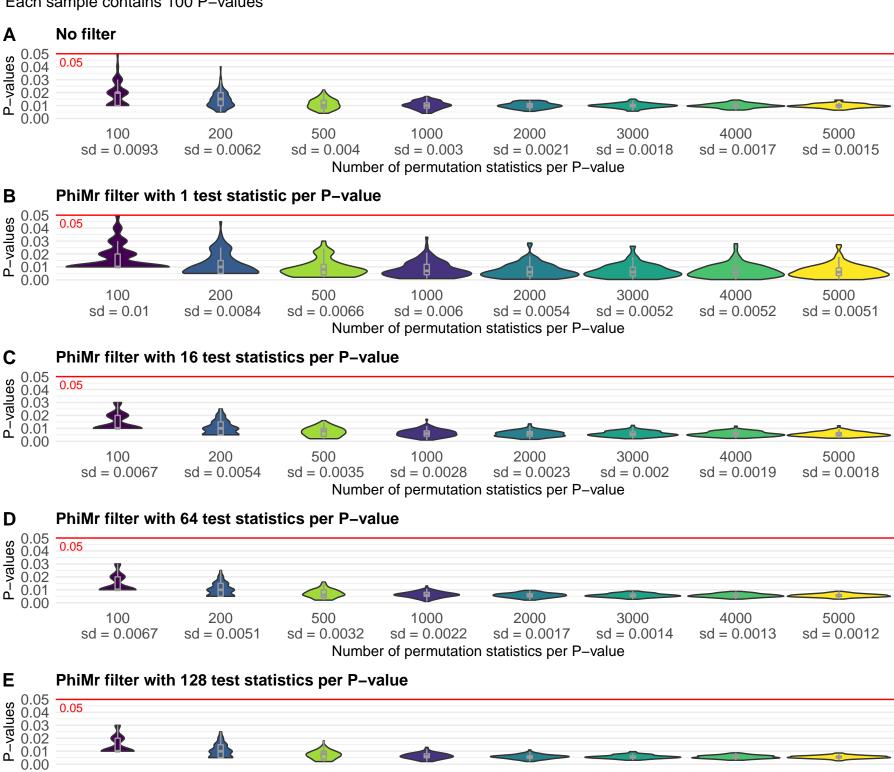# Distribution of AMKAT P−value on a Fixed Data Set

Discrete (SNP) features, 28−variable signal at 100% strength, p = 567, n = 50
Multivariate normal correlated errors (± 0.5 pairwise)
Each sample contains 100 P−values

A **No filter**

Number of permutation statistics per P−value							
100	200	500	1000	2000	3000	4000	5000
sd = 0.0093	sd = 0.0062	sd = 0.004	sd = 0.003	sd = 0.0021	sd = 0.0018	sd = 0.0017	sd = 0.0015

B **PhiMr filter with 1 test statistic per P−value**

Number of permutation statistics per P−value							
100	200	500	1000	2000	3000	4000	5000
sd = 0.01	sd = 0.0084	sd = 0.0066	sd = 0.006	sd = 0.0054	sd = 0.0052	sd = 0.0052	sd = 0.0051

C **PhiMr filter with 16 test statistics per P−value**

Number of permutation statistics per P−value							
100	200	500	1000	2000	3000	4000	5000
sd = 0.0067	sd = 0.0054	sd = 0.0035	sd = 0.0028	sd = 0.0023	sd = 0.002	sd = 0.0019	sd = 0.0018

D **PhiMr filter with 64 test statistics per P−value**

Number of permutation statistics per P−value							
100	200	500	1000	2000	3000	4000	5000
sd = 0.0067	sd = 0.0051	sd = 0.0032	sd = 0.0022	sd = 0.0017	sd = 0.0014	sd = 0.0013	sd = 0.0012

E **PhiMr filter with 128 test statistics per P−value**

Number of permutation statistics per P−value							
100	200	500	1000	2000	3000	4000	5000
sd = 0.0067	sd = 0.0054	sd = 0.0033	sd = 0.0022	sd = 0.0017	sd = 0.0014	sd = 0.0013	sd = 0.0011