



JUICE Ultraviolet Spectrograph Measurements of Icy Satellite, Jupiter, and Io System Environments

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The Jupiter Icy Moons Explorer (JUICE) mission's Ultraviolet Spectrograph (JUICE-UVS) is operating nominally in cruise, following launch in April 2023. Planned JUICE-UVS investigations utilize a variety of observational techniques including nadir push-broom imaging, disk scans, limb stares, stellar and solar occultations, Jupiter transit observations, and neutral cloud/plasma torus stares to perform a comprehensive study of icy satellite atmospheres, plumes, surfaces, and local space environments; Jupiter's atmosphere and aurora; Io and its Io Plasma Torus; and other Jupiter system targets (rings, small moons, etc.) as available. We present recent commissioning and payload checkout calibration data to provide examples of our expected data products at Jupiter. Other calibration and JUICE-Clipper science opportunities during cruise are also planned. We will report our plans to 1) Explore the atmospheres, plasma interactions, and surfaces of the Galilean satellites; 2) Determine the dynamics, chemistry, and vertical structure of Jupiter's upper atmosphere, from equator to pole, as a template for giant planets everywhere; and 3) Investigate the Jupiter-Io connection by quantifying energy and mass flow in the Io atmosphere, neutral cloud, and torus.