

Resources available to the IMPROVE data user

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The Interagency Monitoring of Protected Visual Environments (IMPROVE) network tracks the concentration and chemical composition of haze aerosols at about 170 locations throughout the United States. Data are and documentation provided on-line at <http://views.cira.colostate.edu/fed/>, where users can download species concentrations, together with sample-specific uncertainties, detection limits, data flags, and other supporting information.

Sample- and species-specific measurement parameters do not always capture everything that is known about data quality. Improved analytical methods may yield data whose greater accuracy can be distinguished only in large-scale or inter-species comparisons, for example. Alternatively, data may exhibit patterns in time or space that do not correspond to plausible atmospheric signals. If no rationale can be identified for correcting or invalidating the underlying measurement sets, there is then a network-level uncertainty that is not reflected in the uncertainties reported with individual samples. (Even when a correction can be identified, users may prefer to recognize and accept the resulting discontinuity rather than retrospectively adjust data that have already undergone widespread analysis.) Anomalous data are sometimes identifiable as legitimate measurements of exceptional events in the real world.

IMPROVE offers higher-order information with an open-ended collection of data advisories, available at http://vista.cira.colostate.edu/improve/Data/QA_QC/Advisory.htm. These advisories follow a standard format giving the species, sites, and sampling periods involved, the phenomenon at issue, and a recommended course of action for users of the data, accompanied by a succinct account of the technical basis and supporting evidence. This presentation reviews these advisories and their intended use.

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