CAPS PM<sub>ex</sub> Monitor

Accurate and Precise
Continuous Monitoring of
Particle Optical Extinction.

**APPLICATIONS**

- Visible (red, green or blue) measurement of particle optical extinction using patented Cavity Attenuated Phase Shift technology.

- Measurement of ambient optical extinctions at the 1 Mm<sup>-1</sup> level.

- Climate Change Research Optical Properties Closure.

- Roadside Monitoring.

- Combustion Plume Analysis.

- Aircraft Engine Exhaust Monitoring.

**ADVANTAGES**

- Choice of 1 of 5 Wavelengths:
  - Blue (450 nm)
  - Green (525 nm)
  - Red (630 nm)
  - Far Red (660 nm)
  - Near IR (780 nm)

- No calibration required.

- Autonomous Operation: No Zero Air. Automated Background Subtraction.

- Linear Response (0 - 4000 Mm<sup>-1</sup>).

- Maintenance-Free.

Measured particle extinction at 630 nm in Pasadena, CA during the CalNex campaign shown as 1 hour average values. Note the diurnal variation in extinction levels.

Measured particle extinction at 532 nm outside of Estes Park, CO shown as 1 minute averages. Note the low levels of ambient particle extinction. The spikes are particulate emissions from passing vehicles.
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**SPECIFICATIONS:**

**Sensitivity (S/N =3):**
2.5 Mm<sup>-1</sup> (1 s), 0.25 Mm<sup>-1</sup> (60 s)

**Response Time (10-90%):**
< 2 s

**Sample Flow:**
0.85 l min<sup>-1</sup> (volumetric flow)

**Operating Pressure:**
Ambient

**Materials Exposed to Sample:**
Conductive Urethane, Stainless Steel, Conductive Silicone, and Aluminum

**Data Output:**
RS-232, USB, Ethernet (Data Acquisition Program Included)
On-board Data Storage (6 GB)
Front Panel Display

**Size/Weight:**
Rack mount, 19” x 24” x 9.06”, 25 lbs.
[61 cm x 43 cm x 23 cm, 12 kg]

**Electric Power:**
50 W; 100-250 VAC (50-60 Hz)

**REFERENCES**


