



Summary of South Dakota Space Days 2008

South Dakota Space Days 2008: Spaceship Earth-Celebrating 50 Years of Exploration was held on Oct. 16-17, 2008 at the Watertown Event Center in Watertown, SD. This annual event is sponsored by the South Dakota Space Grant Consortium (SDSGC) <<http://sdspacegrant.sdsmt.edu>>, headquartered at the SD School of Mines & Technology (SDSM&T). The 2008 event was organized and hosted by SDSGC affiliate Lake Area Technical Institute and the Watertown school system. The Consortium Management Team believes that Space Days 2008 was clearly the best ever! About 2,000 students, teachers, and the general public attended Space Days 2008.

<http://sdspacegrant.sdsmt.edu/SpaceDay2008Home.htm>

This highly successful, annual public service event draws thousands of students and teachers from throughout South Dakota who then participate in “hands-on” educational activities in science, technology, engineering and math (STEM). Students visit with experts in aerospace, aeronautics, earth science, engineering, computer science, physics, and other STEM fields about their careers. Guest speakers with nationally recognized credentials such as NASA astronauts, scientists, and managers present programs and meet with the students. Numerous exhibits on space and earth science and technology are provided by members of the SD Space Grant Consortium and other organizations. Students are exposed to the excitement and opportunities of various STEM careers and they learn firsthand about the impact that NASA has on their lives. At Space Days 2008, SDSGC provided students and teachers with educational handouts including over 1,000 high quality NASA posters, lithographs, standards-based NASA educational curriculum materials, and other useful information. The additional exhibitors provided educational materials of their own.

Several NASA experts presented at SD Space Days 2008, in addition to the cadre of NASA staff that accompanied NASA’s Exploration semi-tractor trailer exhibit. Some of the speakers included the following NASA personnel.

- ◇ **Astronaut Mike Fossum** kept the audience on the edge of their seats as he described his second Shuttle mission to the International Space Station (ISS) in summer 2008 to deliver the Japanese “Kibo” Pressurized Module. He tirelessly gave eight presentations to theaters packed with students, teachers and the general public over the two-day period.



- ◇ **Dr. Jack Bacon**, Systems Integrator for the ISS Program and motivational speaker from NASA Johnson Space Center, gave several presentations about the construction of the ISS and the program as well as plans for future NASA missions.

- ◇ **Dr. Ray Wheeler**, plant physiologist at NASA Kennedy Space Center, gave a very interesting overview of research into the use of plants for life support in space.
- ◇ **Angelo Casaburri**, NASA Aerospace Education Specialist, provided one of the 16 individual missions titled “One Small Click for Mankind”, a multi-media space adventure beyond books and blackboards that is based on NASA’s Space Educators’ Handbook. Each participant was provided a computer for the session and kept the educational CD ROM.

SDSGC’s **Tom Durkin** presented “Mars Mania” to 400 students at the local high school and again to 300 middle school students at the Watertown Event Center. Other speakers included researchers from SD State University, SDSM&T, and the University of North Dakota.

Sixteen (16) individual *hands-on* “missions” plus the presentations listed above were provided. Teachers could select up to six events for their classes to attend from among the missions and presentations; typically four missions and two presentations per class. The missions were developed by local teachers so that the content was based on the science standards. Mission topics included Mars Rover robotics (see photo), GPS scavenger hunt, aeronautics, an exercise in bicycle-generated electrical generation that was equated to the requirements for the successful return of Apollo 13 (see photo), etc.



NASA’s large Exploration semi-tractor trailer exhibit was provided (see photo) where students built a virtual lunar base and touched an actual moon rock brought back to Earth from an Apollo mission (see photo).

As a result of assessing the on-site evaluation forms provided at Space Days 2007, SDSGC’s Management Team decided to target only middle and high school students and provide age-relevant, specific programs for Space Days 2008. SDSGC’s Management Team continues to evaluate how future Space Days events can be improved. Space Days 2009 is tentatively being planned to be held in Rapid City on the campus of SDSM&T on October 1-2, 2009.