Supporting Information for “Bringing statistics to storylines: rare event sampling for sudden, transient extreme events”

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Introduction Figs. S1 and S2 display results for AMS applied to the stochastic L96 model with $a = 0$ and $F_4 = 3$, which is really just an array of correlated OU processes with no advection. Figs. S3-S13 display return level vs. return period plots for all combinations of stochastic forcing level $F_4 \in \{3, 1, 0.5, 0.25\}$ and the advance splitting time $\delta \in \{0, 0.2, 0.4, ..., 2\}$, only a subset of which are shown in the main text.

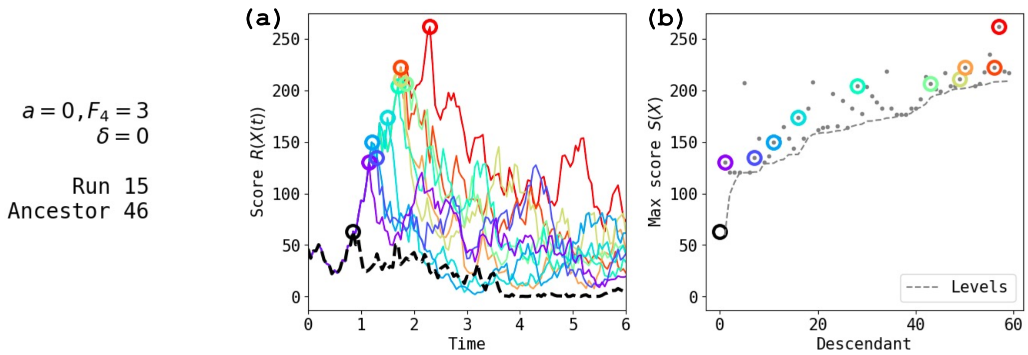

Figure S1. Example of a single lineage generated by AMS applied to the the OU process (L95 with $a = 0, F_4 = 3$), formatted the same as Fig. 4a,b of the main text.

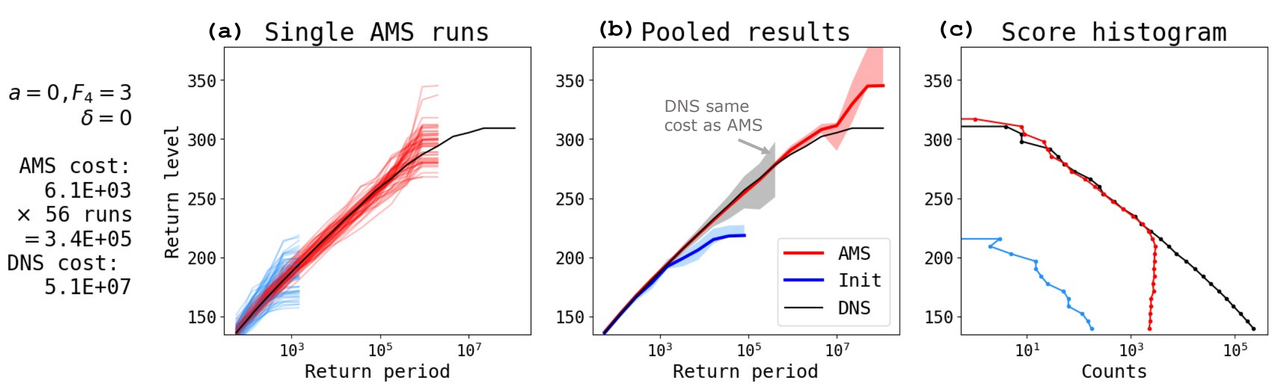

Figure S2. Statistical results of AMS applied to the OU process (L96 with $a = 0, F_4 = 3$) with $N = 128$ initial ensemble members and $M = 56$ runs. Format is the same as Fig. 5a,b,c of the main text.

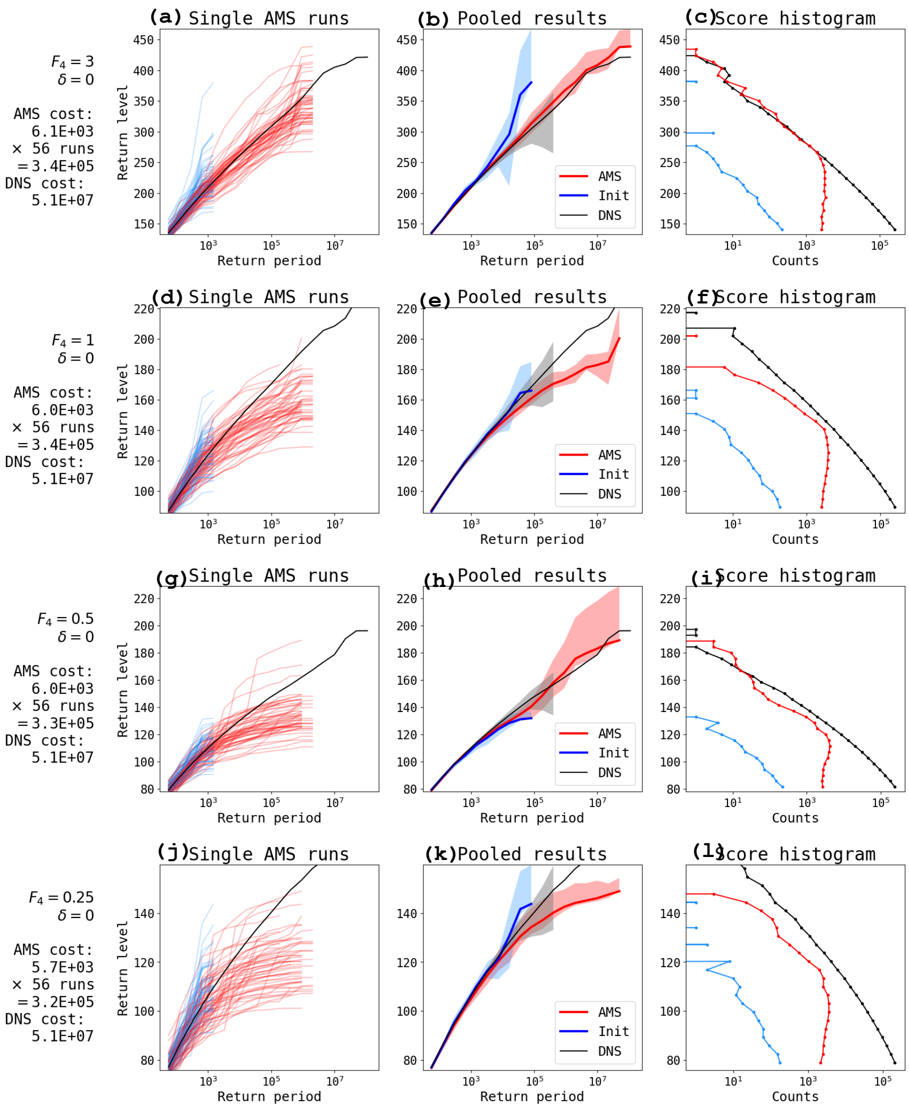

Figure S3. TEAMS algorithm performance at all four noise levels with $\delta = 0.0$

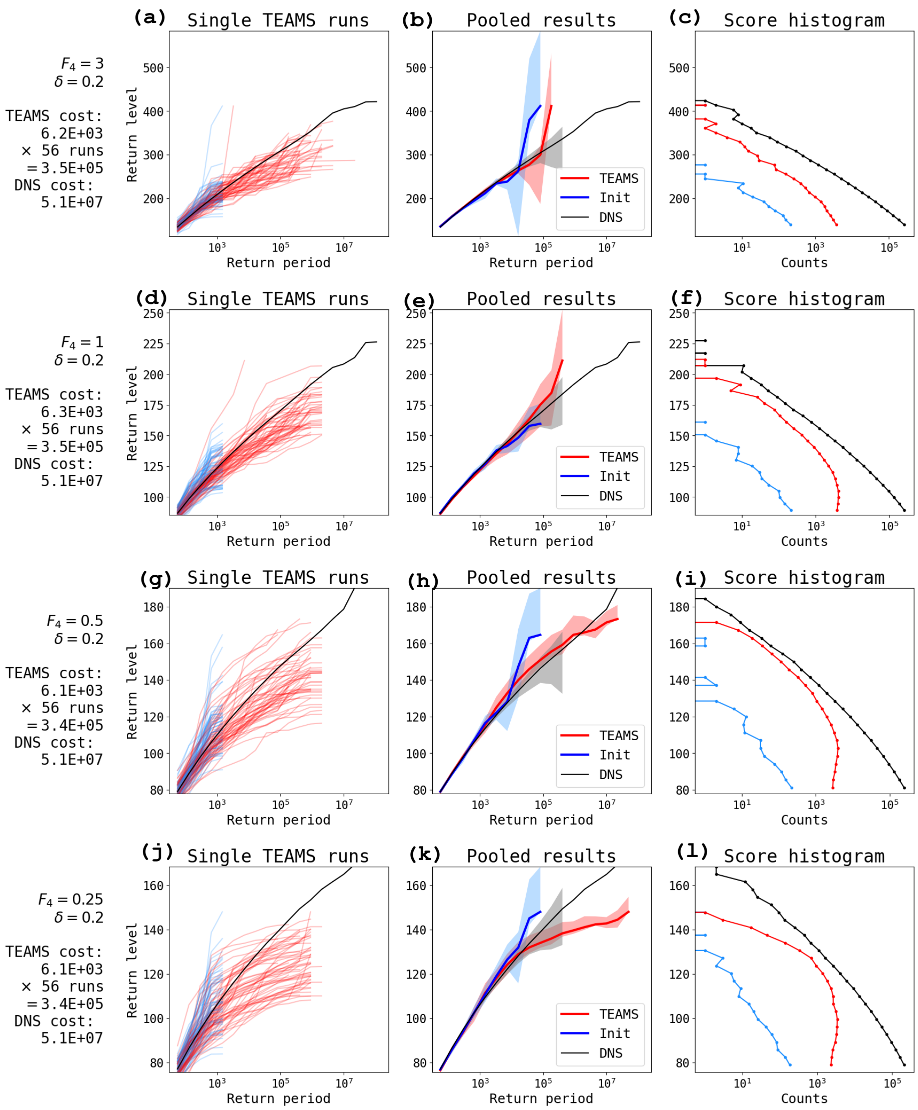

Figure S4. TEAMS algorithm performance at all four noise levels with $\delta = 0.2$

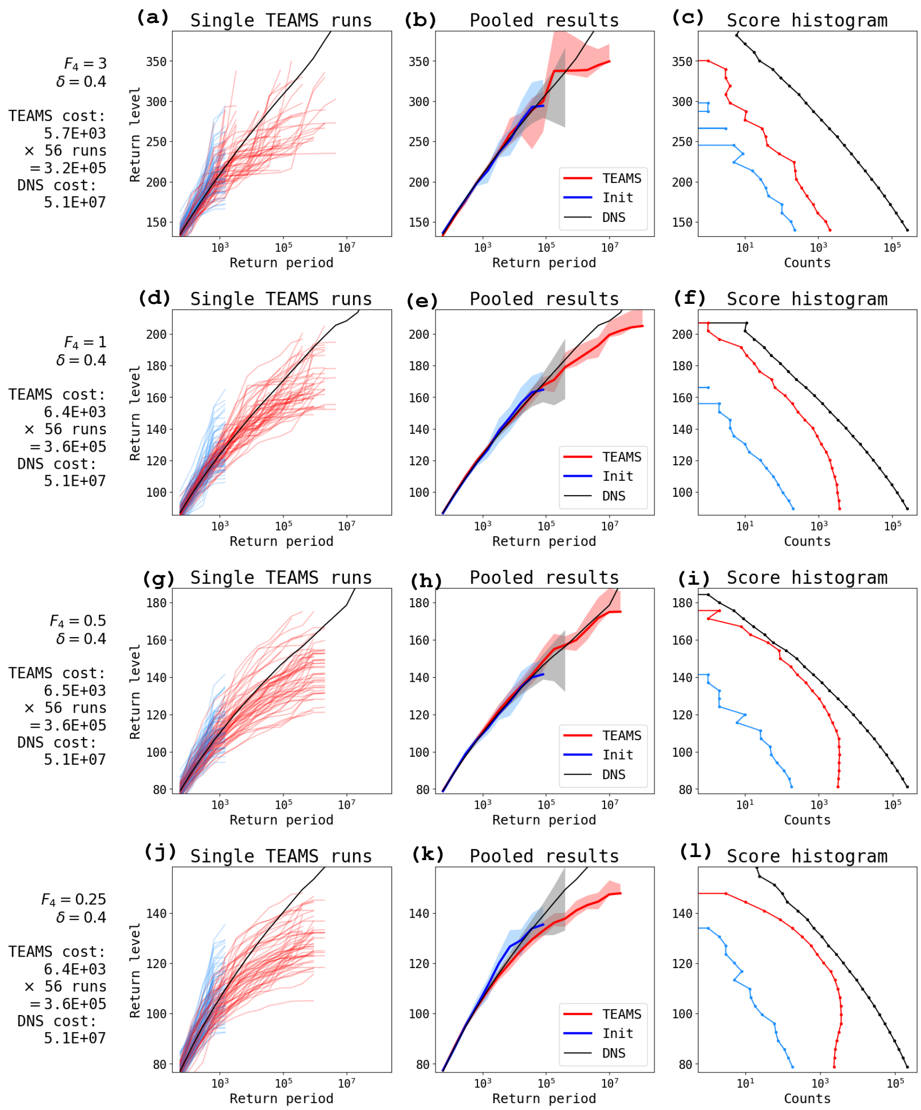

Figure S5. TEAMS algorithm performance at all four noise levels with $\delta = 0.4$

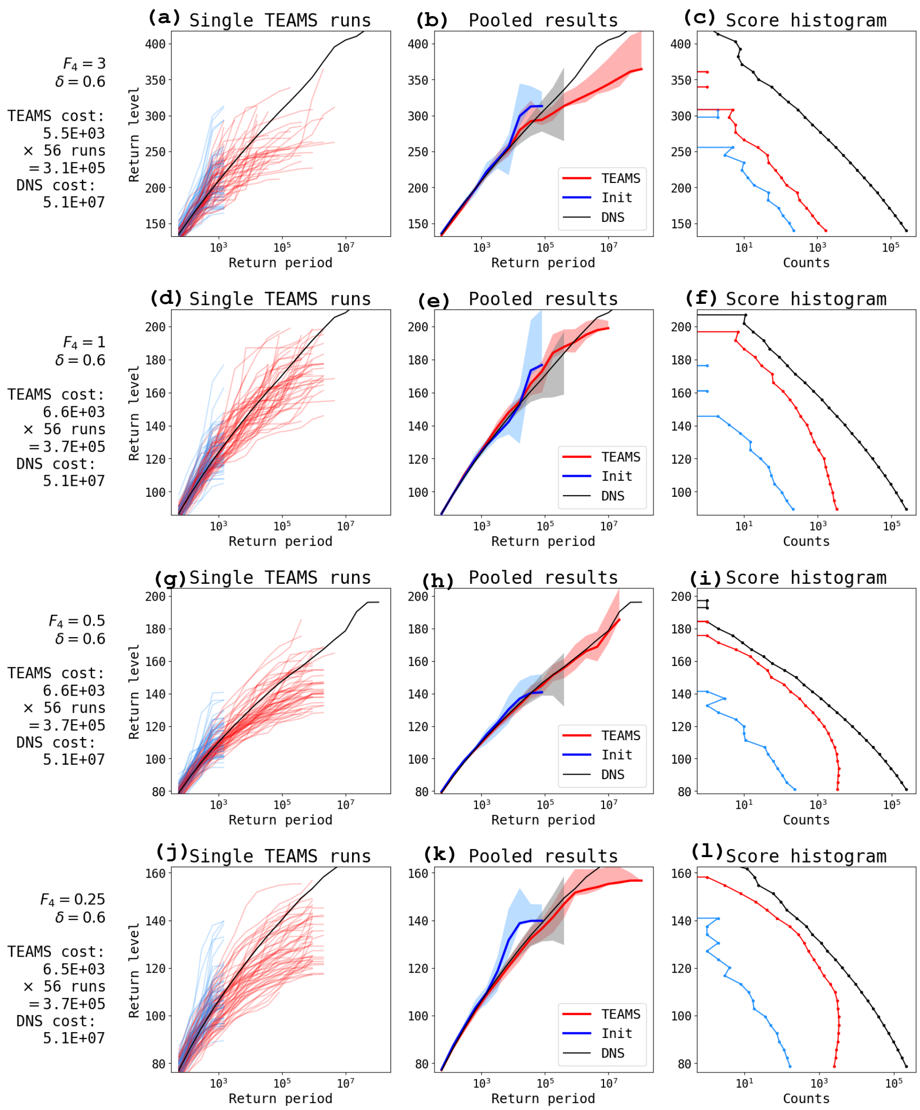

Figure S6. TEAMS algorithm performance at all four noise levels with $\delta = 0.6$

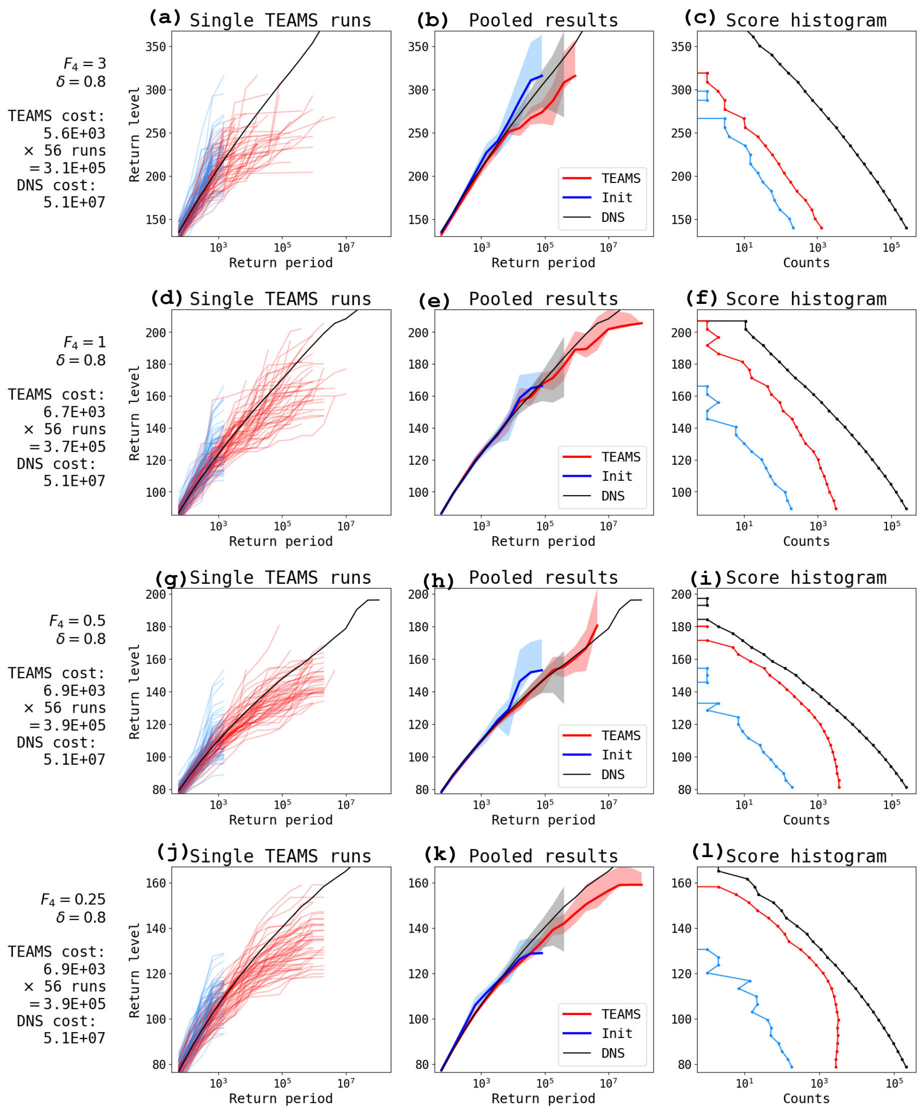

Figure S7. TEAMS algorithm performance at all four noise levels with $\delta = 0.8$

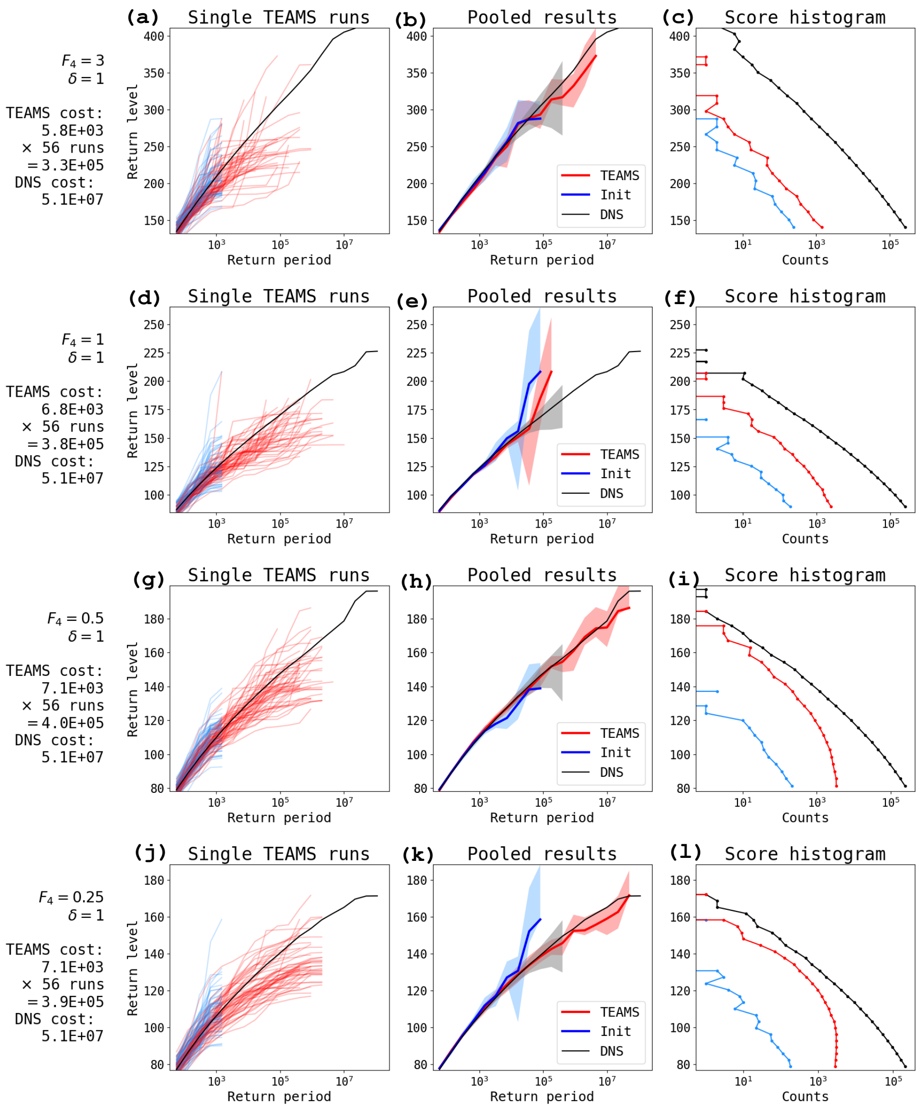

Figure S8. TEAMS algorithm performance at all four noise levels with $\delta = 1.0$

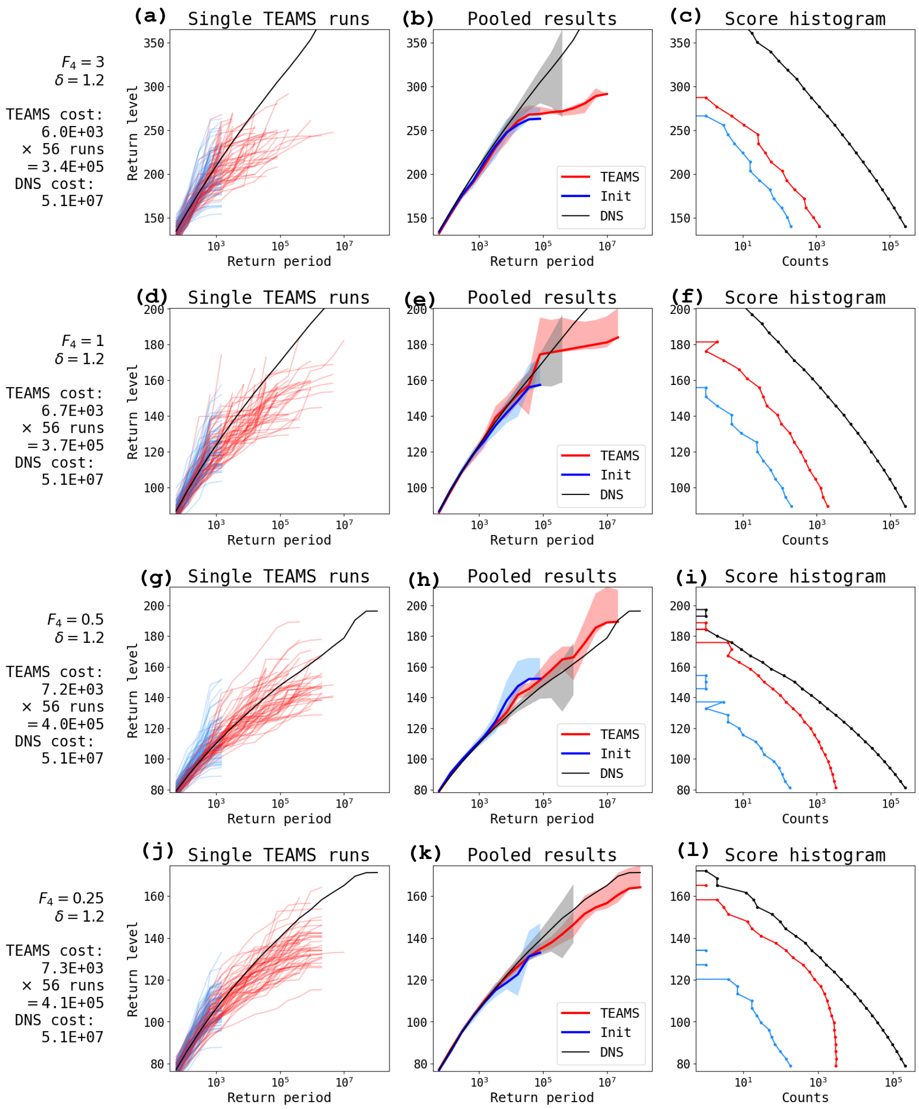

Figure S9. TEAMS algorithm performance at all four noise levels with $\delta = 1.2$

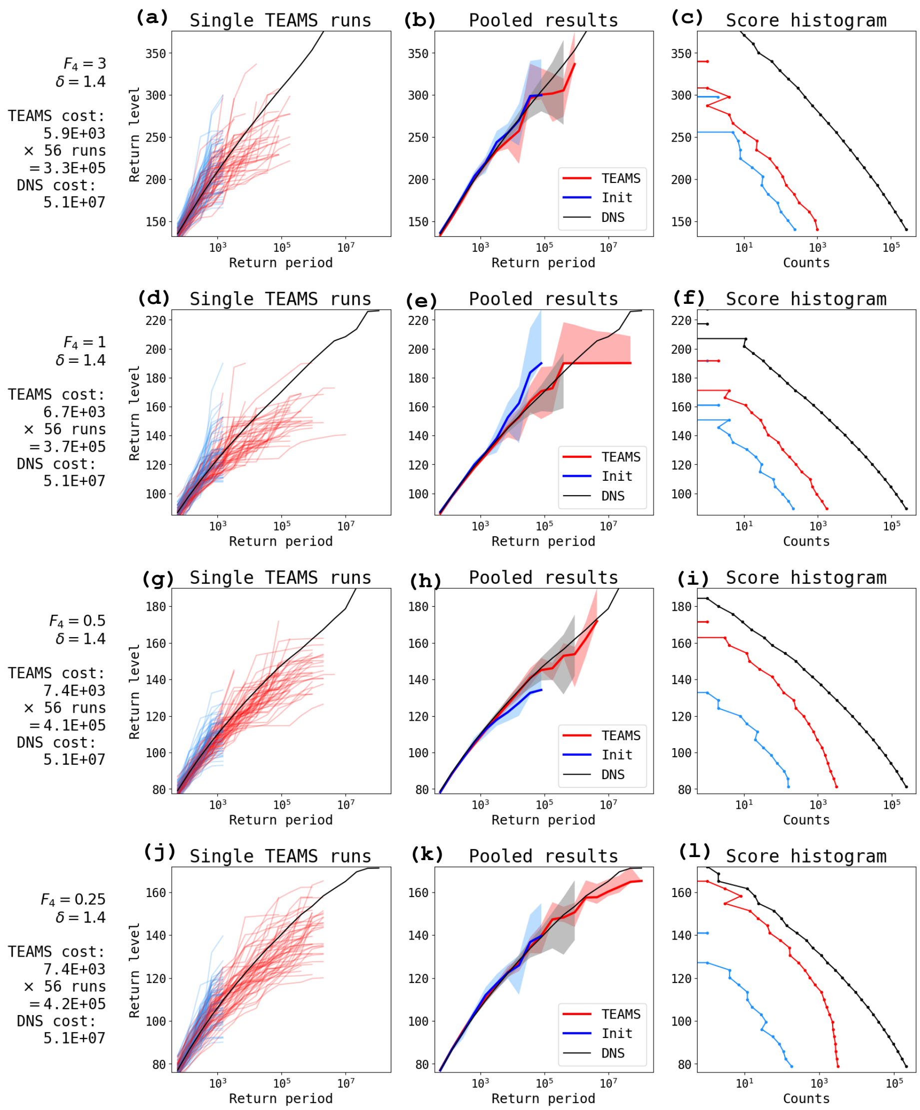

Figure S10. TEAMS algorithm performance at all four noise levels with $\delta = 1.4$

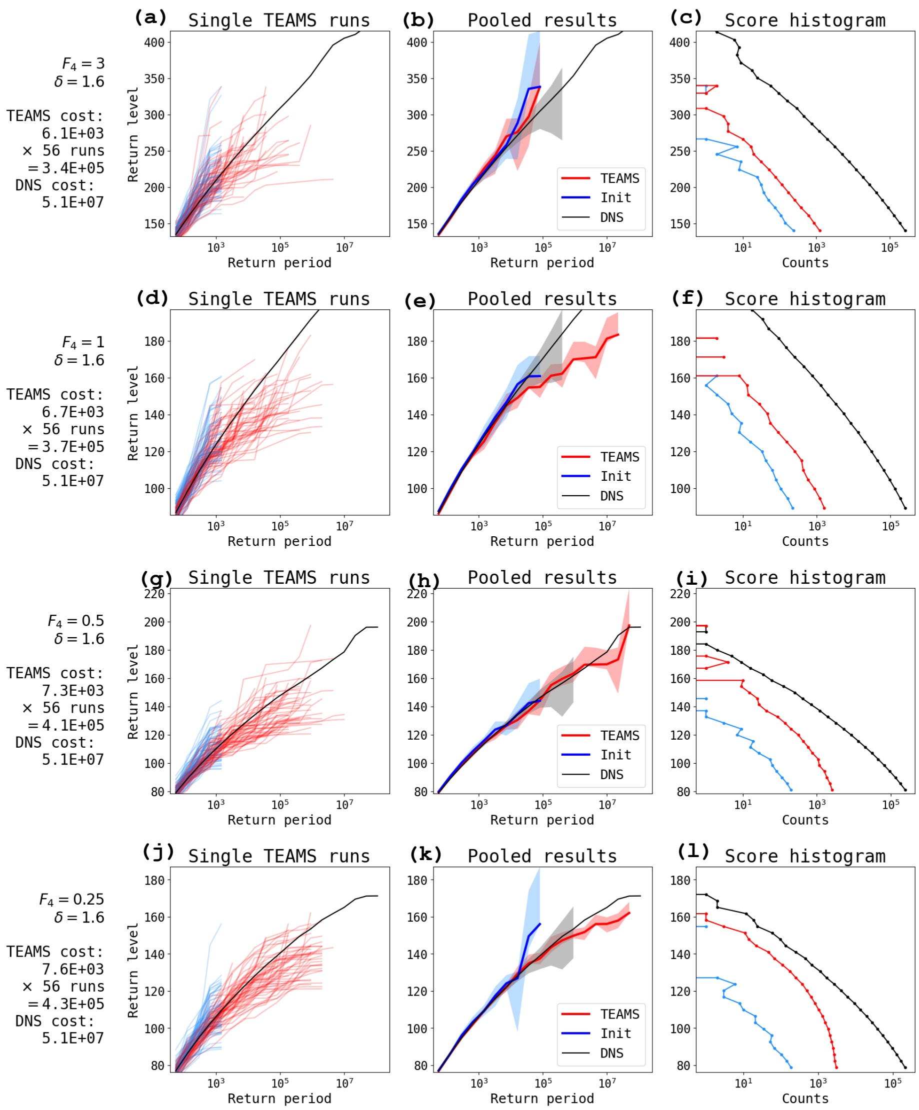

Figure S11. TEAMS algorithm performance at all four noise levels with $\delta = 1.6$

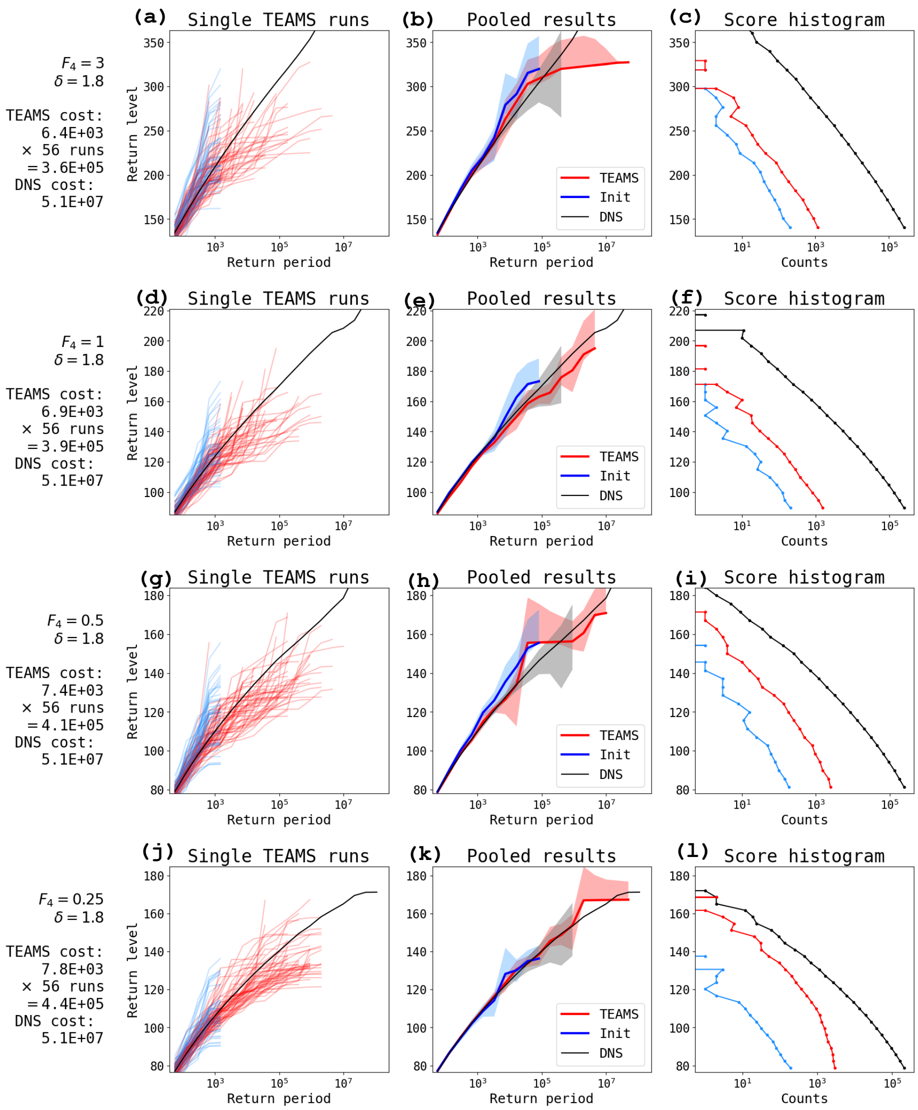

Figure S12. TEAMS algorithm performance at all four noise levels with $\delta = 1.8$

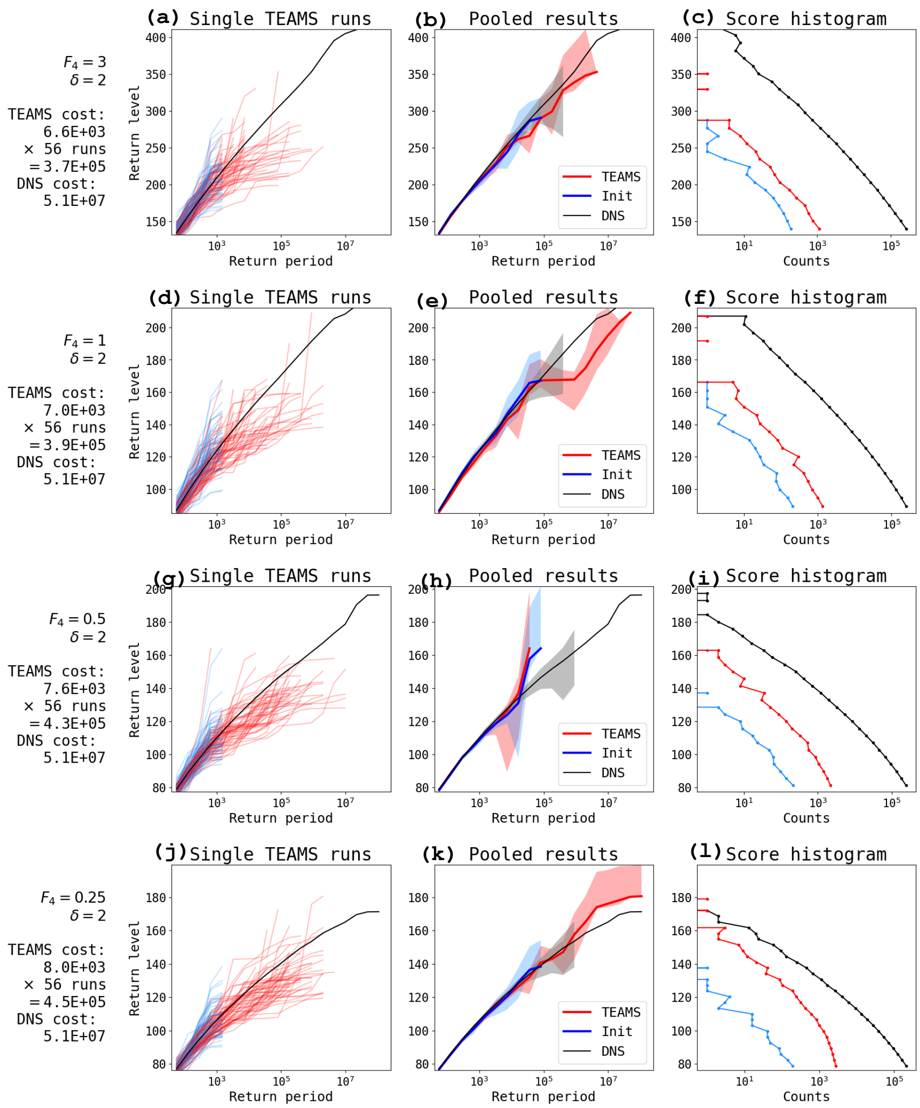

Figure S13. TEAMS algorithm performance at all four noise levels with $\delta = 2.0$