

Supporting Information

Hypoxia Sustains Cyanobacteria Blooms in the Baltic Sea

Carolina P. Funkey¹, Daniel J. Conley¹, Nina S. Reuss², Christoph Humborg³, Tom Jilbert⁴,
and Caroline P. Slomp⁴

¹ Department of Geology, Lund University, Sölvegatan 12, SE-22362 Lund Sweden

² Department of Biology, University of Copenhagen, Helsingørsgade 51, DK-3400 Hillerød, Denmark

³ Department of Applied Environmental Science, Stockholm University, Svante Arrhenius väg 8, SE-11418 Stockholm Sweden

⁴ Department of Earth Sciences, Utrecht University, P.O. Box 80.021 3508 TA Utrecht, The Netherlands

* To whom correspondence should be addressed. E-mail: carolina.funkey@geol.lu.se

Telephone: +(46) 046-222-0107

Contents Summary:

	Caption Page #	Figure/Table Page #
<i>Figure S1</i> - Age model used	S2	S4
<i>Figure S2</i> - Complete chronology of LL19 and F80	S2	S4
<i>Table S1</i> - Raw data for Northern Gotland Deep (LL19)	S2	S5-S8
<i>Table S2</i> - Raw data for Fårö Deep (F80)	S3	S9-S13
References	S3	

Figure S1. Tuning of LL19 and F80 C_{org} profiles to the Loss On Ignition (LOI) profile of 372740-3 (Lougheed et al., 2012). Although each coring site is located in a separate sub-basin of the Baltic (core 322740-3 in the Gotland Deep; F80 in the Fårö Deep and LL19 in the Northern Gotland Basin), the profiles can be easily correlated, indicating coherent Baltic-wide changes in organic matter accumulation during the Holocene. The age model for 372740-3 was constructed on the basis of two lead (Pb) pollution isochrones identified in a neighboring core (370530-5), and 10 paleomagnetic secular variation (PSV) features in 370530-5 and a third core (370540-6). The Pb pollution isochrones are sedimentary Pb concentration markers related to peaks in silver production in Europe. These have been dated using varve chronologies of European lakes[1] and later identified in Baltic Sea sediments[2]. PSV features are magnetic mineral inclination and declination markers related to directional oscillations in the geomagnetic field. These have been dated using varve chronologies of Scandinavian lakes[3] and later identified in Baltic Sea sediments[4]. The positions of the dating points are indicated in the left column of the plot. 29 peaks and troughs in the LOI and C_{org} profiles were subsequently used to tune LL19 and F80 to 372740-3. The positions of these tuning points are indicated in the right column. Linear interpolation was applied between all tuning points. Absolute dating error varies with depth (see Fig. 9 of Lougheed et al., 2012); 68.2% confidence interval yields typical errors of +/- 100-200 years.

Figure S2. Complete chronology of LL19 and F80 as reported in the manuscript, showing concentration profiles of C_{org} . The uppermost 150 years of each core are dated independently by ^{210}Pb radiochronology, using a constant rate of ^{210}Pb supply (CRS) model. The interval from 750 to 6290 yrs BP is dated by tuning to the Pb/PSV-dated core 372740-3 (see Figure S1). In ‘Extrapolation 1’, a constant sedimentation rate was assumed between the oldest ^{210}Pb dating point and the youngest PSV/Pb dating point. ‘Extrapolation 2’ indicates an interval below the oldest PSV/Pb dating point, for which LOI data for 322740-3 is present. The LL19 and F80 records are tuned to LOI in 322740-3, assuming a constant sedimentation rate of 322740-3 equal to that of the oldest dated interval. For LL19 only, ‘Extrapolation 3’ indicates an interval for which no equivalent LOI data from 322740-3 are present. The mean sedimentation rate of LL19 during interval ‘Extrapolation 2’ is assumed constant throughout this interval. Linear interpolation was applied between all dating points.

Table S1. Raw data for the proxies used in this study: years for Mo/Al only years B.P. (present= A.D. 2010), molybdenum/aluminum (%/%), years (for corresponding to the other

variables) in years B.P, total % carbon, zeaxanthin and echinenone (μmol pigment per gram of sediment normalized to total % carbon), $\delta^{15}\text{N}$ vs air (‰), and pheophytin-a/ chlorophyll-a (mole ratio) for Northern Gotland Deep (LL19).

Table S2. Raw data for the proxies used in this study: years for Mo/Al only years B.P. (present= A.D. 2010), molybdenum/aluminum (%/%), years (for corresponding to the other variables) in years B.P, total % carbon, zeaxanthin and echinenone (μmol pigment per gram of sediment normalized to total % carbon), $\delta^{15}\text{N}$ vs air (‰), and pheophytin-a/ chlorophyll-a (mole ratio) for Fårö Deep (F80).

References:

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2. Zillen, L.; Lenz, C.; Jilbert, T., Stable lead (Pb) isotopes and concentrations - A useful independent dating tool for Baltic Sea sediments. *Quaternary Geochronology* **2012**, *8*.
3. Snowball, I.; Zillen, L.; Ojala, A.; Saarinen, T.; Sandgren, P., FENNOSTACK and FENNORPIS: varve dated Holocene palaeomagnetic secular variation and relative palaeointensity stacks for Fennoscandia. *Earth and Planetary Science Letters* **2007**, *255*, 106-116.
4. Lougheed, B. C.; Snowball, I.; M., M.; Kabel, K.; Muscheler, R.; Virtasalo, J. J.; Wacker, L., Using an independent geochronology based on palaeomagnetic secular variation (PSV) and atmospheric Pb deposition to date Baltic Sea sediments and infer 14C reservoir age. *Quaternary Science Reviews* **2012**, *42*, 43-58.

Figure S1

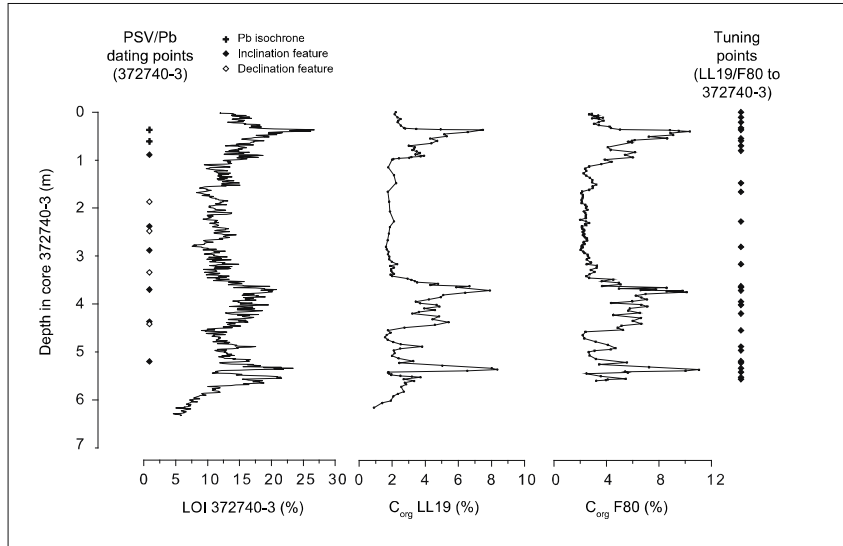


Figure S2

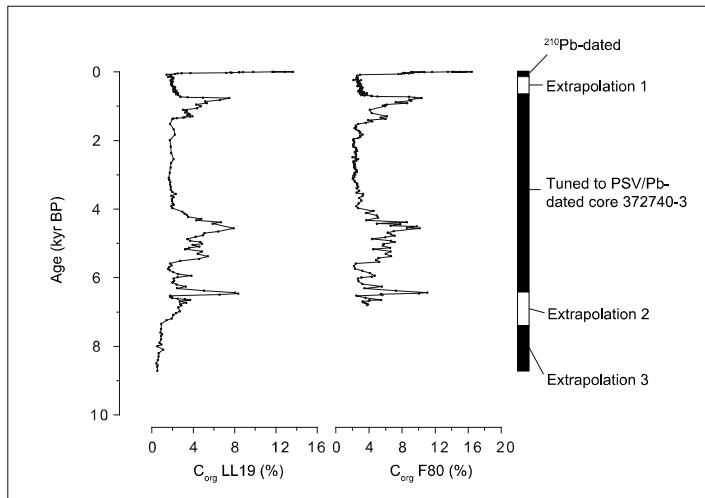


Table S1

Year for Mo/Al	Mo/Al	Year	Total % Carbon	Zeaxanthin	Echinenone	$\delta^{15}\text{N}$ vs air (‰)	Pheophytin-a/ Chl-a
0.0	0.00292	16.0	9.716	0.4798	0.1374	3.670	1.9924
1.3	0.00421	25.0	8.378	0.4480	0.1180	3.116	1.9094
2.4	0.00394	36.0	2.787	0.0935	0.0336	3.529	1.9514
3.7	0.00351	43.1	2.463	0.1200	0.0620	3.357	1.2178
5.0	0.00262	60.2	2.154	0.1169	0.0591	3.475	1.4112
8.5	0.00249	77.4	2.095	0.0917	0.0468	3.272	1.6603
12.2	0.00264	94.5	2.104	0.1168	0.0463	3.235	1.8512
15.8	0.00263	111.6	2.007	0.0995	0.0487	3.054	1.7359
19.4	0.0029	128.8	2.003	0.1119	0.0564	3.743	1.5849
24.7	0.00347	145.9	1.969	0.0978	0.0524	3.681	1.7799
30.6	0.00208	163.0	2.020	0.0954	0.0522	3.347	1.8056
36.5	0.00031	180.2	2.082	0.0950	0.0493	3.192	2.1012
40.8	0.00013	197.3	2.160	0.0933	0.0502	3.124	2.1596
50.9	0.00012	214.4	2.231	0.0888	0.0472	2.995	2.1890
64.9	0.00012	231.6	2.271	0.0826	0.0466	2.757	2.2671
79.4	0.0001	248.7	2.253	0.0894	0.0527	2.949	2.0677
97.7	0.00009	265.8	2.250	0.0562	0.0279	2.815	3.1175
118.2	0.00006	283.0	2.129	0.0997	0.0507	2.711	1.9963
146.8	0.00006	300.1	2.100	0.0893	0.0499	2.826	2.2022
163.6	0.00006	317.2	2.111	0.0813	0.0494	2.791	1.8390
180.5	0	334.4	2.153	0.0743	0.0419	2.938	2.1992
197.4	0.00006	428.6	2.340	0.0221	0.0158	2.734	5.3574
214.3	0.00008	445.7	2.370	0.0367	0.0222	2.657	3.0758
231.1	0.00011	462.9	2.320	0.0249	0.0174	2.805	3.5766
248.0	0.0001	480.8	2.280	0.0327	0.0208	2.793	3.1909
264.9	0.00013	497.1	2.340	0.0319	0.0201	2.696	3.4224
281.8	0.00009	514.3	2.430	0.0294	0.0204	2.535	3.3812
298.7	0.00019	531.4	2.460	0.0221	0.0173	2.651	3.1070
315.5	0.00007	547.6	2.600	0.0248	0.0183	2.395	4.0166
332.4	0.00009	564.5	2.540	0.0314	0.0193	2.752	3.7635
349.3	0.00016	581.4	2.690	0.0808	0.0287	2.721	2.8214
366.2	0.00016	598.3	3.020	0.0438	0.0233	2.819	3.9406
383.1	0.00007	606.7	2.960	0.0364	0.0224	2.897	4.1145
399.9	0.00009	623.6	3.210	0.0697	0.0348	2.407	4.2705
416.8	0.00015	640.5	2.880	0.1522	0.0526	2.522	2.5083
429.5	0.00023	657.3	3.020	0.1215	0.0374	2.629	2.1477
437.9	0.0003	720.0	3.010	0.1017	0.0500	2.462	2.7760
446.4	0.00036	741.0	4.250	0.4706	0.0933	2.047	3.0768
454.8	0.00036	765.0	8.440	0.8932	0.2313	1.962	2.2107
463.2	0.0002	863.0	7.520	0.8500	0.2038	1.845	2.6150
471.7	0.00023	956.0	6.800	0.6389	0.1728	1.776	2.7400
480.1	0.00027	1062.0	5.820	0.6622	0.1536	1.983	3.0065
488.6	0.00019	1134.0	3.540	0.3340	0.0937	2.372	2.3161

497.0	0.00028	1184.0	3.290	0.5129	0.1190	2.112	2.7426
505.4	0.00017	1239.0	4.850	0.7286	0.1695	2.024	2.5151
513.9	0.00017	1295.0	3.800	0.4162	0.1044	2.281	2.3246
522.3	0.00032	1324.0	3.390	0.4515	0.1092	2.365	2.6907
530.7	0.00018	1361.0	2.220	0.1541	0.0538	3.078	2.5513
539.2	0.00019	1552.2	2.160	0.0480	0.0549	3.120	2.0503
547.6	0.00024	1822.7	1.810	0.0659	0.0370	3.167	1.9950
556.1	0.00017	2093.2	1.940	0.0554	0.0377	3.221	1.7231
564.5	0.00013	2228.4	1.990	0.1470	0.0524	3.073	1.9086
572.9	0.00022	2363.7	1.970	0.0809	0.0460	3.148	1.8367
581.4	0.00016	2634.2	1.870	0.0463	0.0309	3.256	2.1197
589.8	0	2769.4	2.050	0.0645	0.0867	2.979	1.9797
602.5	0	2904.7	1.950	0.1206	0.0594	3.154	2.0421
619.4	0.00033	3039.9	1.930	0.0369	0.0345	3.683	1.7744
636.2	0.00032	3215.0	1.960	0.1603	0.0649	3.068	2.0879
653.1	0.00027	3562.0	2.240	0.3123	0.0942	2.480	1.7727
670.0	0.00019	3767.0	2.110	0.3345	0.1227	2.624	1.7000
720.0	0.00027	3879.0	2.310	0.1452	0.0571	2.578	1.7798
729.0	0.00026	3918.0	2.090	0.0666	0.0467	2.872	1.7102
741.0	0.00034	3974.0	2.280	0.1007	0.0539	2.737	1.8396
752.5	0.00155	4007.0	2.520	0.1133	0.0608	2.770	1.7843
764.5	0.00392	4131.0	3.980	0.5088	0.1266	2.266	2.5408
822.5	0.0037	4229.0	4.460	0.3799	0.0834	2.225	2.4168
863.0	0.00187	4328.0	4.970	0.6320	0.1278	2.140	2.2455
914.5	0.00154	4427.0	7.960	0.5750	0.1349	2.317	1.6756
955.5	0.00086	4655.0	7.930	0.8823	0.2517	2.118	1.1672
1002.0	0.00072	4764.0	5.270	0.7273	0.1968	2.076	1.1436
1061.5	0.00085	4874.0	3.530	0.4692	0.0933	2.250	2.9289
1106.5	0	4960.0	5.790	0.4226	0.0964	1.903	2.0121
1134.0	0	5054.0	5.290	0.4480	0.1191	2.003	2.1983
1157.5	0.00019	5127.0	3.810	0.3305	0.0848	2.119	2.2057
1183.5	0.0002	5238.0	6.110	0.4762	0.1112	2.123	1.6187
1211.0	0.00019	5378.0	6.170	0.5164	0.1942	2.056	1.6593
1239.0	0.00022	5510.0	3.760	0.3208	0.1079	2.158	1.7833
1267.5	0.00027	5642.0	2.000	0.1019	0.0566	2.706	1.7603
1295.0	0.00041	5744.0	1.690	0.0323	0.0319	2.624	1.9694
1305.0	0.00031	5838.0	2.190	0.0331	0.0448	2.584	1.9755
1323.5	0.00023	5944.0	4.360	0.4589	0.1910	2.178	1.9384
1332.5	0.00021	6026.0	2.130	0.0972	0.0829	2.247	2.5767
1352.0	0.0001	6140.0	2.160	0.0907	0.0729	2.421	2.5693
1360.5	0.00007	6259.0	3.270	0.4013	0.2081	1.994	3.0530
1371.0	0.00008	6378.0	3.020	0.1718	0.1189	2.068	2.9921
1522.0	0.00006	6465.0	10.260	0.9688	0.3891	1.687	1.5676
1676.5	0.00007	6524.0	2.570	0.0188	0.0197	2.733	2.8887
1828.5	0.00011	6559.0	1.930	0.0000	0.0188	3.014	3.3992
1992.5	0.00006	6594.0	2.360	0.0488	0.0338	3.000	2.7112

2183.5	0	6629.0	2.960	0.0893	0.0542	2.369	2.7436
2369.0	0.00005	6691.0	3.260	0.0592	0.0290	2.306	4.5600
2548.5	0.00009	6897.3	3.330	0.0640	0.0264	2.986	3.9312
2652.5	0.00004	6949.5	3.230	0.0237	0.0155	3.482	4.0301
2792.0	0.00007	6975.7	3.400	0.0436	0.0156	3.200	4.0423
2941.0	0.00002	7027.9	2.790	0.0456	0.0153	3.182	3.2729
3089.0	0.00005	7080.2	2.350	0.0400	0.0169	3.287	1.9786
3145.0	0.00004	7132.5	2.300	0.0238	0.0152	3.957	4.7500
3214.5	0.00004	7184.8	1.930	0.0244	0.0182	4.299	2.3979
3286.5	0.00007	7237.1	1.610	0.0000	0.0211	4.281	2.3289
3351.0	0.00004	7315.5	1.030	0.0000	0.0000	4.119	
3432.0	0.00006	7341.6	1.180	0.0000	0.0000	4.086	
3496.5	0.00009	7393.9	1.160	0.0000	0.0000	3.948	
3561.5	0.00009	7446.2	1.080	0.0000	0.0000	4.558	
3613.5	0.00006	7498.4	0.920	0.0000	0.0000	3.958	
3652.5	0.00008						
3710.0	0.00007						
3766.5	0.0001						
3841.0	0.00011						
3878.5	0.00012						
3917.5	0.00007						
3974.0	0.00007						
4006.5	0.0001						
4074.5	0.00018						
4131.0	0.00032						
4170.0	0.00028						
4229.0	0.0004						
4287.5	0.00156						
4328.0	0.0009						
4384.5	0.00292						
4426.5	0.00216						
4562.5	0.00381						
4654.5	0.00322						
4702.5	0.00208						
4764.0	0.00142						
4810.0	0.00054						
4873.5	0.00049						
4923.0	0.00037						
4960.0	0.001						
5008.0	0.00109						
5044.5	0.00041						
5092.5	0.00099						
5127.0	0.0005						
5172.5	0.0003						
5237.5	0.00089						
5304.5	0.00088						

5377.5	0.00135					
5452.0	0.00077					
5510.0	0.00038					
5586.5	0.00007					
5641.5	0.00009					
5692.5	0.00014					
5743.5	0.00019					
5785.0	0.00013					
5838.0	0.00017					
5891.5	0.00029					
5943.5	0.00058					
5984.0	0.00023					
6025.5	0.00017					
6088.5	0.00015					
6139.5	0.0002					
6200.0	0.00021					
6259.0	0.00043					
6309.5	0.00038					
6378.0	0.00132					
6435.5	0.00348					
6465.1	0.00405					
6494.8	0.00302					
6524.4	0.00034					
6541.8	0.00038					
6559.3	0.00019					
6576.8	0.00018					
6594.2	0.00043					
6611.7	0.00016					
6629.2	0.00019					
6646.6	0.0003					
6691.1	0.00026					
6730.6	0.00026					
6770.1	0.00023					
6809.6	0.00036					
6868.8	0.00043					
6979.9	0.00051					
7032.3	0.00022					
7084.7	0.00011					
7189.5	0.00004					
7241.8	0					
7346.6	0					
7396.6	0					
7496.6	0					

Table S2

Year for Mo/Al	Mo/Al	Year	Total % Carbon	Zeaxanthin	Echinenone	$\delta^{15}\text{N}$ vs air (‰)	Pheophytin-a/ Chl-a
0.4	0.00486	1.2	17.772	0.9601	0.2625	3.194	0.7006
0.9	0.00455	4.9	13.157	0.7230	0.2441	3.526	1.4285
1.5	0.00453	11.6	13.117	0.6148	0.1936	3.566	1.3947
2.1	0.00474	19.2	11.841	0.8366	0.2461	3.130	0.9503
3.4	0.00416	25.9	10.933	0.6745	0.1640	3.183	0.8247
4.9	0.00423	39.1	10.505	0.7005	0.1327	3.356	0.8280
6.4	0.00309	46.4	9.735	0.7139	0.1144	3.455	1.2415
9.0	0.00292	66.4	7.477	0.4937	0.0828	3.618	1.3427
11.6	0.00295	88.0	4.674	0.1238	0.0359	4.104	1.5047
14.3	0.00223	141.9	3.470	0.1480	0.0429	4.027	1.5352
16.7	0.00339	156.5	2.784	0.1297	0.0471	3.570	1.6895
19.2	0.00361	175.0	2.698	0.1107	0.0424	3.469	1.8026
25.9	0.00384	191.1	6.387	0.0401	0.0170	3.718	2.0841
32.7	0.00276	218.0	3.025	0.1133	0.0505	3.397	1.6996
39.1	0.00294	244.9	3.198	0.0949	0.0334	3.234	1.6892
46.4	0.00325	271.7	3.144	0.0911	0.0433	3.100	1.9017
54.6	0.00270	298.6	3.291	0.0801	0.0422	2.925	1.6550
66.4	0.00301	325.5	3.084	0.0769	0.0369	2.971	1.9370
88.0	0.00051	352.4	3.179	0.0719	0.0352	2.938	1.9380
112.7	0.00060	379.3	3.304	0.0786	0.0385	3.080	1.9325
141.9	0.00044	406.1	3.327	0.0831	0.0325	2.986	2.3974
156.5	0.00020	433.0	3.336	0.0612	0.0294	2.882	2.3366
172.6	0.00000	459.9	3.267	0.0608	0.0321	2.602	2.7400
183.4	0.00000	486.8	3.661	0.0563	0.0220	2.823	3.3527
194.1	0.00000	513.7	3.759	0.0631	0.0358	2.701	2.2027
204.8	0.00000	540.5	3.951	0.0704	0.0357	2.816	1.8450
215.6	0.00000	567.4	3.653	0.0901	0.0326	2.814	1.6999
226.3	0.00000	594.3	4.244	0.1228	0.0374	2.756	2.0909
237.0	0.00000	621.2	4.538	0.1839	0.0435	2.692	2.1081
247.8	0.00000	648.1	6.055	0.1789	0.0452	2.824	1.9075
258.5	0.00000	674.9	5.520	0.2425	0.0536	2.766	2.3209
269.2	0.00000	701.8	4.462	0.1246	0.0373	3.126	1.6748
280.0	0.00000	728.7	4.812	0.5687	0.1144	2.381	2.2557
290.7	0.00000	784.4	10.729	0.9728	0.2621	3.170	1.7726
301.4	0.00000	884.0	8.837	1.2580	0.2647	2.781	1.3373
312.2	0.00000	949.0	6.945	1.1833	0.1900	2.685	1.4059
322.9	0.00000	1002.0	6.358	0.7459	0.1596	2.243	1.6845
333.6	0.00017	1345.1	4.803	0.5148	0.1166	2.683	1.8439
344.4	0.00000	1371.0	6.160	0.7974	0.1803	2.585	1.4599
355.1	0.00000	1499.1	5.876	0.7249	0.1052	2.830	1.5707
365.8	0.00000	1576.1	3.722	0.1474	0.0489	3.297	1.4348
376.5	0.00000	1653.1	2.972	0.1075	0.0404	3.608	1.3914
387.3	0.00010	1730.1	5.613	0.1700	0.0450	3.946	1.2601

398.0	0.00020	1838.2	4.561	0.4034	0.0820	2.797	1.3196
408.7	0.00020	1918.3	4.881	0.4091	0.0954	2.941	1.2875
419.5	0.00000	1998.3	2.955	0.0852	0.0435	3.586	1.3091
430.2	0.00000	2078.4	6.343	0.0516	0.0201	3.384	1.6005
440.9	0.00000	2158.4	2.923	0.1164	0.0520	3.140	1.1115
451.7	0.00000	2238.4	2.708	0.1097	0.0572	3.467	1.1039
462.4	0.00000	2318.5	3.588	0.1671	0.0533	3.127	1.1385
473.1	0.00035	2397.1	3.544	0.1612	0.0492	3.226	1.1807
483.9	0.00000	2466.7	3.548	0.1557	0.0487	3.363	1.1572
494.6	0.00021	2526.7	3.500	0.1599	0.0566	3.325	1.0631
505.3	0.00071	2586.7	2.997	0.0788	0.0395	3.358	1.4683
516.1	0.00033	2646.7	2.886	0.0712	0.0336	3.353	1.3549
526.8	0.00037	2706.8	3.107	0.0606	0.0298	3.626	1.6364
537.5	0.00031	2766.8	3.274	0.0909	0.0410	3.526	1.2579
548.3	0.00040	2826.8	2.911	0.1144	0.0623	3.487	1.2078
559.0	0.00037	2877.3	3.722	0.0995	0.0456	3.198	1.3602
569.7	0.00043	2947.9	3.637	0.1464	0.0580	3.066	1.3933
580.5	0.00045	3010.0	2.400	0.1526	0.0741	3.148	1.1861
591.2	0.00040	3072.2	3.017	0.1005	0.0447	2.983	1.3630
601.9	0.00061	3134.3	3.084	0.1048	0.0445	3.697	1.3636
612.7	0.00056	3273.8	4.200	0.2276	0.0683	3.004	1.1853
623.4	0.00118	3378.1	3.163	0.1794	0.0693	3.041	1.1863
634.1	0.00095	3482.3	3.733	0.5376	0.1078	2.714	1.1163
644.9	0.00057	3586.6	4.797	0.7245	0.1233	2.666	1.1074
655.6	0.00134	3784.1	4.668	0.4236	0.1096	2.963	1.0746
666.3	0.00075	3996.9	4.051	0.2942	0.0686	2.992	1.2255
677.1	0.00063	4123.6	4.822	0.5509	0.1026	2.703	1.0457
687.8	0.00048	4250.3	5.614	0.7813	0.1681	3.957	1.4560
698.5	0.00062	4430.0	6.807	0.7310	0.1538	2.980	1.3675
709.3	0.00132	4460.9	9.580	0.9318	0.2249	2.630	1.0594
720.0	0.00171	4589.7	7.555	1.2164	0.2768	2.641	0.7160
729.0	0.00359	4718.5	7.577	1.1343	0.2327	2.667	1.2482
752.5	0.00377	4847.4	4.999	0.5554	0.0885	2.681	1.6911
764.5	0.00457	4943.1	6.941	0.6728	0.1158	3.013	1.5046
813.0	0.00360	5089.9	6.090	0.8609	0.1319	2.733	1.3811
842.5	0.00382	5236.7	8.181	0.9945	0.1208	3.057	1.0986
884.0	0.00338	5383.5	6.037	0.8924	0.2612	2.648	0.7539
914.5	0.00531	5530.3	5.149	0.7898	0.1608	3.041	1.2581
955.5	0.00187	5677.1	3.608	0.0989	0.0412	3.597	1.3424
975.5	0.00199	5824.0	5.083	0.5781	0.1610	2.716	1.6058
985.5	0.00184	5977.5	4.417	0.5495	0.1715	2.706	1.5027
1002.0	0.00262	6043.1	3.669	0.2117	0.0865	2.619	2.0949
1106.5	0.00083	6265.0	4.513	0.2748	0.1678	2.131	2.2345
1203.0	0.00050	6429.5	11.346	0.6417	0.3080	3.230	1.1921
1295.0	0.00203	6485.5	4.220	0.4456	0.1108	2.749	1.3908
1332.5	0.00123	6541.0	3.610	1.0266	0.1369	3.570	1.5798

1371.0	0.00230	6659.7	4.408	0.7304	0.0829	2.534	1.7061
1406.5	0.00060	6711.9	3.922	0.1492	0.0245	3.799	1.4478
1447.5	0.00054	6764.0	4.437	0.1812	0.0286	3.729	1.4583
1485.0	0.00035	6816.2	3.993	0.1130	0.0239	3.395	1.3870
1522.0	0.00000						
1567.5	0.00019						
1603.5	0.00000						
1640.5	0.00000						
1676.5	0.00013						
1715.5	0.00033						
1752.5	0.00023						
1789.0	0.00015						
1828.5	0.00000						
1865.0	0.00023						
1892.0	0.00068						
1928.5	0.00044						
1957.5	0.00000						
1992.5	0.00000						
2020.0	0.00000						
2056.5	0.00000						
2084.5	0.00019						
2118.0	0.00000						
2145.5	0.00000						
2183.5	0.00015						
2212.5	0.00000						
2250.5	0.00000						
2281.5	0.00022						
2308.0	0.00000						
2342.0	0.00021						
2369.0	0.00000						
2403.5	0.00021						
2429.0	0.00000						
2463.0	0.00029						
2489.5	0.00018						
2523.5	0.00012						
2548.5	0.00026						
2565.0	0.00000						
2589.5	0.00000						
2608.5	0.00000						
2626.0	0.00015						
2652.5	0.00000						
2675.0	0.00000						
2694.0	0.00011						
2722.0	0.00000						
2753.0	0.00019						
2771.5	0.00000						

2792.0	0.00000					
2823.0	0.00000					
2842.5	0.00000					
2863.0	0.00000					
2900.0	0.00012					
2921.0	0.00000					
2941.0	0.00000					
2962.0	0.00000					
2994.0	0.00000					
3015.5	0.00000					
3036.5	0.00000					
3068.5	0.00000					
3089.0	0.00000					
3119.0	0.00000					
3171.0	0.00014					
3214.5	0.00000					
3258.5	0.00030					
3298.0	0.00018					
3351.0	0.00018					
3390.0	0.00000					
3432.0	0.00051					
3470.0	0.00034					
3521.5	0.00000					
3561.5	0.00031					
3613.5	0.00025					
3677.5	0.00031					
3749.0	0.00055					
3841.0	0.00035					
3917.5	0.00000					
3974.0	0.00018					
4054.5	0.00150					
4113.0	0.00087					
4190.0	0.00080					
4249.0	0.00037					
4328.0	0.00280					
4384.5	0.00229					
4426.5	0.00092					
4443.0	0.00327					
4485.0	0.00220					
4505.5	0.00498					
4545.0	0.00426					
4562.5	0.00806					
4643.5	0.00372					
4690.0	0.00221					
4738.5	0.00197					
4776.5	0.00317					

4825.0	0.00184					
4873.5	0.00073					
4923.0	0.00182					
4960.0	0.00257					
5019.0	0.00185					
5067.5	0.00173					
5127.0	0.00231					
5172.5	0.00091					
5237.5	0.00229					
5304.5	0.00194					
5377.5	0.00216					
5426.5	0.00106					
5488.0	0.00100					
5541.5	0.00136					
5586.5	0.00020					
5661.0	0.00000					
5735.0	0.00016					
5795.5	0.00050					
5870.0	0.00071					
5943.5	0.00138					
5973.0	0.00090					
5993.0	0.00024					
6025.5	0.00035					
6100.0	0.00017					
6181.5	0.00027					
6259.0	0.00119					
6309.5	0.00030					
6378.0	0.00212					
6435.5	0.00429					
6457.7	0.00322					
6479.9	0.00136					
6502.2	0.00018					
6524.4	0.00000					
6585.5	0.00020					
6646.6	0.00060					
6661.4	0.00073					
6676.2	0.00031					
6691.1	0.00000					
6713.3	0.00000					
6735.5	0.00000					
6757.7	0.00000					
6779.9	0.00000					
6802.2	0.00000					
6824.4	0.00000					