



## **Titan Trek: A New Online NASA Visualization and Analysis Portal for Saturn's Largest Moon**

Emily Law (1), Brian Day (2), and the Solar System Treks Project Team

(1) NASA JPL, Pasadena, United States (emily.law@jpl.nasa.gov), (2) NASA ARC, Mountain View, United States (brian.h.day@nasa.gov)

In its investigations of Saturn's moons, NASA's Cassini mission and ESA's Huygens lander have returned an immense amount of data detailing the dynamic surface of Saturn's largest moon, Titan. In order to greatly facilitate dissemination, visualization, and analysis of this data, the Cassini mission has partnered with NASA's Solar System Treks Project (SSTP). SSTP has recently released a new online portal (<https://trek.nasa.gov/titan/>), Titan Trek, that enables mission planners, planetary scientists, engineers, students, and the general public to interactively access, visualize, and analyze Cassini's mapped data products of Saturn's largest moon.

The initial release of Titan Trek provides a suite of interactive tools and incorporates over 130,000 data products from the range of Cassini encounters with Titan, creating a comprehensive Titan research and educational web portal. Titan Trek data products include: Global Radar mosaic, Radar SAR BIDR BIFQI swaths, Global VIMS mosaics, Global ISS mosaic, Vector data (geological units of Afekan region, material flux based on dune orientation, fluvial networks), Nomenclature, ISS footprints, VIMS footprints, and Global radar topography. We intend to continue to enhance the new Titan Trek portal with new data products as they are released by the Cassini mission including Huygens DISR, Global radiometry, scatterometry, VIMS, ISS, UVIS, CIRS, and other topography products.

Titan Trek is the latest addition to the NASA Solar System Treks Project (SSTP), available at <https://trek.nasa.gov>. NASA's Solar System Trek online portals provide web-based suites of interactive data visualization and analysis tools to enable mission planners, planetary scientists, students, and the general public to access mapped data products from past and current missions for the Moon, Mars, Vesta, etc. These portals are being used for site selection and analysis by NASA and a number of its international partners, supporting upcoming missions.