



Global Friendship Through Space Education

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ASTRO

The Partner School Science Program Newsletter

Put Your Face Into Space!

The space shuttle *Discovery* is slated to launch on its final mission later this month, and that means voting has closed on NASA's Space Rock contest.



It's been a tradition since the Apollo program to rouse slumbering astronauts with music selected either by flight controllers or by crew members' friends and family.

This year, as the shuttle fleet draws closer to retirement, NASA decided to open the floodgates and ask all of Earth to choose the wakeup songs for *Discovery's* last ride.

The agency provided a list of Top 40 tunes and has collected almost 3 million votes since then on which two should be used during *Discovery's* upcoming 11-day mission. Voting has closed, and the two winning numbers will be announced during the mission.

Though voting for this contest has ended, it's not too late to take part in NASA's other public offering: Put your Face in Space.

If you've got a digital photo handy, you can upload your face to a NASA site, and a printout of that picture will fly aboard one of the final two shuttle missions. For the shy types, you can also skip the picture and send just your name into orbit.

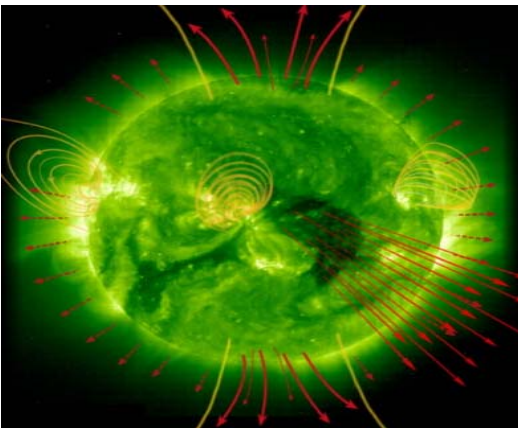
A nifty map of participants shows that 255,869 people around the world have entered either a face or a name—and I really mean **around** the world. True, the U.S. leads the charge with 109,283 submissions. But there are also, to name just a

few international entries, 25 from Uganda, 751 from Indonesia, 1,641 from Romania, and 975 from Peru.

Admittedly that's just a drop in the bucket, considering the current world population of more than 6.8 billion. But hey, it's a start.

The Face in Space page will be open to entries until the last scheduled shuttle launch. To get your face into space, visit <https://faceinspace.nasa.gov/index.aspx>.

Space Weather: Mercury's Tornadoes



If you look at pictures of Mercury taken with a high-powered telescope, the planet looks peaceful and calm. It's tiny, barely bigger than our moon, and covered by craters. But up close, and seen with the right scientific instruments, Mercury sends out a different message. The sun, its nearby neighbor, blasts the tiny planet with radiation. And the planet's tornadoes are like nothing you've ever seen. These twisters don't destroy houses and cars and towns — because no one lives on Mercury. They don't transport anyone to Oz — because, let's face it, Oz isn't a real place. They don't form in the clouds — because Mercury doesn't have clouds. And they're not made of twisted columns of dust and debris — because Mercury doesn't have wind or dust.

The tornadoes on Mercury are like nothing you've ever seen because they're invisible. They form when part of the planet's magnetic field twists up into a spiral, and they open up a connection between the planet's surface and outer space. These tornadoes are enormous — sometimes as wide as the planet itself — and can appear and disappear within a few minutes. On Earth, tornadoes form when two weather systems collide. On Mercury, magnetic cyclones show up when powerful forces, called magnetic fields, smash together.

Mercury's magnetic tornadoes are more than just a powerful force of nature. They may explain another of Mercury's mysteries. Astronomers now suspect that Mercury's atmosphere — or at least part of it — may actually be created by the magnetic tornadoes. When a tornado opens up, the solar wind can wind down to the surface of the planet. Its particles are so powerful that when they strike Mercury's rocky surface, atoms fly up, up, up — and then gravity pulls them back down.

A magnetic tornado can be as wide as the entire planet, so sometimes the solar wind may blast half the planet at once. This sends up a lot of atoms, over a giant chunk of

the planet's surface, flying up like teeny baseballs that have just been hit out of the ballpark — and coming down again, eventually.

The magnetic tornadoes may last only a few minutes, which means the solar wind has only a few minutes to stir up atoms on Mercury's surface. But the tornadoes happen frequently, which means the atmosphere may show up in one place, disappear minutes later — and show up again somewhere else on Mercury.

IMAGE OF THE DAY - Cosmic Gem

Is it a massive bubble? A huge holiday ornament? A multicolored stargate? No, it's the leftover cloud of hot gas and dust created by a star that ended its life in a violent explosion.



The new picture of this cosmic bauble combines data from NASA's Chandra X-ray Observatory and the Hubble Space Telescope.

Image Credit: ESA/NASA

Known as SNR 0509-67.5, the supernova remnant sits about 160,000 light-years from Earth in the Large Magellanic Cloud, a satellite galaxy of our own Milky Way galaxy. Chandra's x-ray vision shows the soft greens

and blues from hot material, while Hubble's visual-light data reveals the visible, glowing pink shell of gas being superheated by an expanding shock wave.

Note: Image of The Day section's aim is to create curiosity in your mind and make you want to search about the image or topic, rather than us giving full details about the image. We are expecting you to ask yourself questions and to search for information about the image of the day to get answers and learn more.