

## Science On a Sphere® (SOS)



Invented by Dr. Alexander MacDonald, Deputy Assistant Administrator for Labs and Cooperative Institutes/ Director, ESRL, Science On a Sphere is essentially a six-foot spherical

movie screen with a set of computer-driven projectors shining on it. Custom software provides the magic of the theater, coordinating the projected data into a seamless animated globe. Global datasets just cannot be accurately represented on a flat surface. SOS updates the trusty globe, bringing it into the age of computers and global remote sensing data. The Science On a Sphere project continues to gain momentum. The exhibit is now installed at nearly 50 museums and science centers, including a number of foreign sites.

## Virtual Institute for Satellite Integration Training (VISIT)



The primary mission of the Virtual Institute for Satellite Integration Training (VISIT) is to accelerate

the transfer of research results based on atmospheric remote sensing data into National Weather Service (NWS) operations. This transfer is accomplished through the education of NWS forecasters on the latest techniques to integrate remote sensing data, especially from satellite and radar. The education approach is based primarily on the use of distance education techniques (WEB-based, teletraining, computer-based modules) that rely on an expert being available at the local forecast offices (the Science Operations Officer (SOO) and a satellite/radar focal point). The strength of the VISIT teletraining approach is its ability to bring the instructor directly to the forecast office. This is done through the VISITview software. Most sessions developed under the VISIT program are stand-alone modules.

## The GLOBE Program



The Global Learning and Observations to Benefit the Environment (GLOBE) Program is an international hands-on primary and secondary school-based science education program. Students conduct

investigations in Earth science, collecting atmosphere, hydrology, soil, land cover/biology, and phenology measurements, reporting their observations through the

GLOBE website, using maps and graphs to analyze and understand their data, and collaborating with scientists and other students around the world. As of 2009, students from 20,000 schools in 110 countries have contributed 20 million measurements and many research reports to GLOBE, facilitated by the participating countries and 129 U.S. Partners.

## **The Community Collaborative Rain, Hail and Snow Network (CoCoRaHS)**



The Community Collaborative Rain Hail and Snow network (CoCoRaHS) is a popular citizen participation science project. Volunteers measure and report the precipitation that falls in their backyards. CoCoRaHS was first envisioned as a local project to involve the community in measuring

hail and precipitation here in Fort Collins, Colorado. CIRA helped start this project in 1997 by supporting two high school students who designed and tested low cost “hail pads” for measuring the number, size and density of hail stones. However, an extremely intense localized flash flood later that summer reshaped the project and demonstrated the need and opportunity for citizens to help scientists measure all forms of precipitation. Since that time, CoCoRaHS has grown steadily. In 2006, working through CIRA, the Colorado Climate Center received an Environmental Literacy grant from NOAA’s Office of Education. This grant enabled partnerships with NOAA and National Weather Service offices to expand the reach of CoCoRaHS across the nation. The CoCoRaHS approach to environmental education has been remarkably successful. By the end of 2009, CoCoRaHS will be active in all 50 states with nearly 15,000 volunteers across the country measuring and reporting their local precipitation. To learn more about CoCoRaHS and how you can help, go to [www.cocorahs.org](http://www.cocorahs.org).



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