

New sightings Web site helps space fans and students

Undergraduate work on a Web-based software program has helped two computer science students join the space center ranks, while helping people around the world track NASA satellites as they fly overhead.

NASA SkyWatch is an easy-to-use online tool allowing individuals to get real-time acquisition and sighting data on prominent NASA satellites as they orbit the Earth (<http://spaceflight.nasa.gov/realdata/sightings/>). William Tracy, United Space Alliance flight dynamics officer, spearheaded development of the SkyWatch software program and through a USA-sponsored student work partnership, enlisted the help of Texas Southern University computer science students to make the program adaptable for the Web.

"It works out great," said Tracy. "The students get to see how tools are used in industry and we benefit from the skills of really talented students."

Shaji Markose and Richard Osborne are two of the students who worked on SkyWatch. Since then, both computer science graduates have joined USA as full-time employees, putting their skills and interests to work for the space program.

Osborne, in the Advanced Technology Development Group, said before working on the program he always thought he'd go to work in the video game development industry, but his experience with SkyWatch changed that.

"I couldn't wait to wake up and go to work at NASA," said Osborne. "And working with Tracy was great – his enthusiasm is contagious and you could tell he was passionate about the project. We worked many late nights on it."

Their hard work has reaped wonderful rewards. When you visit the

site, you'll find a feature rich tool that has been designed to be easy to understand, while still providing enough technical details for serious astronomy fans.

"There are other sites out there, but SkyWatch is the only one that uses actual



The SkyWatch team includes, clockwise from top, Richard Osborne, USA; William Tracy, USA; Kelly Humphries, NASA; and Kim Dismukes, Indyne, Inc. Not pictured: Shaji Markose, USA.



The SkyTrack feature produces a custom image per the reviewer's locale that presents the path of the satellite or vehicle in relation to the visible stars. Using the site, visitors can track the International Space Station, satellites or the space shuttle during missions.

Popular Science recognized JSC's Human Space Flight Web in its listing of the Web's 50 hottest sci-tech sites. In a fall issue, the publication cited the usefulness of the SkyWatch function.

Mission Control data," explained Tracy. "Additionally, we are the only ones that can forecast shuttle entry sightings. That is true atmospheric flight – there is no other Web application that can do that."

"Having the opportunity to walk outside your house and see the shuttle or station fly over makes the space program more tangible," added Tracy. "It makes people feel like they are part of it."

"It puts the space program on a more personal level," added Kim Dismukes, IMPASS manager for the Human Space Flight Web site. "When people see the shuttle or the station, it brings the space program to life."

Before the launch of SkyWatch, space program fans were limited to text listings of sighting opportunities. Those listings are still available, but by identifying a

city or specifying a location using latitude and longitude, this Web-based Java application can produce an image of the satellite trajectory against the backdrop of stars as they would be seen at the location. Known as SkyTrack, this feature is one of the most popular. The SkyWatch site also provides digital data such as Azimuth (degrees East of North), elevation (degrees above the horizon), and range (miles) throughout the pass.

"It's a very interactive program," said Kelly Humphries, NASA manager for the Human Space Flight Web site. "We look at SkyWatch as an example of what's to come for the Human Space Flight Web. We hope to incorporate more, similar features that make the users feel as if they are part of the Mission Control Center and part of the NASA team." ■

JSC to observe St. Patrick's Day

On Friday, March 17, the JSC St. Patrick's Day Observance will be held at 11:30 a.m. in the Bldg. 3 cafeteria. Come hear the Houston Highlander Bagpipers perform under the direction of Ian Martin. The bagpipers are well-known to the JSC community and surrounding areas.

They have performed at JSC's American Heritage Week, St. Patrick's Day Observance, the Robert Burns Dinner, the St. Patrick's Day parade in downtown Houston, and Dickens on the Strand, just to name a few.



Aerospace medical conference to meet in Houston

The 71st Aerospace Medical Association Annual Scientific Meeting will take place at the Westin Galleria & Oaks May 14 – 18. The event, titled "New Horizons in Aviation and Space Medicine," will feature seminars ranging from accident investigation to clinical and operational space medicine. There also will be an astronaut panel and lectures from former NASA Flight Director Eugene Kranz, Director of Space and Life Sciences Dave Williams and Dr. Stanley White, former JSC project officer and former AsMA president. For meeting and registration information visit www.asma.org or contact Dr. Paul Stoner at x39648. Advance registration closes April 17.