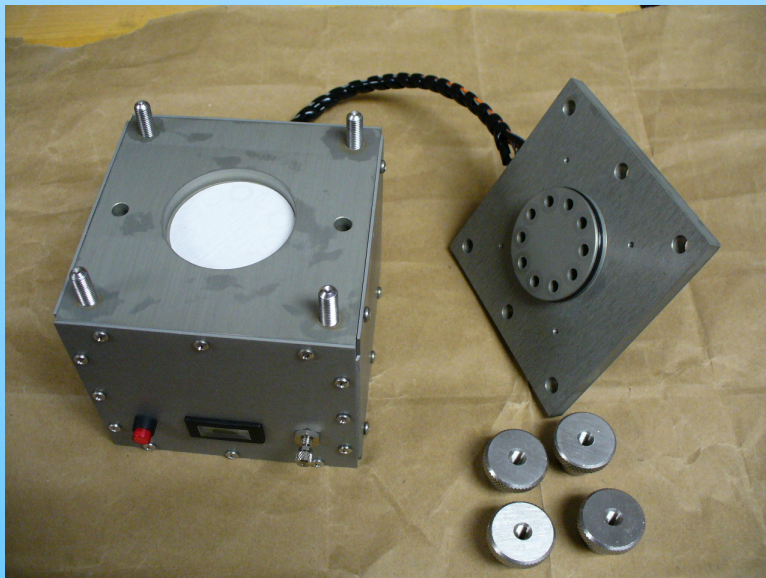
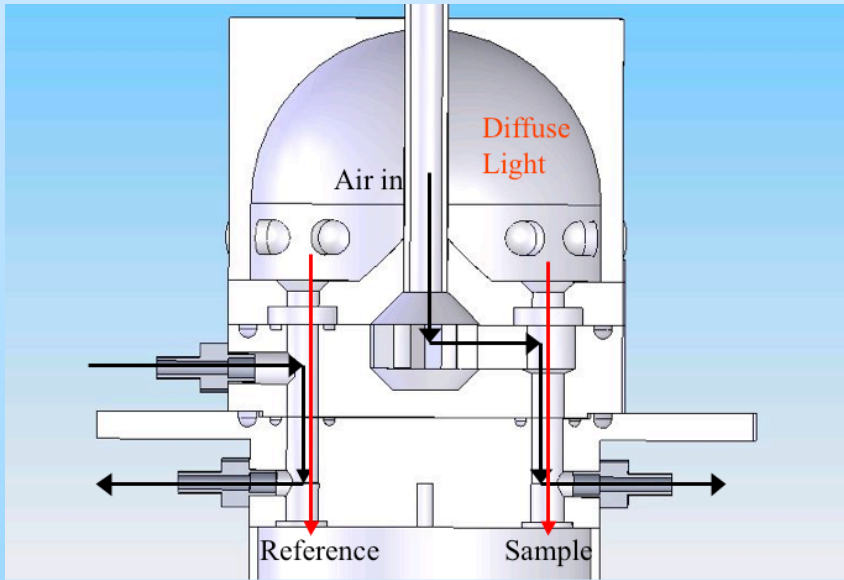


NOAA CLAP: Continuous Light Absorption Photometer

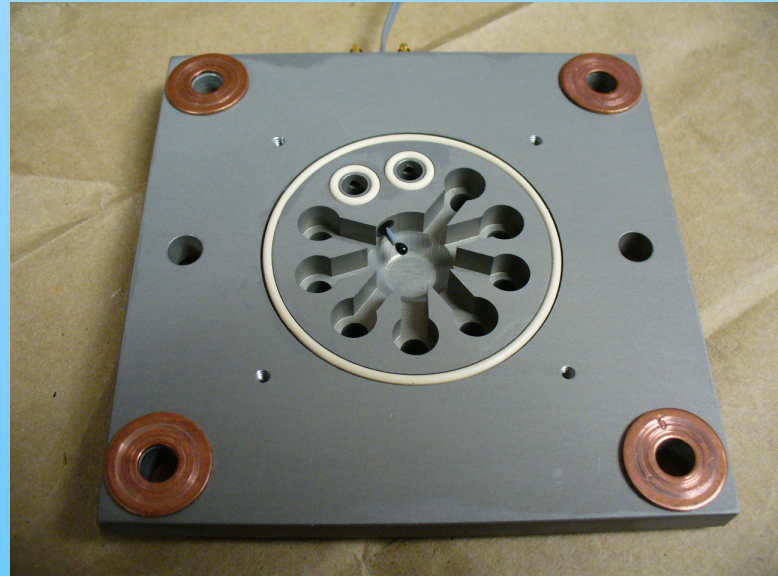
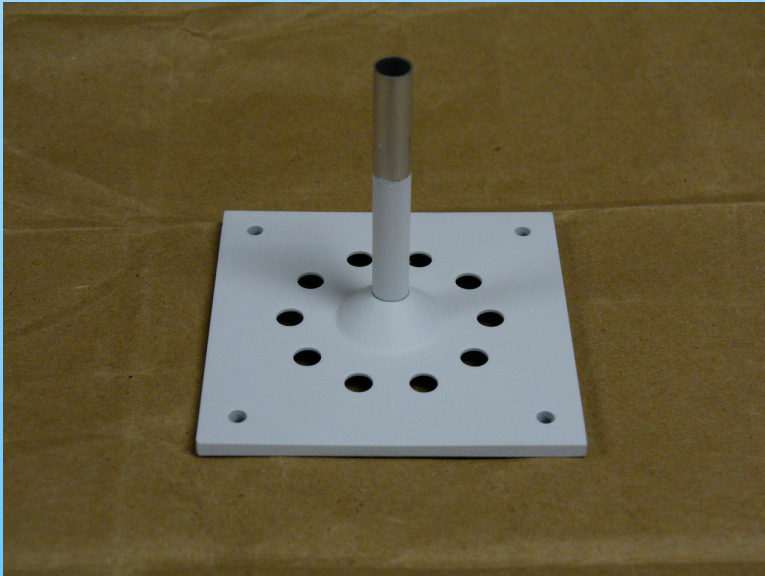
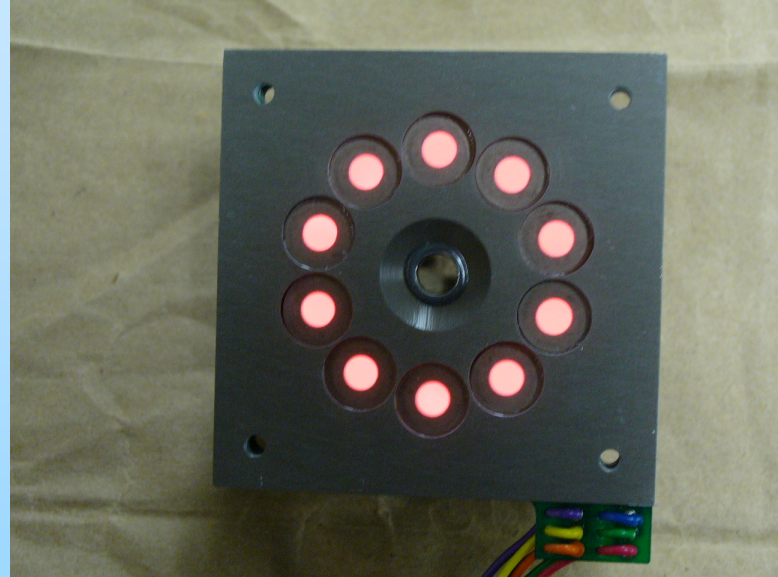
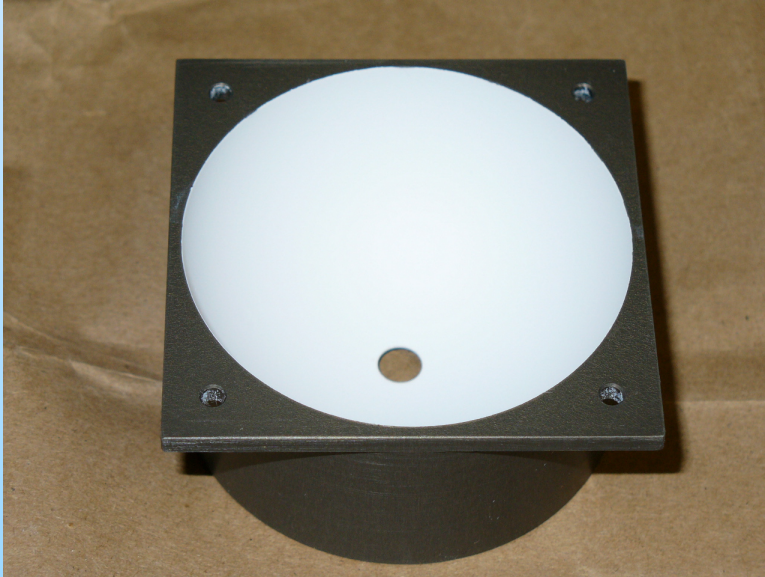
- **Why bother with a new instrument?**
 - lost data due to overloaded filters
 - unheated sample block
 - leak-prone filter holder
 - "black box" internal processing of PSAP
- **User interface – KISS (Keep It Simple, Stupid!)**
 - filter change button and status indicator
 - flow control
 - primary user interface is through 'cpd' software
- **Data output optimized for machine processing**
- **Firmware can be upgraded in the field, remotely from Boulder**
- **Characterization**
 - internal construction (photos)
 - noise vs. averaging time
 - LED intensity
 - planned open source release of drawings, schematics, code



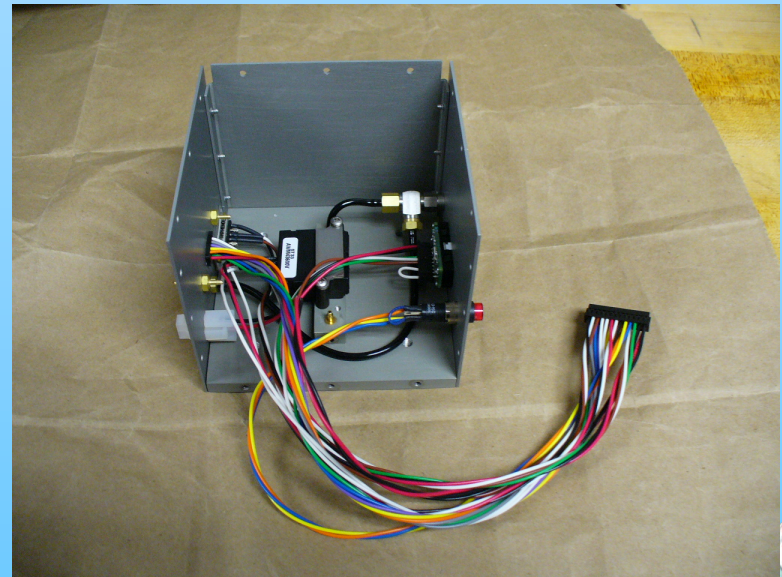
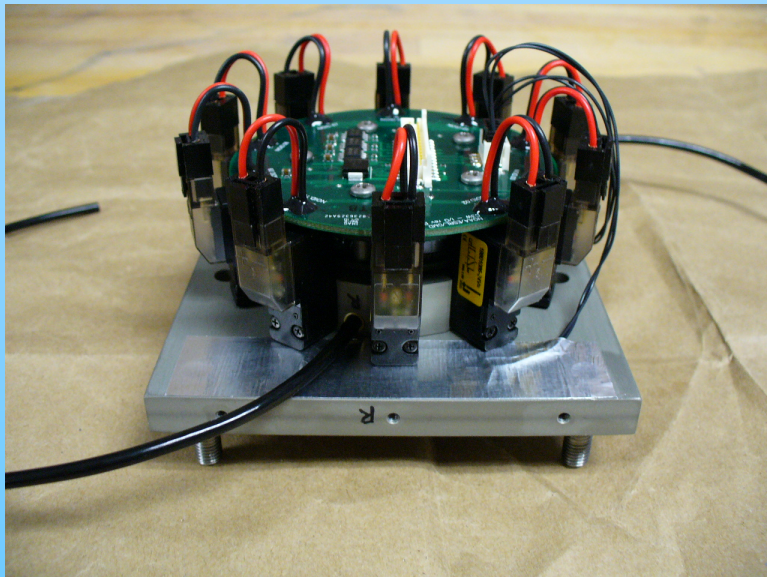
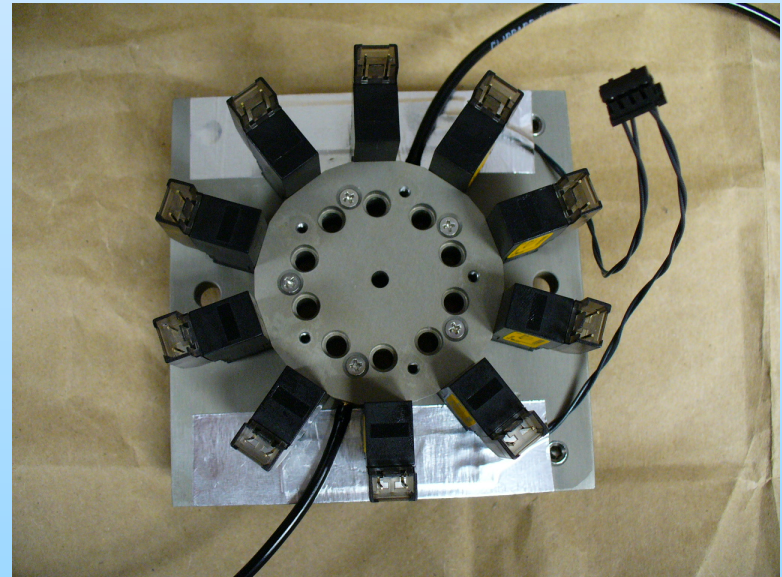
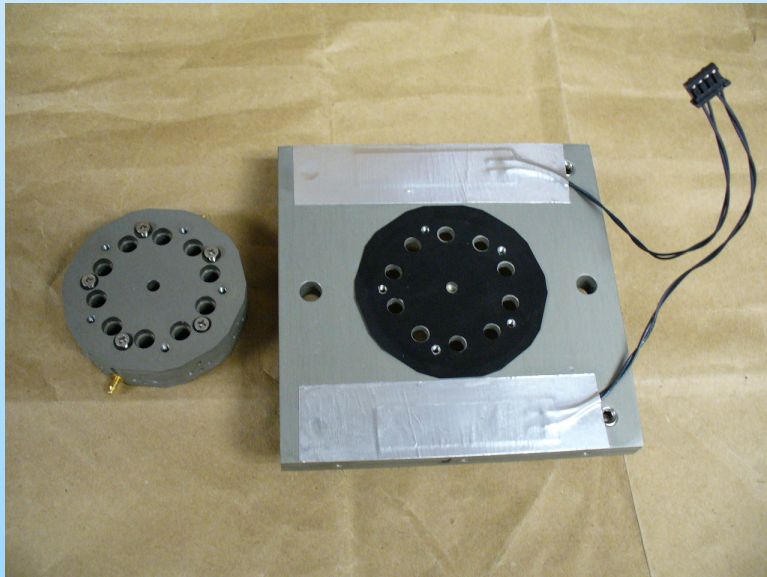
NOAA CLAP – Assembled Product



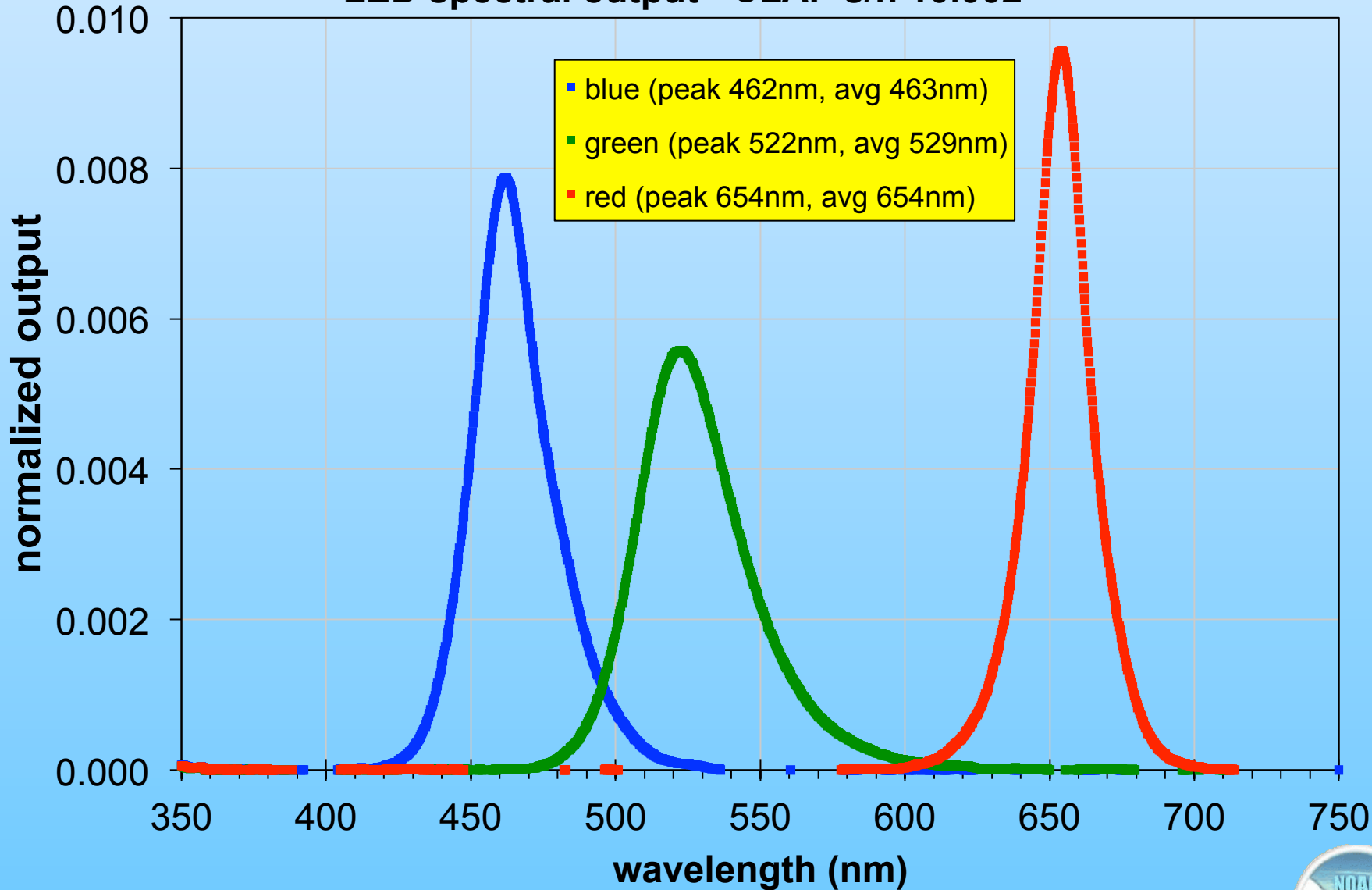
NOAA CLAP – Light Source Internal View



NOAA CLAP – Assembly Details

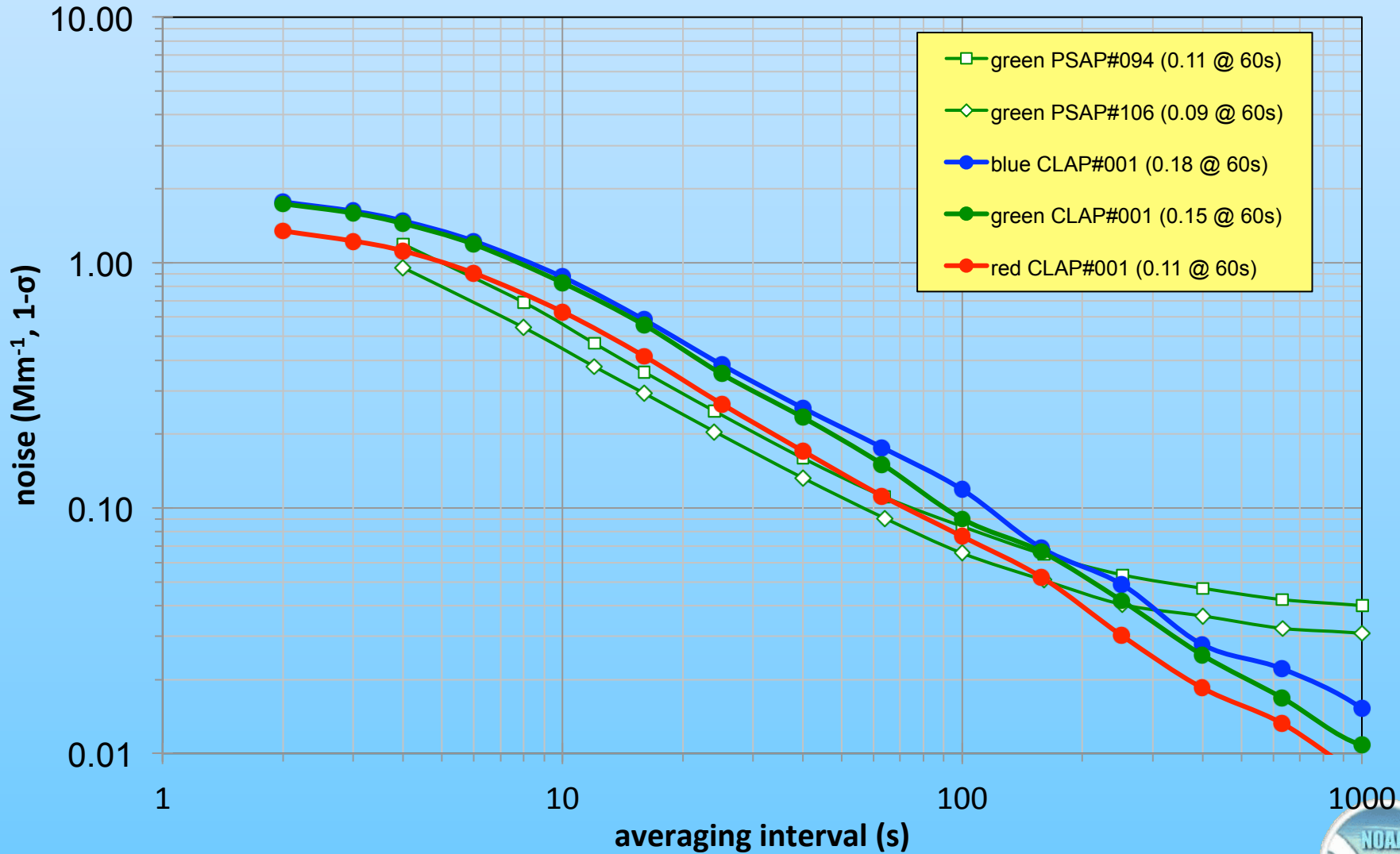


LED spectral output - CLAP s/n 10.002



CLAP and PSAP noise vs. Averaging Interval

Smoothers: PSAP=4-sec boxcar, CLAP=3-sec 1-pole/4-pass



CLAP vs. PSAP Comparison

