

2. In conjunction with the above meteorological data, air and precipitation sampling should be carried out using a pollutant or tracer which is released within the fine meteorological network. An inert tracer should be used in order to avoid chemical transformations. Air sampling should also be carried out by aircraft within and above the surface mixed layer. If possible, the tracer should be released at different heights. Sampling should be carried out under as many meteorological conditions as possible, including convective overturning.
3. Using the above data, LRT models should use the present coarse resolution meteorological data to forecast the downwind concentrations of the tracer. The present LRT and mesoscale models should also be run using the finer resolution data. The results should be compared with those using the coarse meteorological data, and the observed data, to determine what improvement, if any, results from the use of the fine meteorological grid data. This may resolve where more meteorological detail needs to be put into the present models.
4. Existing data sets containing fine resolution meteorological data and information from tracer studies should be examined carefully to see if they can provide the sort of information that items 1 to 3 above are intended to address.
5. Models need to be devised to account properly for the effects of the variability of mixed layer height in space and time as well as the other meteorological and chemical processes that contribute to acid deposition.