Posting type	Advisory
Subject	Data losses during episodes of heavy smoke
Module/Species	A/ MF, elements, f_{abs}
Sites	All
Period	All
Recommendation	Use carbon and ion data to bound MF missing during fire events.
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Supporting information

The Teflon membrane filters used in modules A and D can clog and rupture at the high OC concentrations associated with some regional fire events. Episodes of dense smoke can thus be under-represented among days with valid mass, elemental, or light-absorption data. The degree to which such selection bias may affect a particular data analysis can usually be assessed from the ion and carbon data, as the Nylon and quartz filters used in module B and C rarely clog. (Logistics problems associated with wildfires occasionally take all four modules out of operation, but these leave more obvious gaps in the data record.)
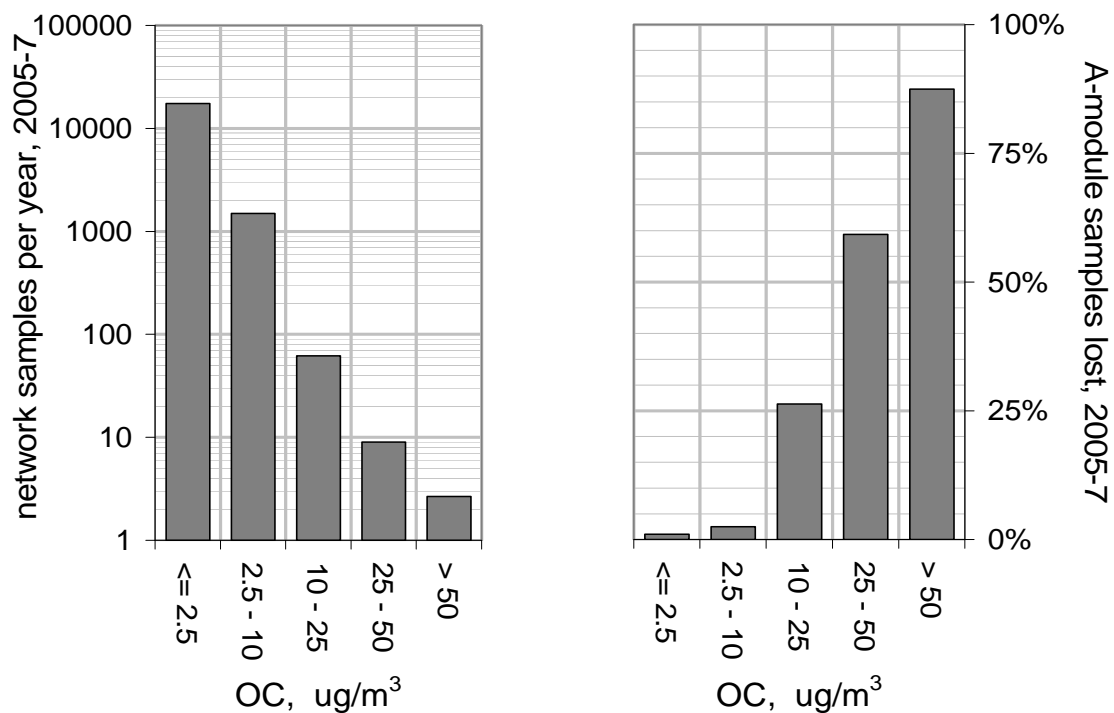

Figure 1. Mean sample recovery statistics from 2005-7 network sampling, for C module (left) and accompanying A module (right). All routine A-module samples accompanying valid C-module data are counted, including those flagged for flow and other anomalies.