

Opportunity Knocks

Events, resources and ideas for planetariums

SEPA Conference 2009
Nashville, TN



Sun/Earth
Day

2010
theme:
Magnetic
Storms

Oct. 23 and 24, 2009

Galilean Nights



APOLLO

4

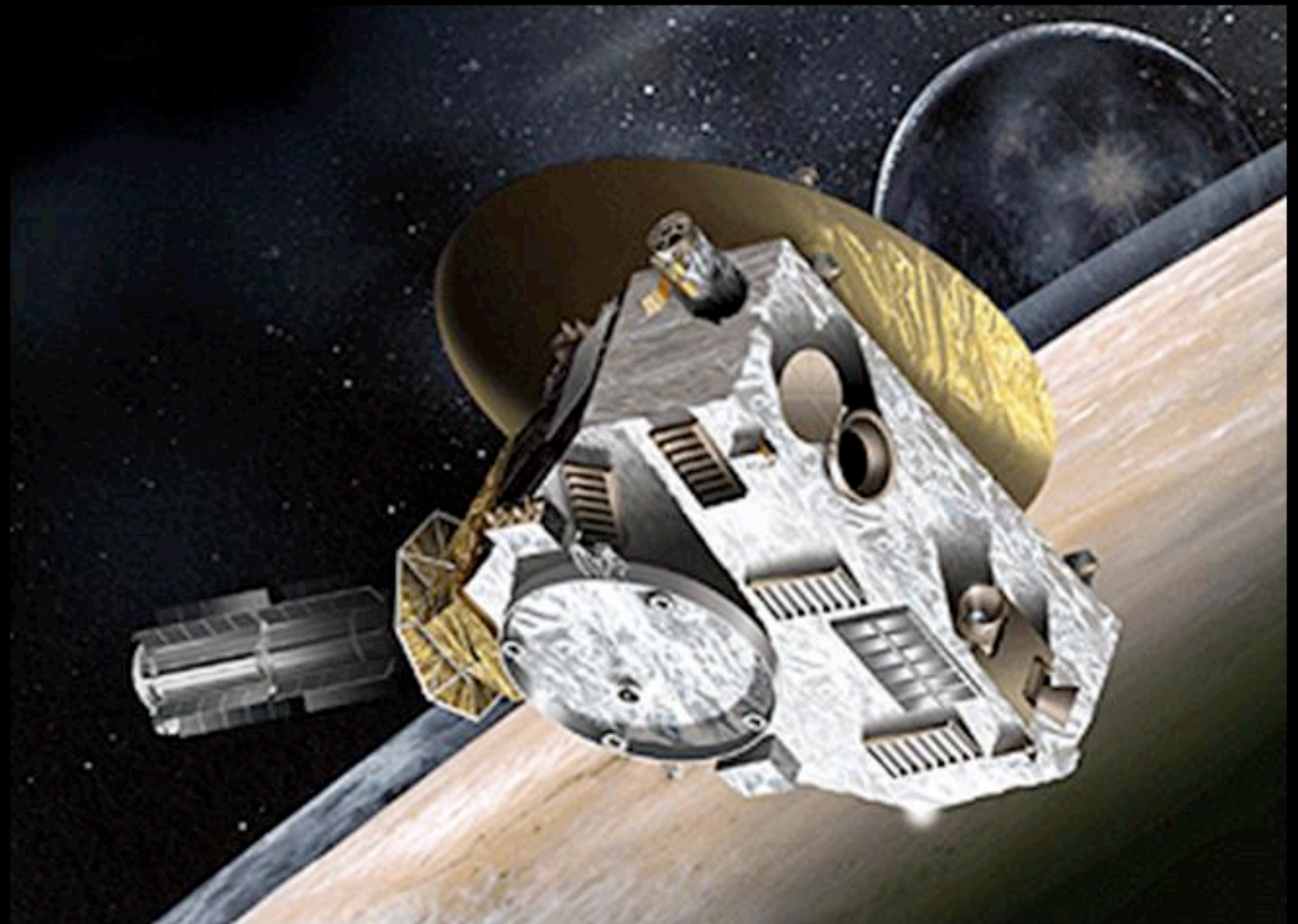


Y E A R S

MESSENGER to Mercury



New Horizons mission
to Pluto & the Kuiper
Belt

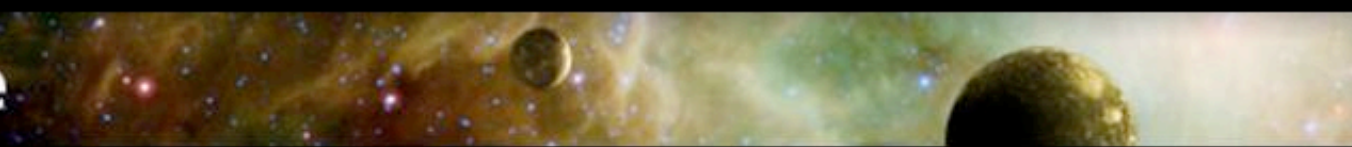


SOFIA Science Center

Stratospheric Observatory for Infrared Astronomy




Museum Alliance



Capture the Universe

ASTROPHOTOGRAPHY CONTEST

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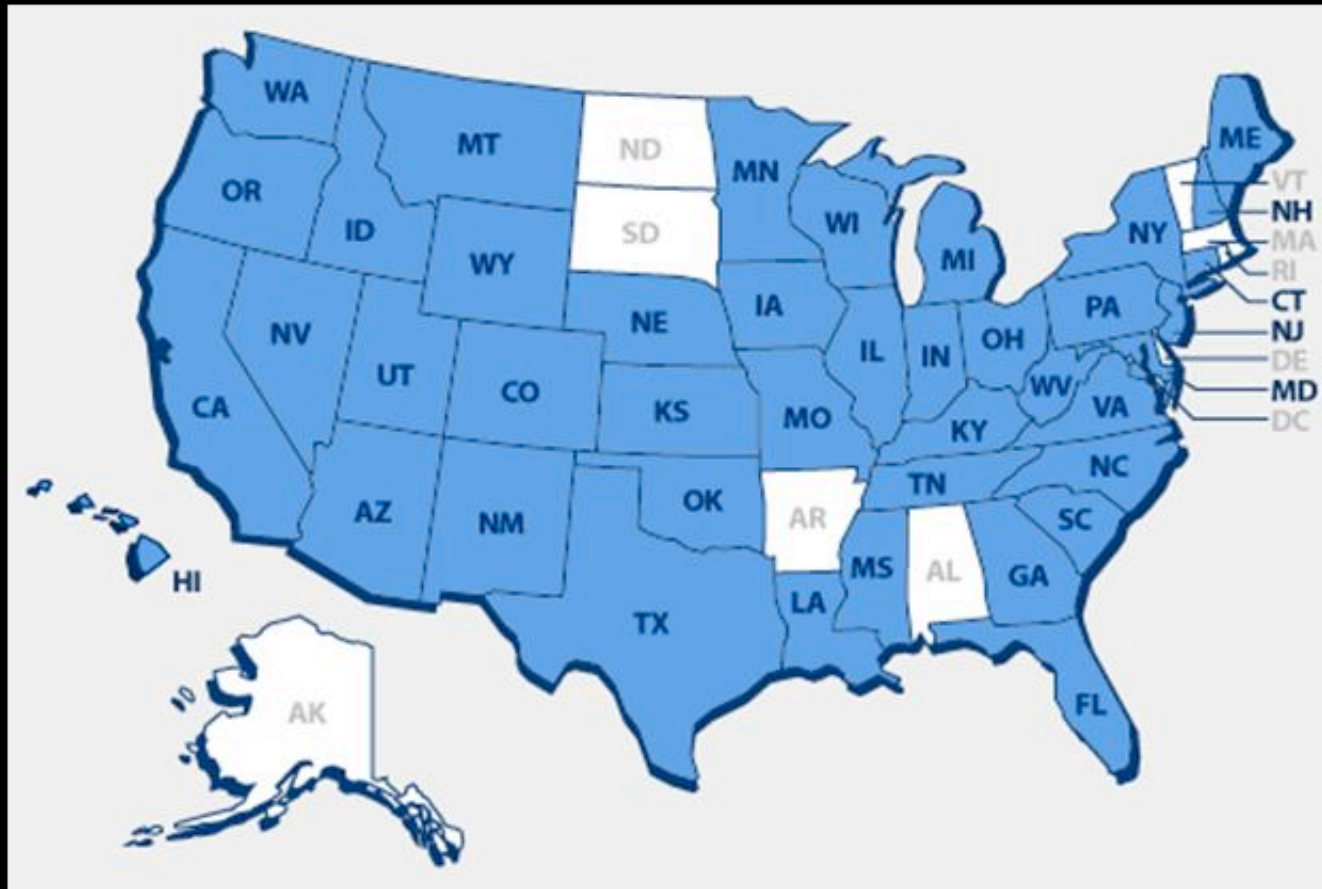
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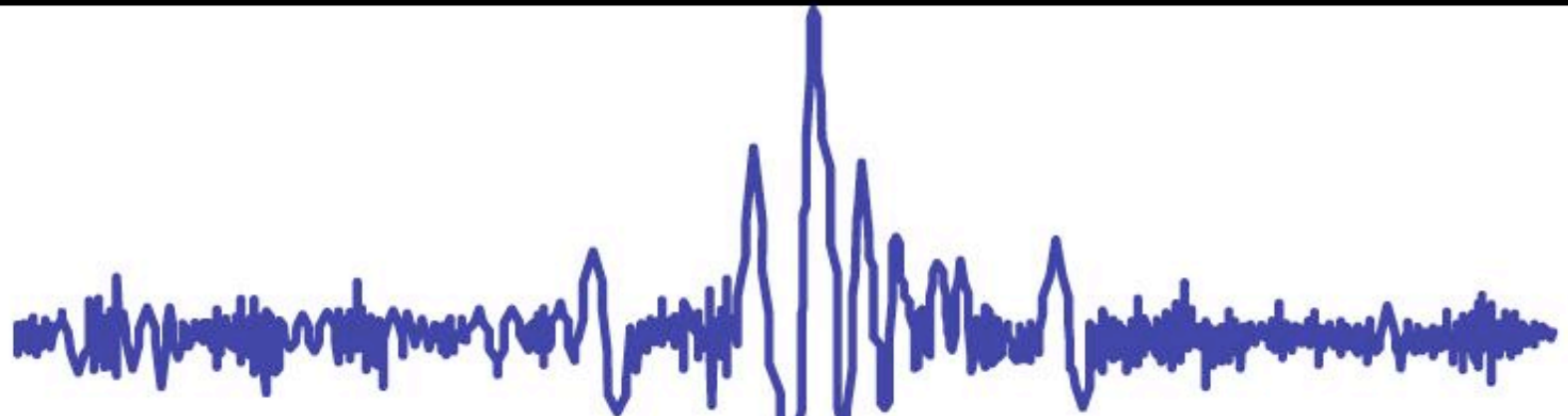
&

DISCOVER

IMAGE COURTESY OF RICH_RICHINS



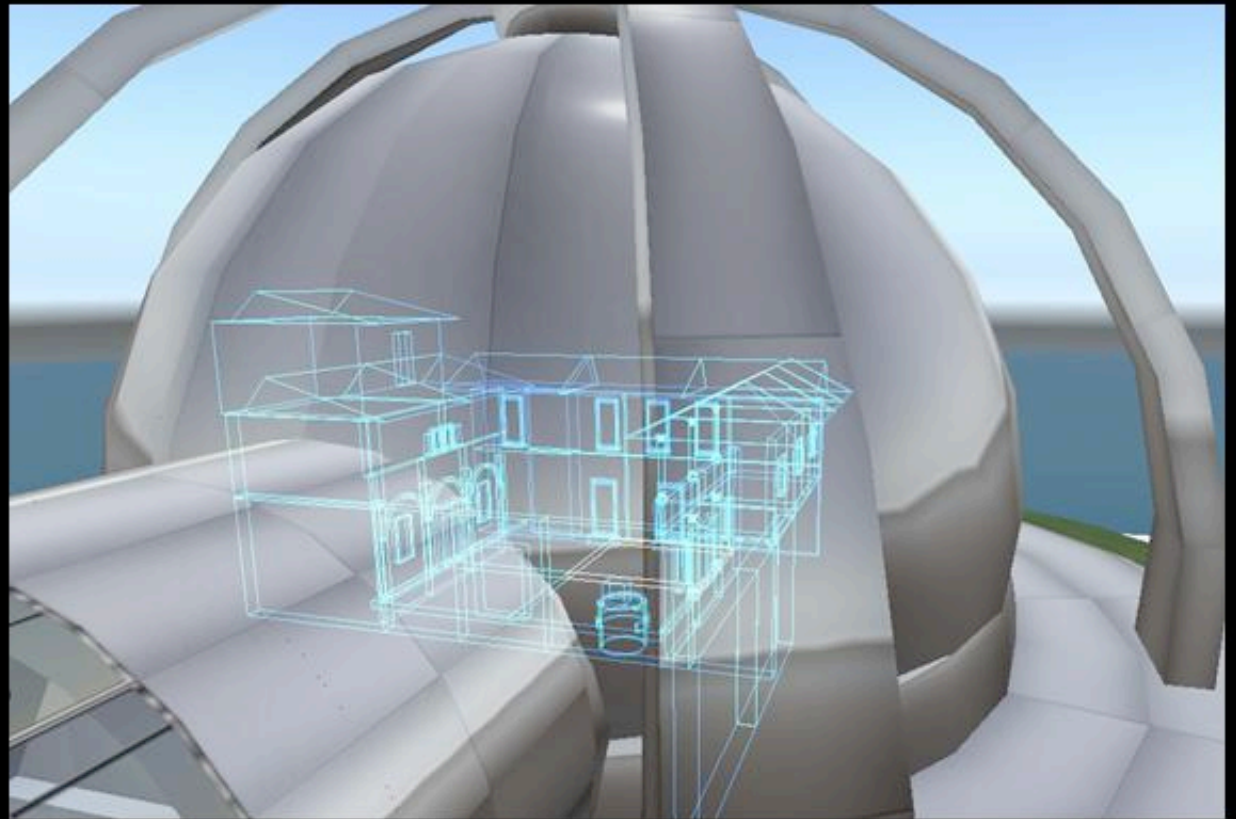
Solar System Educators



IRIS

SLOOH
World
wide
telescope
network





Let There Be Night



The
Chromatics

About.com



Record Breaking Mars Orbit

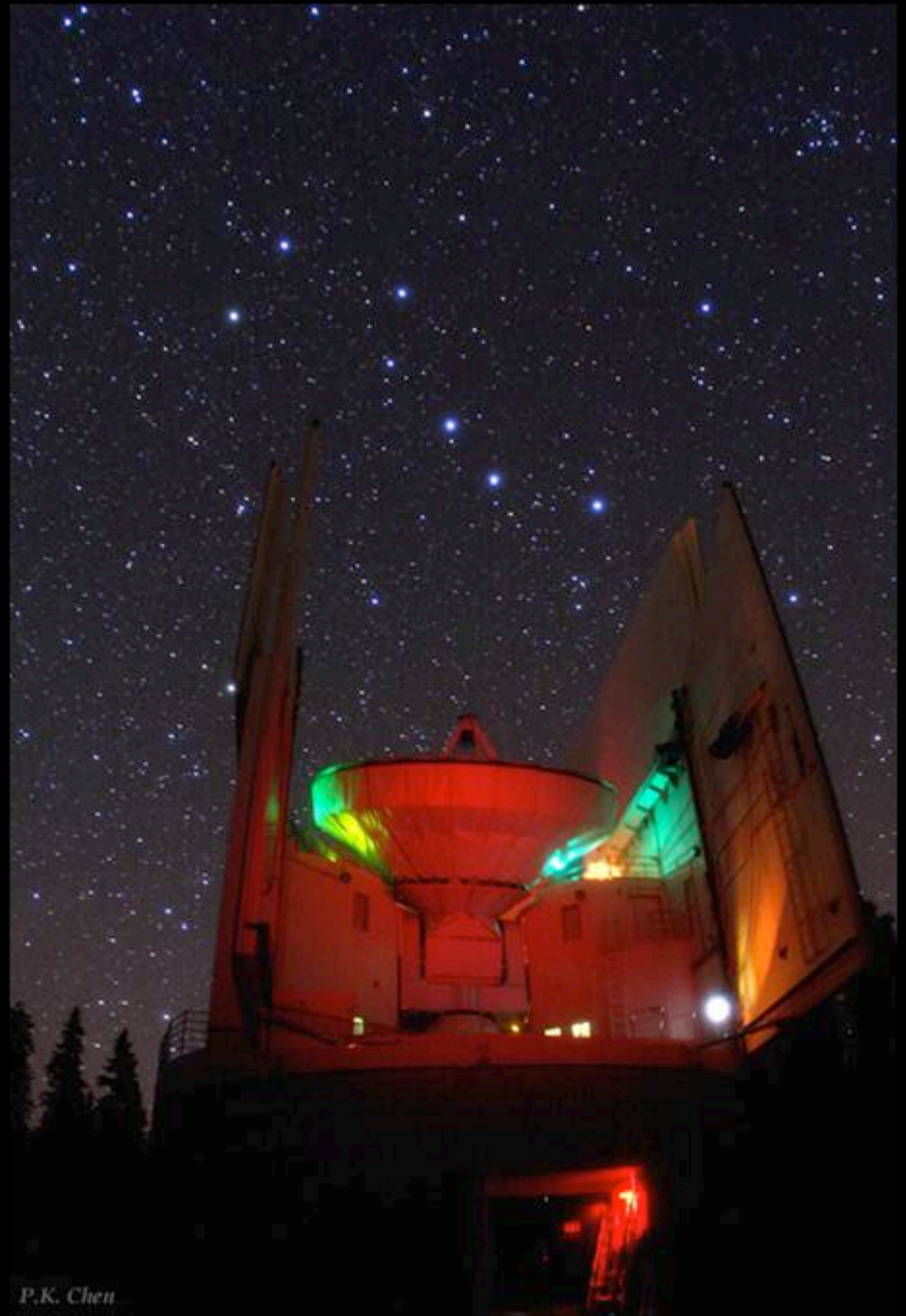




Talk with an ISS
astronaut

NASA
Teaching
from
Space

The World At Night



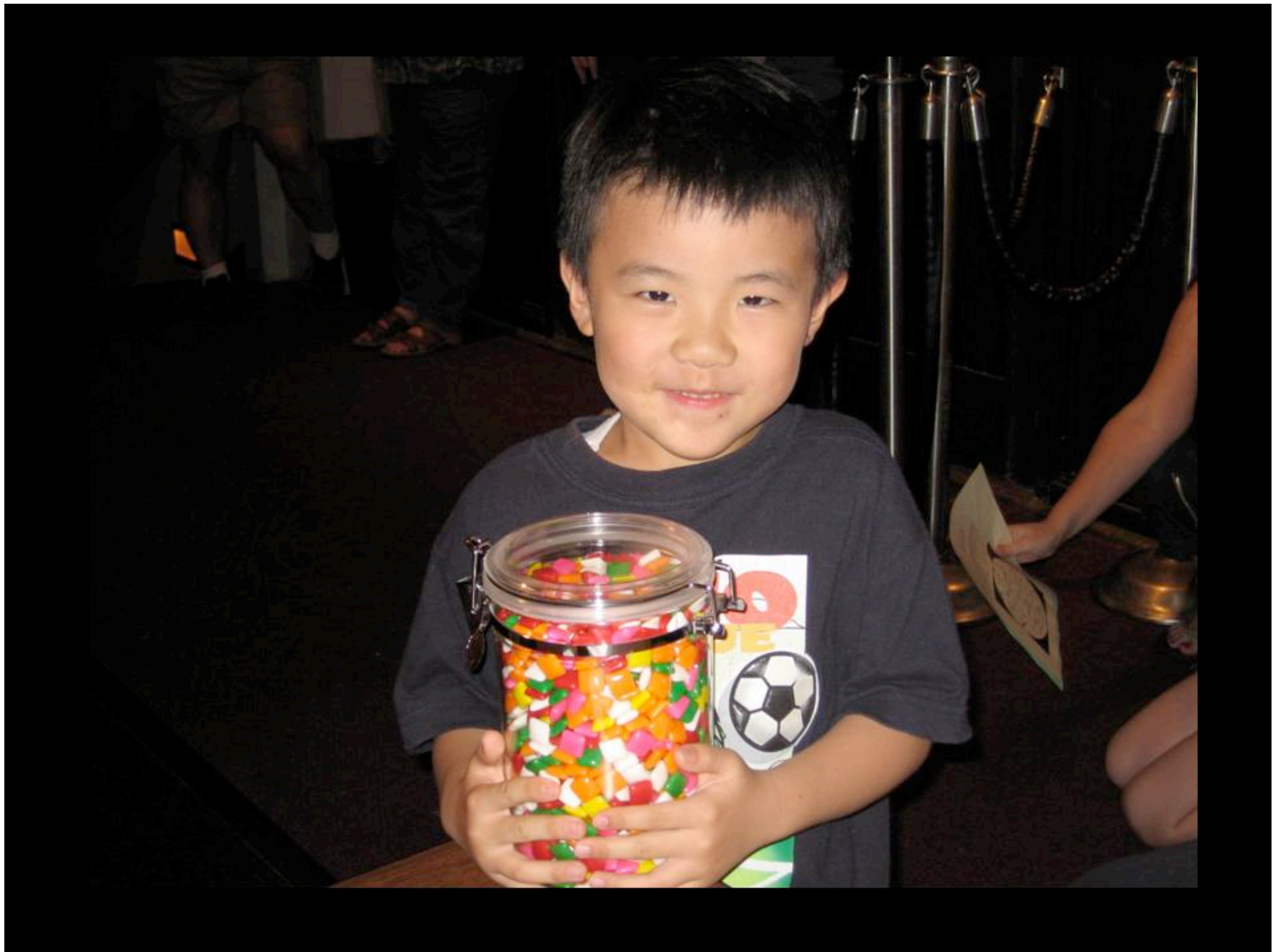


Scouts



Jelly Bean Universe





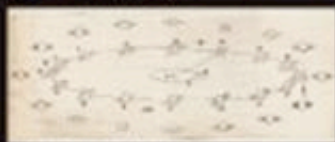


SATURN'S RINGS ARE COMPOSED OF THOUSANDS OF RINGLETS MADE OF MILLIONS OF ICY PARTICLES

In the 1600s, when viewing Saturn's rings was difficult because they seemed to disappear when seen edge-on. Today, space missions have explained the ring system in exquisite detail. The other giant planets — Jupiter, Uranus, and Neptune — have only a few dark rings. We do not yet know why Saturn alone has such abundant, bright rings.

A RING AROUND SATURN (1696)

Christopher Wren's sketch of Saturn's rings, showing the Cassini Division.



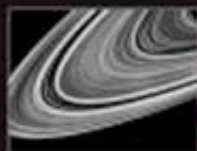
A GAP IN THE RING (1696)

Wren's sketch of Saturn's rings, showing a gap in the ring.



RING PARTICLES (1696)

Wren's sketch of Saturn's rings, showing individual particles.

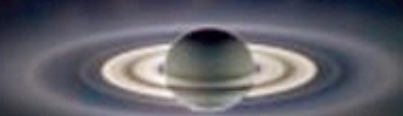


RINGLETS (1696)

Wren's sketch of Saturn's rings, showing individual ringlets.

RING SYSTEM PORTRAIT (2004)

Portrait of Saturn's ring system, showing the rings and the planet.



Source: NASA, Space Shuttle, 1981

Visions of the Universe
downloadable
Poster set

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intentionally
left blank

Opportunity Knocks SEPA 2009 Nashville

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Information and web sites

<http://sunearthday.nasa.gov/2009/index.php> - Sun/Earth Day is an opportunity to bring audiences information about our closest star. The theme for 2010 is Magnetic Storms. They launch the new theme on the website in September by featuring the 150th anniversary of the solar "Superstorm of 1859." You can learn about the superstorm now on YouTube with Dr. Sten Odenwald at http://www.youtube.com/watch?v=DSfAl6_7bjU

<http://www.spaceday.org/index.php/About-Sub-2.html> - Elementary and middle school student signatures in space. Students in an entire school can sign a poster that is converted to digital form and sent along on a space shuttle mission.

<http://www.spaceday.org/> - Space Day activities are listed here in an easy-to-follow format. Use them for other public events, too.

Galilean Nights is a new cornerstone project for IYA. Add it to your schedule of observing events this year, with information found here: <http://www.astronomy2009.org/news/updates/251/>

<http://history.nasa.gov/afj/> - Apollo Flight journals: extensively annotated mission transcript, supporting technical documents, photos, and more.

http://www.nasa.gov/mission_pages/apollo - NASA Apollo 40th Anniversary Website

MESSENGER – The **ME**rcury **S**urface **S**pace **E**nvironment **GE**ochemistry and **R**anging space craft (MESSENGER) flies by Mercury again in late September 2009. Since its launch in 2003, dozens of MESSENGER Fellows have been trained to give teacher workshops and presentations. The next cadre of Fellows is slated for selection in early 2010. To find a speaker in your area, or for application information: <http://btc.montana.edu/messenger/teachers/fellows.php>

heather_weir@ssaihq.com – Heather Weir is an education coordinator with the New Horizons space craft to Pluto and the Kuiper Belt. You can get on the e-mailing list to receive a monthly newsletter if you send her your name and e-mail address. In 2011 a new group of New Horizons Fellows will be selected, and Heather can send you information about that program as well.

<http://www.sofia.usra.edu/Science/docs/SofiaScienceVision051809-1.pdf>

- SOFIA – Stratospheric Observatory for Infrared Astronomy has just posted an overview of the characteristics and capabilities of the observatory and first generation instruments. A primary focus is placed on four science themes: 'The Formation of Stars and Planets', 'The Interstellar Medium of the Milky Way', 'Galaxies and the Galactic Center' and 'Planetary Science'.

Quick! Before the end of June 2009! Enter your astrophoto (taken with some piece of Celestron equipment) and let Bad Astronomer Phil Platt judge its merit. http://www.celestronimages.com/contest_rules.php?contest_id=1

Museum Alliance: Teleconferences with mission scientists, resources and materials to use in programming, and it's free to join if you're a museum professional. Sign up at <https://informal.jpl.nasa.gov/museum/alliance>

<http://www2.jpl.nasa.gov/ambassador/usstates.html> - NASA's Solar System

Ambassador program provides free speakers for your public events. Check this site for a map of the Ambassadors in your area.

Solar System Educators: Lesson plans, activities, content information – these teachers share it all with groups around the country. Check here to find a teacher in your area: <http://sse.jpl.nasa.gov/ssep/index.cfm>

IRIS – Incorporated Research Institutions for Seismology has a team of excellent speakers that will visit your facility free of charge. Contact Pat McQuillan for details: mcquillan@iris.edu or 202.682.2220

SLOOH is your on-line observatory. Members can observe with telescopes located around the world. There's a new kids section as well, and this looks like an opportunity for science fair participants: <http://www.slooh.com/>

The Let There Be Night project has a planetarium program featuring an avatar Galileo. Excellent resources for information about light pollution and dark skies: <http://www.lettherebenight.com/>

The Johannes Kepler Project offers teacher resources, lists of where to find free and inexpensive posters and materials. Check out <http://johanneskepler.org/>

For the urban legend/hoax-de-jours, or to help answer callers' questions, check out <http://www.snopes.com/>

http://www.nasa.gov/audience/foreducators/teachingfromspace/home/stu_main_tfs.html - NASA's Teaching from Space web site has links to programs and contests.

Set up a live talk with an astronaut aboard the International Space Station. To request a planning guide and a proposal form, contact Rene Flores at JSC-Teaching-From-Space@mail.nasa.gov or by phone at 281-483—493.

The World at Night is another IYA project, with displays around the country. Check for information about getting a display for your area at <http://www.twanight.org/newTWAN/news.asp?newsID=6016>

Program aides: Girl scouts (middle school age) can participate in a Program Aide project. After they have received training, they need opportunities to help out with programs in museums or parks. Several aides ran the family art-and-craft activities during this year's Astronomy Day celebration at Fernbank Science Center. Check <http://www.girlscouts.org/councilfinder/> to find the council in your area, and ask about Program Aides.

Scout programs: Scouts can earn an astronomy belt loop (Cub Scouts) or Merit Badge (Boy Scouts) in part by attending a planetarium or observatory program. Check with your local scout office – you may be able to offer an evening or weekend program that will generate some money for you and a learning experience for the scouts. Badge requirements are listed at <http://www.usscouts.org/mb/mb022.asp>

Girl Scouts have astronomy-themed patches they can earn as well. Details are at <http://www.astronomy.org/programs/girlscouts.html#brownies>

Jelly bean universe model/exhibit from Chandra details are at <http://chandra.harvard.edu/chronicle/0108/universe/>

Visions of the Universe posters can be downloaded from <http://amazing-space.stsci.edu/iya/>

Just for fun, follow this link to an awesome clip of Lightning in Slow Motion: <http://www.cpet.ufl.edu/sift/lightning.htm>