SPACE BRIEF

ROUND THE SPACE-WORLD IN TIME

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SPACE SCIENCE AND ASTRONOMY

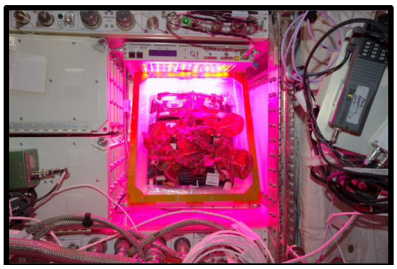
New Jupiter-like Exoplanet discovered

A new exoplanet that is similar to Jupiter (5th planet from the Sun and the biggest planet in the Solar System) has been discovered by a team of astronomers at the Gemini Observatory in Chile. An exoplanet is a planet that does not orbit the Sun; rather it orbits another star in the universe. The new exoplanet called '51 Eridani b' was discovered using a new instrument called Gemini Planet Imager (GPI). GPI is mounted on the Gemini South telescope in the Observatory.

Gemini South Telescope located on a mountain called Cerro Pachón in Chile (*Credit*: Wikipedia)

'51 Eridani b' is twice the mass of Jupiter and has a surface temperature of 430 degrees Celsius. It is located about 97 light-years from Earth (1 light-year is about 9 trillion kilometers). Its host star is called 'c Eridani'. Astronomers believe that with this new discovery, they will have a better understanding of how planets are formed around the Sun. It will also contribute to studies bordering on life outside Earth as the new exoplanet contains traces of water and it is rich in methane gas.

Astronauts eat vegetables grown in outer-space



Veggie on a rack in the ISS (*Credit*: NASA)

Astronauts in the International Space Station (ISS) have harvested and eaten vegetables grown in space. The vegetables were grown in the Vegetable Production System (Veggie) on the space station. The experiment is meant to study potential food supplements for future astronauts, especially for long-duration missions. Some of the vegetables have been frozen and will be sent to the Earth for analysis. According to NASA Veggie scientist Dr Gioia Massa, "Many of the lessons NASA is learning with Veggie could be applied in urban plant factories and other agriculture settings where light is provided by electrical light and water conservation is practiced." NASA is planning future experiments that will investigate the effect of light on crop yield, nutrition and flavor, both on Earth and in space.

Earlier this year, Italian astronaut, Samantha Cristoforetti, brewed the first coffee in space using an espresso machine with special adaptations for the zero gravity conditions.

Public begin voting in NameExoWorld competition

On 14 January, 2015, the International Astronomical Union (IAU) announced the commencement of the first round of the NameExoWorlds competition (ASSTI/SB/4/15). The competition organized by IAU gives opportunity to the public to suggest names to selected exoplanets along with their host stars. An exoplanet with its host star is called an exoworld.

On 12 August, 2015, after selecting 20 planetary systems, the IAU called for voting on the shortlisted names of 15 stars and 32 exoplanets. Five stars in the list already have historical names. Astronomy clubs and non-profit organizations from 45 countries have submitted 247 proposals. These proposals can now be voted on, at the NameExoWorlds Web site (http://nameexoworlds.iau.org/). The closing date for entries is 23:59 UTC on 31 October, 2015.

SPACE EDUCATION AND OUTREACH

ISU's Space Studies Program 2015 ends

The International Space University (ISU), Strasbourg, France, ended its 28th Space Studies Program (SSP15) on 7 August, 2015. The 9-week course which began on 8 June, 2015, was hosted by the Ohio University, Athens, Ohio, USA. 110 participants from 30 countries participated in the course.

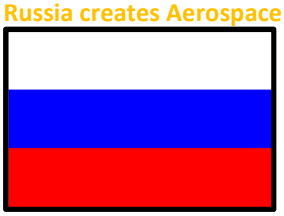
The ISU was founded in 1987 and runs several programs including a 9-week SSP program, 1 year Masters in Space Studies, 1 year Masters in Space Management, and a 5-week SSP for the Southern Hemisphere. The SSP program covers both technical and non-technical, and its pedagogue is based on 3I's – Interdisciplinary, International and Intercultural.

In SSP15, participants received lectures covering fundamental concepts from seven departments - space applications; space engineering; human performance in space; space humanities; space management and business; space policy, economics and law; and space sciences. Other highlights of the course include Distinguished Lectures, including a lecture by ISU founders - Bob Richards and Peter Diamandis, and a lecture by the NASA administrator, Charles Bolden; panel discussions including an International Astronaut Panel that was made up of astronauts from USA, Russia, Italy and Canada; robotics competition; hands-on workshops; alumni conference; rocket launch competition; professional visits to the NASA Glenn Research Center in Cleveland and final presentation by the three Team Projects (TPs). The 'Vision 2040' TP projected visions of space exploration and development by 2040, based on evolving trends and technologies; the Planetary Defence TP developed a wholistic strategy and system for responding to a sudden asteroid threat; while the Tracking Fracking TP explored the use of satellite data for monitoring the environmental changes due to hydraulic fracturing.

The 29th Space Studies Program (SSP16) will be hosted by the Technion Institute, Haifa, Israel, from 4 July – 2 September, 2016.

MILITARY SPACE

Russia creates Aerospace Force



On 13 January 2015, the Chief of the General Staff of the Armed Forces of Russia, Valery Vasilevich Gerasimov, indicated that Russia was planning a restructuring of its military that will combine its Air Force and Space Forces (ASSTI/SB/8/15). On 1 August, 2015, President Vladimir Putin issued a decree merging the Russia's air force, air defense, anti-missile and space forces into the Aerospace Force. This is based on the premise that the frontier of modern and future warfare is in outer-space. The former Commander-in-Chief of the Russian Air Force, Colonel-General Viktor Nikolaevich Bondarev, is now the Commander-in-Chief of the Aerospace Force; Lieutenant-General Pavel Kurachenko is the Chief of the Main Staff and first deputy commander-in-chief; while Lieutenant-General Alexander Golovko is the deputy commander-in-chief of the Aerospace Forces and commander of the Space Forces.

This publication is a product of The African Youth for Space Programme, Department of Human Resources, Science and Technology (HRST), in collaboration with the Directorate of Information and Communication (DIC), African Union Commission, Addis Ababa, Ethiopia. Contact Email: AUSpaceProgramme@africa-union.org