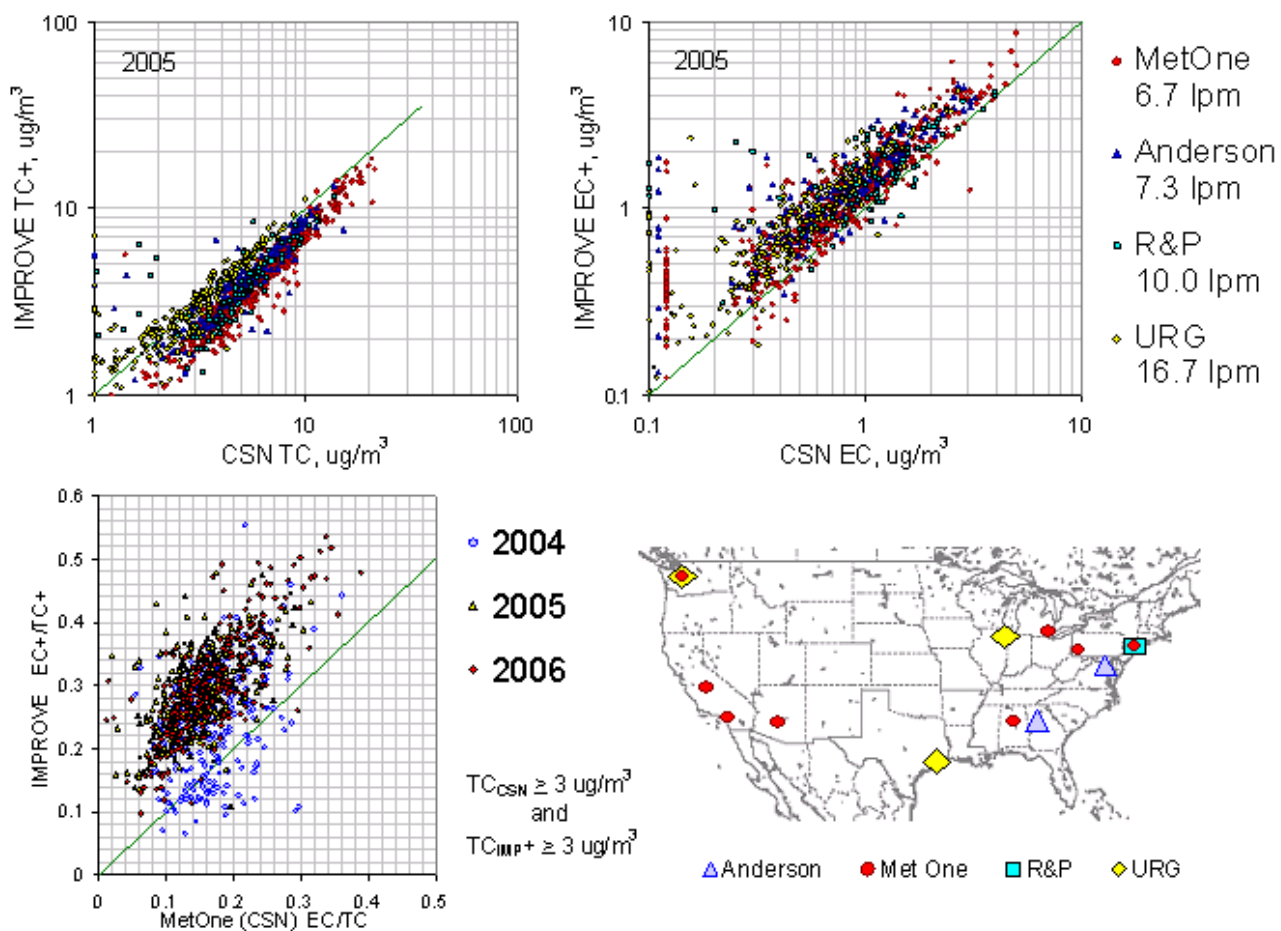


## Relating OC/EC Data from Two National Monitoring Networks

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IMPROVE (Interagency Monitoring of PROtected Visual Environments) is a particle sampling network designed to track regional haze in rural and remote locations. CSN (Chemical Speciation Network) is a particle sampling network designed to support health studies and source apportionment of urban air pollution. Both networks use thermal-optical analyses to determine "elemental" and "organic" carbon in 24-hour samples collected on quartz filters. Differences in their sampler designs, filter handling, analytical protocols and data reduction nevertheless yield significant differences in their reported concentrations. This paper examines the empirical relationships that can be observed in data from several years of collocated monitoring at 12 urban sites, and their implications for integrative data interpretation.



**Figure 1.** Comparisons of IMPROVE and CSN data from collocated monitoring at 12 urban locations (map, bottom right). IMPROVE generally reports more EC than CSN, and less TC than CSN (top); the differences vary with CSN sampler for TC (left), but not for EC (right). The minimum fraction of TC reported as EC by IMPROVE increased in 2005 (bottom left), when aging analytical instruments were replaced. CSN concentrations are reported with no adjustment for sampling artifacts; the "artifact corrections" that are subtracted from reported IMPROVE concentrations were accordingly added back in for these comparisons.