	-0.241	0.152
-1.695	-0.949	0.258	0.606	-0.348
1.066	0.268	0.822	0.626	0.196
-3.325	-2.981	-0.228	0.707	-0.935
-0.735	0.367	0.239	0.782	-0.543
-2.880	-3.019	-0.091	-0.182	0.091
-2.341	-2.414	-0.130	-0.792	0.662
-3.617	-2.967	-0.456	-0.091	-0.365
-0.326	-0.904	0.420	-0.110	0.530
-0.872	-1.180	0.360	-0.357	0.716
-0.908	-1.298	0.271	0.248	0.023
-3.605	-3.425	0.221	-0.011	0.233
-1.412	-1.710	0.111	-0.443	0.554
-1.619	-1.277	-1.752	0.545	-2.297
-0.038	-0.780	-0.095	-0.059	-0.036
0.803	0.834	0.601	0.028	0.574
0.031	-0.073	-0.540	-0.211	-0.329
-1.799	-0.975	-0.184	-0.914	0.729
-1.172	-1.668	-0.728	-0.214	-0.514
0.030	0.424	0.326	-0.172	0.499
-1.866	-2.235	-0.109	-0.243	0.134
-0.189	0.142	0.350	-0.126	0.476
-3.251	-2.666	0.149	-0.140	0.290
-1.723	-1.701	0.038	0.173	-0.135
1.229	1.618	0.452	0.311	0.141
1.251	1.846	0.220	0.084	0.135
-0.825	-1.561	-0.325	-0.646	0.321
1.393	1.863	0.324	-0.232	0.556
-2.198	-1.396	-0.120	-0.214	0.093
-3.648	-3.523	-0.033	0.097	-0.131
-0.481	-0.698	0.279	0.411	-0.132
-2.943	-2.853	-0.056	0.176	-0.232
-0.009	-1.562	-0.071	0.208	-0.279
-0.839	-0.911	-0.106	-0.254	0.148
2.226	1.093	-0.437	0.129	-0.567
1.050	1.030	0.026	-0.039	0.066
1.202	0.467	-0.159	0.071	-0.230
-0.847	-1.103	0.255	-0.115	0.370
1.351	-0.005	-0.052	-0.012	-0.040
0.319	0.275	-0.395	-0.201	-0.194

-0.679	-0.998	-0.417	-0.187	-0.229
1.186	1.161	-0.978	-0.566	-0.412
1.278	0.254	0.185	-0.173	0.358
1.870	2.009	0.051	-0.333	0.384
-4.698	-4.160	0.374	-0.519	0.894
-3.015	-2.269	-0.229	-0.399	0.170
-1.148	-1.886	-0.151	-0.251	0.101
0.133	0.568	-0.239	0.076	-0.315
0.670	0.284	0.175	0.149	0.027
1.406	1.393	-0.533	-0.174	-0.359
0.935	0.694	-0.196	0.295	-0.491
-0.337	-0.782	-0.067	0.169	-0.236
2.795	2.814	0.246	0.463	-0.218
-1.772	-1.127	0.002	0.392	-0.390
1.593	0.327	0.595	0.659	-0.064
1.150	0.195	0.291	0.482	-0.191
1.715	0.379	0.471	0.862	-0.391
0.644	0.596	0.105	0.250	-0.145
1.502	0.681	0.228	0.504	-0.276
-0.115	-0.617	0.216	-0.005	0.221
0.103	0.405	0.154	-0.161	0.315
2.807	2.363	0.468	0.080	0.388
-0.438	0.075	0.339	0.145	0.194
-3.070	-2.481	-0.151	-0.278	0.127
-2.302	-1.919	1.475	0.316	1.159
0.828	0.246	0.613	0.046	0.567
-0.766	-1.249	0.292	0.478	-0.186
-0.816	-1.176	-0.106	0.246	-0.352
-1.881	-1.188	0.203	-0.523	0.726
0.360	0.028	0.449	0.478	-0.029
-0.532	-0.962	0.485	0.139	0.346
-1.472	-1.721	0.240	-0.699	0.939
-2.390	-2.677	-0.086	-0.220	0.134
0.144	0.335	0.203	-0.323	0.526
-0.214	-0.098	0.105	-0.529	0.634
-1.248	-0.856	-0.380	-0.769	0.389
-4.428	-2.722	-0.726	-0.983	0.257
0.025	-1.233	-0.137	-0.053	-0.084
-2.174	-1.711	0.299	-0.120	0.420
-2.013	-1.685	0.132	0.089	0.043
-0.911	-2.115	-0.039	0.388	-0.428
-2.246	-2.590	0.369	0.106	0.263
-1.505	-2.052	0.183	0.338	-0.155
0.601	-0.946	-0.347	0.067	-0.414
-0.921	-1.393	-0.205	-0.405	0.200
0.925	0.442	-0.136	0.612	-0.747
0.418	-0.807	-0.179	0.646	-0.825
-0.689	-1.276	0.243	0.154	0.089
1.100	-0.776	0.221	0.142	0.079
0.542	0.628	0.259	0.113	0.146
1.469	0.845	0.408	0.273	0.134

1.420	-0.234	0.589	0.455	0.134
1.812	0.693	-0.010	0.225	-0.235
-0.042	-0.294	0.245	-0.120	0.365
1.927	2.916	0.016	-0.039	0.055
0.683	1.600	-0.339	-0.638	0.299
-1.473	-1.297	-0.462	-0.711	0.249
0.614	-0.060	1.210	0.532	0.678
1.769	1.533	0.481	0.228	0.253
-0.788	-0.079	0.420	-0.464	0.884
-0.051	-0.022	0.752	0.549	0.203
1.426	1.317	-0.080	-0.044	-0.036
-1.727	-0.820	-0.043	-0.266	0.223
-0.778	-0.446	0.171	0.049	0.122
-0.320	-0.372	0.297	-0.478	0.775
-1.158	-0.264	-0.051	-0.475	0.424
-1.151	-1.506	-0.138	-0.037	-0.100
-0.993	-0.671	0.124	-0.307	0.431
1.186	1.019	0.504	0.066	0.438
0.661	1.069	0.025	0.002	0.023
0.849	0.849	0.257	0.421	-0.164
-1.734	-1.306	-0.102	0.510	-0.613
-3.008	-1.454	0.199	0.650	-0.451
-2.473	-1.998	-0.078	-0.788	0.710
-0.172	-0.622	0.075	0.069	0.006
0.267	0.256	-0.042	-0.216	0.175
-0.313	0.305	-0.001	-0.303	0.302
-1.446	-1.208	0.080	-0.602	0.683
-2.839	-2.277	0.548	-0.285	0.833
-2.176	-1.695	-0.257	-0.285	0.028
-1.097	-1.415	-0.128	0.201	-0.329
0.299	0.561	0.147	-0.575	0.722
-3.085	-2.563	-0.003	0.018	-0.021
-3.986	-3.385	-0.040	-0.950	0.910
1.247	1.081	0.007	0.098	-0.090
2.966	2.708	0.330	0.409	-0.079
1.727	1.967	0.524	0.053	0.471
-0.162	-0.812	0.326	-0.044	0.371
-2.484	-2.157	0.003	-0.535	0.538
-2.064	-1.467	0.518	-0.456	0.974
-1.279	-1.052	-0.194	-0.552	0.358
-1.876	-1.584	-0.035	-1.253	1.218
1.164	1.102	0.072	-0.134	0.206
-3.328	-2.528	0.376	-0.655	1.031
-1.260	-0.345	-0.549	-0.515	-0.034
-4.069	-3.632	0.187	-0.603	0.789
-0.814	-1.437	-0.096	0.411	-0.507
0.054	-0.743	0.513	0.399	0.114
2.778	2.583	0.004	0.449	-0.445
-1.386	-0.834	-0.414	-0.208	-0.206
1.160	0.487	-0.345	-0.008	-0.338
-0.079	0.213	0.326	0.282	0.044

0.781	-0.573	0.234	0.267	-0.033
-0.481	-0.973	0.349	0.468	-0.119
-0.749	-1.021	0.045	-0.008	0.052
-0.122	-0.141	0.276	0.211	0.065
0.597	1.050	-0.240	-0.545	0.305
-0.688	-0.522	0.016	-0.438	0.454
0.349	0.398	-0.152	0.037	-0.189
1.487	0.625	0.504	0.575	-0.071
1.145	0.439	-0.457	-0.436	-0.021
0.851	0.063	0.161	-0.077	0.237
0.405	-0.031	0.095	-0.119	0.215
1.227	0.922	-0.022	-0.255	0.234
2.072	1.190	-0.499	-0.705	0.206
1.817	1.340	0.579	0.520	0.060
0.265	-1.139	-0.031	0.485	-0.515
1.494	0.770	0.328	0.582	-0.253
0.707	0.906	0.227	-0.339	0.566
0.219	0.824	-0.640	-0.659	0.019
1.131	-0.103	0.390	0.607	-0.218
3.536	2.053	0.338	0.323	0.016
-1.302	-1.388	-0.166	-0.023	-0.143
0.363	0.461	0.565	-0.003	0.568
0.971	0.787	-0.052	-0.287	0.234
2.002	1.887	-0.097	-0.061	-0.036
1.223	0.797	0.243	-0.178	0.421
0.309	-0.462	0.393	0.057	0.337
0.809	0.429	-0.108	-0.056	-0.052
1.398	0.886	0.596	0.588	0.008
-0.438	-0.471	0.164	0.102	0.062
-0.946	-0.583	0.084	-0.025	0.108
1.026	0.237	-0.331	-0.015	-0.316
1.426	1.437	0.409	0.393	0.016
1.888	1.601	0.293	0.070	0.223
-0.162	0.290	0.093	0.382	-0.289
-0.663	-1.321	0.119	0.754	-0.635
1.831	1.193	0.112	0.836	-0.724
2.958	1.672	0.486	0.451	0.035
1.255	0.846	0.030	0.014	0.016
-3.791	-3.747	-0.006	-0.407	0.401
-2.389	-2.100	-0.126	0.512	-0.638
0.499	-0.402	0.336	0.078	0.259
-1.114	-1.157	-0.192	-0.007	-0.185
1.570	0.720	0.414	1.121	-0.707
-0.328	-1.048	0.057	0.154	-0.097
0.208	1.282	0.220	0.210	0.010
-2.039	-1.763	-0.137	-0.130	-0.007
1.705	1.280	0.132	-0.012	0.144
0.677	0.489	0.013	-0.039	0.051
-3.266	-2.870	0.062	-1.069	1.131
-0.087	0.166	0.128	-0.374	0.501
-1.612	-1.045	-0.300	-0.028	-0.272
-3.398	-1.237	-0.204	-0.507	0.303

-0.166	0.495	0.040	-0.142	0.182
-0.830	-1.712	-0.116	-0.057	-0.059
0.070	-1.343	-0.086	-0.193	0.107
-2.343	-1.940	-0.077	-0.380	0.302
1.935	1.474	0.318	0.247	0.071
-1.728	-1.941	-0.064	-0.053	-0.011
-1.165	-0.776	-0.257	-0.199	-0.059
-1.274	-0.703	0.034	0.179	-0.146
0.572	0.125	0.108	-0.355	0.463
1.687	2.788	-0.544	-0.289	-0.254
-3.123	-2.965	-0.740	-0.455	-0.285
-2.759	-1.755	-1.778	-0.835	-0.944
-1.042	-0.687	0.121	0.057	0.065
-0.225	-0.577	0.081	0.162	-0.081
-2.113	-1.485	0.700	0.162	0.539
0.728	0.685	0.000	0.429	-0.429
0.192	0.952	0.018	0.430	-0.413
2.428	1.791	0.433	0.462	-0.029
-1.343	-0.931	-0.728	-0.099	-0.630
-1.807	-1.503	0.293	0.273	0.020
-1.629	-2.003	0.445	-0.020	0.466
1.092	1.231	-0.088	0.214	-0.303
1.719	1.810	0.044	-0.142	0.186
-1.084	1.441	-0.260	-1.136	0.876
1.626	1.455	0.184	0.756	-0.572
1.270	0.376	0.701	0.320	0.381
0.627	0.581	-0.980	-1.127	0.147
-0.510	-0.279	0.273	0.081	0.193
-1.910	-1.065	-0.437	-0.521	0.084
0.328	0.334	-0.679	0.143	-0.822
-0.967	-0.615	-0.547	-0.463	-0.084
1.156	1.565	-0.346	-0.573	0.227
1.040	0.761	0.101	0.231	-0.130
-2.504	-3.360	-0.305	-0.837	0.532
-2.177	-2.361	0.200	0.257	-0.057
1.883	2.111	-0.271	0.298	-0.569
2.042	1.723	0.400	0.558	-0.158
-0.228	0.438	0.489	0.134	0.355
0.579	-0.382	0.166	0.803	-0.637
1.308	0.426	0.580	0.868	-0.288
0.981	0.048	0.208	0.529	-0.321
1.194	0.972	0.163	0.330	-0.167
1.872	1.945	0.356	0.582	-0.226
-2.029	-1.489	-0.109	-0.004	-0.105
-1.793	-2.182	0.097	0.245	-0.148
-0.392	-0.154	0.103	-0.177	0.279
-1.035	-0.455	0.158	-0.541	0.699
-1.789	-1.508	0.401	-0.388	0.789
0.102	-0.075	0.483	0.143	0.340
-0.726	-0.534	0.200	-0.378	0.578
0.070	-0.713	0.427	0.560	-0.133

-1.283	-1.811	0.512	0.616	-0.105
-1.236	-1.879	-0.023	0.050	-0.072
0.859	1.117	0.039	-0.271	0.310
-0.999	0.205	-0.208	-0.305	0.097
1.808	1.405	0.113	0.233	-0.120
0.937	0.323	0.115	0.293	-0.178
0.211	-0.254	0.084	-0.040	0.124
-1.536	-0.886	0.100	-0.171	0.272
-0.395	-1.555	0.135	0.410	-0.275
-1.055	-0.888	-0.176	0.248	-0.424
0.412	0.742	-0.030	0.124	-0.155
1.963	1.055	0.407	0.119	0.288
-2.901	-2.388	-0.243	-0.388	0.145
1.033	0.433	0.201	0.056	0.145
0.093	-0.785	0.148	-0.088	0.236
-0.771	-1.723	0.255	0.176	0.080
-1.313	-0.950	-0.258	-0.246	-0.012
0.939	0.555	0.163	0.312	-0.149
-0.417	-1.233	-0.420	-0.175	-0.245
1.196	0.933	-0.003	0.327	-0.330
-0.036	-0.284	-0.026	-0.462	0.437
-0.667	-0.918	0.294	-0.142	0.436
-0.273	-0.212	-0.244	0.179	-0.422
0.900	0.316	0.185	0.177	0.007
-0.940	-0.906	0.077	-0.130	0.206
1.089	0.363	0.612	0.258	0.354
-0.664	-0.313	0.152	0.533	-0.381
-0.985	-1.043	-1.299	0.018	-1.316
0.143	-0.047	0.685	0.096	0.589
-1.258	-1.578	0.146	0.286	-0.140
-1.371	-0.499	-0.344	0.647	-0.991
-3.048	-1.319	-0.146	-0.598	0.451
-2.537	-2.379	0.230	0.267	-0.037
-2.722	-2.270	0.161	0.324	-0.163
-0.456	-0.061	-0.102	0.134	-0.237
-2.295	-1.912	0.275	-0.398	0.673
0.567	-0.594	-0.156	-0.016	-0.141
0.177	0.067	-0.098	-0.242	0.143
1.442	0.879	0.505	0.591	-0.085
0.998	0.238	0.372	0.608	-0.235
-0.547	-0.474	-0.071	-0.101	0.030
1.293	0.414	-0.116	0.085	-0.201
-0.842	-1.432	-0.169	0.176	-0.345
-2.602	-2.145	0.173	-0.144	0.317
-2.360	-1.982	0.031	-0.241	0.272
0.780	0.244	0.876	0.489	0.387
2.190	2.008	-0.097	-0.096	-0.001
1.355	1.650	-0.393	-0.507	0.113
-0.227	-0.021	-0.448	-1.375	0.926
1.551	1.323	0.119	0.051	0.068
1.141	0.589	0.649	0.020	0.629



0.719	0.417	0.127	0.469	-0.342
1.048	0.591	0.501	0.396	0.105
-1.572	-1.054	0.555	-0.612	1.168
1.170	0.242	0.238	0.286	-0.049
0.832	-0.296	0.094	0.142	-0.049
0.820	0.694	-0.082	-0.100	0.018
-0.137	0.110	0.130	-0.441	0.570
0.085	-0.487	-0.122	-0.551	0.429
-0.584	-1.570	-0.085	0.169	-0.254
0.096	-0.924	-0.427	-0.184	-0.242
-0.468	-0.188	-0.186	-0.557	0.371
0.636	0.883	0.400	-0.110	0.510
-1.006	-0.605	-0.209	-0.211	0.002
1.995	1.458	0.777	0.514	0.263
0.778	-0.079	0.120	0.221	-0.100
-0.799	-0.238	-0.030	-0.179	0.149
2.029	2.128	-0.058	0.305	-0.363
-2.776	-2.378	0.701	0.350	0.351
0.363	0.552	0.138	-0.356	0.494
0.844	0.681	0.060	-0.290	0.350
2.415	1.724	-0.126	-0.468	0.343
1.911	2.213	0.394	0.370	0.025
-0.944	-0.124	0.845	0.480	0.364
-1.448	-1.914	0.040	-0.338	0.378
-0.906	-0.147	0.069	0.228	-0.159
0.076	-1.172	-0.004	-0.053	0.048
1.717	1.086	0.350	0.778	-0.428
-1.098	-1.305	0.014	0.234	-0.220
0.638	0.597	0.897	0.217	0.681
-2.020	-1.550	0.031	-0.444	0.475
-0.335	-1.085	0.407	0.564	-0.157
-0.460	-1.115	0.408	-0.005	0.413
-1.709	-1.406	0.159	-0.041	0.200
1.957	1.988	0.028	0.392	-0.364
1.019	1.223	-0.049	0.549	-0.598
-1.874	-1.331	-0.174	-0.351	0.177
-4.008	-3.349	-0.037	-0.745	0.708
0.705	1.139	0.737	-0.365	1.102
2.720	1.966	0.414	0.521	-0.107
-1.097	-0.760	1.153	0.516	0.637
0.719	1.022	0.184	-0.056	0.241
0.869	0.589	0.152	-0.306	0.459
0.927	0.810	0.617	-0.235	0.853
-1.462	-0.816	0.079	-0.144	0.223
0.829	0.392	0.711	-0.708	1.419
0.965	0.513	0.313	-0.103	0.416
-0.881	-0.372	-1.407	-0.104	-1.303
0.568	1.268	0.005	-0.370	0.374
-0.321	0.457	0.257	-0.157	0.414
1.154	0.922	0.074	0.045	0.029
1.437	0.750	0.187	0.654	-0.466

-1.130	-0.524	-0.073	-0.409	0.336
0.055	0.217	0.264	0.385	-0.121
-1.428	-1.708	-1.158	-0.692	-0.466
0.067	0.266	0.105	0.290	-0.185
-0.978	-0.187	-0.807	-0.977	0.170
0.515	0.746	0.172	-0.591	0.763
-2.299	-2.012	-0.534	-0.427	-0.108
-0.634	0.874	-0.438	-0.109	-0.329
-0.215	-0.199	0.018	0.325	-0.308
0.821	0.877	-0.115	0.169	-0.284
-0.296	-0.090	0.346	-0.055	0.401
1.875	1.608	0.046	-0.563	0.609
2.135	0.732	0.126	0.426	-0.300
1.542	2.180	-0.765	-0.787	0.022
0.442	0.608	-0.895	-0.581	-0.314
-1.156	-0.730	0.579	-0.194	0.774
-0.560	-0.338	0.330	-0.347	0.678
-2.222	-2.407	-0.308	-0.735	0.426
0.339	-0.245	0.376	0.317	0.058
-0.248	-0.083	-0.216	-0.314	0.098
0.478	0.275	0.694	0.347	0.347
-0.215	-1.318	0.028	-0.383	0.411
1.754	1.581	-0.835	-0.590	-0.245
1.228	0.852	0.428	0.093	0.335
-1.636	-1.227	-0.079	-0.579	0.500
-0.578	-0.472	0.013	-0.051	0.064
1.008	0.453	0.363	0.191	0.172
0.739	0.728	-0.056	-0.282	0.225
-0.355	-0.470	0.019	-0.059	0.078
0.667	0.043	-0.462	0.387	-0.849
-0.064	0.236	0.214	0.113	0.101
0.094	-0.327	-0.208	-0.226	0.018
-1.642	-1.201	-0.204	-0.501	0.297
-0.130	-0.444	-1.166	-1.088	-0.078
0.545	-0.489	-0.318	0.109	-0.426
1.512	0.242	-0.054	0.132	-0.185
-2.434	-1.961	0.097	-0.069	0.166
0.596	0.788	0.273	0.333	-0.060
-0.494	-0.417	-0.133	-0.360	0.227
0.004	-0.143	0.410	-0.071	0.480
0.224	-0.823	-0.033	0.247	-0.280
1.873	0.275	0.276	0.176	0.099
-0.004	-0.078	-0.079	0.379	-0.459
0.538	0.600	-0.260	-0.072	-0.188
0.136	-0.068	0.124	-0.034	0.159
0.521	-0.424	-0.808	0.167	-0.975
1.283	-0.252	0.064	0.006	0.058
-2.401	-1.757	0.350	0.589	-0.239
0.233	0.286	0.456	0.568	-0.112
-1.131	-0.819	0.255	-0.308	0.563
-0.944	-1.464	0.363	-0.056	0.419

-0.627	-1.118	0.234	0.908	-0.674
-1.947	-1.699	0.062	1.100	-1.038
-0.405	-0.658	0.629	-0.534	1.163
0.564	-0.325	0.401	0.283	0.118
0.079	-0.946	0.126	0.499	-0.373
1.210	0.824	0.481	0.068	0.414
1.814	2.062	-1.186	-0.841	-0.345
-0.217	0.101	0.301	0.335	-0.033
1.306	1.297	-0.893	-0.286	-0.608
0.687	1.001	-0.301	-0.566	0.265
-1.503	-1.323	0.417	-0.327	0.744
-1.289	-1.948	-0.356	-0.415	0.059
1.432	0.668	0.052	0.283	-0.231
-1.032	-0.491	0.398	-0.421	0.820
-0.194	-0.039	0.464	-0.029	0.493
-1.612	-1.015	0.211	-0.286	0.497
-4.342	-1.868	-0.225	0.892	-1.117
-0.701	-0.235	0.102	-0.600	0.701
0.658	0.825	0.132	0.268	-0.136
-2.406	-2.551	0.295	0.275	0.021
-0.631	-1.460	-0.018	0.734	-0.752
-2.800	-2.499	0.028	-0.914	0.942
-2.339	-2.005	0.100	-0.676	0.777
0.373	0.149	-0.189	-0.279	0.089
-2.600	-1.951	-0.192	-1.071	0.879
-1.696	-1.172	-0.098	-0.675	0.577
0.462	-0.425	-0.259	-0.448	0.189
0.880	0.280	-0.415	-0.291	-0.124
-0.807	-1.441	-1.085	-0.794	-0.291
-0.962	-0.675	0.199	-0.362	0.561
0.381	-0.463	0.199	0.203	-0.004
-0.519	-0.452	-0.130	-0.155	0.025
-0.961	-1.283	-0.325	-1.139	0.813
-0.278	-0.467	-0.116	0.258	-0.374
1.315	0.113	0.537	0.631	-0.094
2.817	4.055	0.320	-0.380	0.701
1.769	1.446	-2.026	-0.606	-1.420
3.644	2.259	-0.763	-0.010	-0.753
-0.721	0.336	0.161	0.210	-0.049
-2.600	-2.611	-0.320	0.685	-1.004
0.559	1.249	0.021	-0.071	0.092
1.222	1.504	0.135	0.018	0.117
-1.197	-1.404	-0.179	0.381	-0.561
-1.422	-1.139	-0.119	0.776	-0.895
0.349	0.306	-0.065	0.236	-0.301
0.138	0.671	-0.181	0.134	-0.315
2.399	1.780	0.261	0.270	-0.009
0.620	0.022	-0.362	0.044	-0.406
1.160	1.838	-0.116	-0.811	0.695
2.595	2.159	-0.160	-0.196	0.036
2.585	1.897	0.373	0.512	-0.139

2.998	1.338	-0.763	-0.203	-0.560
2.092	1.499	0.826	0.282	0.545
2.196	1.281	0.475	0.072	0.403
1.557	0.242	0.471	0.821	-0.349
-1.276	-0.443	0.376	-0.270	0.646
3.007	2.453	-0.153	-0.098	-0.055
2.289	1.638	-0.412	0.125	-0.537
3.407	2.171	0.113	-0.097	0.210
3.731	1.929	0.479	0.193	0.286
1.553	1.902	0.585	-0.804	1.389
1.681	0.561	-0.310	0.432	-0.742
2.892	2.054	0.334	-0.043	0.377
2.338	1.409	0.183	0.499	-0.316
3.539	2.037	0.546	0.567	-0.021
2.067	1.947	0.661	0.166	0.494
0.755	1.184	-0.740	-0.225	-0.515
0.903	0.949	0.376	0.592	-0.215
1.620	0.183	0.850	0.384	0.466
1.614	1.165	0.700	0.215	0.485
2.207	1.148	0.284	0.056	0.229
1.344	1.793	0.278	-0.677	0.955
1.902	1.533	0.331	-0.198	0.529
0.323	0.644	0.210	-0.287	0.497
-0.346	-0.110	0.453	-0.272	0.726
2.189	2.302	0.180	-0.289	0.469
2.446	2.308	0.448	0.201	0.248
2.972	1.707	0.390	0.195	0.195
0.125	0.783	-0.139	-0.804	0.665
1.214	1.564	0.360	-0.212	0.572
1.146	0.640	0.378	-0.159	0.536
-2.305	-2.291	-0.104	-0.189	0.085
1.717	1.432	0.238	0.323	-0.085
-0.764	-1.904	0.358	0.085	0.272
1.752	1.621	-0.148	-0.113	-0.034
0.908	0.219	-0.045	0.701	-0.746
0.566	0.376	-0.642	-0.862	0.220
-1.128	0.061	0.041	0.847	-0.806
-0.771	-1.537	0.359	0.534	-0.175
-2.684	-2.662	0.203	0.387	-0.184
-1.133	0.179	0.074	-0.195	0.270
-0.205	0.508	-0.056	-0.007	-0.049
1.590	1.942	0.265	-1.265	1.530
-0.355	-0.057	-0.234	-0.162	-0.072
-0.700	-0.098	0.158	0.124	0.034
-2.213	-1.810	-0.152	0.061	-0.213
1.489	0.682	0.343	0.204	0.139
0.959	-0.181	0.045	-0.401	0.447
-0.465	-0.361	0.022	-0.287	0.309
-1.706	-1.189	-0.061	0.079	-0.140
-1.031	-1.368	0.588	0.773	-0.185
0.306	0.077	0.220	0.170	0.050

2.401	2.520	-0.139	-0.159	0.020
-1.082	-0.681	0.051	-0.031	0.083
2.350	1.733	-0.249	-0.226	-0.022
0.223	-0.006	-0.206	-0.446	0.240
1.621	1.752	0.078	-0.345	0.422
-1.296	-1.606	-0.013	-0.056	0.043
0.937	0.253	0.394	0.224	0.170
0.346	-0.008	-0.033	0.291	-0.324
1.747	1.601	0.467	-0.119	0.586
-2.036	-2.333	-0.133	-0.015	-0.119
-3.311	-3.507	-0.147	0.410	-0.557
1.807	0.657	0.631	0.347	0.284
-2.822	-1.857	-0.345	-0.618	0.273
-0.771	-1.734	0.210	0.210	0.000
1.543	1.442	-0.499	-0.617	0.117
-0.126	0.717	-0.932	-0.572	-0.360
0.597	-0.845	0.605	0.370	0.236
-0.766	-0.505	-0.582	-0.662	0.080
-0.095	-1.364	0.086	-0.118	0.204
-0.315	-1.590	-0.022	0.622	-0.644
2.639	1.969	-0.646	-0.432	-0.215
-2.051	-1.537	-0.262	-0.829	0.567
1.021	0.948	0.250	-0.194	0.444
-1.086	-0.841	0.222	-0.050	0.272
1.131	1.288	-0.535	0.084	-0.619
-0.197	-0.645	0.272	0.191	0.081
1.291	1.480	-0.285	-0.304	0.019
-0.026	0.893	-0.369	-0.853	0.484
-1.380	-0.966	0.100	0.270	-0.170
0.772	0.096	-0.361	0.089	-0.451
1.163	1.027	0.354	-0.383	0.736
0.566	0.727	0.219	-0.153	0.372
-1.138	-1.768	-0.168	-0.053	-0.115
-0.863	-0.359	0.695	0.075	0.620
-2.052	-1.404	0.708	-0.332	1.040
-0.836	0.719	-0.844	-0.947	0.103
0.698	0.017	0.055	0.403	-0.349
-0.573	-2.071	0.305	0.621	-0.316
0.677	0.772	0.445	0.487	-0.042
0.533	0.369	0.536	0.745	-0.209
1.624	1.919	0.027	0.262	-0.235
2.477	1.498	0.307	0.068	0.239
1.344	0.841	0.483	0.212	0.271
2.867	2.012	0.440	-0.050	0.490
2.791	1.597	0.467	0.360	0.107
0.987	1.681	-0.921	-1.328	0.406
0.832	1.744	0.021	-0.511	0.532
1.524	2.051	-0.159	-0.681	0.522
2.357	1.870	0.626	0.508	0.118
2.298	2.582	0.388	-0.159	0.546
2.123	1.688	1.016	0.657	0.359

-2.479	-2.015	-0.488	-1.150	0.662
0.377	-0.318	0.519	0.975	-0.455
3.276	1.873	-0.270	-0.404	0.134
1.514	1.449	-0.002	0.314	-0.316
0.907	-0.143	0.168	0.618	-0.450
-0.212	0.408	0.156	-0.415	0.571
2.173	1.504	0.150	0.031	0.119
-1.071	-0.842	-1.038	-0.904	-0.134
1.174	1.058	-0.153	0.324	-0.477
-1.091	-0.611	-0.129	0.031	-0.160
1.412	0.760	0.231	0.291	-0.059
0.228	0.869	0.453	-0.091	0.545
1.659	0.828	0.422	0.551	-0.129
1.786	1.936	-0.414	0.269	-0.684
1.577	1.930	0.170	-0.248	0.418
2.205	1.899	-0.008	-0.416	0.408
2.645	1.974	-0.037	-0.034	-0.003
1.911	1.599	0.768	0.432	0.336
1.534	1.368	0.366	-0.262	0.627
2.315	1.991	0.157	-0.387	0.545
2.005	1.692	0.890	0.162	0.728
-2.577	-1.850	-0.162	0.101	-0.263
0.625	-0.355	0.365	-0.038	0.404
-3.066	-2.262	-0.229	-0.590	0.361
1.059	1.665	-0.894	-0.617	-0.277
-1.673	0.164	-0.213	-0.323	0.111
0.092	-0.648	0.092	0.242	-0.150
1.778	0.702	0.397	0.077	0.320
1.893	0.806	0.218	0.423	-0.205
-0.211	0.028	-0.267	-0.419	0.152
1.463	0.610	0.566	0.897	-0.331
0.941	0.676	0.649	0.320	0.329
1.544	0.512	0.658	0.448	0.210
-1.064	-1.252	-0.105	-1.128	1.022
-1.249	-1.574	-0.586	-0.175	-0.411
-0.555	0.060	0.387	-0.309	0.696
1.618	1.425	0.390	0.562	-0.172
2.358	1.731	0.527	0.335	0.191
2.062	1.947	0.775	-0.072	0.848
2.969	1.652	-0.292	0.386	-0.678
3.227	1.322	0.190	-0.654	0.844
2.602	2.013	0.280	0.457	-0.177
1.925	1.794	-0.168	0.023	-0.191
2.848	3.578	0.355	0.258	0.097
2.686	1.865	0.652	0.357	0.295
0.583	0.392	1.436	1.059	0.377
3.071	2.252	0.345	0.487	-0.142
2.532	1.993	0.238	0.096	0.142
1.534	2.243	0.373	0.352	0.021
-1.731	-1.752	0.075	0.213	-0.138
2.549	1.691	0.009	0.248	-0.239
2.586	1.275	-0.161	0.472	-0.633

2.068	1.919	0.774	0.330	0.444
2.057	1.454	0.488	0.671	-0.183
3.154	2.089	0.179	0.392	-0.213
1.968	2.130	0.295	0.150	0.145
2.657	1.970	0.224	0.368	-0.144
2.135	2.159	0.116	-0.612	0.728
2.919	1.864	0.714	0.267	0.447
2.447	1.728	0.266	0.198	0.069
3.171	1.716	0.328	0.283	0.044
-0.600	-0.693	-0.066	-0.139	0.073
1.847	1.328	0.960	0.309	0.651
1.196	0.935	0.644	0.313	0.331
0.660	0.733	0.320	0.397	-0.078
1.684	1.875	0.421	0.342	0.079
1.764	1.299	0.365	0.570	-0.206
2.607	2.098	0.463	0.193	0.270
1.096	1.047	-0.226	-0.239	0.013
2.298	1.698	0.315	0.203	0.113
2.650	2.224	0.237	-0.579	0.816
-0.536	-0.133	0.612	0.066	0.547
-0.173	-0.352	-0.171	0.630	-0.801
0.995	1.155	0.486	0.177	0.309
0.504	2.024	0.485	-0.491	0.976
2.165	1.404	-0.237	0.318	-0.555
2.392	1.599	0.693	0.321	0.373
-0.916	0.044	-0.067	-0.621	0.554
1.302	0.810	-0.341	0.382	-0.723
0.544	0.417	-0.155	-0.129	-0.026
2.024	1.123	0.375	0.538	-0.163
1.346	1.136	0.453	-0.326	0.779
1.056	1.288	-0.116	-0.522	0.406
1.140	0.300	0.419	0.038	0.381
2.277	1.935	0.482	0.000	0.482
3.064	2.694	-0.034	0.479	-0.513
1.288	0.558	-0.123	0.142	-0.265
2.055	1.351	0.402	0.675	-0.273
1.341	1.290	0.348	0.293	0.055
-1.122	-1.077	0.138	-0.123	0.261
2.407	1.790	0.562	0.218	0.344
1.358	0.742	0.172	0.326	-0.154
2.195	2.137	0.284	0.073	0.211
2.903	2.660	0.465	0.094	0.371
-0.032	-0.451	0.529	0.851	-0.323
1.734	1.337	0.367	0.624	-0.257
1.506	0.913	0.550	0.467	0.083
2.014	1.915	0.257	-0.146	0.403
1.606	1.614	0.245	0.079	0.166
0.934	1.362	0.066	-0.226	0.292
0.812	-0.024	0.276	-0.530	0.805
-0.259	-0.609	0.668	0.636	0.032
2.891	1.288	0.079	0.177	-0.098
0.453	1.001	0.480	-0.043	0.523

1.828	1.073	0.471	0.338	0.133
1.759	1.177	0.343	0.822	-0.479
2.322	1.886	0.018	0.190	-0.172
1.491	1.402	-0.115	0.130	-0.245
2.011	1.482	-0.127	0.070	-0.197
1.822	0.997	0.485	0.608	-0.124
2.732	2.626	0.042	0.371	-0.329
2.146	2.428	-0.111	0.080	-0.191
1.635	1.921	0.806	0.663	0.143
1.587	1.984	-0.233	-0.140	-0.093
1.406	1.363	0.549	0.385	0.164
2.286	1.620	0.627	0.220	0.407
2.272	2.223	0.051	0.266	-0.216
-1.797	-1.246	0.066	0.712	-0.646
2.927	2.319	0.703	-0.036	0.739
-1.586	-1.312	-0.269	-0.410	0.141
1.723	1.395	-0.037	0.140	-0.177
-1.368	-0.560	-0.124	0.039	-0.163
1.844	1.519	0.350	0.186	0.164
1.161	0.297	0.221	0.935	-0.714
0.007	0.318	-0.125	-0.398	0.273
1.193	1.131	0.227	-0.113	0.341
0.281	-0.011	-0.052	0.198	-0.251
3.335	2.374	0.381	0.274	0.106
2.194	2.100	0.157	-0.135	0.292
0.460	-0.243	0.343	0.413	-0.070
1.928	0.878	0.585	0.290	0.295
-1.263	0.098	0.252	-1.100	1.351
-0.279	0.244	-0.250	-0.484	0.235
0.128	-0.781	-0.722	-0.311	-0.411
2.304	1.608	-0.184	-0.317	0.133
0.705	1.386	0.260	0.142	0.118
-2.482	-0.694	0.265	-0.636	0.901
2.282	2.240	0.129	-0.403	0.532
0.913	0.592	0.444	0.328	0.116
1.112	0.408	0.540	0.305	0.235
2.984	2.419	-0.014	0.580	-0.593
1.747	1.089	0.139	0.441	-0.302
1.170	1.542	-0.396	-0.426	0.030
2.594	1.790	0.361	0.322	0.038
1.252	0.814	0.366	0.177	0.189
-2.321	-0.481	-1.266	-0.889	-0.377
3.001	2.673	-0.338	-0.254	-0.084
3.040	2.129	0.726	0.324	0.402
2.832	1.907	0.294	-0.076	0.370
-2.847	-1.411	0.237	-0.713	0.949
1.447	0.969	0.324	1.013	-0.689
2.315	2.510	0.067	-0.254	0.321
3.684	2.349	0.404	0.415	-0.011
2.722	2.187	0.361	0.115	0.246
-1.600	-0.813	0.176	-0.259	0.436
1.487	1.378	0.609	0.274	0.335



0.434	1.125	0.583	0.147	0.436
1.799	0.844	1.094	-0.289	1.383
2.467	1.656	0.467	0.334	0.134
3.069	1.337	0.515	-0.068	0.583
2.905	1.233	-0.222	-1.319	1.097
2.491	2.347	0.434	-0.048	0.482
1.591	2.005	0.746	0.156	0.589
0.319	0.371	0.430	0.903	-0.473
2.130	0.920	0.331	0.325	0.006
1.209	0.953	-0.087	-0.159	0.073
2.077	2.349	0.472	-0.433	0.906
2.018	1.792	0.243	0.046	0.197
0.792	0.981	0.130	0.008	0.122
1.807	1.999	-0.355	-0.911	0.556
2.122	1.303	-0.017	0.258	-0.275
1.578	0.974	0.610	0.877	-0.266
-1.411	-0.884	-0.335	-0.388	0.053
-1.297	-1.589	0.031	0.299	-0.268
-0.880	0.006	-0.493	-0.124	-0.369
1.330	1.852	0.360	-0.468	0.828
2.029	1.434	0.306	-0.365	0.671
2.828	1.993	0.505	-0.034	0.539
-0.434	0.947	0.318	-0.679	0.996
2.374	2.508	-0.140	-0.368	0.228
1.512	1.026	0.365	0.395	-0.030
2.235	2.003	0.072	0.090	-0.018
2.253	1.666	0.200	-0.268	0.469
2.518	2.053	-0.164	0.056	-0.220
2.258	1.631	0.053	0.209	-0.156
2.568	1.839	-0.352	-0.296	-0.056
0.057	-0.205	-0.215	0.637	-0.853
2.199	1.746	-0.118	0.059	-0.177
1.629	1.019	0.656	-0.179	0.835
2.705	2.223	0.632	0.049	0.583
2.600	1.819	0.726	0.779	-0.053
1.900	1.243	0.225	0.479	-0.254
1.373	0.820	0.490	0.302	0.188
2.384	1.655	0.078	0.096	-0.018
3.120	2.674	0.153	0.209	-0.055
2.253	2.622	0.022	-0.418	0.440
0.762	0.926	0.573	-0.300	0.873
0.378	1.550	-0.576	-1.008	0.433
-2.024	0.091	-0.078	-0.883	0.805
1.794	1.872	-0.144	-0.674	0.530
2.204	2.595	0.937	0.173	0.764
2.439	1.663	0.095	0.201	-0.106
0.035	0.453	0.410	0.335	0.075
1.217	1.895	-0.023	0.165	-0.188
-0.270	0.705	0.308	-0.738	1.046
-0.503	-0.137	0.099	-0.507	0.606
0.589	0.585	0.219	0.505	-0.286
0.402	1.099	0.123	0.473	-0.350

1.817	1.375	0.551	0.738	-0.187
1.447	1.000	-0.201	-0.215	0.014
2.971	1.717	0.169	0.107	0.062
2.803	2.154	0.085	0.215	-0.130
1.904	1.321	0.232	0.416	-0.185
0.952	1.095	0.171	0.044	0.127
2.782	2.233	-0.033	-0.017	-0.016
3.735	2.795	0.678	-0.047	0.725
1.321	1.707	0.179	0.755	-0.575
1.330	0.681	0.510	1.001	-0.491
2.162	1.541	0.260	-0.150	0.410
1.677	1.117	0.682	0.342	0.340
1.525	0.583	-0.090	0.251	-0.341
2.220	2.863	0.219	0.075	0.143
1.464	0.602	-0.272	-0.376	0.104
0.236	-0.164	-0.264	0.180	-0.443
0.290	0.515	-0.356	0.176	-0.532
1.038	1.528	0.146	-0.172	0.318
2.214	1.901	-0.040	-0.105	0.065
2.724	1.617	0.340	0.305	0.035
1.844	2.146	-0.135	-0.222	0.087
1.110	1.224	0.398	0.160	0.238
1.903	1.183	0.738	0.822	-0.084
1.015	0.628	0.310	0.009	0.301
1.956	2.278	0.038	0.050	-0.013
0.834	0.811	0.159	-1.089	1.248
2.288	1.695	0.777	0.242	0.536
2.158	2.344	-0.227	-0.104	-0.123
-1.062	-0.354	0.167	-0.422	0.590
2.201	2.241	0.396	0.060	0.336
2.609	2.045	0.531	0.518	0.013
1.531	3.507	-0.438	-1.746	1.307
-0.358	-0.026	-0.017	0.222	-0.239
1.284	1.623	-0.812	-0.497	-0.315
0.289	0.659	-0.087	-0.366	0.279
0.509	0.285	0.536	0.960	-0.424
1.214	2.091	0.042	-0.043	0.085
0.669	0.727	0.070	0.096	-0.026
1.846	2.031	0.395	-0.043	0.438
1.255	1.615	-0.044	-0.155	0.111
1.804	1.144	0.254	-0.296	0.550
1.278	1.077	-0.225	-0.062	-0.164
-0.736	-0.331	0.448	0.131	0.317
1.041	0.617	-0.333	0.537	-0.870
2.077	1.951	0.546	-0.393	0.939
1.436	1.137	0.212	0.162	0.050
0.781	1.944	0.108	-0.500	0.608
2.191	2.066	0.465	-0.099	0.564
1.813	0.355	0.093	0.549	-0.456
-0.407	-0.057	1.053	-0.843	1.896
2.432	1.262	0.671	0.574	0.098
0.266	1.059	0.157	-0.003	0.160

2.745	2.215	0.778	-0.046	0.823
1.963	1.020	0.237	0.461	-0.224
0.421	1.125	0.168	-0.296	0.464
2.052	2.244	0.200	-0.048	0.248
-0.304	0.362	-0.005	-0.611	0.606
0.768	0.745	0.113	-0.743	0.855
2.548	2.278	0.128	-0.110	0.238
2.031	1.374	0.336	0.398	-0.063
2.722	2.193	-0.146	-0.333	0.187
2.630	1.695	0.512	0.026	0.487
2.114	1.166	0.531	0.009	0.521
1.189	1.693	0.892	0.036	0.856
2.922	2.168	0.508	0.048	0.460
2.048	1.353	0.876	0.644	0.232
0.545	0.996	0.140	-0.405	0.545
3.110	2.432	-0.993	-0.692	-0.301
1.479	1.419	0.190	0.012	0.178
0.693	0.273	0.415	0.144	0.271
1.846	1.436	0.096	0.436	-0.340
1.253	2.317	0.560	-0.873	1.433
-0.393	-0.361	0.693	1.186	-0.494
2.094	1.890	0.142	0.087	0.055
-3.593	-3.334	-0.034	-0.733	0.700
-1.618	-1.307	0.141	-0.851	0.993
1.487	1.967	0.430	-0.419	0.849
-1.094	-1.038	-0.013	0.067	-0.081
-1.697	-1.506	-0.275	0.380	-0.655
-2.289	-1.992	-0.162	-0.565	0.403
-0.248	0.161	0.404	-0.664	1.068
1.288	0.650	0.005	-0.520	0.525
2.145	1.951	0.295	0.014	0.281
-0.892	-0.764	0.723	-0.473	1.196
2.946	2.324	0.508	0.211	0.297
-2.116	-3.334	0.132	0.638	-0.506
0.829	0.082	0.140	0.285	-0.145
-2.198	0.056	0.632	0.797	-0.165
2.168	1.553	0.934	0.094	0.840
0.313	1.178	0.297	0.331	-0.034
0.871	1.195	0.708	-0.141	0.848
1.412	1.098	0.252	0.315	-0.062
2.031	1.578	0.398	-0.130	0.528
1.446	1.492	0.632	0.326	0.306
2.157	2.119	0.178	-0.277	0.455
3.025	2.742	0.471	0.123	0.348
1.180	1.403	0.207	-0.411	0.618
2.416	1.616	-0.101	-0.197	0.096
-2.175	-1.707	0.430	-0.363	0.794
0.036	-0.286	0.274	0.199	0.075
0.471	-0.339	0.017	0.229	-0.212
-0.582	-1.758	0.291	0.139	0.152
0.262	0.441	0.361	0.254	0.107
1.278	1.153	0.206	0.031	0.175

2.160	1.510	0.376	0.042	0.334
1.912	0.760	0.069	-0.027	0.096
-3.666	-1.672	-0.409	-0.697	0.289
0.734	0.636	0.180	0.289	-0.109
2.365	0.855	-0.070	-0.002	-0.067

mRNA lifetime / change fold- $\log_2(\text{siYTHDF2}/\text{siControl})$
mRNA lifetime ( <b>Source Data</b> <b>to Figure 2c-</b> <b>d)</b>
1.199
2.708
0.417
-0.540
0.054
-1.229
0.165
#NUM!
0.701
1.058
-0.036
-0.163
0.210
-0.328
#NUM!
#NUM!
0.135
#NUM!
-0.782
0.329
-0.683
#NUM!
0.615
0.571
0.459
#NUM!
-0.148
-0.266
1.158
-0.557
0.420
-0.591
0.533
0.216
0.549
-0.936
-0.576
-0.027
-2.323
0.512

#NUM!
0.403
1.881
-0.183
#NUM!
-0.498
-0.006
0.080
#NUM!
-0.301
-0.208
0.276
0.425
-0.267
-0.108
#NUM!
-1.133
0.087
0.272
-0.265
-0.770
0.188
0.635
0.402
-0.502
-1.560
#NUM!
-0.594
-0.946
0.390
-0.045
#NUM!
#NUM!
-1.043
0.317
#NUM!
0.065
0.292
0.239
0.416
-0.985
-0.066
-0.322
0.727
-0.201
1.405
-0.078
1.235
#NUM!
0.947
-0.353

0.022
0.994
-1.344
0.785
0.334
-0.310
0.419
1.008
-0.433
-0.061
-0.678
-1.636
#NUM!
0.884
2.366
-1.544
#NUM!
0.955
1.363
-0.682
0.216
#NUM!
-0.611
-0.431
0.190
0.766
-0.652
0.149
0.369
0.511
0.308
0.190
-0.502
1.154
-1.263
-0.286
#NUM!
-0.052
-0.908
-1.696
0.219
0.547
0.147
0.598
-0.022
0.257
1.454
0.318
0.175
1.475
0.284

-0.817
1.051
0.167
-0.109
0.442
-0.939
-0.874
#NUM!
1.583
0.074
-3.986
0.319
0.273
0.455
0.329
-0.282
1.571
0.314
0.727
-0.282
1.103
0.399
1.684
-0.119
#NUM!
-0.082
0.399
#NUM!
0.347
#NUM!
0.236
0.332
0.521
0.527
-0.974
0.242
-1.532
0.568
0.855
0.648
-0.184
-0.006
-0.235
-0.633
-0.458
#NUM!
1.945
0.706
0.574
-0.068
0.454



-0.007
#NUM!
-0.710
#NUM!
-0.182
#NUM!
0.156
0.167
#NUM!
-1.457
-1.771
0.213
-0.578
0.269
0.052
0.309
0.103
-0.163
-2.038
0.582
-0.899
0.324
-1.530
-1.557
0.190
-0.431
0.246
1.229
-0.246
-0.790
0.345
0.183
-0.141
0.055
0.432
-0.261
0.350
0.680
-0.180
0.508
0.066
0.450
0.517
2.189
0.373
#NUM!
0.631
1.670
-0.024
0.224
-0.365

0.052
#NUM!
-0.283
0.409
0.820
-0.764
4.657
1.317
-0.778
#NUM!
#NUM!
-0.686
#NUM!
-1.403
0.100
0.339
0.238
0.774
0.024
0.294
0.363
-0.147
-0.058
0.252
-0.668
-0.103
0.016
0.217
0.409
0.538
0.550
#NUM!
#NUM!
0.100
0.409
1.201
0.266
1.002
0.114
2.611
0.462
0.208
0.488
-2.329
-0.112
0.750
-0.626
0.609
-2.052
0.260
0.269

-1.228
-1.022
#NUM!
0.195
-0.125
-1.798
#NUM!
-0.095
#NUM!
#NUM!
-0.985
-0.156
-0.485
0.632
0.095
-0.051
-0.375
-0.162
0.301
-0.171
0.142
0.434
0.179
-0.344
#NUM!
-0.178
#NUM!
0.099
0.098
0.152
-0.262
0.048
-0.203
-1.503
0.198
0.717
0.486
3.266
0.101
-0.012
0.310
0.381
0.400
0.247
0.892
#NUM!
0.210
1.099
0.626
0.173
-0.660

-1.639
0.451
-0.333
-0.737
-0.485
-0.124
-0.047
0.017
-0.377
#NUM!
0.673
#NUM!
#NUM!
-0.364
#NUM!
#NUM!
-0.943
-1.056
#NUM!
0.075
-0.590
#NUM!
0.823
-0.847
-0.105
#NUM!
1.706
-0.625
-1.589
2.913
-1.029
0.541
-0.744
-0.324
-0.794
0.199
-0.058
0.677
0.619
-0.003
0.325
#NUM!
0.264
#NUM!
0.071
-0.939
0.138
#NUM!
0.490
0.161
0.643

-0.504
-0.196
#NUM!
-0.959
#NUM!
1.339
0.264
-0.237
-0.244
0.841
-0.505
0.026
-0.137
-0.439
#NUM!
-0.150
0.086
-0.824
0.524
#NUM!
0.480
-0.044
0.544
0.212
-1.070
#NUM!
0.326
0.998
0.522
-0.295
0.066
0.060
-0.077
0.299
#NUM!
-0.457
0.072
#NUM!
0.242
0.373
1.014
0.259
0.212
-0.637
0.170
0.458
0.538
0.690
0.215
0.272
0.540

0.135
1.951
0.322
0.523
#NUM!
-0.432
0.845
0.421
-0.216
1.414
0.750
0.447
0.308
0.161
0.629
0.030
-0.544
0.096
0.332
-0.009
0.421
0.548
0.179
0.186
0.282
-0.023
0.385
-0.126
-0.054
-0.925
-0.188
-0.325
#NUM!
#NUM!
0.291
#NUM!
0.247
-0.145
0.080
-0.442
-0.487
#NUM!
-0.493
-0.257
0.311
-0.587
0.100
0.338
1.098
0.860
0.719

0.402
-0.122
-0.181
-0.957
0.255
-0.183
-0.216
-0.219
-0.665
0.059
#NUM!
#NUM!
-0.693
0.904
-0.661
0.065
#NUM!
#NUM!
0.364
0.042
#NUM!
0.767
-0.139
0.022
#NUM!
#NUM!
0.059
0.019
0.121
0.427
0.584
0.610
0.518
0.386
-2.407
0.087
1.433
-0.681
0.018
0.017
0.322
-0.315
0.323
-1.264
#NUM!
1.892
1.156
0.153
-1.673
#NUM!
0.190

#NUM!
#NUM!
0.234
-0.141
0.303
0.324
-0.071
-0.483
0.214
#NUM!
#NUM!
0.073
-0.767
0.273
0.014
0.530
0.207
0.862
-0.296
#NUM!
-0.218
0.203
-0.293
-1.058
0.975
0.043
0.087
0.178
0.166
-0.165
-0.414
#NUM!
0.170
0.748
0.407
0.168
0.841
-0.422
-0.050
0.338
-0.188
0.314
#NUM!
#NUM!
-0.652
0.428
-0.977
-0.653
-0.834
#NUM!
0.072



-1.071
0.000
-0.295
-0.516
-0.661
0.563
-0.485
-0.128
-0.525
-0.201
#NUM!
#NUM!
#NUM!
#NUM!
-2.312
#NUM!
-1.864
-0.438
#NUM!
#NUM!
#NUM!
-0.650
#NUM!
0.210
0.959
#NUM!
#NUM!
4.925
-0.404
#NUM!
#NUM!
0.132
-0.384
#NUM!
-0.599
0.222
-0.760
-2.067
-0.689
#NUM!
-0.049
-0.566
-0.732
-0.310
0.381
0.070
-0.063
-0.324
-0.450
#NUM!
-0.052

#NUM!
-0.197
0.402
-0.141
-0.159
0.344
-0.552
0.612
0.089
#NUM!
-0.313
0.489
0.042
0.194
0.413
0.581
-0.166
0.481
0.214
#NUM!
0.510
0.864
0.327
0.674
0.567
0.271
-0.872
-0.626
-0.377
-0.347
#NUM!
-0.290
0.530
0.356
0.128
0.541
-0.013
0.758
0.351
#NUM!
-0.389
1.001
0.543
-0.198
0.278
#NUM!
#NUM!
0.487
#NUM!
-0.228
0.083

0.274
#NUM!
0.311
0.296
0.372
0.325
0.424
#NUM!
2.321
0.375
#NUM!
0.376
0.243
0.315
0.631
1.247
0.479
0.208
0.018
0.507
#NUM!
1.480
-0.097
0.212
0.162
0.168
0.129
4.451
0.164
-0.611
-0.390
-1.529
-0.849
-0.075
#NUM!
-0.875
#NUM!
0.719
0.500
-0.061
-0.400
#NUM!
-0.260
#NUM!
-0.574
#NUM!
#NUM!
#NUM!
0.124
0.595
0.496

1.245
0.494
0.343
0.372
0.967
0.591
1.524
#NUM!
0.264
0.541
-0.121
0.304
0.491
0.367
1.825
#NUM!
#NUM!
0.021
-0.664
-0.273
0.479
0.146
0.249
0.338
0.149
-0.177
0.475
0.165
0.013
1.828
-0.061
0.112
0.579
0.171
0.677
0.221
-0.154
0.240
0.449
-0.206
1.051
-0.044
#NUM!
0.514
0.662
0.207
-0.042
-0.294
0.189
-0.083
-0.333

-0.471
-0.008
0.112
#NUM!
0.826
-0.950
#NUM!
0.109
0.176
-0.366
-1.151
0.173
0.298
-0.332
#NUM!
0.079
0.434
-0.323
0.481
0.221
0.251
0.199
-0.057
0.328
1.042
0.701
0.621
0.343
#NUM!
1.161
0.266
0.140
-2.838
0.589
-0.587
-0.087
-0.572
0.180
0.197
0.150
0.986
0.092
-0.030
0.201
#NUM!
#NUM!
-0.034
-0.697
0.270
1.914
0.281

#NUM!
0.258
0.736
-0.530
#NUM!
-0.054
0.383
-0.104
0.471
0.100
0.496
-0.054
-0.141
-0.170
-0.281
0.254
#NUM!
0.562
-1.488
-0.313
1.069
0.334
0.358
#NUM!
0.220
0.522
-3.050
1.287
0.341
#NUM!
-0.686
0.499
-2.221
#NUM!
#NUM!
0.543
0.301
#NUM!
0.158
2.187
0.574
#NUM!
0.238
-0.277
0.836
-0.737
0.236
#NUM!
-1.568
#NUM!
2.028

0.160
0.180
0.410
0.938
0.475
#NUM!
-0.048
0.495
0.078
-0.452
0.731
0.684
0.215
0.439
-0.206
0.643
0.862
#NUM!
0.384
0.284
-0.664
0.114
0.217
0.220
0.268
0.162
0.418
0.121
0.608
-0.628
0.003
0.328
-0.077
-0.869
0.059
-1.245
0.395
#NUM!
0.501
0.325
0.509
0.250
0.521
0.149
0.275
0.706
-0.222
0.233
0.293
1.082
0.117

0.428
#NUM!
-0.001
-0.271
1.098
-0.111
-0.271
0.860
0.216
#NUM!
0.105
0.513
1.142
0.213
0.105
0.588
0.599
0.472
-0.920
-0.565
0.417
0.452
0.508
0.056
#NUM!
0.277
0.578
0.209
1.309
1.751
0.286
0.882
0.395
-0.144
0.259
#NUM!
0.813
0.533
0.890
0.257
0.355
0.169
0.725
0.095
#NUM!
0.217
#NUM!
0.815
1.403
0.534
-0.635



1.130
0.328
0.899
0.399
1.320
#NUM!
0.671
1.812
0.337
#NUM!
#NUM!
#NUM!
#NUM!
0.185
0.300
#NUM!
0.226
#NUM!
0.693
-0.121
0.281
-2.005
0.111
-0.516
0.478
#NUM!
-0.987
0.064
#NUM!
0.308
-0.047
0.931
-0.151
0.185
0.673
0.310
#NUM!
-0.831
0.196
0.605
#NUM!
0.423
-0.123
#NUM!
0.411
-0.539
0.497
-0.039
#NUM!
-0.173
0.328

0.067
0.513
0.492
#NUM!
-0.261
0.427
-0.153
0.325
0.131
-2.583
#NUM!
#NUM!
#NUM!
#NUM!
-0.020
0.253
-0.471
0.175
-0.242
0.655
0.217
-0.427
0.399
0.659
-0.293
0.844
#NUM!
0.134
0.340
0.220
0.440
0.221
0.248
-0.295
-0.036
0.443
#NUM!
-0.166
#NUM!
0.008
-1.414
0.147
1.441
0.374
-0.526
0.205
-0.312
0.395
-0.015
0.326
#NUM!

0.758
#NUM!
-1.137
#NUM!
-0.042
-0.434
0.151
0.174
-0.149
#NUM!
-0.003
-1.609
-0.408
-0.853
-0.163
0.017
0.171
0.125
0.415
0.151
0.066
0.066
0.585
-0.376
0.446
-0.319
0.316
0.186
0.517
-0.269
0.364
#NUM!
0.564
#NUM!
0.333
-0.390
0.590
-0.093
0.543
-0.883
-0.746
0.153
0.561
-0.231
-1.035
0.415
-0.145
-0.907
-0.075
-0.465
#NUM!

0.756
-0.013
0.291
0.900
0.670
0.490
1.666
0.850
#NUM!
0.689
-0.066
0.551
-0.069
0.062
-1.093
#NUM!
0.349
0.651
2.445
-0.856
1.808
0.409
#NUM!
#NUM!
0.439
0.639
0.461
0.044
0.269
1.040
-0.188
-0.278
0.140
#NUM!
-0.126
2.772
0.210
#NUM!
-1.230
0.944
-0.040
-0.338
0.832
-0.094
-0.185
1.179
0.672
0.137
#NUM!
-1.397
-2.838

-0.402
0.739
-0.428
0.474
#NUM!
-0.249
-0.115
-0.294
-0.492
0.397
0.529
0.246
-1.412
#NUM!
0.552
1.624
0.044
-0.367
0.846
-0.066
0.396
0.452
0.426
0.149
0.615
#NUM!
0.827
-0.066
0.912
-1.520
-0.602
-1.028
#NUM!
#NUM!
#NUM!
0.897
-0.209
#NUM!
-0.268
0.036
-0.785
-0.477
0.132
0.648
#NUM!
0.216
0.559
0.840
0.589
#NUM!
0.541

-0.505
-0.170
-0.252
0.558
-0.356
0.034
-0.455
0.470
-0.547
0.210
-0.060
0.733
-0.311
-1.458
-0.217
-0.809
0.414
-0.207
0.047
0.180
0.032
0.463
0.549
-0.600
#NUM!
#NUM!
-0.539
0.396
-1.123
0.504
0.133
1.295
-0.272
0.263
0.717
0.660
0.223
-0.214
-0.274
#NUM!
-0.092
0.169
0.549
#NUM!
#NUM!
0.378
0.118
0.083
0.281
-0.410
0.463

0.168
0.623
#NUM!
0.317
0.217
0.408
0.463
-1.098
1.338
0.203
-0.078
-0.076
-0.484
-1.701
#NUM!
-2.506
0.105
0.981
0.985
#NUM!
-0.166
-1.505
1.327
-0.270
-0.230
-0.190
-0.404
0.102
0.133
#NUM!
0.934
2.049
-0.586
0.011
-0.351
#NUM!
0.109
0.302
0.165
-0.176
0.138
-1.197
0.233
0.202
#NUM!
0.377
0.562
0.129
0.201
-0.321
-0.118

-0.697
0.401
0.163
0.104
0.481
-0.166
0.029
-0.084
0.748
0.055
-0.103
-0.967
-0.183
-0.880
-0.354
0.497
-0.823
-0.194
-0.248
0.315
-0.138
-0.180
-0.722
#NUM!
0.545
0.491
0.254
#NUM!
0.453
0.100
0.259
-0.052
-0.071
0.327
0.958
-0.503
1.037
-0.919
-1.641
-1.117
-0.056
-0.157
0.626
#NUM!
-0.225
#NUM!
#NUM!
-0.759
-0.289
0.741
-0.363



0.502
#NUM!
-0.306
-1.507
-0.314
-0.621
0.232
-1.676
#NUM!
#NUM!
0.175
0.356
0.100
1.416
#NUM!
1.766
#NUM!
0.634
1.034
-0.133
-0.227
0.462
-0.528
0.492
1.303
0.078
0.180
-0.091
0.789
#NUM!
-0.028
-0.285
-0.869
0.246
1.061
0.534
0.293
0.357
0.476
0.258
-0.019
-0.221
-0.125
-0.213
0.065
-0.026
0.311
0.307
0.363
-0.123
0.478

0.053
0.180
-0.253
-1.112
#NUM!
-0.376
-0.319
1.127
0.242
0.468
1.283
0.339
#NUM!
-0.301
-0.088
-0.610
#NUM!
0.629
1.200
#NUM!
0.062
0.143
-1.504
-0.301
0.057
0.066
0.757
-0.079
0.582
0.517
0.442
-0.078
#NUM!
0.412
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-0.124
-0.066
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-0.612
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-0.294
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0.507
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-0.088
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#NUM!



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#NUM!
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-0.359
0.032
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-0.163
-0.113

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#NUM!
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#NUM!
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0.328
-1.469
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-0.211
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0.961
0.106
-0.897
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1.622
#NUM!
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0.393
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0.715
0.379



-0.238
0.379
-0.127
-0.081
0.578
1.878
0.183
0.143
-0.049
-0.232
0.188
0.042
0.237
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-0.825
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0.664
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#NUM!
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-0.158
0.398
#NUM!
#NUM!
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#NUM!
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-1.137
-0.405
-0.066
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-0.285
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#NUM!
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-0.320
0.478
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-0.240
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-0.254
-0.407
-0.127
#NUM!
#NUM!
#NUM!
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0.199
0.520
-0.054
0.054
0.600
-0.759
0.179
-0.089

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-0.402
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#NUM!
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-0.198
-0.210
-0.091
0.379
#NUM!
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#NUM!
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-0.806

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#NUM!
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-0.787
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-0.637
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0.714

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#NUM!
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