

Institute for Tribal Environmental Professionals, Tribal Air Monitoring
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AIR QA/QC DEFINITIONS

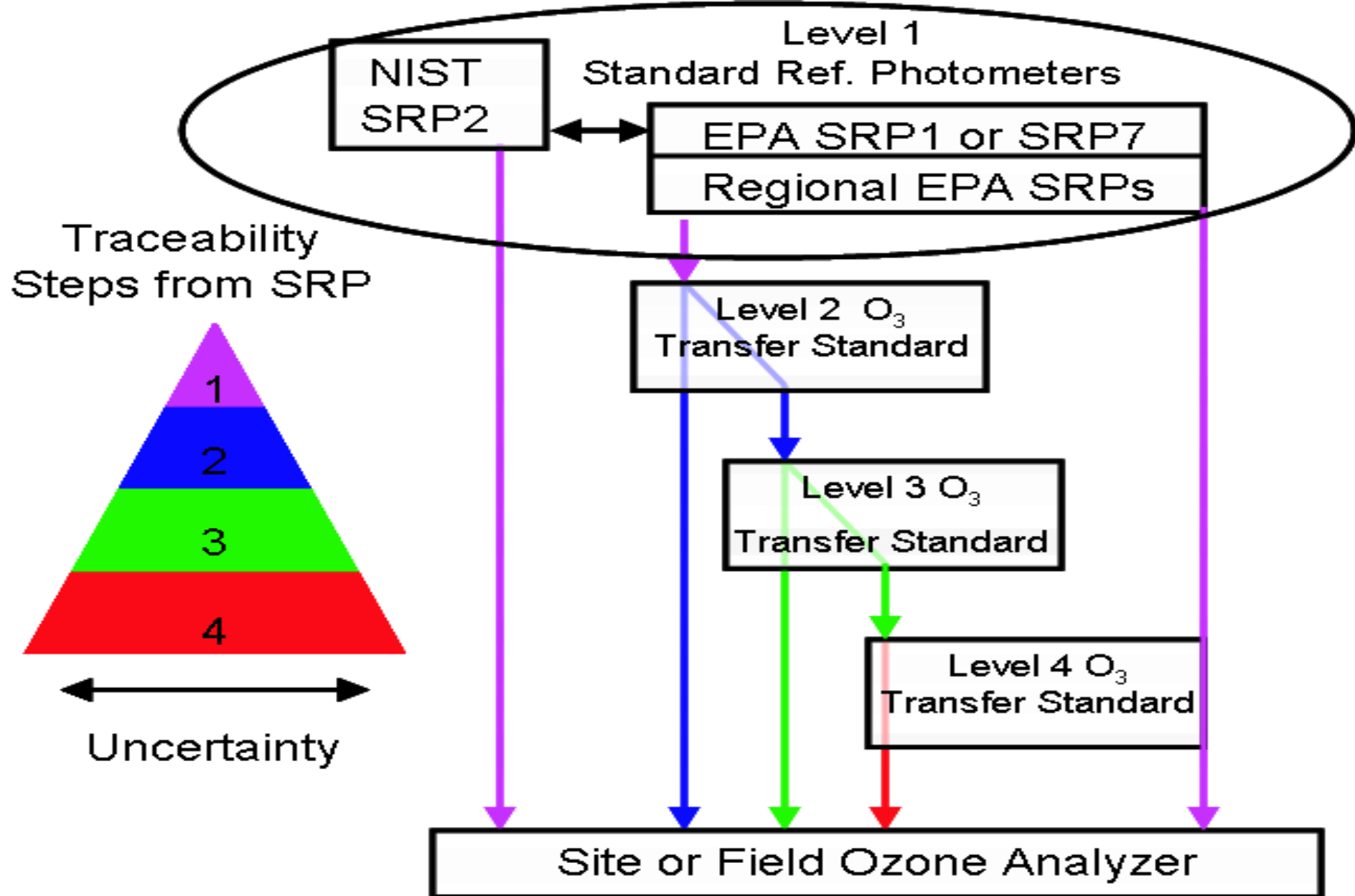


Figure 1.1. Ambient air ozone traceability scheme

definitions

- Verification: comparing to a standard of a higher authority—NO ADJUSTMENTS
 - Ex: all points lying within 2% of line
 - Leak checks (comparing against stnd of zero)
 - Flow rate within 4% for cont PM
 - Reference membrane if a BAM
- Calibration—change the response

Standards:

Each has stated uncertainty

- Device that is used as a reference, with stated uncertainty
- Primary standard (no higher authority--NIST)
- National standard (EPA SRP)
- Reference standard, or local primary standard (highest authority of an organization)
- Transfer standard relates (with SOP) a parameter to a higher authority standard via a transportable device



certification

- The process and documentation of comparison to a higher authority standard within required limits, for how well this standard compares against a standard of higher authority
- Each step of the chain from NIST down to your field instrument should have a certification and you should have copy (should be included in your local primary standard documentation)



Measurement Quality Objectives:

- Are Performance Requirements
 - Ozone
 - 90% confidence limit for the CV of 15%
 - 95% confidence limit for absolute bias of 7%
 - PM_{2.5} (contin and manual) goals for meas uncertainty
 - 10% for total precision
 - +/- 10% for total bias
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