

**QTL underlying circadian clock parameters under seasonally variable field settings  
in *Arabidopsis thaliana***

**Supplemental Tables and Figures**

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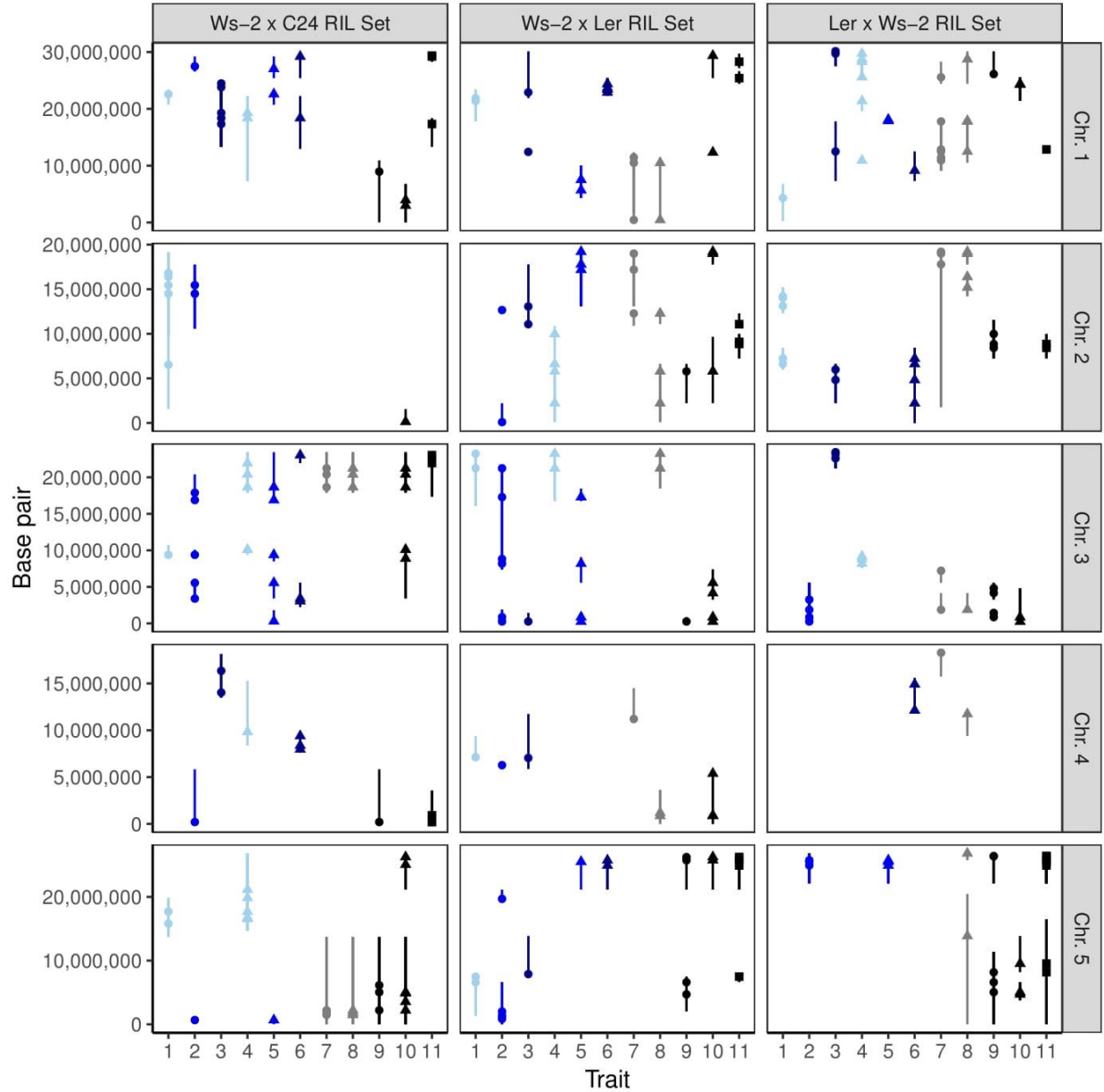
**Supplementary Table 1.** Pearson correlations between phenotypic means for all pairs of traits for the *Arabidopsis thaliana* Ws-2 × C24 (top value), Ws-2 × *Ler* (middle value) and *Ler* × Ws-2 (bottom value) RIL sets. The phenotypic correlation is likely reduced as a result of summation over multiple positive and negative effect QTL. \*\*\*  $P < 0.001$ , \*\*  $P < 0.01$ , \*  $P < 0.05$ ; all significant correlation coefficients are shown in bold.

	Cauline Leaf Number	Cauline Branches	Rosette Leaf Number	Rosette Branches	Rosette Meristem Fate
June Period	<b>0.30***</b>	<b>0.28*</b>	<b>0.25*</b>	<b>0.27*</b>	0.09
	-0.07	-0.01	0.03	0.10	0.10
	-0.03	0.07	0.01	0.20	0.04
July Period	<b>0.31**</b>	<b>0.31**</b>	0.20	0.21	0.03
	0.08	0.01	0.04	0.11	0.09
	<b>0.25*</b>	<b>0.26*</b>	0.11	0.20	-0.27
June Phase	0.21	0.19	0.18	<b>0.35***</b>	<b>0.24*</b>
	0.09	0.07	0.07	0.11	-0.02
	0.11	0.05	-0.11	-0.02	0.02
July Phase	<b>0.25*</b>	<b>0.25*</b>	0.11	0.19	0.13
	<b>0.25*</b>	0.20	0.16	0.14	-0.03
	-0.04	-0.03	0.05	-0.05	-0.08
Cauline Leaf Number		<b>0.99***</b>	<b>0.79***</b>	<b>0.78***</b>	-0.01
		<b>0.83***</b>	0.04	-0.03	-0.16
		<b>0.80***</b>	<b>0.33**</b>	-0.08	<b>-0.35**</b>
Cauline Branches			<b>0.80***</b>	<b>0.78***</b>	-0.03
			0.08	0.05	-0.12
			<b>0.39***</b>	-0.01	<b>-0.37**</b>
Rosette Leaf Number				<b>0.84***</b>	-0.18
				<b>0.67***</b>	<b>-0.42***</b>
				0.20	<b>-0.78***</b>
Rosette Branches					<b>0.28*</b>
					<b>0.29*</b>
					<b>0.34**</b>

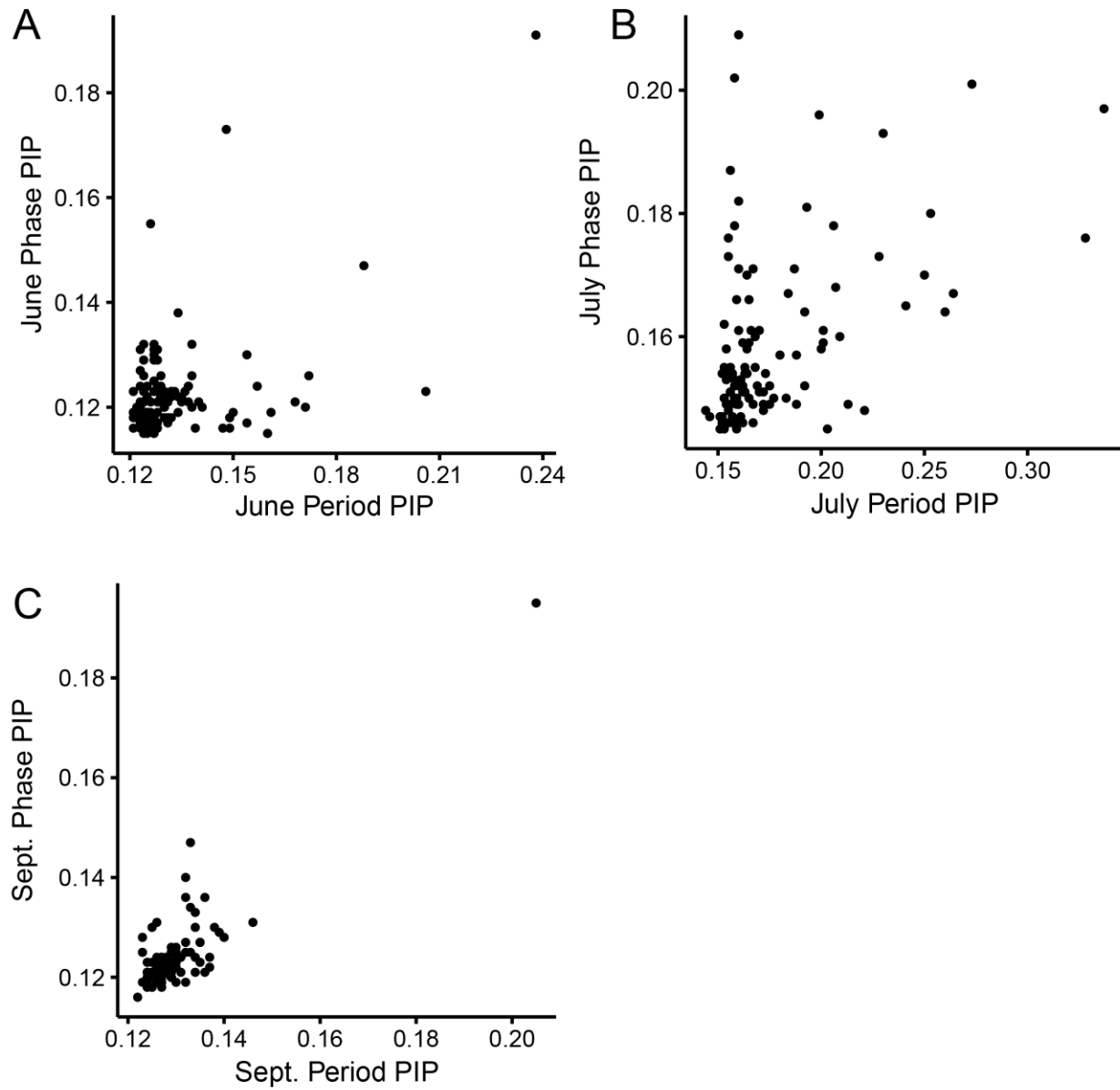
**Supplementary Table 2.** Pearson correlations between SNP posterior inclusion probabilities (PIPs) for all pairs of traits for the *Arabidopsis thaliana* Ws-2  $\times$  C24 (top value), Ws-2  $\times$  *Ler* (middle value) and *Ler*  $\times$  Ws-2 (bottom value) RIL sets. \*\*\*  $P < 0.001$ , \*\*  $P < 0.01$ , \*  $P < 0.05$ ; all significant correlation coefficients are shown in bold.

	Cauline Leaf Number	Cauline Branches	Rosette Leaf Number	Rosette Branches	Rosette Meristem Fate
June Period	-0.05	-0.04	-0.06	-0.04	-0.05
	0.08	<b>0.33***</b>	-0.05	-0.14	0.01
	-0.13	-0.08	0.05	0.01	0.04
July Period	-0.04	-0.05	0.01	-0.09	0.01
	-0.09	-0.02	-0.10	0.16	-0.15
	-0.03	0.12	<b>0.25**</b>	<b>0.25**</b>	<b>0.24**</b>
June Phase	0.04	0.08	-0.10	<b>0.25**</b>	0.04
	<b>0.19*</b>	<b>0.61***</b>	0.02	-0.02	-0.05
	<b>0.17*</b>	0.09	0.06	-0.09	-0.04
July Phase	-0.01	-0.02	-0.02	-0.03	-0.02
	0.12	-0.01	0.02	<b>0.28**</b>	-0.05
	-0.04	0.04	0.02	-0.12	0.11
Cauline Leaf Number		<b>0.98***</b>	<b>0.50***</b>	<b>0.45***</b>	0.06
		<b>0.57***</b>	-0.05	-0.02	-0.03
		<b>0.53***</b>	-0.01	-0.04	-0.01
Cauline Branches			<b>0.51***</b>	<b>0.45***</b>	0.03
			-0.09	-0.07	-0.15
			0.04	-0.02	0.09
Rosette Leaf Number				<b>0.34***</b>	<b>0.30***</b>
				<b>0.37***</b>	<b>0.73***</b>
				0.14	<b>0.61***</b>
Rosette Branches					0.14
					<b>0.21*</b>
					-0.04

**Supplementary Figure 1.** Genetic architecture for all traits mapped in the *Arabidopsis thaliana* Ws-2  $\times$  C24 (left column), Ws-2  $\times$  Ler (middle column) and Ler  $\times$  Ws-2 (right column) RIL sets. For each trait we present the median number of SNPs (and associated confidence limits) with the highest PIP scores. SNPs move in and out of the model through the permutation procedure, therefore, this genetic architecture is only one of the possible outcomes.



**Supplementary Figure 2.** Associations between SNP posterior inclusion probabilities (PIP) for circadian period and phase in (A) June (B) July and (C) September in the Ws-2  $\times$  *Ler* RIL set.



**Supplementary Figure 3** Associations between SNP posterior inclusion probabilities (PIP) for July circadian period and cauline branches (A) and rosette branches (B) for the *Arabidopsis thaliana* Ler  $\times$  Ws-2 RIL set.

