

would seem that improved statistics of the temporal and spatial variability of precipitation events and the development of storm-type climatologies for eastern North America would improve our ability to simulate wet deposition in the large-scale models.

5.4.3 Model Development and Testing

Appropriate data are lacking with which to develop and test modified deposition simulations; effort is required to specify carefully the requirement, and to compile such data. At present, model results can be compared with air concentration measurements of SO_2 and SO_4^{2-} , and wet deposition of total S (or SO_4^{2-} and SO_2 , if special precautions are taken), but not against dry deposition. Because of the difficulties in simulating wet deposition in the large-scale models, it is advisable to compare model outputs with air concentration measurements, in addition to those of wet deposition.

The following are issues which require resolution through additional research effort: the differing real-world process and simulation model "scales"; the inadequate resolution of the data input fields for the process simulation; and the necessity of validating models using output fields of low resolution against point measurements.

As more sophisticated deposition models are developed (e.g. for scavenging) efforts should be made to incorporate them into the LRT models.

5.4.4 Modeling Deposition

Most current LRT models simulate only sulfur deposition; whereas,