

Table S1: Heritability estimates and associated statistics from SOLAR

Pennzzz_Trait	Heritability with covariate AGE and SEX	P value	Heritability with covariate BMI and SEX	p value
Active wake	0.45	0.0002	0.44	0.0002
Light sleep	0.39	0.001	0.39	0.001
Deep sleep	0.22	0.06	0.21	0.06
Total Sleep	0.47	0.06	0.46	0.06
No of Sleep Episodes	0.67	0.0001	0.66	0.0001
Mean duration of sleep episodes	0.46	4.00E-05	0.46	4.00E-05
No of wake episodes	0.65	1.00E-03	0.65	1.00E-03
Mean duration of wake episodes	0.47	7.00E-05	0.47	7.00E-05
Mean activity during wake	0.71	0.0008	0.69	0.0008
Variance of activity during wake	0.78	2.40E-08	0.78	2.40E-08
Number of sleep episodes during deep sleep	0.65	8.81E-10	0.64	8.81E-10
Mean duration of sleep episodes during deep sleep	0.65	5.00E-05	0.64	5.00E-05
Number of wake episodes during deep sleep	0.66	7.00E-06	0.65	7.00E-06
Mean duration of wake episodes during deep sleep	0.37	4.00E-05	0.35	4.00E-05
Wake after sleep onset	0.32	1.00E-02	0.32	1.00E-02
Total time in homothermic state during wake	0.65	0.0005	0.68	0.0005
Sleep efficiency	0.59	3.00E-03	0.59	3.00E-03
ChronoSapiens_Traits	Heritability with covariate AGE and SEX	P value	Heritability with covariate BMI and SEX	p value
Center of Gravity MAX value	0.59	0.0000024	0.59	0.0000024
Center of Gravity MAX phase	0.69	0.0000002	0.69	0.0000002
Primary MAX value	0.62	0.0000001	0.62	0.0000001
Primary MAX phase	0.54	0.000006	0.54	0.000006
Primary MIN value	0.49	0.000005	0.57	0.000005
Primary MIN phase	0.92	0.000006	0.92	0.000006
Primary_OFF_phase	0.57	0.000003	0.49	0.000003
Rhythm of oscillation	0.79	4.80E-12	0.79	4.80E-12
Munich Rythmicity Index	0.7	2.32E-08	0.7	2.32E-08
alpha_rho	0.41	0.001	0.43	0.001
Traits	Heritability with covariate AGE and SEX	P value	Heritability with covariate BMI and SEX	p value
Interdaily stability	0.49	0.002	0.52	0.001
Relative amplitude	0.57	0.00005	0.57	0.0005
L5-5hours with minimal activity	0.49	0.003	0.49	0.003
M10-10hours with	0.9	8.48E-15	0.9	8.48E-12

maximal activity				
Fitbit	Heritability with covariate AGE and SEX	P value	Heritability with covariate BMI and SEX	p value
Alpha/rho	0.56	0.02	0.56	0.01
Efficiency	0.88	0.00002	0.88	0.00002
Minutes After Wakeup	0.56	0.003	0.52	0.01
Minutes Asleep	0.53	0.005	0.53	0.005
Time In Bed in Minutes	0.5	0.01	0.58	0.01
Restless Count	0.92	0.000005	0.9	0.00005