

Enceladus Plume PIEs (2) in S79

I. SATURN_191_192

ISS_192EN_PLMHPMR001_PIE

2013-163T05:55:00-T07:55:00

II. SATURN_193

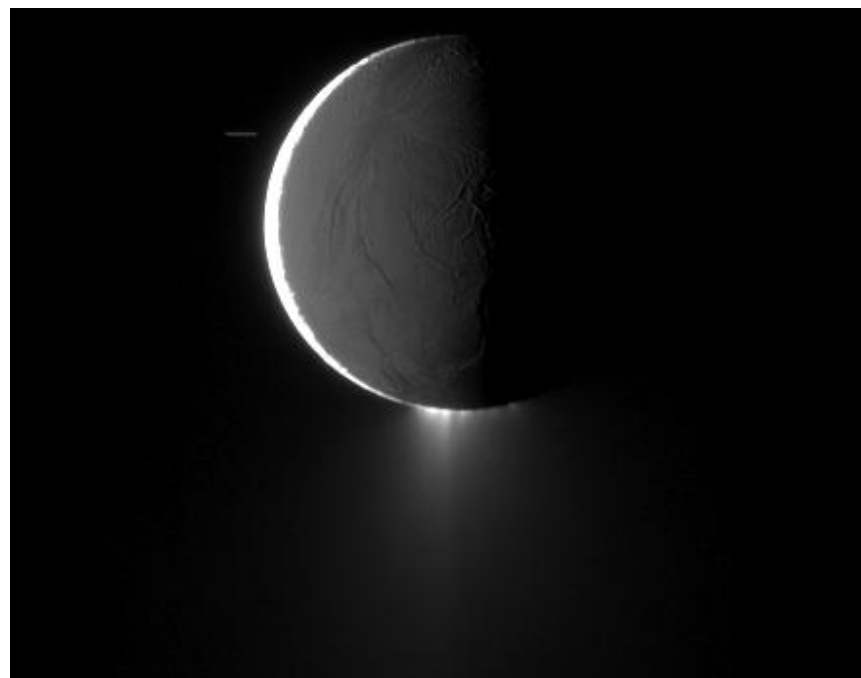
ISS_193EN_PLMHPMR001_PIE

2013-175T12:10:00-T14:10:00

Science Goals:recap

To obtain different viewing geometries which better characterize plume morphology, particle size, and the relationship between plumes and surface features and thermal anomalies. Specific jets are mapped to specific locations. In addition, large distances are required for context and to understand the relationship of the plumes to E-ring (tendrils observations useful here). Observations of both jets and plumes required.

To understand the variability of geologic activity on Enceladus.



ISS Enceladus image of the surface and the plume

Mimas “Plume” PIE (1) and “Rock” observation

“Rock”: SATURN_191_192

ISS_192OT_ALBPOLA103_PRIME

(UVIS in ridealong; originally Mimas)

2013-163T01:00:00-T03:00:00

Mimas: SATURN_193

ISS_193MI_MIPLUME001_PIE

2013-174T20:00:00-T22:00:00

Science Goals:

Mimas: To obtain different large solar phase angle observations of Mimas to search for possible plumes; to understand the forward scattering properties of the surface of Mimas, which is related to the composition and size of the surface particles; and to understand the macroscopic roughness of the surface.

Rock: To obtain observations of the rotational states of the outer irregular moons of Saturn, to understand their collisional and dynamical history.



ISS image of Mimas

Small phase angle observations (4)

I. Tethys: XD_192_193

UVIS_192TE_LOPHASE001_PIE

2013-166T21:45-T23:15:00

II. Dione: SATURN_193

UVIS_193DI_LOPHASE001_PIE

2013-178T07:23:00-T09:45:00

III. Mimas: SATURN_193

UVIS_193MI_LOPHASE001_PIE

2013-178T09:45-T11:15:00

IV. Encelauds: RINGS_194

UVIS_194EN_LOPHASE001_PIE

2013-190T09:40:00-T11:10:00

Science Goals:

To obtain observations of moons at very small solar phase angles (when the surface appears fully illuminated) to understand the textural properties of the surface, their albedo and their energy balance. The UV albedo is especially significant in understanding their composition.



Images of fully illuminated moons (Dione and Rhea).

UVIS Iapetus Occultation

SATURN_195_196

UVIS_196IA_ICYEXO001_PRIME

2013-222T21:07:00-T22:11:00

The purpose of this stellar occultation is to search for activity, an atmosphere, plumes, gravitationally bound particles, or anything else, around Iapetus.

