



Figure S3: The coefficient of variation (CV) of the inter-coalescent time intervals for 10 lineages sampled in the current day on the background of a derived neutral allele with frequency f in the population. The colored dots give the CVs of T_k from our simulations using stochastic trajectories. Under our approximation the coalescent time intervals are exponential, and so have $CV=1$. The deeper coalescent time-intervals (low k s) are more variable than our predictions presumably because neutral trajectories are highly variable so increasing the variance of the coalescent times. More recent time-intervals (high k) are in better agreement with our approximation, as the trajectory with not have strayed far from a frequency f a short way back in time.