

The Year of Videoconferences

The 2013-2014 school year seems to be the year of videoconferences for Partner School Science Program (PSSP) schools. "In a school year, we have had a maximum number of 14 NASA videoconferences for past 10 years. However, this school year we have already registered 20 NASA videoconferences. It is

highly possible this number will increase in the following days. As of now, the total NASA videoconference number is 90," said Mr. Tolga Yildirim.



Since the last videoconference on December 3, 2013, PSSP schools participated in eight videoconferences with NASA, two videoconferences organized between partners.

Students received information about both Toys in Space and Mission Patch by Mr. Scott Anderson from Marshall Space Flight Center (Huntsville, Alabama, USA). It was interesting for students to learn the idea behind designing a mission patch or the science behind the toys. Students designed their own mission patches, toys, and found solutions on how to let astronauts play and have fun in space. Following videoconferences took place between partners:

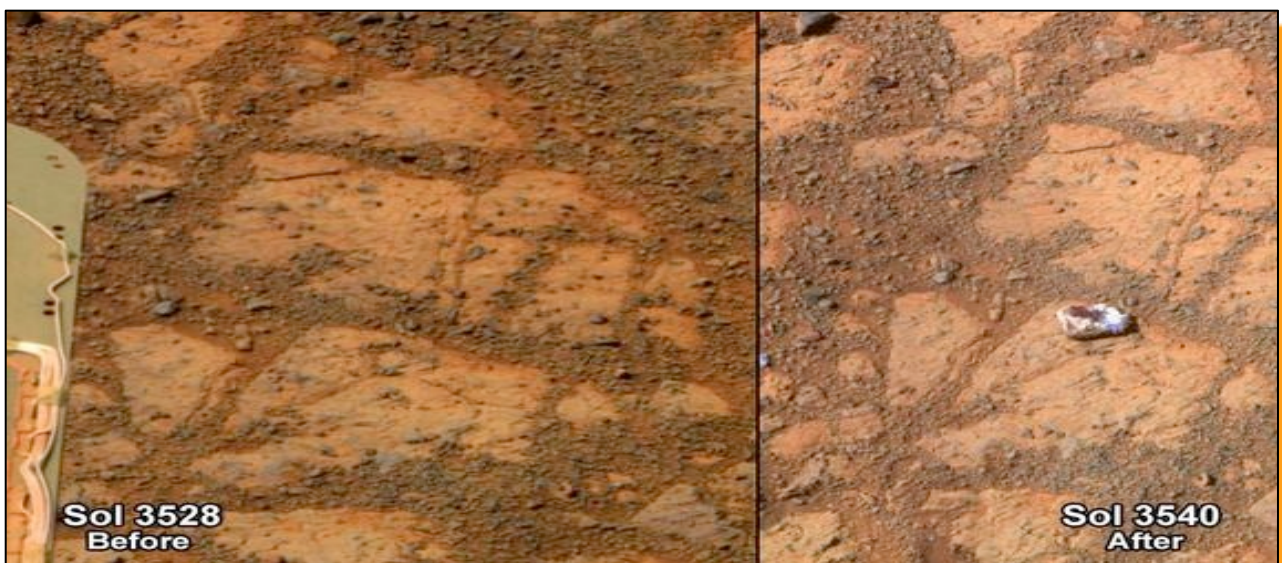
- **December 5, 2013** - Middle School 328(NYC, New York), Mithatpasa Turk College - Mission Patch
- **December 6, 2013** - School4Child (Lodz, Poland), Rota College(Izmir, Turkey) - Meet and Greet
- **December 19, 2013** - Kemerburgaz Doga College (Istanbul, Turkey), Noble Academy (North Caroline, USA) - Meet and Greet
- **January 13, 2014** - Noble Academy (North Caroline, USA), Kemerburgaz Doga College (Istanbul, Turkey), SEV Primary School (Izmir, Turkey) - Mission Patch

- **January 14, 2014** - Acibadem Doga College (Istanbul, Turkey) - John Ericsson School (NYC, USA) - Toys in Space
- **January 15, 2014** - Rota College (Izmir, Turkey) - School4Child (Lodz, Poland) - Toys in Space
- **January 16, 2014** - Middle School 328 (NYC, USA) - METU College (Ankara, Turkey) - Mission Patch
- **January 23, 2014** - Atasehir Doga College (Istanbul, Turkey) - Toys in Space
- **January 24, 2014** - Izmir Bahcesehir College (Izmir, Turkey) - Mission Patch
- **January 30, 2014** - John Ericsson School (NYC, USA) - Toys in Space

Technology

Mysterious Mars Rock Looks Like 'Jelly Donut,' Defies Explanation (Photos)

by Tariq Malik, Managing Editor | January 21, 2014 04:35pm ET



This before-and-after pair of images of the same patch of ground in front of NASA's Mars Rover Opportunity 13 days apart documents the arrival of a strange, bright rock at the scene. The rock, called "Pinnacle Island," is seen in the right image on Jan. 8, 2014. The image at left was taken on Dec. 26, 2013. Credit: NASA/JPL-Caltech/Cornell Univ./Arizona State Univ.

A mystery rock on Mars that suddenly appeared in front of NASA's Opportunity rover may look like a tasty donut, but it is like nothing ever seen on the Martian surface before.

The [strange Mars rock was spotted by Opportunity](#) on Jan. 8 in a spot where, 13 days earlier, there was nothing. The rock, which scientists now call "Pinnacle Island," is white on the outside, red in the middle and appeared after Opportunity had just finished a short drive.

"It looks like a jelly donut," said Steve Squyres, the rover's lead scientist at Cornell University in Ithaca, N.Y., during a recent NASA event marking Opportunity's 10th year on Mars. "And it appeared, it just plain appeared, at that spot and we haven't driven over that spot." [[Amazing Photos from NASA's Opportunity Mars Rover](#)]



Steve Squyres, lead scientist for NASA's Mars rover Opportunity, points at a strange rock found by the rover on Jan. 8, 2014, where earlier there had been nothing, during a Jan. 16 presentation. The rock has been named "Pinnacle Island." Credit: NASA/JPL [View full size image](#)

The odd rock is located in a spot on "Murray Ridge" along the wall of Endeavour Crater where [Opportunity](#) is spending the Martian winter. A closer look at the rock using Opportunity's robotic arm-mounted instruments revealed even more surprises.

"It's like nothing we ever seen before. It's very high in sulfur, very high in magnesium, it has twice as much manganese than anything we've seen on Mars," Squyres said with excitement in last week's Jan. 16 event. "I don't know what any of this means. We're completely confused, we're having a wonderful time."

Squyres said rover scientists have two working theories on how the Pinnacle Island rock mysteriously appeared near Opportunity. One suggests that the rock is a piece of debris from an impact crater somewhere near the rover that just happened to plop down in front of Opportunity, while the other theory is that the rock was kicked up by one of the rover's six wheels during its recent drive.

"That's the more likely scenario," Squyres said of the wheel-driven idea. "The crater ejecta one, I don't really believe. I think that the idea that somehow we mysteriously flicked it with the wheel is the best explanation."

Opportunity has been exploring Mars since Jan. 24, 2004, when it landed on the Red Planet a few weeks after its robotic twin Spirit. Both`rovers far outlasted their original 90-day mission, with Opportunity still driving today. Spirit's mission officially ended in 2011, several months after the rover stopped communicating with Earth.

Squyres said the weird Mars rock is an example of how the Red Planet keeps surprising scientists, even 10 years later.

"Mars keeps throwing new things at us," he said.

NASA has been celebrating the [Mars rover mission's 10th anniversary](#) in several events this month, including the Jan. 16 presentation that included Squyres, as well as a new Mars rover photo exhibit at the Smithsonian Air & Space Museum Washington, D.C.



Fixed to a tripod and looking east across the Kennedy Space Center's Turn Basin, [a camera captured](#) these star trails as a series of short exposures over a three hour period on the evening of January 23rd. Positioned just a few miles from Space Launch Complex 41 at Cape Canaveral Air Force Station, it also captured a spectacular night launch of an Atlas V rocket carrying NASA's [Tracking and Data Relay Satellite TDRS-L](#). Creating the trails, [the apparent motion](#) of the stars through the sky is just a reflection of the daily rotation of planet Earth on its axis. But that rotation is also the reason the [rocket streak](#) follows a path arcing east across the Atlantic. [Launching toward](#) the east, in the direction of Earth's rotation, adds the rotation velocity to the rocket and reduces the fuel needed to reach orbit. A little ironically, TDRS-L is destined for a [geostationary orbit](#). From there, 36,000 kilometers or so above the equator, its orbital period will match Earth's rotation and the satellite will hang motionless [in planet Earth's sky](#).