CONTROL ID: 2256007

TITLE: Searching for Water and Other Molecules with JWST

ABSTRACT BODY:

Abstract Body: The James Webb Space Telescope (JWST) will be a powerful tool for measuring water and other molecules in transiting exoplanets, warm circumstellar disks, brown dwarfs, and cool stars. In early 2019 the observatory is scheduled to begin science operations near the Sun-Earth L2 Lagrange point. The sunshield will allow the telescope and science instrument module to cool passively to approximately 40 K. The segmented primary mirror has 25 square meters of collecting area, giving the observatory unprecedented sensitivity in the infrared. JWST has four science instruments that cover wavelengths from 0.6 to 28 microns at spectral resolutions up to about R=3000. I will summarize relevant observatory constraints, instrument capabilities, and observing templates. I will illustrate practical issues with examples from the Science Operations Design Reference Mission. Finally, I will discuss the Cycle 1 proposal process, which begins in 2017.

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PRESENTATION TYPE: Oral