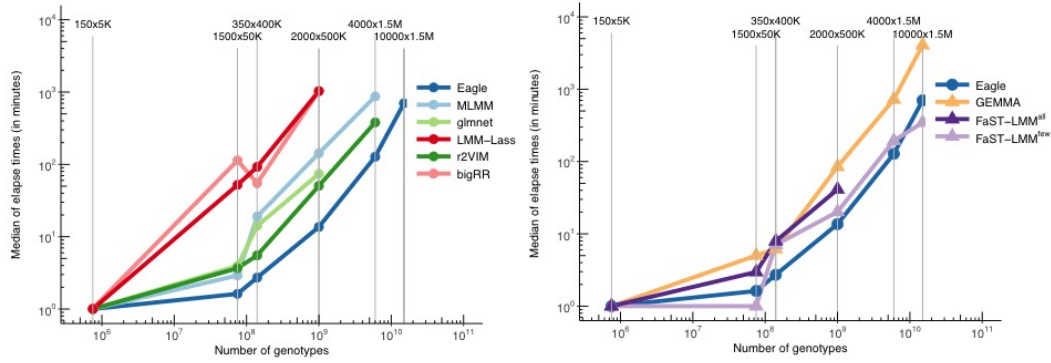


Figure 1: Median run times, in minutes, for the analysis of simulation study data from the six scenarios. Eagle is compared against five other multiple-locus programs/packages (top left) and two single-locus programs (top right). The x- and y-axes are on a log scale for improved aesthetics. Eagle has the lowest run-times of the multiple-locus programs/packages, sometimes by orders of magnitude. Eagle can even produce results faster than single-locus programs. The actual median run times for the programs/packages across the scenarios are given in the table. The entries in a bold font correspond to the lowest run-time for a scenario. FaST-LMM<sup>all</sup> is where calculation of the similarity matrix is based on all the SNP data. FaST-LMM<sup>few</sup> is where calculation of the similarity matrix is based on a subset of the SNP data.



		Simulation Scenarios					
Method	Name	150x5K	1500x50K	350x400K	2000x500K	4000x1.5M	10000x1.5M
Multiple	Eagle	0.08	1.62	<b>2.71</b>	<b>13.65</b>	<b>127.63</b>	699.55
	MLMM	0.15	2.91	19.04	143.01	870.84	
	glmnet	0.11	3.95	14.06	74.03		
	r2VIM	0.09	3.66	5.51	50.59	380.52	
	bigRR	1.01	113.35	54.99	1030.61		
	LMM-Lasso	0.57	52.08	92.20	1031.85		
Single	GEMMA	0.02	5.02	6.17	84.83	723.33	4071.60
	FaST-LMM <sup>few</sup>	<b>0.01</b>	<b>0.80</b>	7.07	20.16	193.90	<b>346.19</b>
	FaST-LMM <sup>all</sup>	0.03	2.96	7.90	41.27		