

1. The scanty available data suggest that the washout rates of sulfates (and probably nitrates) should be comparable in summer and winter. The rainout rates could be strongly dependent on storm type, and hence the time of year, because of the different mechanisms whereby particles can be incorporated into precipitation (some data suggest variations of an order-of-magnitude or more).
2. Experimental results and theoretical considerations suggest a seasonal variation of the wet scavenging coefficient for sulfur dioxide, which can be up to several orders of magnitude, depending on the latitude, being most pronounced in the northern parts of America that receive appreciable amounts of snow in the winter. Probably the same conclusions also apply to nitrogen dioxide. Nitric acid vapour, being highly reactive with all kinds of surfaces, is expected to show a smaller seasonal dependence of the scavenging coefficient.
3. The situation is too confusing at present to draw any conclusions about the seasonal dependence of the dry deposition rate for sulfates (or nitrates). In the winter, deposition velocities would seem to be  $0.2 \text{ cms}^{-1}$  or less, but values reported for summertime conditions range over an order of magnitude, including negative numbers.
4. The dry deposition velocity of sulfur dioxide is expected, from available experimental and theoretical results, to show only a modest seasonal variation--generally, less than a factor of two or so in any given area. The same is probably true of nitrogen dioxide and nitric acid vapour.
5. The gas-phase homogeneous component of sulfuric and nitric acid formation rates is relatively well-understood and has a strong seasonal variability, especially at the northern latitudes. However, our knowledge of the heterogeneous component, including in-cloud processes, is too poor at present to allow any conclusions regarding the seasonal dependence of the overall chemical transformation rate of sulfur and nitrogen oxides.