

Note that nowhere does the SO_4 concentration fall much below 1.0 mg l^{-1} even in remote arctic areas and this could thus be interpreted as the typical "background" contribution. With no other alkaline components, such a concentration would result in a pH of about 5.0 which could, therefore, be considered the background value of pH. Departures from this value, rather than from pH 5.6, should be considered in discussing regional and local influences.

4.3 Observed Variation of pH with Height

The ideal way to verify the sequence suggested in section 4.1 would be detailed airborne observations collecting cloud droplets, in-cloud precipitation and falling precipitation from the same cloud system. This has not been done in any systematic way, although there are isolated airborne measurements that are not inconsistent with the hypothesis.

Two sets of ground level measurements on mountains are available from Mauna Loa, Hawaii in an essentially remote, largely unpolluted oceanic environment and from Whiteface Mountain, N.Y. immediately downwind of a heavily polluted area.

Mauna Loa, Hawaii

Data collected from June 1975 to June 1980 at several sites ranging from sea-level to the Mauna Loa observatory at 3400 m MSL have been reported by Miller and Toshinaga (1981)