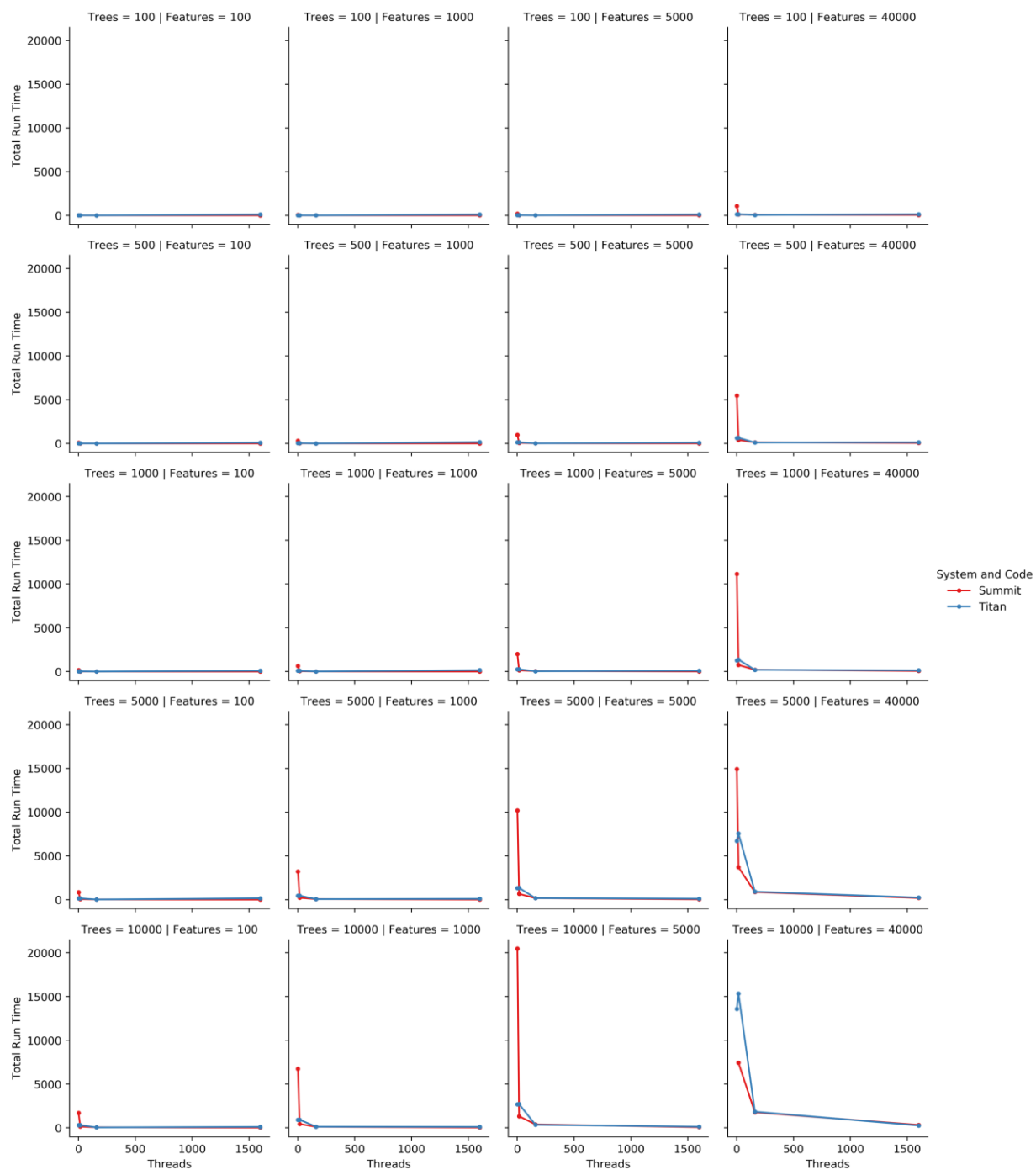
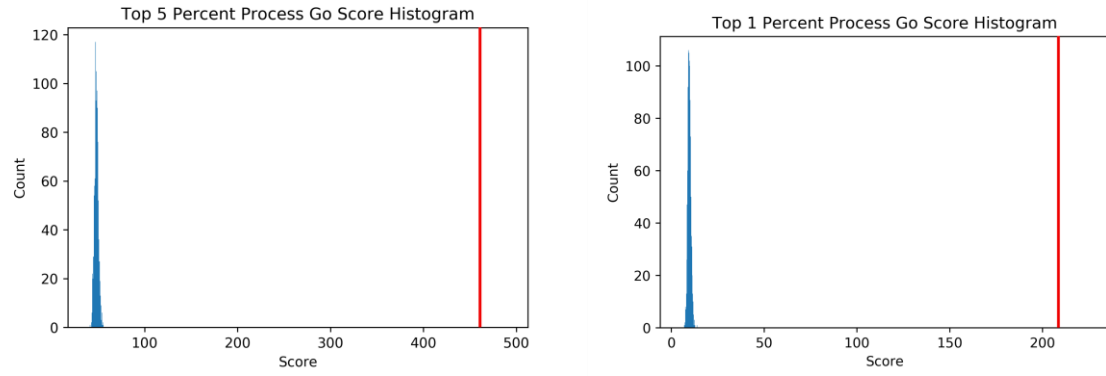


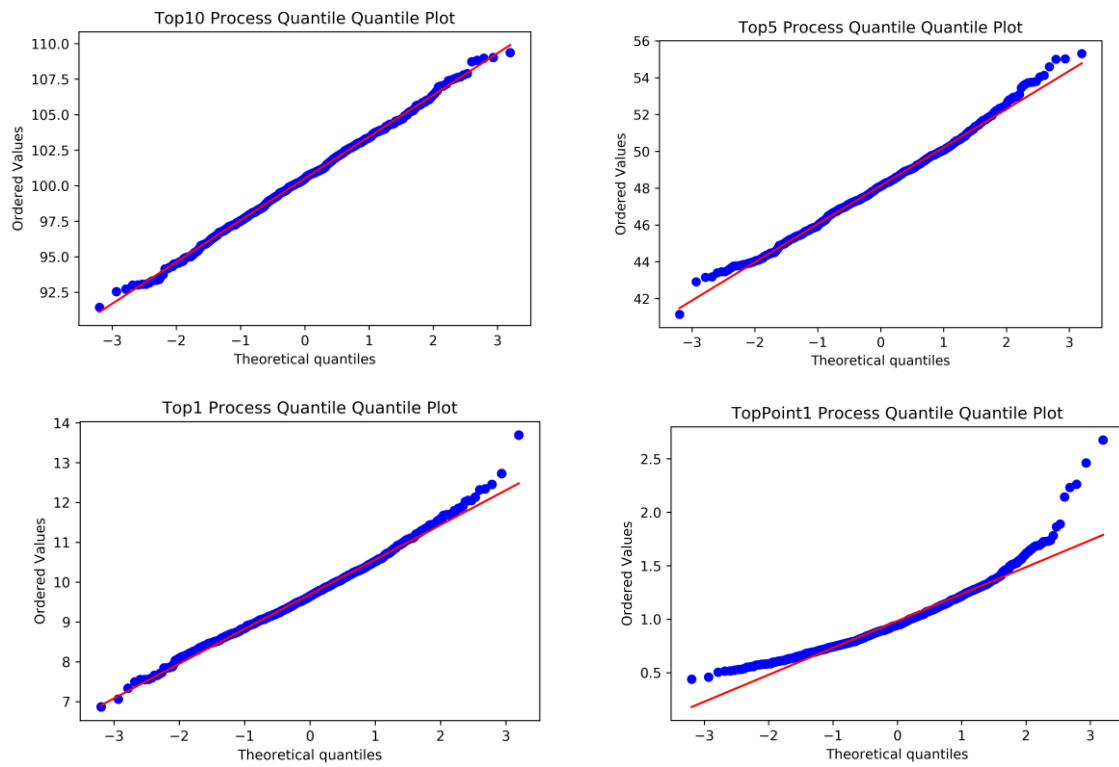
## Supplementary Information



**Figure S1.** Runtime on HPC Systems. The full grid of graphs comparing Summit and Titan times to completion for the C++ code. The red line is for Summit and the blue line is for Titan.



**Figure S2.** Null Distribution Plots. Null distributions with iRF intersect scores in red for the two thresholded Predictive Expression Networks not shown in the main text.



**Figure S3.** Quantile-Quantile Plots for the PENs. Quantile-quantile plots for each null distribution of the thresholded Predictive Expression Networks. .