

December 5–12, 2009

# Bright Horizons 6

## Eastern Caribbean

[www.InSightCruises.com/SciAm6](http://www.InSightCruises.com/SciAm6)

Photograph Courtesy of the MJC - Arecibo Observatory, a facility of the NSF

Listed is a sampling of the  
20 sessions you can participate in  
while we're at sea.  
For a full listing visit  
[www.InSightCruises.com/SciAm6-talks](http://www.InSightCruises.com/SciAm6-talks)

▲ Explore the contributions and potential of radio astronomy at the celebrated Arecibo Observatory. Get an unparalleled behind-the-scenes tour of the iconic facility, and absorb an in-depth look at the unique contributions derived from Arecibo research and development.

### SCIENTIFIC AMERICAN TRAVEL

Refresh your science spirit with the vitality of intelligent conversation, the balance of conceptual and practical, and the energy of striving towards new horizons. Join Scientific American on Bright Horizons 6 cruise conference on Holland America's Eurodam, December 5–12, 2009. Expert knowledge, lush Caribbean islands, recreation and reflection await you.

Update your cosmology knowledge with Dr. Lawrence Krauss, as he analyzes which cosmology ideas and theories are holding up over time, which have changed, and which suggest the future form of the universe. Tune in to astronaut Dr. Guy Bluford and learn first hand about Space Shuttle and International Space Station missions. Rendezvous with Dr. Jim Bell and make a deep impact on your knowledge of Near

Earth Asteroids and planetary geology. Think green and dig in to a hot topic with Dr. David Blackwell, geothermal energy maven. Sit with immunologist Dr. Noah Isakov and get the latest thinking in allergy, immunobiology, and the origins of cancer.

Take home keys to understanding pressing topics in green energy, medicine, and space science. Savor the moment with a friend on an uncrowded Grand Turk beach or a Virgin Islands rainforest hike.

Get all the details at [InSightCruises.com/SciAm-6](http://InSightCruises.com/SciAm-6), or call Neil at (650) 787-5665 and effortlessly arrange to stimulate your brain with Scientific American Travel!



Cruise prices vary from \$799 for an Inside Cabin to \$2,999 for a Full Suite, per person. (Cruise pricing is subject to change.) For those attending the conference, there is a \$1,375 fee. Optional eight-hour Arecibo Observatory tour is \$175 and includes transportation, entrance fees, and luncheon. Taxes and gratuities are approximately \$150.

#### Einstein's Big Blunder, A Cosmic Mystery Story

Speaker: Lawrence Krauss, Ph.D.

A review of the revolutions that have taken place in cosmology over the past decade, including the discovery of Dark Energy, which permeates space and drives cosmic expansion. Tune in to Dr. Krauss and develop a deeper understanding of space, time, and gravity — one that is apt to change your picture of the universe.

#### The Undiscovered Country

Speaker: Lawrence Krauss, Ph.D.

We humans have undoubtedly questioned the origins of the cosmos for as long as we've walked the Earth but we've made spectacular progress in recent years. This progress forces us to discard much of what cosmology textbooks told us up until quite recently. Get the latest on competing ideas, their implications, and how they can be experimentally tested.

#### Postcards from Mars

Speaker: Jim Bell, Ph.D.

The NASA Mars Exploration Rovers Spirit and Opportunity landed on the Red Planet in January 2004, and have been driving, photographing, and analyzing their landing sites for the past five years. Prof. Bell has been the lead scientist in charge of the rovers' Panoramic Camera imaging system since the rovers were "born" nearly a decade ago. Come along for an amazing journey of geologic exploration and learn about the ways that both rovers have been utilized to discover convincing evidence that Mars was once warmer, wetter, and much more Earthlike than it is today.

#### Studying the Solar System in 3-D

Speaker: Jim Bell, Ph.D.

Don your red-blue glasses and join planetary imaging expert Prof. Jim Bell on a voyage of 3-D discovery of the solar system. Stereo pictures of Mars, the Moon, Saturn, asteroids, comets, and other places taken by astronauts and robotic space probes provide new details about the geology and history of our planetary neighbors. Learn about the ways that 3-D images are taken, and the ways that they are used by scientists and engineers involved in space exploration. Viewing the solar system in 3-D is the next best thing to being there!

#### Plate Tectonics

Speaker: David D. Blackwell, Ph.D.

Glide into an updated understanding of plate tectonics. Join Dr. Blackwell for a discussion of the development of the theory, its key principles, and its consequences. You'll learn about physical properties of the dynamic lithosphere, athenosphere, and mantle layers versus chemical layers of the earth, driving forces of plate movement, and the relationship of plate boundaries to geological events such as earthquakes and the creation of topographic features like mountains, volcanoes, and oceanic trenches.

#### The Space Shuttle Program

Speaker: Guion S. Bluford, Jr., Ph.D.

Countdown to contemporary treasure — a first-hand account of life in space. Dr. Guion Bluford, a veteran of four Space Transportation System (STS) missions (STS 8, STS 61-A, STS 39, and STS 53) will present a look at the Space Shuttle Program, from its inception to the wrap up of its service in 2010. Learn about training for shuttle duty, noteworthy aspects of daily routine in space on the Discovery and Challenger, and gain a behind the scenes look at the science and technology projects executed by Shuttle astronauts.

#### The International Space Station

Speaker: Guion S. Bluford, Jr., Ph.D.

Join Dr. Bluford for a comprehensive survey of the International Space Station (ISS) Program. He will orient us to the history and complexities of this permanent human presence in space. From project inception to launch to ongoing development and daily living, pick up a new understanding of the logistics, function, and significance of the ISS.

#### The Future of the Space Program

Speaker: Guion S. Bluford, Jr., Ph.D.

Travel back to the future with an indepth discussion on the future of the NASA Space Program. Dr. Bluford will address the issues and opportunities ahead as space exploration matures. You'll get the big picture of the Constellation Program (with its Aries, Orion, and Altair components) which will return humans to the moon and later take them to Mars. Come away with the insights and views on what lies ahead from Dr. Bluford, astronaut and aeronautical engineer.

#### Monoclonal Antibodies and Cancer Immunotherapy

Speaker: Noah Isakov, Ph.D.

Take a look under the hood of contemporary immunotherapy. From molecular biology to medicine, monoclonal antibodies are a valuable part of the scientist's toolkit. From his view deep in the trenches of immunobiology, Dr. Isakov will offer:

- An overview of antibody molecules
- A guide to the production of monoclonal antibodies with specificity against a predetermined pathogen
- The scoop on monoclonal antibody use in research, diagnosis, and therapy

For details contact: Neil Bauman  
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