

of the statistics of these physical processes from wind and precipitation data. The source emission inventory corresponds to the year 1977. The OME model estimates compare quite favorably to measurements of annual wet deposition taken from Canadian and U.S. networks for 1977. The OME model also has been used to calculate the relative contribution from U.S. and Canadian SO<sub>2</sub> emission sources to the sulfur concentrations and wet deposition over eastern North America.

#### ENAMAP-1 Model

SRI International has developed a trajectory-type regional air quality simulation model (Bhumralkar et al., 1980). This model calculates monthly and annual average concentrations and dry and wet depositions of SO<sub>2</sub> and SO<sub>4</sub>. The basic element of the ENAMAP-1 model is the emission of puffs of SO<sub>2</sub> at equal time intervals from all source areas. The puffs are assumed to be well mixed in the horizontal and vertical and to be transported by the mixed layer wind field.

The wind field is determined by objective analysis of available upper-air observations approximately 1500 m above mean sea level. Removal and transformation of the pollutant mass is treated linearly.

SO<sub>2</sub> emissions from the SURE program were used in ENAMAP-1 model simulations. The months of January, April, August, and October 1977 were chosen for model evaluation.