

Table 5. Conversion of SO<sub>2</sub> in Power Plant and Smelter Plumes

Source	SO <sub>2</sub> Oxidation Rate (% h <sup>-1</sup> )	Comments
Forrest and Newman (1977)	<1.5	-four coal-fired power plants (30° to 40°N) -no correlation could be found between conversion and temperature (10 to 25°C), humidity or time of day
Husar et al. (1978a)	1 to 4 (noontime) <0.5 (night)	-St. Louis (38°N) -power plant -photochemistry may be the dominant mechanism
Lusis et al. (1978)	1 to 3 (June, noon and p.m.) <0.5 (winter, or summer early a.m.)	-Fort McMurray (57°N) -power plant -evidence of photochemical activity during relatively high conversion rates -temperature varied from -13 to 23°C
Dittenhoefer and de Pena (1979)	0 (<65% RH) ~1 (65 to 90% RH) 2 to 6 (90% RH)	-Pennsylvania (41°N) -power plant -evidence that both gas phase and aqueous phase oxidation are important
Forrest et al. (1979a)	<2	-Tarpon Springs, Florida (28°N) -oil-fired power plant -no correlation was found between individual meteorological parameters and extent of oxidation, although higher conversions were observed in August than in February
Forrest et al. (1980)	0.1 to 0.8 (night, early a.m.) 1 to 4 (late a.m. and afternoon)	-Cumberland coal-fired power plant (35°N) -reactions were correlated with solar radiation