The James Webb Space Telescope: Solar System Science. D. C. Hines[1], H. B. Hammel[2], J. I. Lunine[3], S. N. Milam[4], J. S. Kalirai[1] and G. Sonneborn[4], [1]Space Telescope Science Institute, 3700 San Martin Drive, Baltimore, MD 21218, hines@stsci.edu, [2]Association of Universities for Research in Astronomy, 1212 New York Ave. NW Ste 450, Washington, DC 20005, hbhammel@aura-astronomy.org, [3]Cornell University, 402 Space Sciences Building, Cornell University, Ithaca, NY 14853, jlunine@astro.cornell.edu, [4]NASA/Goddard Space Flight Center, Mail Code: 665, Greenbelt, MD 20771, george.sonneborn-1@nasa.gov.

The James Webb Space Telescope (JWST) is poised to revolutionize many areas of astrophysical research including Solar System Science. Scheduled for launch in 2018, JWST is ~100 times more powerful than the Hubble and Spitzer observatories. It has greater sensitivity, higher spatial resolution in the infrared, and significantly higher spectral resolution in the mid infrared. Imaging and spectroscopy (both long-slit and integral-field) will be available across the entire 0.6 - 28.5 micron wavelength range. Herein, we discuss the capabilities of the four science instruments with a focus on Solar System Science, including instrument modes that enable observations over the huge range of brightness presented by objects within the Solar System.

The telescope is being built by Northrop Grumman Aerospace Systems for NASA, ESA, and CSA. JWST development is led by NASA's Goddard Space Flight Center. The Space Telescope Science Institute (STScI) is the Science and Operations Center (S&OC) for JWST.