The author’s abstract could be organized more clearly to consolidate in one thought what work is being done in this paper. A sentence clarifying the implications of the work would also be useful. The model description is reasonably clear, but would be better with another sentence or two elaborating on why the particular coarse graining was chosen, and a little more detail in how it was implemented. The results clearly relate back to the stated objective of the work. It was a little unclear what exactly the 2-letter node abbreviations (e.g. “UG” or “CG”) mapped to in the context of the network as shown in the unlabeled figure. There is a missing figure, which would be helpful in understanding figure 5, because right now it’s not clear what the reaction rate constants are. Additionally, in figure 5 the y-axis label should be more specific about the information measure being shown. Another sentence describing more specific future would in the discussion would also be useful to the reader and for the benefit of the field. Overall the paper was well written and had clear motivation, but needed a little more elaboration in certain areas.