

Balloon Observation Platform for Planetary Science (BOPPS)



Planetary Targets Observed:
Comet Siding Spring (C/2013 A1)
Comet Jacques (C/2014 E2)
1 Ceres (dwarf planet)

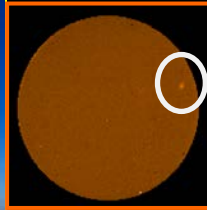


Image of Comet Siding Spring; 2.7 μm [H_2O vapor emission] on 26 Sept 2014 at 00:20:15 UTC.

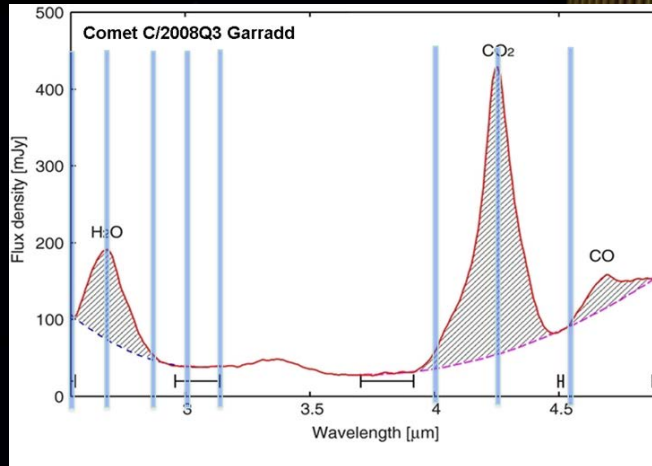
BOPPS peering out of the high bay at the Columbia Scientific Balloon Facility at Ft. Sumner. Prior to launch, night sky pointing tests were performed. The telescope is 0.80-meter aperture, incorporating an IR camera and near-UV-Vis imaging and operation of FSM to obtain sub-arcsecond pointing stability.

BOPPS was launched from Ft. Sumner, NM on 25 Sept 2014. Its primary mission is to gain scientific knowledge of the origin of the Solar System by examining the emissions from Oort Cloud comets with a multi-spectral sensitive payload at altitude (~37 km).

Measuring CO_2 & H_2O

Wavelength Bands:

- 2.47 μm – H_2O
- 2.70 μm – H_2O
- 2.85 μm – H_2O
- 3.05 μm – H_2O
- 3.20 μm – H_2O
- 4.00 μm – CO_2
- 4.27 μm – CO_2
- 4.60 μm – CO_2



Continuum subtraction ratio of CO_2 to H_2O emissions, using eight narrow band spectral filters (indicated by the blue vertical lines)

10/17/14

