Raman Lidar Status: Hardware

John Goldsmith
Sandia National Laboratories
Livermore, California
SGP Raman lidar reconfiguration

Deck on top for other instrumentation

Main System Power Panel

Utility Container

UPS
Laser Chiller

Lidar Container

Now adjacent to radars
Short term (before summer 2015 IOPs):
improve output pointing control
October 2015: Decommission
January 2016: Recommission
SGPRLC1 Thermal Cycling Issue Greatly Improved After Upgrades

Before Upgrades: NFOV Co-polarization 20150915

After Upgrades: NFOV Co-polarization 20150422
SGPRLC1 Thermal Cycling Issue Greatly Improved After Upgrades
TWP -> ENA complete
(first light at ENA 9/4/2015)
Water-vapor "image" from ENA

enaRLC1, mr, 20150927
Radiosonde comparisons from ENA
Uptime at ENA

Recent update: laser failure on 4/20/2016

88% uptime since installation
OLI/AMF3: Chamber of Commerce photo
But sometimes...
Lasers aren’t the only safety concern...
Water vapor “image” from OLI
Radiosonde comparisons from OLI

olirlM1 versus radiosonde, 20151113 17:45 UTC

olirlM1 versus radiosonde, 20151124 23:55 UTC

Height (km)

Water Vapor Mixing Ratio (g/kg)
Current status

• Laser system almost ready to ship back...