

ORBITER Credits & Contributions

In alphabetical order. Last updated 25 September 2006.

The list is complete to the best of my knowledge. For corrections or omissions please contact Martin Schweiger.

Special thanks go to all beta testers of the Orbiter 2006 Edition for their invaluable help.

Steve Albers

laps.noaa.gov/albers/sos/sos.html

- [Io surface map](#)
Created from Voyager and Galileo data
Included since: 060428
- [Iapetus surface map](#)
Modified for Orbiter by Rolf Keibel
Lightened to show detail
empty areas filled with fictional coverage
Included since: 060428

Jason Benson (“agent036”)

- [New Mir model](#)
Included since: version 021201

P. Bretagnon, G. Francou

Bureau des Longitudes, CNRS URA 707

pierre@bdl.fr francou@bdl.fr

- [VSOP87](#)
Planetary perturbation terms for Mercury to Neptune
Download date: 17 August 2001

M. Chapront-Touze, J. Chapront

Bureau des Longitudes, CNRS URA 707

77, Avenue Denfert-Rochereau

75014, Paris, France

- [Lunar Solution ELP 2000-82B \(Semi-analytical lunar ephemerides\)](#)
Ref:
Astron. Astrophys. 124, 50 (1983)
Astron. Astrophys. 190, 342 (1988)

Robert Conley (“estar”)

- [Atlantis module extensions:](#)
Movable arm and grappling, including MMU and Satellite extensions
- [Atlantis documentation](#)
Included since: version 021201

Elwood Downey

www.clearskyinstitute.com/xephem/xephem.html

- [Lunar ephemeris](#)
Perturbation terms for lunar positions.

Andrew Farnaby

- Project Alpha ISS model
Included since: version 030527

Javier Fernandez

- Cape Canaveral surface textures and structural elements

Don Gallagher

- Space Shuttle Atlantis Orbiter model:
mesh and textures extensions
Included since: version 060925
- LDEF mesh and textures
Included since: version 031103

Michael Grosberg

- Space Shuttle Atlantis mesh and textures
Included since: version 060925

Damir Gulesich

- Space Shuttle External Tank and Solid Rocket Booster mesh and textures.
Included since: version 031103

James Hastings-Trew

<http://apollo.spaceports.com/~jhasting/>

- Phobos and Deimos meshes
Download date: 12 March 01
Author note:
Meshes are downsampled versions of OpenUniverse Objects
- Uranus map
Format: 1024x512 Jpeg
Download date: 2000
Author note:
Painted pretty much from scratch based on images found around the internet.
- Uranus ring data:
Download date: 2000
- Neptune map
Format: 1024x512 Jpeg
Download date: 2000
Author note:
Painted pretty much from scratch based on images found around the internet.

Seth Hollingsead

<http://www.OrbitersimLandSAT.com>
Iceversaka@hotmail.com

- Mars surface map optimisation and adaptation for Orbiter
Included since: version 060221

David Hopkins

- Space Shuttle Atlantis module code extensions
Included since: version 031103

Jet Propulsion Laboratory Multimission Image Processing Laboratory

Solar System Visualization Project and Magellan science team

- Venus surface map
Format: 5120x2560 Tiff
Download date: 22 September 03 (original: p45187.tif)
Composite of Magellan synthetic aperture radar mosaics.
Author note:
Data gaps are filled with Pioneer-Venus Orbiter altimetric data, or a constant mid-range value. Simulated color is used to enhance small-scale structure. The simulated hues are based on color images recorded by the Soviet Venera 13 and 14 spacecraft.

Björn Jónsson

<http://www.mmedia.is/~bjj>

- Venus cloud map
Format: 1800x900 Jpeg
Download date: 12 March 01
- Saturn map
Format: 1800x900 Jpeg
Download date: 12 March 01
Author note: *"Created from Voyager data with some artistic interpretation"*
- Saturn ring data
Download date: 9 March 01
Author note: *"Created from Voyager images"*
- Callisto surface map
Format: 1800x900 Jpeg
Download date: 29 April 2006
Release notes:
This map of Callisto was created from images obtained by the Voyager and Galileo spacecraft. Most of these had a resolution of 0.7-4 km/pixel. The main exception is that lower resolution images were used to colorize the map. The main reasons are that Callisto has not been globally imaged in color at high resolution and the weird color filter combination used for imaging at high resolution.

Rolf Keibel

- Jupiter texture map
- Jupiter cloud map
created/edited for Orbiter from CICLOPS maps
- Saturn texture map
edited for Orbiter
- Triton texture map
based on Voyager photos
- Uranus texture map
- Misc:
Various planet configuration file modifications

The standard Orbiter distribution contains a subset of Rolf Keibel's 'Outer Planets' addon.

Roger "Frying Tiger" Long

- DeltaGlider and DG-S mesh and virtual cockpit
Included since: version 020418
Updated and extended version, included since: version 050116
- Dragonfly mesh improvements and textures
Included since: version 021201

- Shuttle-A mesh
Included since: version 021201

“McWgogs”

- Cloud microtexture
Included since: 060518
Sizes: 512x512 and 256x256 DXT3 adapted from original 512x512 ARGB version.

Jens Mayer

<http://home.arcor.de/jimpage/>

- Moon map
Format: 8192x4096 Jpeg
Download date: 19 August 03

NASA/JPL/Space Science Institute

- Mimas surface map
<http://photojournal.jpl.nasa.gov/catalog/PIA07779>
Format: 2876x1438 Jpeg
Download date: 20 March 2006
Included since: 060320
Release notes:
This global digital map of Saturn's moon Mimas was created using data taken during Cassini and Voyager spacecraft flybys. The map is an equidistant projection and has a scale of 434 meters (1,424 feet) per pixel. The mean radius of Mimas used for projection of this map is 199 kilometers (124 miles). The resolution of the map is 8 pixels per degree. [...]
Mission: Cassini
Spacecraft: Cassini Orbiter
Instrument: Imaging Science Subsystem
Product Size 3165 samples x 1878 lines
Produced by: Cassini Imaging Team
- Enceladus surface map
<http://photojournal.jpl.nasa.gov/catalog/PIA07777>
Format: 14396x7198 Jpeg
Download date: 20 March 2006
Included since: 060320
Release notes:
This global digital map of Saturn's moon Enceladus was created using data taken during Cassini and Voyager spacecraft flybys. The map is an equidistant projection and has a scale of 110 meters (361 feet) per pixel. The mean radius of Enceladus used for projection of this map is 252 kilometers (157 miles). The resolution of the map is 40 pixels per degree. [...]
Mission: Cassini
Spacecraft: Cassini Orbiter
Instrument: Imaging Science Subsystem
Product Size 14960 samples x 7860 lines
Produced by: Cassini Imaging Team
- Tethys surface map
<http://photojournal.jpl.nasa.gov/catalog/PIA07781>
Format: 11496x5748 Jpeg
Download date: 20 March 2006
Included since: 060320
Release notes:
This global digital map of Saturn's moon Tethys was created using data taken during Cassini and Voyager spacecraft flybys. The map is an equidistant projection and has a scale of 293 meters (961 feet) per pixel. The mean radius of Tethys used for projection of this map is 536 kilometers (333 miles). The resolution of the map is 32 pixels per degree. [...]
Mission: Cassini
Spacecraft: Cassini Orbiter
Instrument: Imaging Science Subsystem
Product Size 12068 samples x 6408 lines
Produced by: Cassini Imaging Team

- Dione surface map
<http://photojournal.jpl.nasa.gov/catalog/PIA07776>
 Format: 5192x2596 Jpeg
 Download date: 20 March 2006
 Included since: 060320
 Release notes:
 This global digital map of Saturn's moon Dione was created using data taken during Cassini and Voyager spacecraft flybys. The map is an equidistant projection and has a scale of 977 meters (3,205 feet) per pixel. The mean radius of Dione used for projection of this map is 560 kilometers (348 miles). The resolution of the map is 10 pixels per degree. [...]
 Mission: Cassini
 Spacecraft: Cassini Orbiter
 Instrument: Imaging Science Subsystem
 Product Size 5750 samples x 3244 lines
 Produced by: Cassini Imaging Team
- Rhea surface map
<http://photojournal.jpl.nasa.gov/catalog/PIA07780>
 Format: 7199x3552 Jpeg
 Download date: 20 March 2006
 Included since: 060320
 Release notes:
 This global digital map of Saturn's moon Rhea was created using data taken during Cassini and Voyager spacecraft flybys. The map is an equidistant projection and has a scale of 667 meters (2,188 feet) per pixel. The mean radius of Rhea used for projection of this map is 764 kilometers (475 miles). The resolution of the map is 20 pixels per degree. [...]
 Mission: Cassini
 Spacecraft: Cassini Orbiter
 Instrument: Imaging Science Subsystem
 Product Size 7700 samples x 4200 lines
 Produced by: Cassini Imaging Team

Valerio Oss

- KSC VAB mesh
 Included since: version 021201

Balázs Patyi

patyibalazs@yahoo.com

- PTV (Personal transport vehicle) mesh
 Included since: version 010706

Radu Poenaru

- Dragonfly electrical and environmental simulation, Dragonfly panels
 Included since: version 021201
- Shuttle-A virtual cockpit and cargo management
 Included since: version 050207

Carl Romanik (“Chode”)

Ephemeris module implementations:

- Phobos and Deimos
 Code based on: Sinclair, Astron. Astrophys. 220, 321 (1989)
 Comment:
 Testing against Horizons shows agreement within 20km for Phobos, 50km for Deimos for 2000-2024.
- Uranus' moons (Miranda, Ariel, Umbriel, Titania, Oberon)
 Code based on: Laskar and Jacobson, Astron. Astrophys. 188, 212 (1987)
 Comment:
 According to the Horizons documentation, this is the same theory they use for Uranus, and the agreement of the DLLs with Horizons looks to be within about 50km.

- Triton:
Code based on: Jacobson et al., Astron. Astrophys. 247, 565 (1991)
Comment:
This also appears to be what Horizons use, and the DLL agrees within about 1000km.

Mario Rossi

- Mars surface map
www.Space-Graphics.com
Pre-release Mars-M46 V2
www.space-graphics.com/m46v2_shaded.htm
Additional Sources:
www.space-graphics.com/credits.htm
MOLA Science team - Mars Orbiter Laser Altimeter (MOLA) Science Investigation
NASA/JPL/Caltech - Solar system surface map database
NGDC - National Geophysical Data Center
USGS - U.S. Geological Survey
Included since: version 060221

Dean A. Scott

- Earth cloud map
Format: 4096x2048 Jpeg
Download date: 16 July 01

Duncan Sharpe

- TransX MFD mode module
Included since: version 031103

Robert Stettner

- Uranus & Neptune major moons:
Miranda, Ariel, Umbriel, Titania, Oberon, Triton, Proteus, Nereid
Included since: version 021201
Author note:
Special Thanks go to JPL and their Planetary Satellite Mean Orbital Parameters and Moon Maps, as well as the developing Orbiter Community, for providing assistance and great support!!!"

Philip J. Stooke

Dept. of Geography, University of Western Ontario,
London, Ontario, Canada N6A 5C2
<http://www.ssc.uwo.ca/geography/spacemap>

- Phobos map
Format: 600x300 Jpeg
Download date: 27 July 01
- Deimos map
Format: 800x400 Jpeg
Download date: 27 July 01

David Sundstrom

- Hubble Space Telescope (HST) model.
Included since version 031103

Constantine Thomas

<http://www.btinternet.com/~consty>

- Jupiter map
Format: 1024x512 Jpeg
Download date: 12 March 01
Author note:
Constructed from Voyager data (JPL/NASA)

USGS

Astrogeology Research Program
Planetary Geomatics Group
Gazetteer of Planetary Nomenclature
<http://planetarynames.wr.usgs.gov/>

- Mercury surface labels
- Mars surface labels
- Io surface labels
- Europa surface labels
- Ganymede surface labels
- Callisto surface labels
Included since: 060428

Visible Earth/NASA

<http://visibleearth.nasa.gov/>

- Earth surface map
Format: 8192x4096 TIFF
Location: <http://visibleearth.nasa.gov/cgi-bin/viewrecord?11612>
Download date: 18 February 2002

NASA Goddard Space Flight Center Image by Reto Stvckli (land surface, shallow water, clouds). Enhancements by Robert Simmon (ocean color, compositing, 3D globes, animation). Data and technical support: MODIS Land Group; MODIS Science Data Support Team; MODIS Atmosphere Group; MODIS Ocean Group. Additional data: USGS EROS Data Center (topography); USGS Terrestrial Remote Sensing Flagstaff Field Center (Antarctica); Defense Meteorological Satellite Program (city lights).

- KSC area high resolution surface tiles from Landsat 7 imagery
available from the Visible Earth site.

John Van Vliet

- Titan surface map
Conversion of JPL map by Dr. Fridger Schrempp (CICLOPS)
http://www.planetary.org/saturn/images/titan_map_mosaic_schrempp_050414_512x256.jpg
Included since: 060320

Richard Wall

ricwall@gmail.com

- Land-water masks for Cape Canaveral surface tiles
Included since: 060428

James S Williams

- Venus surface and cloud textures
Included since version 031103

- Mercury textures
Included since version 050116