

Bayesian Exercises

December 3, 2007

1 Bayesian Exercises

For all these exercises we will use the dataset1-transcript.aln dataset found at <http://www.cibiv.at/~ingo/Brno/exercises>.

1. Run BEAST on the data with a yule tree prior and the rest of the setting leave as default.
2. Run the data on MrBayes on a single chain for the same sampling parameters that was used with BEAST.
3. Using Tracer, tree annotator and TreeView, compare the results from both runs. Are they different? Why?
4. Using either BEAST or MrBayes, do further analysis on the data. Try at least 2 different evolutionary models and 2 different tree priors. Also do several runs to ensure that the chain is stationary.
5. How do the trees change?
6. Does the posterior support change with different tree priors?
7. Are your chains long enough? Back up your position.
8. How do the posterior support values compare to a ML bootstrap? If they are different, suggest why.