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New Cartographic Products and Composition Maps of the Icy Saturnian Satellites based on Cassini ISS and VIMS data

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he Cassini spacecraft continued its journey through the Saturnian system during the first extended and the beginning of the second extended mission. Recent targeted and non-targeted flybys of the medium sized Saturnian satellites Mimas, Enceladus, Tethys, Dione, and Rhea gave us the opportunity to create new cartographic products and composition maps of these satellites. Images from the Cassini Imaging Science Sub-system (ISS) and the Visual and Infrared Imaging Spectrometer (VIMS) were used to calculate these products.

We present a higher-resolution version of the Mimas atlas, improved global mosaics of Enceladus, Tethys, and Dione and the first version of the Rhea atlas. We used the same 15 tiles schema for the Rhea atlas as it was used for the atlases of Enceladus, Tethys, and Dione. The three tiles quadrangle schema for Mimas is the same as used for Iapetus.

We also show the first global composition map of Rhea and improved composition maps of Enceladus and Dione. Based on these mosaics spectral properties could be derived. Thus, global maps illustrating the spatial variations of the absorption band depth of water ice were calculated, which are indicative of varying sizes of the water ice particles.

All cartographic products have been made available to the public through CICLOPS (http://ciclops.org) and PDS (http://pds.jpl.nasa.gov).

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