NASA's Aqua satellite was launched on May 4, 2002 and since then has been collecting data about the Earth's atmosphere, biosphere, hydrosphere, and cryosphere. It has six Earth-observing instruments on board: the Atmospheric Infrared Sounder (AIRS), the Advanced Microwave Sounding Unit (AMSU-A), the Humidity Sounder for Brazil (HSB), the Advanced Microwave Scanning Radiometer for EOS (AMSR-E), the Clouds and the Earth's Radiant Energy System (CERES), and the Moderate Reso-Iution Imaging Spectroradiometer (MODIS).

Dynamic Planet

The Dynamic Planet projects spherical data sets, including those from the Aqua satellite, and is a major element of the Aqua Outreach efforts, used in a wide variety of venues and for many different

audiences. Notably, the exhibit served as a primary backdrop to President Obama on November 23, 2009, as he announced the Administration's new Educate to Innovate campaign from the Dwight D. Eisenhower Executive Office Building in Washington, DC. Although the Dynamic Planet often projects Aqua data, in this particular photograph, the data set shown is a global biosphere data set from the Sea-viewing Wide Field-of-view Sensor (SeaWiFS). The Dynamic Planet was set up for this event by the Aqua Outreach Coordinator.



The NASA Science Explorer touch screen interface allows users of the Dynamic Planet to view and explore dynamic digital images of the Earth, other planets, and space.

EarthSky Podcasts

EarthSky Communications and the Aqua Project have collaborated on the production of an Aqua/EarthSky radio show and podcast series. The resulting radio digital media files have been distributed to more than 1900 broadcast affiliates around the world via the EarthSky Network, including 80% of all public radio stations in the U.S. Each 90-second science podcast is expected to create 14 million media impressions, with the overall series



generating more than 84 million impressions around the world on topics related to the Aqua mission. To date, eight productions have been completed and distributed via the EarthSky network, with interviews of the Aqua Project Scientist, the AIRS Science Team Leader, a MODIS Science Team member, the CERES Science Team Leader, an AMSR-E Science Team member, the CloudSat principal investigator, and the MODIS Atmosphere Team Leader. This screenshot shows the EarthSky web page for the CERES Science Team leader's podcast on clouds and climate.

Public Outreach

Students' Cloud Observations On-line (S'COOL)

The S'COOL project offers hands-on science that produces useful ground truth data for the Aqua and Terra missions. The project, supported primarily by the CERES Science Team centered at Langley Research Center (LaRC), focuses on cloud observation but introduces the idea of Earth System science

through its integrated data-reporting sheet (clouds, surface cover, surface air conditions). The project integrates math, science, technology, and other subject areas in formal education lessons and activities designed for students in grades K-12. This image is the cover of the June 2003 Bulletin of the American Meteorological Society.

MODIS Rapid Response System (RRS)

The MODIS RRS has become an important component in the Aqua and Terra missions and in NASA's overall Earth science research program. Since 2000, it has been producing and disseminating, in close to real time, photograph-quality MODIS images. MODIS RRS images are routinely used by a global community of scientists and others working in fire monitoring, agriculture, ice monitoring, air quality, education, and media. An average of 144,000 unique visitors comes to the site every month, and a recent Google search of "MODIS Rapid Response" returned 136,000 results. In addition to providing much of the imagery that appears on NASA's Earth Observatory and Visible Earth web sites, MODIS RRS also provides imagery to NASA Public Affairs, the S'COOL program, museums such as the National Museum of Natural History, and a variety of media outlets ranging from National Geographic to the History Channel.

Global 10-day fire maps are generated using the MODIS RRS fire locations to represent the current fire activity across the world.





On May 9, 2010, oil continued to flow from a damaged offshore oil well in the Gulf of Mexico. This image from Aqua's MODIS instrument shows the oil slick on that day.

Aqua's MODIS instrument captured this natural-color image of Hurricane Igor at 12:40 p.m. AST (16:40 UTC) on September 13, 2010. Igor shows all the characteristics of a strong hurricane, including a distinct eye and spiral arms spanning hundreds of kilometers.





AIRS Outreach at the Jet Propulsion Laboratory

AIRS science team member Ed Olsen was interviewed and filmed for Eco Company, a national TV show hosted by teens. The hosts report on topics ranging from the latest technologies in energy, recycling, conservation and organics to sharing the stories of young people making a positive impact on the environment. Ed spoke about the AIRS instrument, greenhouse gases, and infrared technology. The show runs on 117 local television stations around the country and is now opening in international television markets. Ed's segment will likely air during the Spring of 2011.





National Aeronautics and Space Administration

ViewSpace

ViewSpace is a popular and growing network of autoupdating multimedia astronomy and Earth science exhibits that are produced by the ViewSpace production team at the science and operations center of NASA's



Hubble Space Telescope and its successor, the James Webb Space Telescope. ViewSpace uses Internet-fed digital signage technology to provide an ever-changing kaleidoscope of

inspiring and educational presentations of the latest astronomy and space-based Earth science to informal education institutions. In a successful 2008 effort, the Aqua team worked with the ViewSpace production team to create an 18-minute ViewSpace feature showcasing the science and applications of the Aqua mission. These images are screenshots from the finished production.



AIRS Outreach Coordinator Sharon Ray assembled a panel of scientists to participate in JPL's Climate Change Town Hall. AIRS Science team member Dr. Eric Fetzer discussed the latest research about climate change and fielded questions from the audience at the Pasadena Convention Center as part of the Climate Day event.

AIRS Outreach Coordinator Sharon Ray on a recent trip to Africa, distributed NASA calendars and AIRS lenticular cards to Maasai tribesman in Tanzania. Sharon was able to describe the images through an interpreter.

