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Introduction: A rich harvest of new results has been obtained in 2005 by the Cassini-Huygens mission to the Saturnian system, a cooperative project of NASA, the European Space Agency and the Italian Space Agency. One of the main achievements is a unique possibility to obtain the first look onto the surface of Saturn’s largest Moon, Titan. The success of the Huygens probe into Titan’s thick nitrogen-methane atmosphere has revealed a new world, strangely Earth-like, with methane playing the role of water, low temperature ice substituting for rock, and organic aerosols precipitated from the atmosphere taking the place of soil. Streams of liquid methane course over the icy bedrock of a world nearly frozen in time shortly after its formation.

Titan surface structure: Prior to the Cassini-Huygens mission there was almost no data on the surface of Titan, despite the fact that it is one of the largest moons in the solar system, with a diameter of 5150 km. Titan’s atmospheric haze hid the surface from Voyager and Earth-based observations in visible light. The Cassini spacecraft during its flybys close to Titan revealed the surface features with its visual and IR imaging instrument, and with the first strips from an imaging radar survey. The resolution of these images is still coarse to moderate, and Cassini has still seen only a fraction of the surface. As a result the description of the feature types on Titan that we can make today is just as first approach.

The current synoptic map covers about 80% of Titan – segments of the area south of 35°N. Images for this map were obtained in a near-IR band (938 nm) at which light can penetrate Titan's atmosphere. The map shows only brightness variations on Titan's surface (the illumination is such that there are no shadows and no shading from topographic variations). The dark terrains are presumably lowlands. The Huygens probe landed in such a region. The bright regions of Titan are thought to consist of upland terrain that is relatively uncontaminated by the dark material that fills the lowland regions. In the south polar region there is a dark feature with sharp boundaries identified as the best candidate so far for a past or present hydrocarbon lake on Titan. In a bright terrain area just north of the Huygens landing site, there are numerous channels with a dendritic pattern. They have been formed by a running fluid and could carry liquid methane in past and present times.

Creation of the Titan nomenclature: The International Astronomical Union’s (IAU) Working Group on Planetary System Nomenclature (WGPSN) established 10 feature types and Latin terms for naming on Titan, as well as 7 categories of proper names. The initial work has been done by the authors of this abstract – the members of the Outer Solar System Task Group, which is a subdivision of the WGPSN, and Jennifer Blue, who is a geographer at the USGS/Flagstaff Astrogeology Research Program. Further development was made by the WGPSN, which approved the names.

Feature type definitions:

ALBEDO FEATURE: Geographic area distinguished by amount of reflected light.
ARCUS: Arc-shaped feature.
CRATER: A circular depression.
FACULA (pl. FACULAE): Bright spot(s).
FLUMEN (pl. FLUMINAE): Channel(s) on Titan that might carry liquid.
LACUS: Small plain; on Titan – a "lake" or small, dark plain with discrete, sharp boundaries.
MACULA: Dark spot.
REGIO: A large area marked by reflectivity or color distinctions from adjacent areas, or a broad geographic region.
RINGED FEATURE: Cryptic ringed feature.
VIRGA (pl. VIRGA): A streak or stripe of color.

Proper name categories:

Albedo features: Sacred or enchanted places, paradise, celestial realms from legends, myths, stories, and poems of cultures from around the world.
Craters and ringed features: Deities of wisdom.
Facula/Faculæ: Facula: Islands on the Earth that are not politically independent.
Clusters of Faculæ: Archipelagos on the Earth.
Flumen/Flumina: Mythical or imaginary rivers.
Lacus: Lakes on Earth, preferably with a shape similar to the lacus on Titan.
Other features (Arcus, Macula, Regio): Deities of happiness, peace, and harmony from world cultures.
Virga/Virgae: Deities of rain.
**Feature names on Titan:** The 43 names listed below can be used in papers with a note “provisional name” until their final official approval by the forthcoming IAU General Assembly (August 2006). Coordinates are rounded to 1°. Longitudes are W.

**ALEBEDO FEATURES (13)**

**Aaru** 10 N 340 Egyptian abode of the blessed dead.

**Adiri** 10 S 210 Melanesian afterworld where life is easier than on Earth.

**Aztlan** 10 S 20 Mythical land from which the Aztecs believed they migrated.

**Belet** 5 S 255 Malay afterworld reached by a flower-lined bridge.

**Ching-tu** 30 S 205 Chinese Buddhist paradise where those who attain salvation will live in unalloyed happiness.

**Dilmun** 15 N 175 Sumerian garden of paradise, primeval land of bliss.

**Fensal** 5 N 30 Magnificent mansion of the Norse goddess Frigga, to which she invited all married couples who had led virtuous lives on Earth to enjoy each other's company forever.

**Mezzoramia** 70 S 0 Oasis of happiness in the African desert, from an Italian legend.

**Quivira** 0 N/S 15 Legendary city of a fabulous treasure sought by Coronado and other explorers (SW USA).

**Senkyo** 5 S 320 Japanese ideal realm of aloofness and serenity, freedom from worldly cares and death.

**Shangri-la** 10 S 165 Tibetan mythical land of eternal youth.

**Tsegiki** 40 S 10 Navajo sacred place.

**Xanadu** 15 S 100 An imaginary country, in the poem “Kubla Khan” by English author Samuel Coleridge (1772 – 1834).

**ARCUS (1)**

**Hotei Arcus** 28 S 79 One of the seven gods of happiness in Japanese Buddhism. He is the god of contentment, good fortune, cheerfulness, and he is always smiling.

**CRATER (0)**

No feature named so far with this term.

**FACULA / FACULAE (15)**

**Antilia Faculae** 11 S 187 Archipelago corresponding to the mythical island of Antilia, once thought to lie midway between Europe and the Americas.

**Bazaruto Facula** 12 N 16 Mozambique isl.

**Coats Facula** 11 S 29 Canadian island.

**Crete Facula** 9 N 150 Greek island.

**Elba Facula** 11 S 1 Italian island.

**Kerguelen Facula** 5 S 151 French island.

**Mindanao Faculae** 7 S 147 Philippine isl.

**Nicobar Faculae** 2 N 159 Indian archipel.

**Oahu Facula** 5 N 167 Hawaiian island.

**Santorini Facula** 2 N 146 Greek island.

**Shikoku Facula** 10 S 164 Japanese island.

**Sotra Facula** 12 S 40 Norwegian isl.

**Texel Facula** 11 S 183 Dutch island.

**Tortola Facula** 9 N 146 One of the British Virgin Islands.

**Vis Facula** 7 N 138 Croatian island.

**GLUTEN / FLUMINA (0)**

No feature named so far with this term.

**LACUS (1)**

**Ontario Lacus** 72 S 183 Lake between Canada and USA.

**MACULA (4)**

**Eir Macula** 24 S 115 Norse goddess of healing and peace.

**Elpis Macula** 31 N 27 Greek goddess of happiness and hope.

**Ganesa Macula** 50 N 87 Hindu elephant-headed god of good fortune and wisdom.

**Omacatl Macula** 18 N 37 Aztec god of good cheer and lord of banquets.

**REGIO (1)**

**Tui Regio** 20 S 130 Chinese goddess of happiness, joy and water.

**RINGED FEATURES (3)**

**Guabonito** 11 S 151 Taino Indian (Antilles) sea goddess who taught the use of amulets.

**Nath** 30 S 8 Irish goddess of wisdom.

**Veles** 2 N 137 Slavic god of housekeeping wisdom.

**VIRGA / VIRGAE (5)**

**Bacab Virgae** 19 S 151 Mayan rain god.

**Hobal Virga** 35 S 166 Arabian rain god.

**Kalseru Virga** 36 S 137 NW Australian rainbow serpent, bringer of rain.

**Perkunas Virgae** 27 S 162 Lithuanian god of rain, thunder and lightning.

**Shiwanni Virgae** 25 S 32 Zuni (SW USA) rain god.

**Diameter of ringed features (km):**

Guabonito 55

Nath 95

Veles 45

**Web resources:** The lists of the names on Titan can be found at the Gazetteer of Planetary Nomenclature on the Internet: Titan Nomenclature Table of Contents, or at the URL http://planetarynames.wr.usgs.gov/, then go to “Saturnian system,” and after that to “Titan Nomenclature Table of Contents.”

There is also a map of Titan (600 kB PDF) with all named features on the web: Titan, or at the URL http://planetarynames.wr.usgs.gov/images/Titan_com.pdf