Distribution of AMKAT P−value on a Fixed Data Set
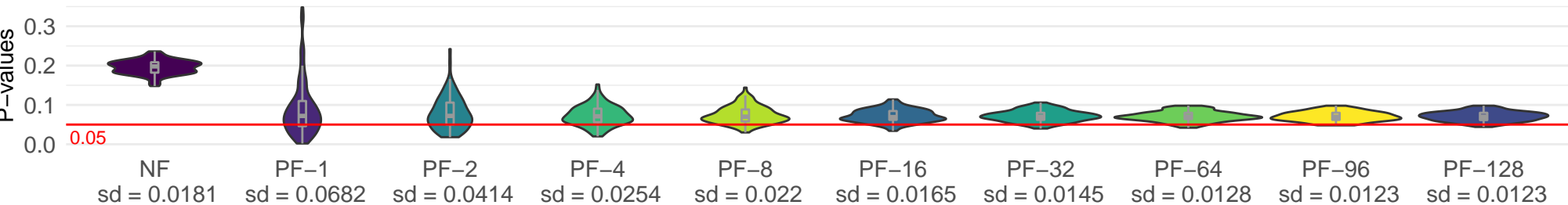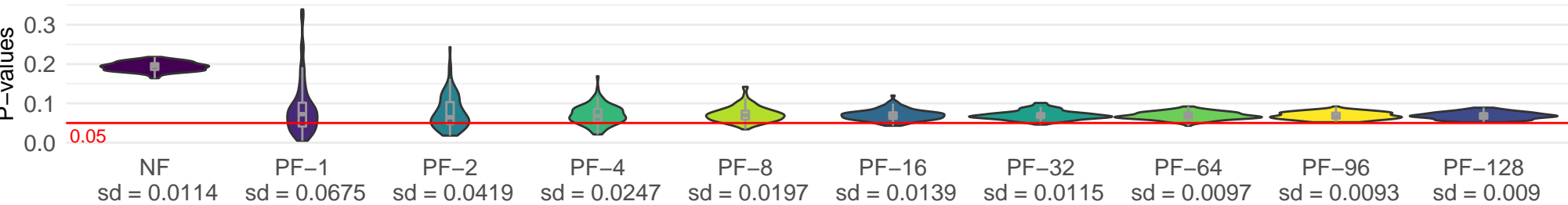
Continuous features, 7−variable signal at 100% strength, p = 250, n = 50, multivariate normal correlated errors (± 0.5 pairwise)
Each sample contains 100 P−values

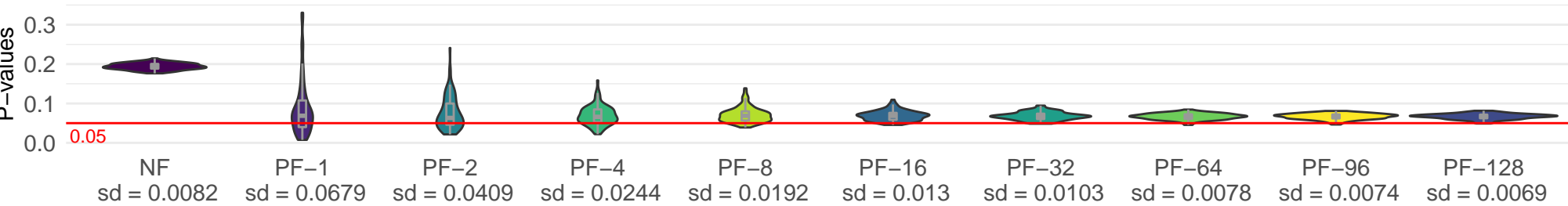NF = No Filter   PF−Q = PhiMr Filter with Q Test Statistics

A   500 permutation statistics per P−value

NF	PF−1	PF−2	PF−4	PF−8	PF−16	PF−32	PF−64	PF−96	PF−128
sd = 0.0181	sd = 0.0682	sd = 0.0414	sd = 0.0254	sd = 0.022	sd = 0.0165	sd = 0.0145	sd = 0.0128	sd = 0.0123	sd = 0.0123

B   1000 permutation statistics per P−value

NF	PF−1	PF−2	PF−4	PF−8	PF−16	PF−32	PF−64	PF−96	PF−128
sd = 0.0114	sd = 0.0675	sd = 0.0419	sd = 0.0247	sd = 0.0197	sd = 0.0139	sd = 0.0115	sd = 0.0097	sd = 0.0093	sd = 0.009

C   2000 permutation statistics per P−value

NF	PF−1	PF−2	PF−4	PF−8	PF−16	PF−32	PF−64	PF−96	PF−128
sd = 0.0082	sd = 0.0679	sd = 0.0409	sd = 0.0244	sd = 0.0192	sd = 0.013	sd = 0.0103	sd = 0.0078	sd = 0.0074	sd = 0.0069

D   5000 permutation statistics per P−value

NF	PF−1	PF−2	PF−4	PF−8	PF−16	PF−32	PF−64	PF−96	PF−128
sd = 0.0065	sd = 0.0679	sd = 0.0406	sd = 0.0244	sd = 0.0187	sd = 0.0124	sd = 0.0097	sd = 0.0072	sd = 0.0066	sd = 0.006