

model. The necessary simplifications introduced into most available models will lead to errors in model outputs. Those areas in which simplifications are most likely to affect model results and which are currently being improved are

- (1) The relationship between the H^+ ion and precursor sulfur compounds, especially SO_2 ;
- (2) The characterization of the nitrogen-oxidants cycle in connection with H^+ ion; and
- (3) The representation of the wet removal of pollutants via scavenging processes during rain or snow events.

The availability, accuracy and resolution of field measurements also limit both our ability to make reliable model predictions (when the data are used as model inputs) and our ability to assess the degree of uncertainty in model outputs (when the data are used for comparison purposes). In addition, the evaluation of model simulations of total and dry deposition are difficult because dry deposition cannot yet be measured reliably.

Typically, on an annual basis, model estimates and reliable field observations are expected to agree to within a factor of two. It is expected that this range of uncertainty will be narrowed in the future.