



RICE[®]

theHoustonMuseumofnaturalscience

“Firsts” for the Houston Museum of Natural Science – Rice Partnership

- First NSF-funded teacher research program in Astronomy and Earth Science: 1988-91 (teacher alumni of that program include the Director of Science at HISD, head of Challenger Center at George Observatory, and many other talented teachers).
- First meter-class telescope dedicated to the public: George Observatory, and still the largest public telescope within one hour of 5 million people. Also collaborated to get state law passed to protect dark skies near observatories.
- First internet-accessible but *safe* (non-html) online museum exhibit, **SL9**, 1994
HMNS has had Rice-Developed, internet-accessible earth and space science exhibits ever since, with more than two million in-person users.
- First educational CD-Rom to allow *safe* (non-html) access to online realtime earth and space science data: *Space Update*, 1996. (Followed by *Earth Update*, *Space Weather*, and *Mars Update*) Over 160,000 in the field, sold and given away free to teachers.
- First network of museums for Earth science: [Museums Teaching Planet Earth](#), 1998
Winner of first two NASA Cooperative Agreement Competitions: ESIP and REASoN
- Charter member, Earth Science Information Partners, 1998 (www.esipfed.org);
Cooperating with: DLESE, NSDL, Museum Visualization Alliance, and others
- First fullview immersive digital theater in the U.S., 1998 (Burke Baker Planetarium)
First fullview show: “*Cosmic Mysteries*” (Dec 1998)
Upgraded theater to fulldome in 2000 (6 projectors instead of 4)
- First fullview Earth Science production for immersive digital theaters
Powers of Time, 1999
- First fulldome Earth and Space Physics show for immersive digital theaters
Force 5, 2000. Additional shows completed: *Future Moon*, 2002; *Saturn: the Ring World*, 2004; *Secrets of the Dead Sea*, 2004; *Earth’s Wild Ride*, 2005; *Dinosaur Prophecy*, 2006; *Night of the Titanic*, 2007; *Impact Earth*, 2008; *Force 5*: 2010 (plus many more other HMNS shows) – www.spaceupdate.com/?planetariums_shows.html
- First single-projector, immersive portable digital theater
Discovery Dome, 2003 (now in 100+ locations, 25 states, 26 countries – including first digital planetarium in East Africa). Spinoff distribution company: MTPE, Inc (www.discoverydome.com) (user map <http://tinyurl.com/discdome>)



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- First fulldome show DVD flown in space (on [STS-123 by Takao Doi!](#)), 2008
- First fisheye lens flown in space (still up on the ISS; launched 2009)

The following products were developed for Discovery Dome by our partner Avela Corp with our help in design, testing, and distribution:

- First standup, easy-access portable inflatable dome with an airlock: [Go-Dome](#), 2004
- First dual-mirror portable projection system: [Newtonian-1](#), 2007
- First coated front-surface convex mirror for dome: *Go-Vex*, 2010.
- First semipermanent inflatable dome: [Zodiac Dome](#), 2010.

Carolyn Summers (HMNS) statistics:

Vice President for Astronomy and Physical Science, Houston Museum of Natural Science

Invented the Challenger Center Concept (many millions of children around the world)

Taught virtually all the astronauts celestial navigation

More than a million students taught in person

Twenty-five fulldome digital planetarium shows produced (wrote all scripts)

“Woman on the Move”, 1998

Many teaching and service awards

Patricia Reiff (Rice University) statistics:

Professor, Physics and Astronomy Dept; Director, Rice Space Institute

Fellow, American Geophysical Union, 1997

“Athelstan Spilhaus” award from AGU for public outreach, 2009

“Woman on the Move”, 1990

Created “Master of Science Teaching” Program (19 alumni plus 6 presently)

Elected to Cosmos Club, 1992

Thirteen PhD graduates

Co-Investigator on DE, Polar, IMAGE, Cluster and MMS missions (space plasma physics)

E/PO lead on MMS Mission ; co-lead on IMAGE and Cluster missions

PI, “The Public Connection”; “Museums Teaching Planet Earth”; “Immersive Earth”

President and CEO, MTPE, Inc. and Space Update, Inc. (Spinoff companies marketing Rice and Museum-developed products).

Head of Local organizing committee, Sally Ride Science Festival – Houston. Brings 1400+ middle school girls to Rice for hands-on science workshops annually plus street fair.

Keynote speaker 2006: Sally Ride. Keynote speaker 2007: Eileen Collins, with video

greeting from Peggy Whitson, ISS commander. Keynote speaker 2008: Peggy Whitson;

2009: Ellen Ochoa; 2010: Wendy Lawrence