Project 2: Verification of precipitation forecasts over SE Asia

Data: One year of observations of 24h accumulated precipitation for 6 stations in SE Asia, matched to corresponding forecasts from the Japanese operational model, the American Global Forecast Model and the ECMWF model. The three models provide forecasts for 1 to 5 days. Forecasts are from high resolution deterministic models, and verification of precipitation accumulations tend to be most informative using categorical verification techniques, so this data analysis will involve categorizing the predictand variable, and using contingency tables and associated scores.

Setup: Data have already been “cleaned” of missing cases, and composited over all stations for each of the 5 forecast projections, yielding 500 to 750 cases for each projection. The data are ascii text, tab delimited. The main comparison should be done using the composted datasets, but separation by station could be considered. Station ID numbers are included in the datasets to make filtering by station possible. All that is needed to start this project is scripts for reading the data into the analysis package(s). Verification tools for categorical variables are already available in R, but the tables and most of the scores are easily programmed. An excel-based “contingency table calculator” is available to compute the tables and scores if needed.