

CASSINI UVIS AT JUPITER: FIRST RESULTS ON HYDROCARBONS AND AEROSOLS

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One of the objectives of the Cassini UVIS instrument during the Jupiter flyby is to measure the column abundance of acetylene and latitudinal gradients of its abundance to help constrain photochemical models which include meridional circulation. Another is to measure the reflectivity of polar stratospheric aerosols at UV wavelengths (less than 190 nm) at a variety of phase angles from 0 to 140 degrees to constrain particle properties. High signal/noise ratio data were obtained thanks to high sensitivity and long dwell times. By mid-November the spectra had accumulated about a million counts per spectral channel with a clear signature of acetylene and evidence for ethane and ethylene.