Posting type Advisory

Subject Arcane flagging of early hydrogen and fine mass data

Module/Species A/ MF, H

Sites Entire network

Period 1 September 1990 – 26 February 1992

Recommendation Include non-zero data with native flag "AP" as valid; exclude data

with native flag "AA" as invalid.

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Supporting information

Analysts may choose to work only with "normal" data having no qualifications, those delivered with native flag "NM" and VIEWS status flag "V0". In most years, very few data are qualified for any reason: in 2008, for example, just 428 (2%) fine mass values were flagged other-than-NM out of a total 19819 reported. From 1 September 1990 through 26 February 1992, however, *all* fine mass and hydrogen data are flagged to reflect concerns for sporadic contamination that are described on page 2 of the Winter 1992 IMPROVE Newsletter.

For the period of suspected contamination, all non-missing MF and H values carry native flags AA or AP and VIEWS status flag V5. The AA flag denotes observations that were retrospectively invalidated; note that their value is incorrectly delivered as 0 rather than "missing", and their VIEWS status is incorrectly listed as V5 ("valid but qualified") rather than M2 ("missing because invalidated"). The AP flag denotes observations that were retrospectively judged valid as described in the Newsletter. Only 5% of the period's observations were invalidated as AA, but another 4% of the AP observations are reported as MF = 0. Zero is otherwise such a rare value for measured mass that these AP observations must also be considered suspect.