



Global Friendship Through Space Education

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ASTRO

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NASA Partners On Nanosail-D Amateur Astronomy Image Contest

NASA has formed a partnership with Spaceweather.com to engage the amateur astronomy community to submit the best images of the orbiting NanoSail-D solar sail. NanoSail-D unfurled the first ever 100-square-foot solar sail in low-Earth orbit on Jan. 20.

To encourage observations of NanoSail-D, Spaceweather.com is offering prizes for the best images of this historic, pioneering spacecraft in the amounts of \$500 (grand prize), \$300 (first prize) and \$100 (second prize).

The contest is open to all types of images, including, but not limited to, telescopic captures of the sail to simple wide-field camera shots of solar sail flares. If NanoSail-D is in the field of view, the image is eligible for judging.

The solar sail is about the size of a large tent. It will be observable for approximately 70 to 120 days before it enters the atmosphere and disintegrates. The contest continues until NanoSail-D re-enters Earth's atmosphere.

NanoSail-D will be a target of interest to both novice and veteran sky watchers. Experienced astrophotographers will want to take the first-ever telescopic pictures of a solar sail unfurled in space. Backyard stargazers, meanwhile, will marvel at the solar sail flares -- brief but intense flashes of light caused by sunlight glinting harmlessly from the surface of the sail.

NanoSail-D could be five to 10 times as bright as the planet Venus, especially later in the mission when the sail descends to lower orbits. The NanoSail-D satellite was jointly designed and built by NASA engineers from the agency's Marshall Space Flight Center in Huntsville, Ala., and NASA's Ames Research Center in Moffett

Field, Calif.

Key sail design support was provided by ManTech/NeXolve Corp. in Huntsville. The NanoSail-D experiment is managed by Marshall. It is jointly sponsored by the Army Space and Missile Defense Command, the Von Braun Center for Science and Innovation and Dynetics Inc., all located in Huntsville.

To learn more about the NanoSail-D imaging challenge and contest rules, satellite tracking predictions and sighting times, visit <http://www.nanosail.org>.

Land on "Goldilocks" Planet for Sale on eBay



The alien planet *Gliese 581g* set off a firestorm of controversy earlier this year when astronomers loudly declared it to be the first truly habitable planet found outside our solar system.

One of several planets known to orbit the red dwarf star *Gliese 581*, the headline-grabbing world was described by one researcher as being "just the right size and just at the right distance [from its star] to have liquid water on the surface."

Not so fast, other astronomers cried. Are you sure this planet actually exists?

Even at a mere 20 light-years from Earth, *Gliese 581g* is too far away for us to see it directly. We have to infer its existence based on the planet's gravitational tugs on its host star.

While scientists have been arguing whether *Gliese 581g* is real, two American citizens went ahead and laid claim to the planet and have started selling plots of alien land on eBay. Say what?

According to Jason Connell and Alison Tippins, there's a loophole in the United Nations' 1967 Outer Space Treaty, which prohibits countries from claiming property in space. They say the treaty doesn't say anything about private citizens. The two entrepreneurs have, therefore, issued a declaration of ownership to the United Nations and have, as a joke, set up a page on eBay for selling ten-acre (four-hectare) parcels of the planet for U.S. \$20 each.

Dubbing themselves "The Benevolent Fisted Rulers of Gliese 581g," the pair has renamed the planet Zarmina's World, based on a nickname given to Gliese 581g by one of the discovering scientists.

According to the eBay ad, some of the "advantages to being an early adoptive landowner" are:

- Zarmina orbits its sun every 37 days, so your life expectancy automatically increases to roughly 749 years.
- Landowners will be charged only nominal docking/landing/takeoff fees. Tourists will shamelessly be taken advantage of.

Since we currently lack the space-faring vehicles that would make a journey of 20 light-years practical, for now your \$20 buys you only a transferable land deed, a print of an artist's representation of the planet and its star, a copy of the Bill of Rights and Constitution, and a scientific fact sheet and outline of intentions.

IMAGE OF THE DAY - Decorating the Sky

This mosaic image taken by NASA's Wide-field Infrared Survey Explorer, or WISE, features three nebulae that are part of the giant Orion Molecular Cloud--the Flame nebula, the Horsehead nebula and NGC 2023.



Image Credit: NASA/JPL-Caltech/UCLA

Despite its name, there is no fire roaring in the Flame nebula. What makes this nebula shine is the bright blue star seen to the right of the central cloud. This star, Alnitak, is the easternmost star in Orion's belt. Wind and radiation from Alnitak blasts away electrons from the gas in the Flame nebula, causing it to

become ionized and glow in visible light. The infrared glow seen by WISE is from dust warmed by Alnitak's radiation.

The famous Horsehead nebula appears in this image as a faint bump on the lower right side of the vertical dust ridge. In visible light, this nebula is easily recognizable as a dramatic silhouette in the shape of a horse's head. It is classified as a dark nebula because the dense cloud blocks out the visible light of the glowing gas behind it. WISE's infrared detectors can peer into the cloud to see the glow of the dust itself.

A third nebula, NGC 2023, can be seen as a bright circle in the lower half of the image. NGC 2023 is classified as a reflection nebula, meaning that the dust is

reflecting the visible light of nearby stars. But here WISE sees the infrared glow of the warmed dust itself.

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.