No segments; one icy satellite PIE in S87

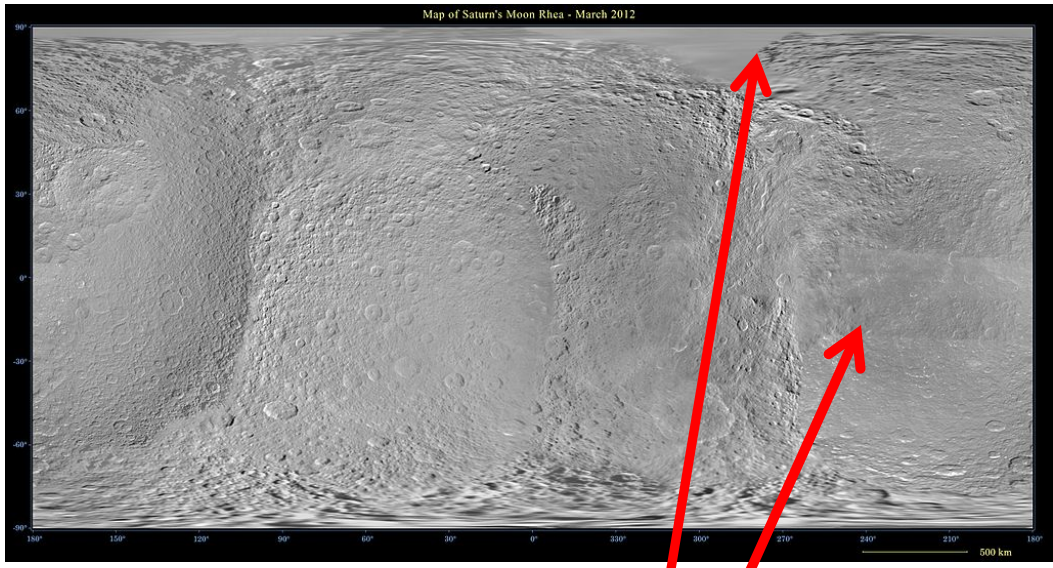
ISS_212RH_REGMAP001_PIE

CIRS, UVIS, VIMS in ridealong

2015-041T03:00:00-T08:30:00
47,000 km; phase angle is 105°; lit approach

Science Goals:

To obtain images of areas not previously observed at high resolution, and to obtain color images and photometric observations.



The basemap of Rhea showing important regions to be observed.

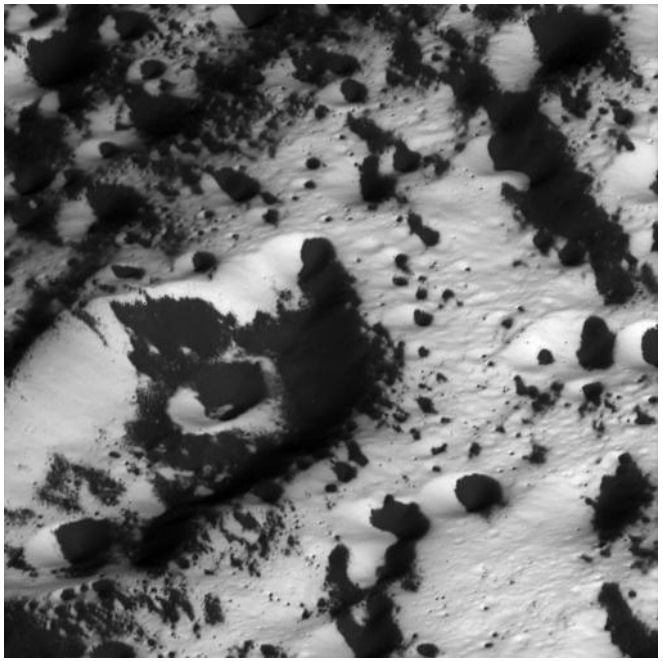
Iapetus significant observation (not a PIE)

ISS_211IA_LOWPHASE001_PRIME
2015-004T19:46:00-005T09:32:00
CIRS and UVIS in Ridealong (collaborative)

ISS_211IA_ZEROPHASE001_PRIME
2015-005T22:30-006T08:17
VIMS and UVIS in Ridealong (collaborative)

Science Goals:

To obtain observations of Iapetus at small solar phase angles to determine the micro-texture of its surface and its geometric albedo. Ultimately the latter quantity is important in determining its bolometric Bond albedo, which in turn is key to models of volatile transport.

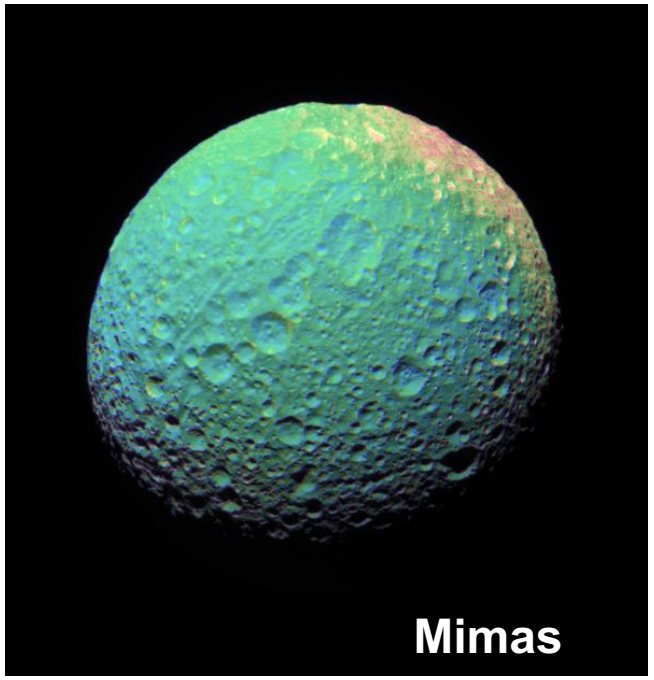


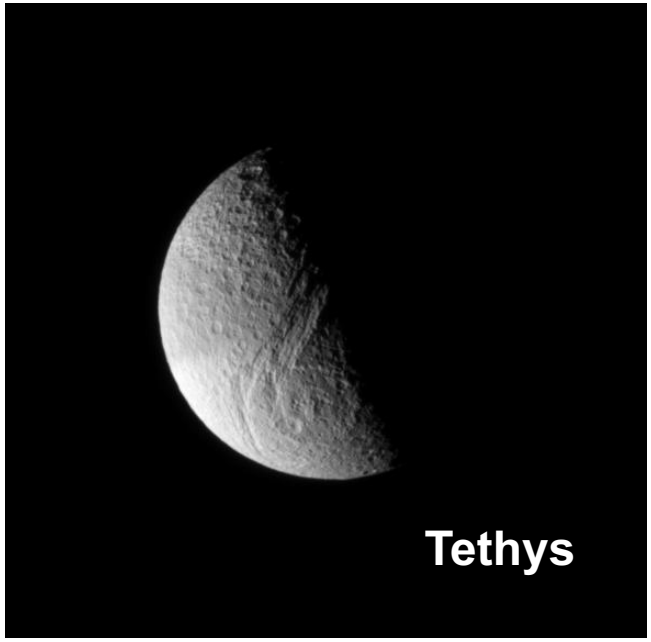
ISS image of Iapetus showing complexity of surface

Other observations

I. UVIS Icy Moon longitude coverage: in the first seven days of 2015, there are five observations(two of Tethys and three of Mimas) to increase the longitudinal coverage of these moons. The goal is to understand compositional diversity on the surface. 1.75-5 hours long

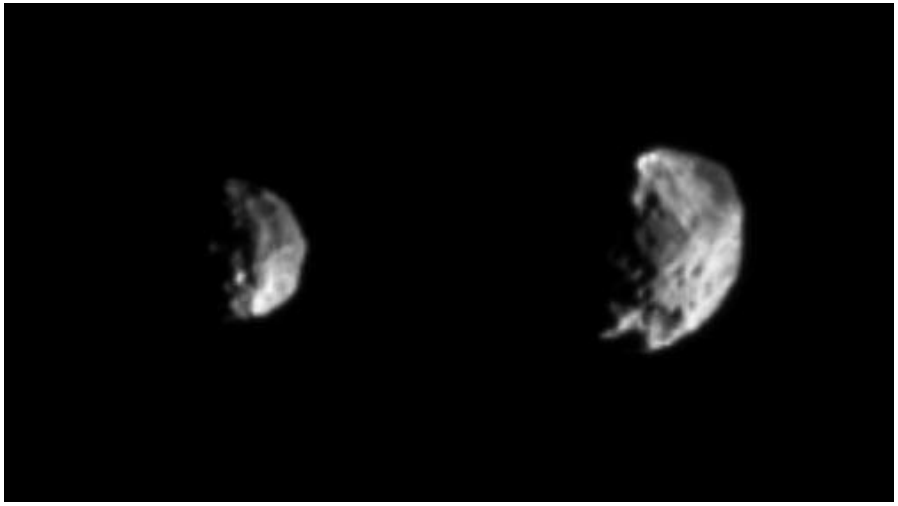
2. Long observations in apoapsis regions to determine the rotational and dynamical state of the outer moons (T. Denks's PS program). The request for the irregular moon Albiorix from 2015-017T to 019T also has a VIMS rider. This is probably the only time in the mission that a "non-Phoebe" outer moon will be observed by VIMS. With an apparent magnitude of 10.0 predicted for the visible, VIMS may get a useful signal. The request duration of 37.5 hrs. covers almost 2.5 rotations. Besides the usual clear-filter imaging, ISS will also do multi color here to see if hemispherical color variations exist on Albiorix. In the Grav&Bauer (2007) paper, suspicions for such variations are mentioned.





Other observations, cont'd.

3. A 10-hour observation of Phoebe to obtain more color and photometric observations and To compare with other outer Irregulars (very distant)



Phoebe