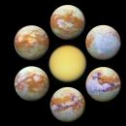


Accessing Cassini *Titan* Data Made Easier

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- Cassini Research Issues**
- Future inaccessibility of Cassini science experts
- Cassini Data Highly Complex
- Cassini Data Not Easy to Find or Use
- Cassini Data in PDS not organized by Science Discipline
- Unanticipated Archive Responsibilities for Future Projects

Cassini Titan Science

Overview

- Titan Flyby Table
- Flight Summaries for Each Flyby
- Flight Mapping Software (TITAN for the STN/RTM)
- Decision Ring
- Navigation & Trajectory/Orbit/Targeting Descriptions
- Titan Sections in Cassini Final Mission Report

Titan Interior

Cassini measured Titan's gravity field and dynamic tidal response, including (together with Huygens data) the presence of a deep subsurface water ocean—one deeper than liquid water and three times as deep. A subsurface low density, possibly liquid, core was detected.

Titan Surface

By the conclusion of the mission Cassini/Huygens had revealed a complex Titan surface with a striking resemblance to the total geomorphology of the Earth. Dunes, seas, lakes, rivers, volcanic constructs, mountains, and all-enclosed Titan's methane cycle, analogous to the Earth's hydrologic cycle, drove processes including sedimentary transport that led to the most geomorphologically complex surface after that of the Earth. Most striking was the discovery of several polar seas and hundreds of lakes, covering hundreds of thousands of square kilometers. Some of the lakes appear very Earth-like, with bays, coves, and canals, while other boundaries and basins and may reflect a basic origin of the lakes. Subsequent and complementary measurements by Cassini led to a liquid hydrocarbon inventory of about 70,000 square kilometers, mostly surface.

Science Research Support (SRS) system houses unique support data that cannot be found anywhere else except within the PDS Help Pages:

(Revamped Titan PDS Help Page available in late 2018)

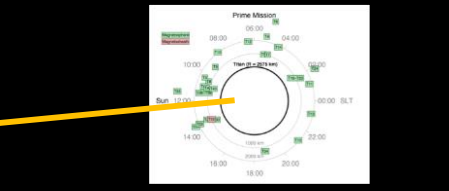
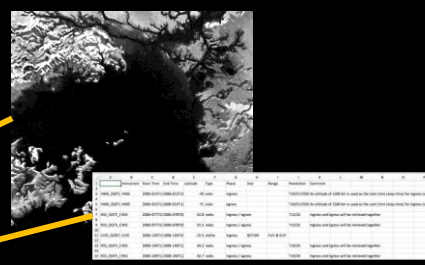
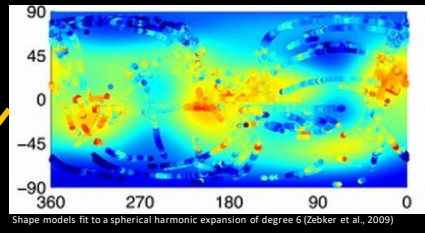
- ### Science Themes
- Interior
 - Surface
 - Huygens Lander
 - Atmosphere
 - Magnetospheric Interactions

- ### Higher-Order Products
- Titan Discipline Final Final Report
 - Global Shape Model
 - Huygens Gazetteer
 - Geologic Maps
 - RADAR SAR summaries
 - Atmospheric occultation summaries
 - Cloud Atlas
 - Magnetospheric data in Titan centered coordinates
 - Identification of key events (e.g. when data was high quality or relevant)

- ### Titan Overviews, Planning data and other items of value
- Titan Discipline Final Report
 - Titan flyby summaries
 - 1 sheet summaries
 - Tour Atlas (tables and plots)
 - Planning summaries (master timelines, as uplinked plans, etc.)
 - Titan Atmospheric Working Group (final report and tables of interest)
 - ISS data processing strategies
 - CIRS Titan-specific guidebook
 - Intra-instrument gotcha's in data processing

- ### Finding Data Tools
- Titan Trek
 - Event Calendar
 - Outer Planet Unified Search (OPUS)
 - PDS Image Atlas
 - SPICE

- ### Cassini / PDS Solutions
- Science Teams and Discipline Experts:** Generate and deliver most valuable research support data
 - Project:** Generate and deliver search & visualization tools to aid in science research
 - Project:** Develop Architecture to organize data by disciplines & science teams. House tools & data in Help Pages at the PDS.



Event	Start	End	Duration
Event 1	00:00:00	00:00:05	00:00:05
Event 2	00:00:05	00:00:10	00:00:05
Event 3	00:00:10	00:00:15	00:00:05
Event 4	00:00:15	00:00:20	00:00:05
Event 5	00:00:20	00:00:25	00:00:05
Event 6	00:00:25	00:00:30	00:00:05
Event 7	00:00:30	00:00:35	00:00:05
Event 8	00:00:35	00:00:40	00:00:05
Event 9	00:00:40	00:00:45	00:00:05
Event 10	00:00:45	00:00:50	00:00:05
Event 11	00:00:50	00:00:55	00:00:05
Event 12	00:00:55	00:01:00	00:00:05
Event 13	00:01:00	00:01:05	00:00:05
Event 14	00:01:05	00:01:10	00:00:05
Event 15	00:01:10	00:01:15	00:00:05
Event 16	00:01:15	00:01:20	00:00:05
Event 17	00:01:20	00:01:25	00:00:05
Event 18	00:01:25	00:01:30	00:00:05
Event 19	00:01:30	00:01:35	00:00:05
Event 20	00:01:35	00:01:40	00:00:05
Event 21	00:01:40	00:01:45	00:00:05
Event 22	00:01:45	00:01:50	00:00:05
Event 23	00:01:50	00:01:55	00:00:05
Event 24	00:01:55	00:02:00	00:00:05
Event 25	00:02:00	00:02:05	00:00:05
Event 26	00:02:05	00:02:10	00:00:05
Event 27	00:02:10	00:02:15	00:00:05
Event 28	00:02:15	00:02:20	00:00:05
Event 29	00:02:20	00:02:25	00:00:05
Event 30	00:02:25	00:02:30	00:00:05
Event 31	00:02:30	00:02:35	00:00:05
Event 32	00:02:35	00:02:40	00:00:05
Event 33	00:02:40	00:02:45	00:00:05
Event 34	00:02:45	00:02:50	00:00:05
Event 35	00:02:50	00:02:55	00:00:05
Event 36	00:02:55	00:03:00	00:00:05
Event 37	00:03:00	00:03:05	00:00:05
Event 38	00:03:05	00:03:10	00:00:05
Event 39	00:03:10	00:03:15	00:00:05
Event 40	00:03:15	00:03:20	00:00:05
Event 41	00:03:20	00:03:25	00:00:05
Event 42	00:03:25	00:03:30	00:00:05
Event 43	00:03:30	00:03:35	00:00:05
Event 44	00:03:35	00:03:40	00:00:05
Event 45	00:03:40	00:03:45	00:00:05
Event 46	00:03:45	00:03:50	00:00:05
Event 47	00:03:50	00:03:55	00:00:05
Event 48	00:03:55	00:04:00	00:00:05
Event 49	00:04:00	00:04:05	00:00:05
Event 50	00:04:05	00:04:10	00:00:05
Event 51	00:04:10	00:04:15	00:00:05
Event 52	00:04:15	00:04:20	00:00:05
Event 53	00:04:20	00:04:25	00:00:05
Event 54	00:04:25	00:04:30	00:00:05
Event 55	00:04:30	00:04:35	00:00:05
Event 56	00:04:35	00:04:40	00:00:05
Event 57	00:04:40	00:04:45	00:00:05
Event 58	00:04:45	00:04:50	00:00:05
Event 59	00:04:50	00:04:55	00:00:05
Event 60	00:04:55	00:05:00	00:00:05

Layers

Features

Legend

Scale

Projection

Coordinate System

Units

Color

Opacity

Visible

Refresh

Close

Event Calendar

Event Name

Start Time

End Time

Duration

Category

Priority

Status

Created By

Last Modified

Notes

Search

Filter

Sort

Export

Print