

Hello Terrestrial Being,

As we come to the end of another year, we wish to thank all of our teachers who have been with us through another year. Many great projects have been shared with GFTSE and they would have not happened without the guidance and motivation of the teachers. You can see some of the action on page 3 of this issue.

Also, do check out some of the top stories from different space news portals all over the world down below. Everything from an interstellar asteroid to a new Mars Rover is in our interest these days. Hooray Space!

SPACE NEWS IN A FLASH

- 1st Interstellar Asteroid is a Spinning Space Cigar
- NASA Builds Its Next Mars Rover Mission
- Closest Temperate World Orbiting Quiet Star Discovered
- First Cat in Space to Receive a Proper Memorial
- Dinosaur Killing Asteroid Hit Earth In Exactly The Wrong Spot
- James Webb Telescope Emerges From 90 Days Under Lock and Freeze
- Astronomers Create Most Detailed Radio Image of Nearby Dwarf Galaxy

For the wise man looks into space and he knows there is no limited dimensions.

- Lao Tzu

1st Interstellar Asteroid is a Spinning Space Cigar

When astronomers using the Pan-STARRS1 telescope in Hawaii spotted a mysterious object dashing through our solar system on Oct. 19, they immediately knew it was something special.

Traveling at high speed and originating from interstellar space, this object was originally thought to be an ancient comet, but observations revealed it was, in fact, an asteroid from another star system.



Astronomers have determined that the mysterious object — which has been named 'Oumuamua and given the official scientific designation 1I/2017 U1 — looped around the sun on Sept. 9 and made its closest pass by Earth on Oct. 14. 'Oumuamua (whose name means "a messenger from afar arriving first" in Hawaiian) is now about 124 million miles (200 million kilometers) from Earth and is zooming away from us at about 85,700 mph (137,900 km/h) relative to the sun, NASA officials said.

'Oumuamua is thought to be at least 1,300 feet (400 m) long, rocky (with some metal perhaps mixed in), relatively dense and shaped like a cigar, researchers said. It likely acquired its ruddy hue after being bombarded by high-energy cosmic rays for the millions of years it's been drifting through interstellar space, team members added.

(<http://www.livescience.com>)

NASA Builds Its Next Mars Rover Mission

In just a few years, NASA's next Mars rover mission will be flying to the Red Planet.

At a glance, it looks a lot like its predecessor, the Curiosity Mars rover. But there's no doubt it's a souped-up science machine: It has seven new instruments, redesigned wheels and more autonomy. A drill will capture rock cores, while a caching system with a miniature robotic arm will seal up these samples. Then, they'll be deposited on the Martian surface for possible pickup by a future mission.

Mars 2020 relies heavily on the system designs and spare hardware previously created for Curiosity rover, which landed in 2012. Roughly 85 percent of the new rover's mass is based on this "heritage hardware."

(<http://phys.org>)

Dinosaur Killing Asteroid Hit Earth In Exactly The Wrong Spot

Sixty-six million years ago, an asteroid struck Earth in what is now the Yucatan Peninsula in southern Mexico. This event, known as the Chicxulub asteroid impact, measured 9 km in diameter and caused extreme global cooling and drought. This led to a mass extinction, which not only claimed the lives of the dinosaurs, but also wiped out about 75% of all land and sea animals on Earth.

However, had this asteroid impacted somewhere else on the planet, things could have turned out very differently. According to a new study produced by a team of Japanese researchers, the destruction caused by this asteroid was due in large part to where it impacted. Had the Chicxulub asteroid landed somewhere else on the planet, they argue, the fallout would not have been nearly as severe.

In short, modern hominids may very well owe their existence to the fact that the Chicxulub asteroid landed where it did.

(<https://www.universetoday.com>)

Closest Temperate World Orbiting Quiet Star Discovered

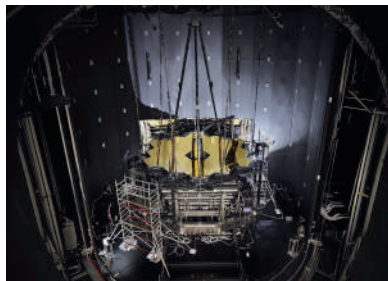
A temperate Earth-sized planet has been discovered only 11 light-years from the Solar System by a team using ESO's unique planet-hunting HARPS instrument. The new world has the designation Ross 128 b and is now the second-closest temperate planet to be detected after Proxima b.

It is also the closest planet to be discovered orbiting an inactive red dwarf star, which may increase the likelihood that this planet could potentially sustain life. Ross 128 b will be a prime target for ESO's Extremely Large Telescope, which will be able to search for biomarkers in the planet's atmosphere. Ross 128 is moving towards us and is expected to become our nearest stellar neighbour in just 79 000 years.

(<http://www.spacedaily.com>)

James Webb Telescope Emerges From 90 Days Under Lock and Freeze

The James Webb Space Telescope has just emerged into the light after more than 90 days sealed in NASA's giant cryogenic vacuum chamber. The test is crucial to ensuring the next-generation telescope is space-ready before its launch, which is currently scheduled for mid-2019.



James Webb is often touted as Hubble's cosmic successor. The two telescopes have similar mission profiles and overlap in the wavelengths of light they detect. But Webb's main mirror is more than six times the size of Hubble's. It's so large, that engineers had to construct it out of 18 individual segments, which will unfold and align once it reaches its destination.

(<http://www.space.com>)

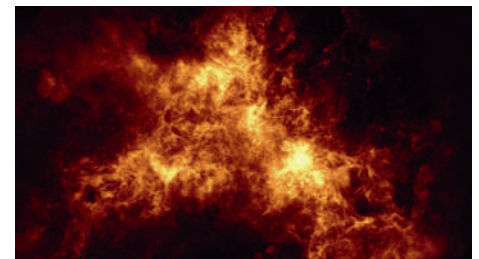
First Cat in Space to Receive a Proper Memorial



On Oct. 18, 1963, a French cat named Félicette became the first and only feline to ever travel to space. She launched atop a Véronique AG1 rocket and flew nearly 100 miles (157 kilometers) above the Earth, where she briefly experienced weightlessness. Her rocket soared up to six times the speed of sound and exposed her to 9.5 g's of force. Fifteen minutes later, she safely returned to Earth by parachuting down in her little space capsule — alive and well.

(<http://www.livescience.com>)

Astronomers Create Most Detailed Radio Image of Nearby Dwarf Galaxy



Astronomers at ANU have created the most detailed radio image of nearby dwarf galaxy, the Small Magellanic Cloud, revealing secrets of how it formed and how it is likely to evolve.

This image was taken by CSIRO's powerful new radio telescope, the Australian Square Kilometre Array Pathfinder (ASKAP), and its innovative radio camera technology, known as phased array feeds.

The Small Magellanic Cloud, which is a tiny fraction of the size and mass of the Milky Way, is one of our nearest galactic neighbours and visible to the naked eye in the southern sky.

(<http://phys.org>)

SCHOOLS IN ACTION

We have never seen so many photos of different schools in this section before. I guess it is safe to say, our programs are growing stronger day by day. That was so poetic! :)



Bahçe ehir College, Antalya



Erkan Ulu Schools, stanbul



FMV I ık Middle School, stanbul



STEK Mavi ehir, zmir



Yönder College, zmir



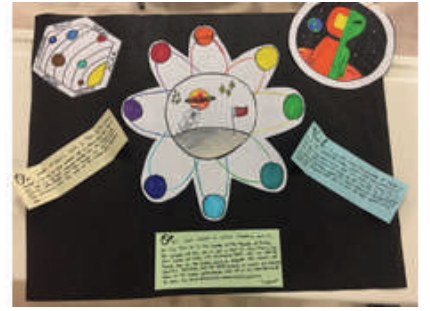
Rota College, zmir



Yönder College, stanbul



TK Büyükçi li Campus, zmir



TAKEV Secondary School, zmir



UKEB Schools, zmir



MEV College, zmir



ProFuturo School, Poland



ODTÜ GVO, Ankara
Yane Sandanski, Bulgaria



TK BTK Campus, zmir
Aylward Academy, England



MEF Middle School, stanbul
Velzys Gymnasium, Lithuania

Astronomy Picture of the Day



North America and the Pelican

Explanation: Fans of our fair planet might recognize the outlines of these cosmic clouds. On the left, bright emission outlined by dark, obscuring dust lanes seems to trace a continental shape, lending the popular name North America Nebula to the emission region cataloged as NGC 7000. To the right, just off the North America Nebula's east coast, is IC 5070, whose profile suggests the Pelican Nebula. The two bright nebulae are about 1,500 light-years away, part of the same large and complex star forming region, almost as nearby as the better-known Orion Nebula. At that distance, the 6 degree wide field of view would span 150 light-years. This careful cosmic portrait uses narrow band images to highlight the bright ionization fronts and the characteristic red glow from atomic hydrogen gas. These nebulae can be seen with binoculars from a dark location. Look northeast of bright star Deneb in the constellation of Cygnus the Swan.