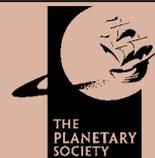


Travel with The Planetary Society and Discover  
Mysteries of Planet Earth & our Amazing Universe!



# The Planetary Society EXPEDITIONS 2012/2013

## Australia Total Solar Eclipse!

November 5-16, 2012

An introduction to Australia, from its aboriginal heritage to the modern era, culminating in the **Total Solar Eclipse in Cairns November 14!** Discover classic Australian cities and landscapes, from cosmopolitan Sydney to iconic Ayer's Rock and Alice Springs in the Outback, and the tropical northeast in Queensland! Learn about the historic heritage of Australia in the Rocks and Australia's astronomical heritage and current Mars program. Optional extension to New Guinea includes fascinating experiences and traditional singing!

## Hawaii Transit of Venus!

June 4-12, 2012

**Simply Out of This World!**

Explore one of the greatest places on Earth to view our solar system and to see the **Transit of Venus**, one of the most rare astronomical events of our lifetime! See the natural wonders of Hawaii from the Kona Coast to Volcanoes National Park and the great observatories on top of Mauna Kea. At the 'Imiloa Astronomy Center explore Hawaiian cultural and navigational understanding of the stars and delight in Galaxy Garden—a model of the Milky Way—a unique look at Hawaii!

## Arecibo & the Lesser Antilles!

January 30–February 9, 2013

Travel to San Juan, Puerto Rico, and discover mysteries of deep space and near-earth asteroids at Arecibo Radio Observatory. Meet scientists working on the search for extraterrestrial intelligence, and other deep space astronomies, from quasars to the origins of the universe from the moment of the Big Bang! Then fly to Barbados and board the 227-foot, 5-masted Royal Clipper and explore the Lesser Antilles. Explore islands, go snorkeling and whale watching, and more!

## AUSTRALIA & NEW GUINEA

Total Solar Eclipse November 14, 2012



## Lake Baikal Transit of Venus!

June 1-12, 2012

An extraordinary opportunity to see the **Transit of Venus** and explore Siberia & Lake Baikal! Watch Venus as it slowly passes across the disk of the Sun—an amazing phenomenon first predicted by Johannes Kepler in 1627 and inspiration for the great voyage of Captain Cook in 1769! Discover the delights of Siberia and the Transit of Venus which has fascinated astronomers for 380 years!

## Alaska Aurora Borealis!

March 7-13, 2013

**Greatest Light Show on Earth!**

Discover the great beauty of Alaska and see the famed Aurora Borealis or Northern Lights. Look for marine life and wildlife near Seward, then take the train from Anchorage to Fairbanks, passing lofty 20,320-foot Denali (Mt. McKinley). Visit the Ice Festival in Fairbanks and learn about the Aurora from special guests at the Geophysical Institute. Watch the local curling and sled dog teams and see the Aurora Borealis dance across the night sky with local astronomy enthusiasts at Creamer's Field and Mt. Aurora.

*You can Travel with The Planetary Society!*

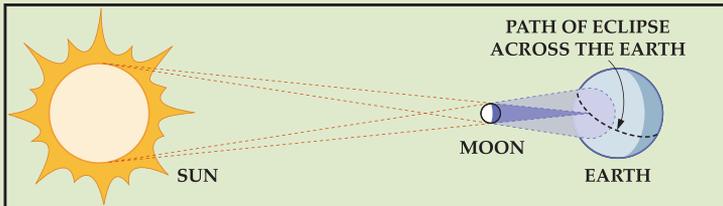
See the Total Solar Eclipse November 14, 2012  
**AUSTRALIA Eclipse 2012**

November 5-16, 2012  
with optional New Guinea Extension November 15-20, 2012



This expedition will be a wonderful introduction to Australia, from its aboriginal heritage to the modern era. We will also discover classic Australian landscapes from the harbors of New South Wales to iconic Ayer's Rock, Alice Springs, and the tropical northeast in Queensland! The trip will culminate in the **Total Solar Eclipse in Cairns**, overlooking the Great Barrier Reef! Our visit includes:

- **Sydney**, cosmopolitan heart of Australia—discover the historic Rocks area, and Australian wildlife at the Taronga Park Zoo. Learn about Australia's astronomical heritage, current Mars program, and Australia's deep space research program.
- **Ayer's Rock, the Olgas & Alice Springs**—explore these iconic images of the Australian Outback, including the Henbury Meteor Craters and enjoy star gazing.
- **Tjapukai Aboriginal Park**—enjoy this showcase of fascinating culture in tropical Queensland.
- **Green Island**, a delightful coral cay on the Great Barrier Reef, surrounded by a multicolored world of coral, giant clams, seabirds, tropical fish, crabs, and sponges—an extravaganza to relish while snorkeling or by glass bottom boat.



- **Cairns and the Total Solar Eclipse**, from a base in Australia's tropical resort city, at the edge of the Atherton Tableland and Great Barrier Reef, see the Total Eclipse from the oceanfront.

The **New Guinea Extension** will give a delightful introduction to this fascinating country, with Tufi Lodge as our home base. Amazing cultural experiences await you, as well as a look at New Guinea's superb natural heritage! \$4,995 + air + Extension.

# ANTARCTICA

December 2012



*Please Inquire for Information!*

The last  
Transit of Venus  
of our Lifetime!

First Cor  
22:09 U

Sun's Equator

*See the Transit of Venus...*

# DISCOVER

*Simply out of this world!*

Spectacular clear skies and high elevation observatories offer the best viewing in America. Scientists can see literally "Out of this World!" We can see the **Transit of Venus** on June 5, 2012 (it won't happen again for more than 100 years!). The planet Venus will be perfectly lined up with the Earth and Sun, so we can see Venus slowly cross the Sun—one of the most fascinating astronomical events in our lifetime!

The earth's forces create new land right before our eyes, as lava streams forth from volcanoes rising 33,000 feet from the ocean floor. The Pacific is home to a profusion of life—from whales to sea turtles, and fish to rays.

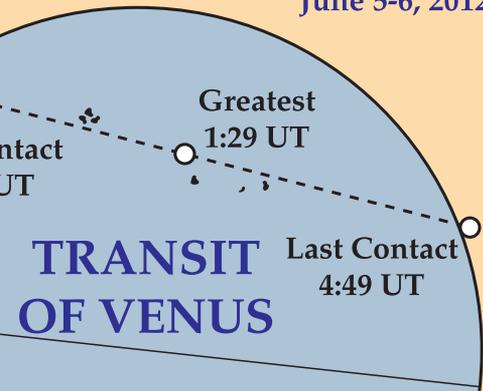
Our journey will begin in Kailua-Kona where old black ribbons of lava flow to the sea. We will see Galaxy Garden, inspired by planetary artist Jon Lomberg, with a botanic scale model of the Milky Way Galaxy.



We will cross the island between the two largest volcanoes on Hawaii, Mauna Loa & Mauna Kea. En route, we will visit the W.M. Keck Observatory headquarters near the famous Parker Ranch to learn about discoveries.

**For More Information: email [Info@betchartexpeditions](mailto:Info@betchartexpeditions)**

June 5-6, 2012



# SIBERIA & LAKE BAIKAL

*An extraordinary opportunity!* • **June 1-12, 2012**

Our 12-day journey will begin in Moscow where we will discover the enchantment of Moscow's Kremlin, with its frescoed Archangel Cathedral, Armory Museum, political offices, and historic buildings. We will have a special visit to Star City, where Russia's cosmonauts and astronauts from many countries train.

We will then fly to Irkutsk, the "Paris of Siberia," with striking gold-domed churches and wooden homes with blue and green shutters. The next day, we will go to the Lake Baikal Solar Observatory where we will observe the Transit of Venus! It is a great natural phenomenon and will be a never-to-be-forgotten experience!

The transit lasts for six hours and so we will aim to spend the morning at the observatory viewing it. Passengers may wish to bring their own telescopes. Afterwards, we will board *M/V Vampilov*, a comfortable ship with modest accommodations.



We'll venture more than 250 miles up Lake Baikal. The Russian "Galapagos Islands," Baikal is the single richest location in Russia for endemism, a fabulous reservoir of unique flora and fauna. Lake Baikal is the oldest and deepest lake in the world, and stores nearly 20% of the freshwater on earth. It contains more than 1,500 species unique to Baikal, and hundreds more endemics on the surrounding mountainsides.

Our visit will include Pribaikalsky and Zabaikalsky National Parks; Maloe More, the "small sea" and Olkhon Island, to visit the fishing village, school, and museum. We'll walk along the marble headlands of Baikal's famous "Shaman Rock" and explore the Ushkany Islands. \$5,995 + air.

*the last one in our lifetime!*

# HAWAII

**June 4-12, 2012**



At 9,300 feet on the slope of Mauna Kea we will visit the Onizuka Visitor Center and then transfer to 4-wheel drive vehicles to go to the summit of Mauna Kea, at 13,796 feet, and see sunset near some of the world's largest observatories.

At Hawaii Volcanoes National Park, we will see ancient lava formations which built the island and hot molten lava that is flowing to the sea. We'll drive as close as we can to the two latest eruptions, Halemaumau and Kilauea at the coast.



At the world class 'Imiloa Astronomy Center of Hawaii we will explore the Hawaiian cultural and navigational understanding of the stars with real-time information obtained from the 13 telescopes on the Big Island.

Throughout our journey, we will explore new discoveries and the continuing effort to unlock the mysteries of the universe and nature's paradise of lava and sea. \$3,495 + air.



**.com • Telephone (408) 252-4910 or USA (800) 252-4910**

# ARECIBO

## & the Lesser Antilles

January 30–February 9, 2013



Our adventure combines two tremendous opportunities—a chance to see the Arecibo Radio Telescope near San Juan, Puerto Rico, and an opportunity to explore the ring of volcanic islands called the Lesser

Antilles which circle around the eastern Caribbean. During our visit to Puerto Rico, we will first explore San Juan, where an impressive fort and historic Old Town bring back visions of pirate days and the heritage of the Caribbean. We will visit the mountains of Puerto Rico and meet Arecibo staff and scientists who organize Arecibo's fascinating research. We will travel on board the 227-foot, 5-masted *Royal Clipper*—one of the world's largest sailing yachts as we relive the heritage of the Caribbean exploring these beautiful islands. From Barbados, we will sail to St. Lucia, Dominica, Antigua, St Kitts, Isles les Saintes, and Martinique! There will be opportunities for snorkeling and beach activities, to go whale watching, to explore historic towns, go hiking in the rainforest, and to discover the night sky. From \$3,650 + air.



## Looking Deep into Space



Radio telescopes collect electromagnetic waves produced by distance stars, galaxies, pulsars, quasars, and other space objects. Radio waves have much longer wave lengths than visible light waves and can detect much fainter energy sources, thus can explore much deeper into space.

To capture these long waves the telescope dish needs to be very large. The Arecibo telescope parabolic reflector dish has a diameter of 1,000 feet or 305 meters. Aluminum panels cover the inside of the dish to reflect the radio waves to an antenna suspended above the center of the dish. The antenna transfers the electromagnetic wave information to the on-site receiver and amplifies and then records the information digitally.

Astronomers using radio telescopes have discovered many deep space objects, including pulsars and quasars, and many rare molecules. These discoveries have been instrumental in understanding the origins of the universe since the Big Bang.

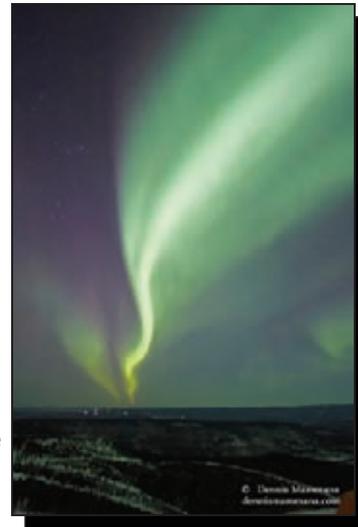
The Arecibo radio telescope is also a critical facility for the study and detection of near-Earth asteroids.

# Alaska Aurora Borealis

Come see the Greatest Light Show on Earth!

March 7-13, 2013

Explore the great beauty of Alaska in winter, and see the famed Aurora Borealis or Northern Lights, the greatest light show on Earth! We will begin our adventure in Anchorage, situated at the head of the Cook Strait and at the foot of the Chugach Mountains, whose spectacular peaks define the coast of Alaska. Travel on the classic train journey from Anchorage to Fairbanks, passing North America's tallest and most awesome mountain, 20,320-foot Mt. McKinley en route. We will arrive in Fairbanks to enjoy the annual winter World of Ice Art Festival and learn about the Aurora Borealis at a scientific institute as we discover the delights of Fairbanks and the night skies. Visit the Geophysical Institute at the University of Alaska, Fairbanks, which was established to study the Aurora and its effects. Discover other delights of this snowy wonderland. See sled dogs and learn about the art of mushing, and the local Curling Club will demonstrate this popular winter sport. \$2,795 + air.



For information & reservations, please contact

## Betchart Expeditions Inc.

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Cupertino, CA 95014-5435

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Email: info@betchartexpeditions.com

All prices are based on twin share + air

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Map by April Milne.

CST# 2036304-40