

USGS EROS Data Center
25th Anniversary Open House
Saturday, September 19, 1998
9:00 a.m. to 3:00 p.m.

Indoor Activities

(Exhibits, Hands-on demonstrations, and Self guided tours)

Old Timers Gathering ---

The Main Conference Room has been set aside as a gathering place for long time EROS Data Center employees. The "Old Timers" definition has been expanded to include employees who worked at the downtown Sioux Falls office, "Downtowners", and employees with 20 years or more of service to the Center, "Veterans". The EROS Data Center scrapbooks, old photos, a slide show, and other mementos will be available for viewing. Light refreshments and much reminiscing are planned.

The Earth Doctor is in ---

At this exhibit kids and parents can ask questions about the Earth and the state of the global environment. You can look at photographs and images collected by aircraft and satellite, and talk about what you see. The Peanuts character Lucy would charge you 5 cents for answers and advice, but here the information is free.

A Time and Space Tour of Senegal ---

Take a time and space tour of the West African country of Senegal. Begin by viewing aerial shots of this ecologically diverse country and compare the aerial views to a Landsat satellite mosaic. Next, visit a variety of field sites through time, comparing before-and-after photos that take you back in time. This web site shows some of the work EROS scientists are doing in Senegal to monitor long-term environmental changes that have occurred as a result of droughts and human pressures.

National Elevation Data ---

Elevation data are used in a variety of applications, including mapping geologic hazards, engineering geology, hydrologic analysis, and meteorology. This exhibit shows a shaded relief rendition of the seamless National Elevation Database (NED) being assembled at the EROS Data Center. This prototype version was assembled using the best available Digital Elevation Models (DEMs) covering the conterminous U.S. Over 50,000 DEM files (75 gigabytes) were processed over a three month period using several UNIX workstations to produce this "first ever" seamless database in which the USGS's 7.5-minute, 30-minute, and 1-degree DEM data files have been appended together into one data set.

Urban Retrospectives Interactive Display ---

Major urban areas in the United States are expanding rapidly. Scientists at the EROS Data Center are studying where and how urban growth has occurred in selected U.S. cities in order to develop and refine computer-based models that can be used to predict where growth will occur in the future. These models will help city managers, land developers, and engineers to anticipate environmental problems associated with growth in different areas and to plan new developments accordingly. At this interactive display you use a computer to see how selected U.S. cities have expanded through the years.

National Atlas Interactive Demonstration ---

The new edition of the National Atlas of the United States of America is being produced as an interactive Web-based digital atlas. Visitors to this booth will be able to log into the National Atlas web site and compose a map by selecting data layers and an area they're interested in. The Atlas also features an animated map of vegetation growth and a clickable map of terrain relief and elevation.

Gold Panning ---

Learn how to pan for gold and other interesting minerals. Experienced gold panners will tell you where look for "pay dirt", show you how to fill your pan with the "right stuff", and teach you how to "pan your pan". Then it's your turn. Kids and parents are invited to compete for the best panful of "nuggets."

Red-Green-Blue: What do the colors mean? ---

Scientists analyze and interpret multispectral remotely sensed images based on the colors and patterns that represent different materials and conditions on the Earth's surface. At this demonstration you will learn how the primary colors (red, green, and blue) are assigned to multispectral data and how their mixtures are interpreted.

EROS Data Center on the World-Wide-Web ---

EROS Data Center staff demonstrate how to access the Center's web pages and the types of data and information that are available on-line.

Whatever do they use that thing for? ---

Scientists who use remotely sensed data to study the Earth work with some unusual equipment to analyze photographs and to collect samples and information about stuff on the ground ("ground truth") that is in the pictures. Examples of some of this equipment are displayed. Kids and parents are invited to figure out and match up each piece of equipment with the correct description of what it is used for.

ISM Demonstration ---

The Global Land Information System (GLIS) is a World Wide Web-based query tool developed by the U.S. Geological Survey (USGS) to provide data and information about the Earth's land surface. Examples of holdings available through the GLIS include cartographic data, topographic data, soils data, aerial photographs, and satellite images from various agencies and cooperators located around the world.

The GLIS booth will provide real-time demonstrations of the Global Land Information System and will give participants the opportunity to gain hands-on experience.

The GLOBE Program ---

The GLOBE Program exhibit provides an introduction to the National Oceanic and Atmospheric Administration (NOAA)-, National Aeronautics and Space Administration (NASA)-, National Science Foundation (NSF)-, and United States Geological Survey (USGS)-sponsored Global Learning and Observations to Benefit the Environment (GLOBE) Program with pictures depicting GLOBE teachers taking measurements as well as GLOBE visualization data. The display includes handouts for visitors interested in the program, a 10-minute video, the GLOBE home page, and on-line GLOBE images from participating schools around the world.

EarthKam ---

The EarthKam display features data of Australia and other locations that kids helped to capture using a digital camera mounted on the Space Shuttle. In addition to pictures of the Space Shuttle and EarthKam data, a video introducing the EarthKam program, the National Aeronautics and Space Administration's (NASA's) EarthKam home page, and on-line EarthKam images will also be shown.

UNEP GRID Sioux Falls---

The United Nations Environment Programme (UNEP), Global Resource Information Database (GRID) Sioux Falls serves as a window into the activities of the EROS Data Center and other US organizations for the United Nations community. UNEP is the environmental voice of the United Nations. UNEP GRID Sioux Falls gathers data and information about people and the environment using space and computer technologies. This information, in turn, is used to respond to questions about human populations, rivers, farming, fires and other topics relating people to their environment. Information about the data at the EROS Data Center is provided to people throughout the world via published reports, the Internet, and visiting scientists.

Sample USGS Map Products ---

Pick up a free United States Geological Survey (USGS) map product. Some are out of this world! A variety of unique maps of several planets such as Venus, Mars, and the Moons of Jupiter, in addition to large-scale maps of South Dakota, are available free at the Map Products Booth.

USGS Teacher Packets ---

The United States Geological Survey (USGS) produces many types of free educational packets for K-12 science and geography teachers. Teachers are invited to come and see what is available.

EDC Research/Ordering Assistance for Teachers ---

Need help finding out what EROS Data Center products might be useful for your class? Come see us for assistance.

Photo Laboratory Tour ---

The EROS Data Center Photographic Laboratory produces annually over 375,000 products. These products range from 16-millimeter film products to 50-inch paper prints. The lab uses many different kinds of printers and processors to produce both black-and-white and color products. This tour will introduce you to the range of photographic products and operations within EROS's Photographic Laboratory.

Digital Data Production Tour ---

Digital data production is responsible for custom image processing at the EROS Data Center. We create maps and images from a variety of different sources for many different uses. On this tour, visitors will be able to create maps on computers using data acquired from different satellites and sensors.

Computer Room #1 Tour ---

On this tour you will see some of the biggest and fastest computers that are used routinely to process digital data at the EROS Data Center. You will learn what each system does and how fast it does it. You will also see several data output devices in action as well as a display of all the Digital Archive media types that we currently use with information about their data storage capacities.

Computer Room #2 Tour ---

The tour of Computer Room 2 features Earth Observing System (EOS) and Landsat-7 data storage, product generation, and product distribution systems. EOS is a National Aeronautics and Space Administration (NASA) program designed to obtain data over a 10- to 15-year period from a series of polar-orbiting satellites. Landsat-7 is the latest in the Landsat series of satellites, the first of which was launched in 1972. Both satellites are scheduled to be launched in mid-1999 and will provide data for global change and earth science research. The EROS Data Center will be receiving up to 500 gigabytes per day of data from EOS and 150 gigabytes per day from Landsat-7. Visitors on the tour will see the Landsat-7 antenna tracking and control system, a variety of high-performance computers, and state-of-the-art robotic data storage systems. EOS and Landsat-7 engineering and operations staff will provide demonstrations and answer questions.

Data Archives Tour ---

The archive at the EROS Data Center holds the world's largest collection of satellite and aircraft photographs of the Earth's land surface. The archive holds over 9 million aircraft photographs of the United States, 3 million satellite images from throughout the world, and more than 218,000 computer tapes of satellite images.

USGS Videos ---

New EDC video, approximately 10 minutes in length, running every 15 minutes throughout the day.

Raytheon STX Booth ---

The Raytheon Company is a global technology leader in defense and commercial technology. Raytheon is proud to be a partner with the USGS at the EROS Data Center providing scientific, engineering, and software support in the areas of space and Earth science, scientific data management, remote sensing, and satellite ground systems. Raytheon's booth highlights its endeavors in space and earth remote sensing with special activities and gifts for children.