SUPPLEMENTARY ONLINE MATERIAL

Circadian clock properties of fruit flies *Drosophila melanogaster* exhibiting *early* and *late* emergence chronotypes

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Supplementary Figure S1: Representative actograms of flies that exhibit free-run (neither morning nor evening activity components phase-locked to the LD cycle) in *T30*, weakly entrained (one of the two components phase-locked to the LD cycles while the other exhibited free-run) in *T18*, and entrained (both activity components phase-locked to the LD cycle) rhythm in *T18*.

Supplementary Figure S2: Figures (a)-(c) represent the PRCs plotted from experimental (black line) and interpolated (grey line) data from polynomials used to estimate area under the curve for the (a) *early* (b) *control* and (c) *late* populations. (d) Sum of squares values indicating the goodness-of-fit between the polynomial and experimental data. All sum of square values reported here did not differ significantly from 0 thus indicating the polynomials used for AUC analysis reflects the experimental data accurately.

Supplementary Figure S3: Amplitude of entrainment (A_{ent}) estimated as the sum of activity counts around the morning (M) and evening (E) peaks averaged across 7 days for all three sets of populations under LD12:12 with $4 \times 10^{-4} \text{ Wm}^{-2}$ light intensity during the day. The *late* populations exhibited significantly higher A_{ent} for both M and E peaks as compared to the other populations while the M and E peaks did not differ significantly from each other for a given population. Asterisks indicate statistically significant differences ($p < 0.05$).

Supplementary Figure S4: Number of days (transients) required for the three sets of populations to re-entrain to 9-h phase-advance and 9-h phase-delay in light/dark 12:12 cycles. ANOVA on transients revealed a significant effect of population for both advance ($F_{2,6}=9.52$, $p<0.05$) and delay ($F_{2,6}=6.88$, $p<0.05$). In both cases the *late* populations took significantly longer to re-entrain as compared to the *early* populations while it significantly differed from the *control* for phase-advance and not phase-delay. Asterisks indicate statistically significant differences ($p<0.05$).

		block 1	block 2	block 3	block 4
early		$y=a+bx+cx^{2.5}+dx^3+ee^x$	$y=a+bx+cx^3+de^x+e/x^2$	$y=a+bx^2+cx^4+dx^6+ex^8+fx^{10}$	$y=a+bx+cx^3+de^x+e\ln x/x^2$
	R ²	0.955317674	R ² 0.837365931	R ² 0.999277944	R ² 0.936109756
	a	-8.11602602	a 9.163518506	a -2.38160908	a 2.351191599
	b	9.851402678	b -4.38186548	b 1.373449817	b -3.42333506
	c	-3.98625742	c 0.122330037	c -0.24467596	c 0.113796245
	d	1.502223689	d -0.01997385	d 0.014092844	d -0.017344
control	e	-0.0548885	e -6.46107614	e -0.000321	e 16.31920159
				f 2.53E-06	
		$y=a+bx^2+cx^4+dx^6+ex^8+fx^{10}$	$y=a+bx+cx^2+dx^3+ex^4+fx^5$	$y=a+bx+cx^{2.5}+de^x+e/x^2$	$y=a+bx+cx^{2\ln x}+dx^3+ee^x$
	R ²	0.977749981	R ² 0.987934691	R ² 0.983689312	R ² 0.975602135
	a	-1.43497958	a 11.32164822	a 14.55127251	a -1.99351764
	b	0.620452214	b -24.689396	b -7.10829061	b 1.050497192
late	c	-0.09867596	c 18.65207431	c 0.390503898	c -1.71092602
	d	0.004373099	d -6.30150412	d -0.01385338	d 0.54198498
	e	-6.61E-05	e 0.94927054	e -7.73199016	e -0.02615298
	f	2.61E-07	f -0.05178496		
		$y=a+bx+cx^2+dx^3+ex^4+fx^5$	$y=a+bx+cx^2+dx^3+ex^4+fx^5$	$y=a+bx^2+cx^4+dx^6+ex^8$	$y=a+bx+cx^3+d(\ln x)^2+e/x^2$
	R ²	0.999950352	R ² 0.96120615	R ² 0.905906231	R ² 0.998725481
	a	2.418326646	a -12.9238362	a 0.722655957	a 232.197012
	b	-4.43362575	b 17.8179283	b -0.45664792	b -153.013914
	c	2.382178875	c -9.84501063	c 0.035403632	c 0.394368112
	d	-0.49683413	d 2.738486331	d -0.00123564	d 186.5907559
	e	0.022850698	e -0.38102054	e 1.43E-05	e -7.83E+01
	f	0.00162637	f 0.020441504		

Supplementary Table S1: Details of polynomials obtained by curve fitting to experimental PRC data. The selection of polynomials was based on highest *R*² values indicating goodness of fit and least number of coefficients.