

ARECIBO

& the Lesser Antilles

January 21-29, 2011



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 10-16, 2011

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

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

The Planetary Society

EXPEDITIONS 2010/2011

Tahiti Total Solar Eclipse!

July 4-12, 2010 Six spaces are available!

If you would like to see the Total Solar Eclipse, please call Taunya (800) 252-4910.

We will explore the spectacular volcanic islands of Tahiti and Moorea. On Moorea we will be captivated by the spinner dolphins, cultural heritage, and under sea world. We will then visit remote Anaa Atoll where we will be hosted by the villagers, and see the Total Solar Eclipse! This will be the experience of a lifetime!

P.S. The next Total Solar Eclipse trip will be Australia November 2012!

Hawaii!

October 2-9, 2010

Simply Out of This World!

Hawaii is one of the greatest places on earth to view our solar system. At 13 observatories, scientists focus on the wonders of the night sky, from star clusters to companion galaxies! They can see literally "Out of this World!" into the vastness of space with amazing accuracy. On this expedition, we will explore the natural wonders of Hawaii and learn about research at some of the great observatories. We will also learn about ancient Hawaiians navigation techniques, go snorkeling, and see active lava flows in nature's paradise of lava and sea!



Arecibo & the Lesser Antilles!

January 21-29, 2011

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!

Alaska Aurora Borealis!

March 10-16, 2011

The Greatest Light Show on Earth!

The dazzling night sky, spectacular snow-covered mountain peaks, grizzlies, moose, and bald eagles may be seen on this wonderful winter-time adventure in Alaska! Take the train from Anchorage to Fairbanks. Look for the Aurora in the night sky at Mt. Aurora, Creamer's Field and the Alpencrest Observatory! Learn about the Aurora at special lectures at the Geophysical Institute and visit Poker Flat where rockets are launched to study it. Also see the Ice Festival, sled dogs, and learn about the popular winter sport of curling!

Antarctica!

December 9-21, 2010

Antarctica holds many answers to the world's past climate in the thousands of years of data in the polar cap ice cores. It has been bombarded by meteorites, and some have come from the Moon and even Mars! We will explore the Antarctic Peninsula on board the new expedition ship, M/V Plancius. Days will be filled with landings in zodiacs, cruising amid ice floes and icebergs, and walks which give the feeling of discovery of the "White Continent."

You can Travel with The Planetary Society!

Tahiti Total Solar Eclipse

July 4-12, 2010

See the **Total Solar Eclipse July 11, 2010**

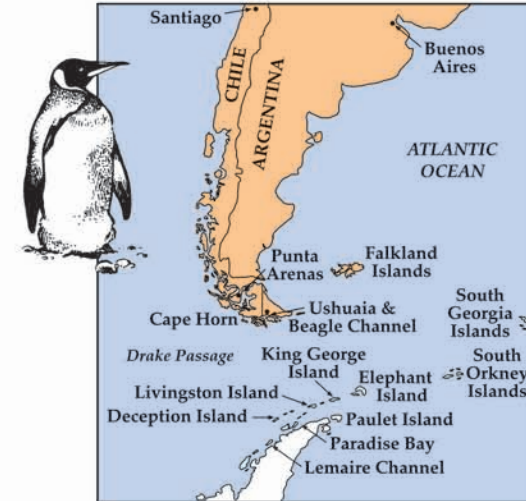
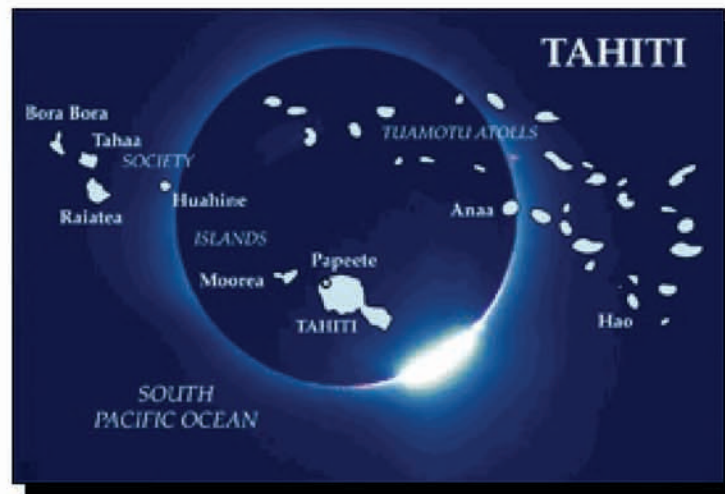
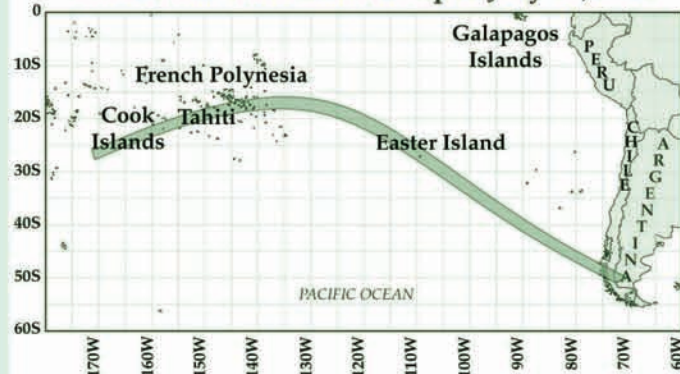
Captain Cook and Robert Louis Stephenson fell in love with Tahiti for good reason. It is really one of the most beautiful places on earth, with jagged volcanic peaks, a profusion of flowers, fringing coral reefs, fascinating cultural sites of early Polynesia, and a bounty of coral and tropical fish. During this Tahiti Eclipse adventure, we'll discover the magic of French Polynesia and the Eclipse! This expedition will take you to one of the most fascinating atolls in the Tuamotu Archipelago to view the eclipse, and along the way provide a first class introduction to the natural and cultural world of French Polynesia. The three islands that we will visit are the perfect examples of oceanic island evolution from high island to atoll. We will take advantage of this to talk about the development of these islands and what they can expect in the future. Meet and mingle with local people, and get face to face with the flora and fauna both on land and in the water. With luck, we will be entertained by schools of dolphins. \$4,995 + air

The Total Solar Eclipse July 11, 2010



A Total Solar Eclipse takes place when the Sun, Moon, and Earth are perfectly aligned and the Moon is the right distance from Earth. When the Moon passes in front of the Sun, it will cast a shadow on a portion of the Earth. When the Moon completely covers the Sun, we will see a Total Solar Eclipse. The moving shadow of the Moon on Earth creates the eclipse path. The duration of totality for this eclipse at Anaa Atoll will be approximately 3 minutes.

Path of the Total Solar Eclipse July 11, 2010



ANTARCTICA

December 9-21, 2010

SAVINGS of more than \$1,000 per person!

DISCOVER HAWAII

It is simply "Out of this World!"

October 2-9, 2010

In Hawaii, spectacular clear skies and high elevation observatories offer the best viewing in America! Thirteen telescopes focus on the wonders of the night sky, from star clusters to companion galaxies! Scientists can see literally "Out of this World!" into the vastness of space with amazing accuracy. 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, fish to rays, many of which we can see while snorkeling.

Our journey will begin in Kailua-Kona—on the dry side of the Big Island of Hawaii—where old black ribbons of lava flow to the sea. Here 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 and Mauna Kea. En route, we will visit the W.M. Keck Observatory headquarters near the famous Parker Ranch to learn about their discoveries.

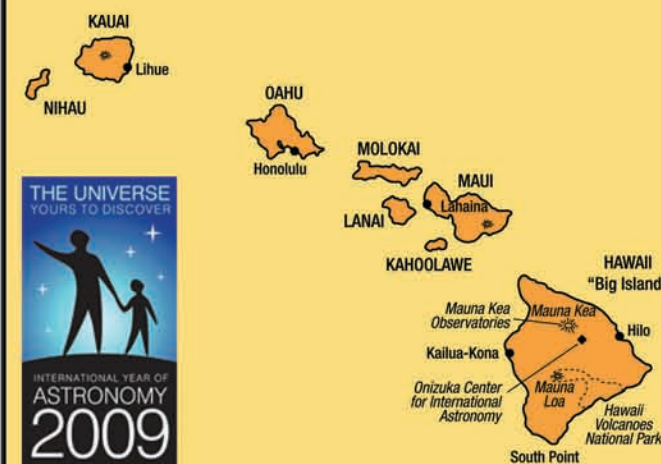
At 9,300 feet on the slope of Mauna Kea we will visit the Onizuka Visitor Center and then transfer to 4-wheel drive vehicles to go to the summit of Mauna Kea, at 13,796 feet, and see sunset from the mountain top near some of the world's largest observatories.

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 will 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. \$2,795 + air

HAWAIIAN ISLANDS



Considered by scientists as one of the last pristine regions and most inhospitable habitats on earth, Antarctica offers the world's most magnificent wilderness with abundant concentrations of wildlife, icebergs sculptured by the sea, and extraordinary scenery. Travel on the excellent new 110-passenger M/V Plancius where we can birdwatch from the bridge. Once we reach the Antarctic Convergence, we will begin to see a profusion of wildlife, which thrives on the nutrient rich waters. Here we will find humpback, minke, southern right, and sei whales, along with several species of true and fur seals, and tens of thousands of penguins of four species. There will be a program of briefings on the geology and history of Antarctic exploration, marine mammals, penguins, and other topics. Naturalists from around the world are on board as our expedition guides and have experience in the polar regions. From \$5,650 + air.



For More Information: email Info@betchartexpeditions.com • Telephone (408) 252-4910 or USA (800) 252-4910