

Rev 214 SOST Segment

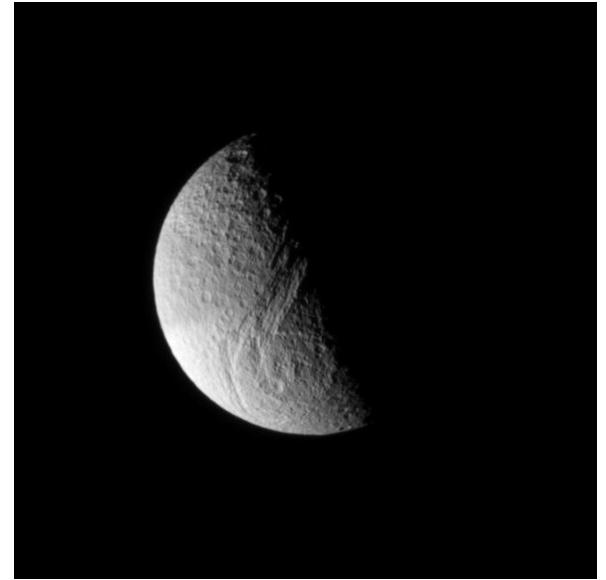
2015-100T20:13:00-102T20:13:00

No targeted flybys; Highlights:

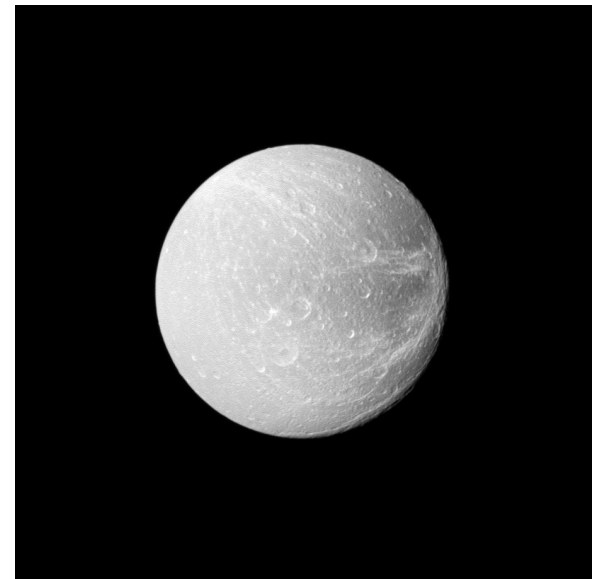
CIRS and ISS observation (16.5hours) starting at 101T05:00 of Tethys to image and derive composition of poorly observed regions and to characterize its spatially resolved thermal inertia, “Pacman” shape, and global energy balance. UVIS observation of trailing side to understand UV absorber; ~54, 000 km C/A at moderate solar phase angles (~30-50°); VIMS ridealongs; 3 PIEs

ORS observations of Dione at ~110,000 km focusing on bright wispy streaks.

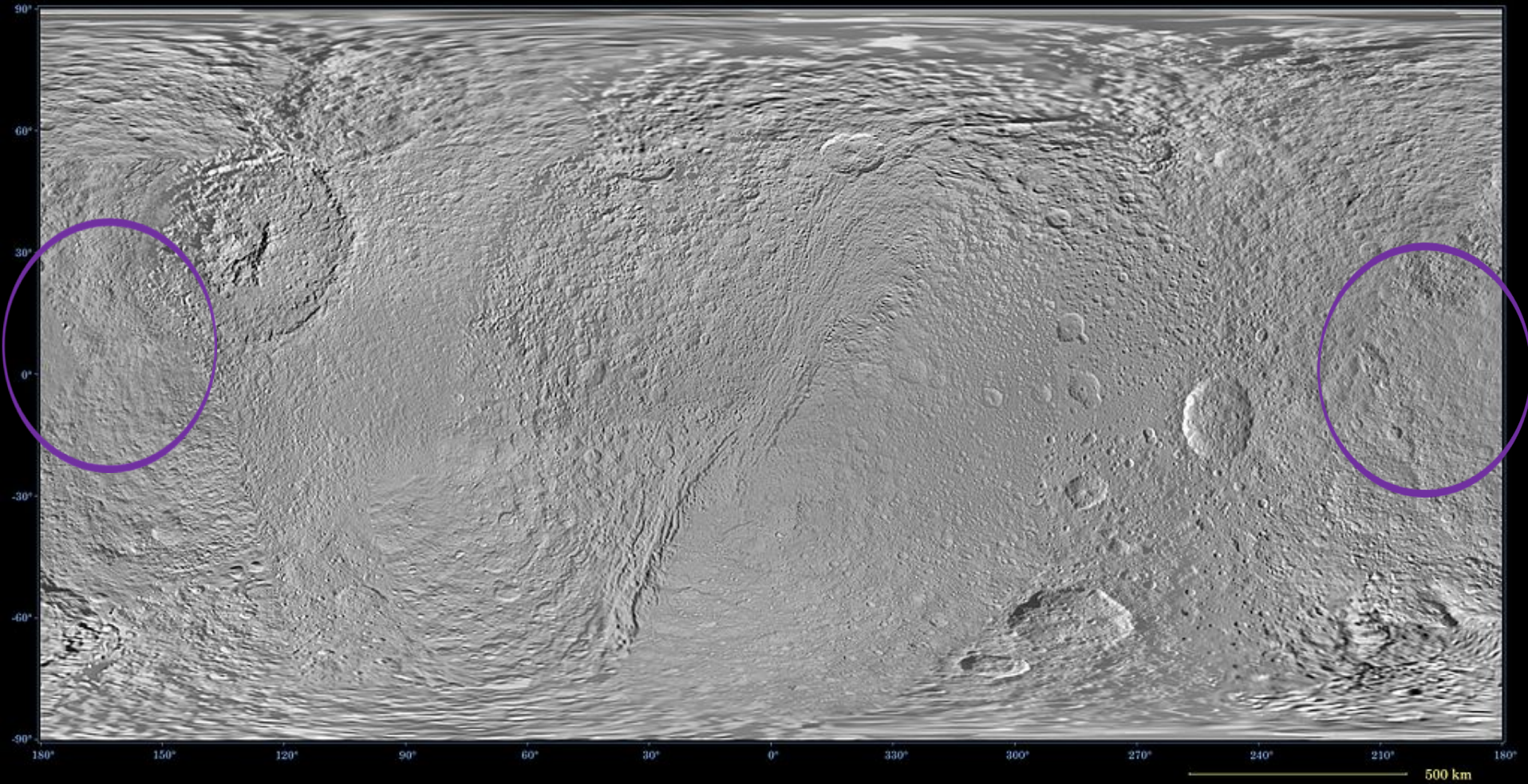
Two observations of Paaliaq to determine rotation state and pole position (another observation later in sequence)



Tethys (above); Dione (below)



Map of Saturn's Moon Tethys - June 2012



The Tethys observations will focus on the above area.

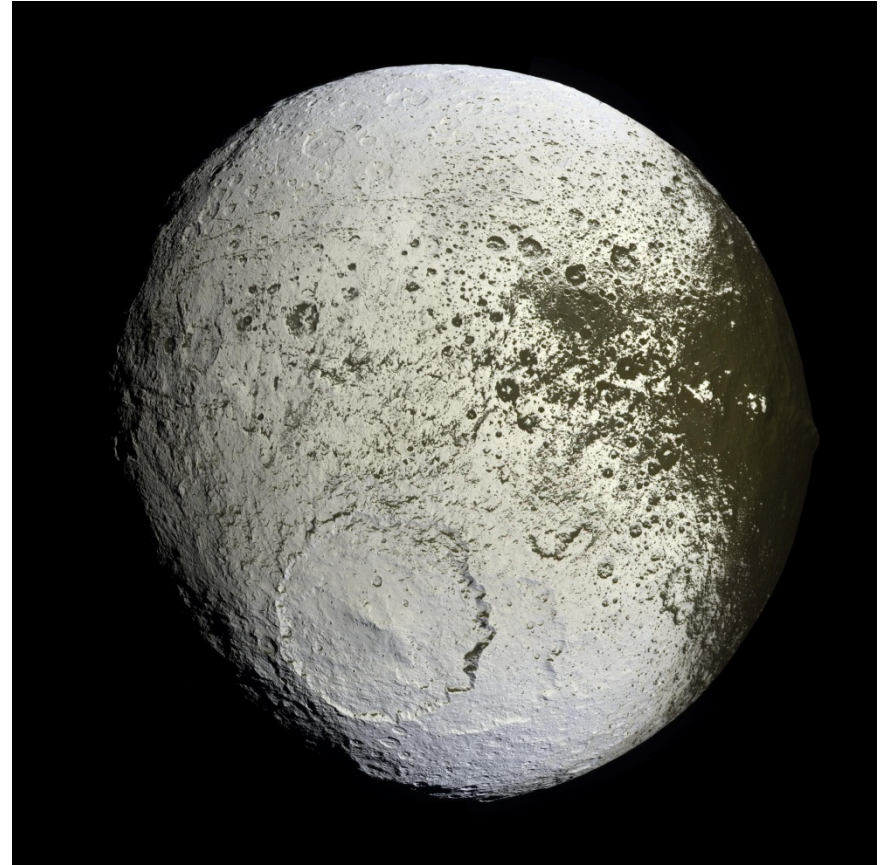
lapetus observing campaign

(No PIES)

On rev 213-214 (XD Segment) there are five distant (~1 million km) ORS lapetus observations designed to cover regions that are poorly imaged. The solar phase angle is ~40 degrees throughout the observing period, which is ideal for mapping geologic features.

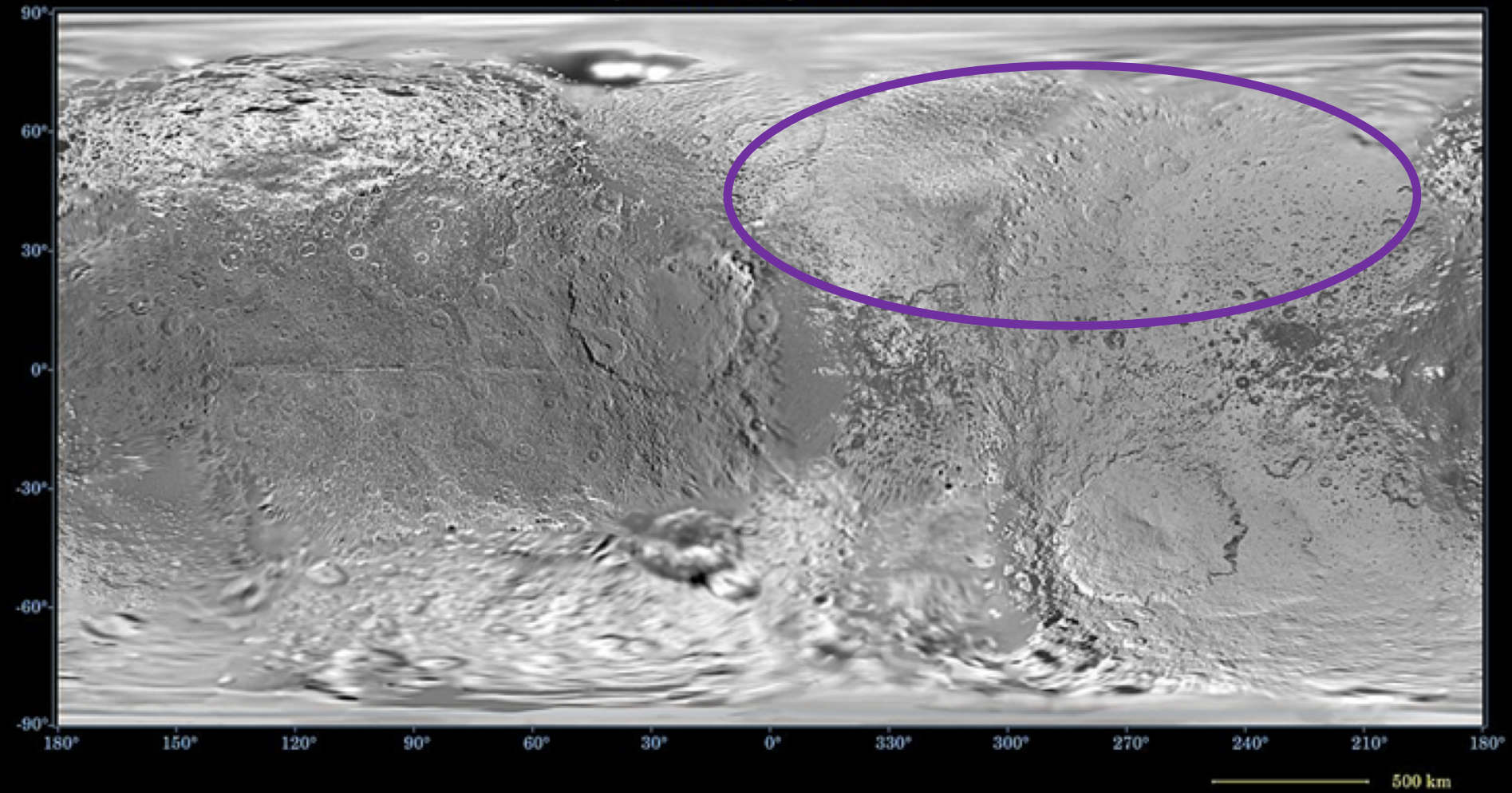
Composition and thermal properties will also be studied.

The observations extend from 2015-085T21:52-091T20:17 and cover the N. trailing (bright) hemisphere. ISS is prime except for one observation, which is CIRS prime. lapetus is about 240 ISS pixels at 6 VIMS (hi-res) pixels.



lapetus

Map of Saturn's Moon Iapetus - May 2008



This part of the campaign will focus on the above area.

Plume Observation in S88 (not a PIE)

XD_214_215

ISS_214EN_PLMHPMR001_PRIME

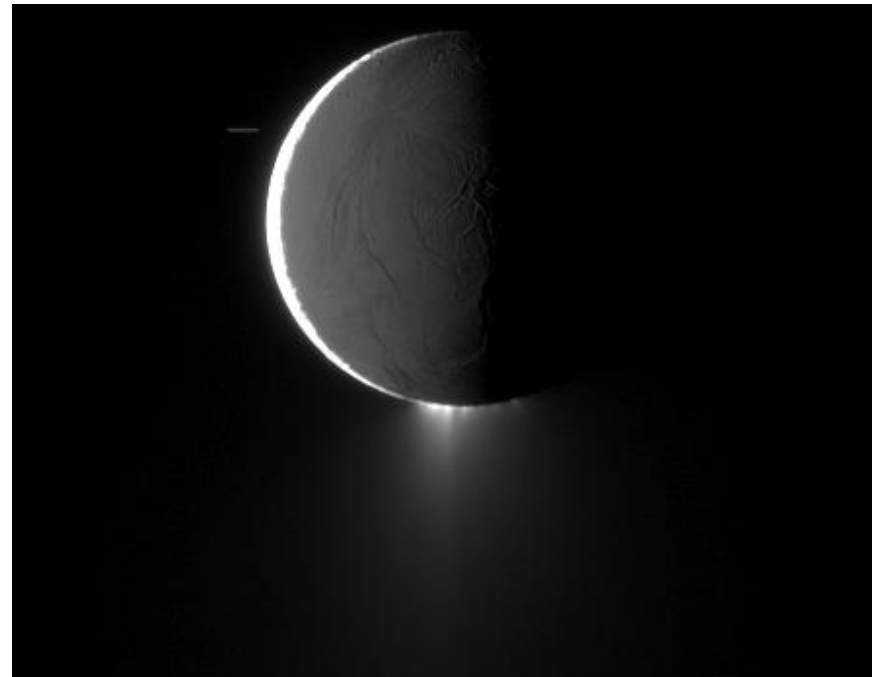
2015-103T23:10-104T09:00

VIMS and UVIS in ridealong; pointing requirements (must point within 15° of Saturn center ; added to spreadsheet)

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 needed.

To understand the variability of geologic activity on Enceladus.



ISS Enceladus image of the surface and the plume

“Rock” observations (not PIEs)

“Two Rocks” in : XD_214_215:

ISS_214OT_PAAPOL072_PRIME
2015-113T12:59:00-114T08:44:00
Paaliaq (Inuit group) pole position

ISS_214OT_BEBROT079_PRIME
2015-114T08:44:00-115T08:44:00
Bebhionn (Gallic group) rotation period

Science Goal:

To obtain observations of the rotational states of the outer irregular moons of Saturn, to understand their collisional and dynamical history. The compilation of data on many moons will provide clues regarding theories of the early history of the Solar System, e.g., the Nice Model

Tilman Denk’s Participating Scientist project



“Rocks”