

# Astronautical News

14 April 2017

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The British Interplanetary Society

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**SSL completes agreement to partner with DARPA on satellite servicing** Space Systems Loral (SSL) announced that it has signed and executed an agreement with the U.S. Defense Advanced Research Projects Agency (DARPA) to develop advanced capabilities for servicing and maintaining spacecraft in geostationary orbit.



**United Launch Alliance cuts Atlas rocket price amid competition** United Launch Alliance has dropped the price of its workhorse Atlas 5 rocket flights by about one-third in response to mounting competition from rival SpaceX and others, the company's chief executive said.



**New Horizons spacecraft enters hibernation** The New Horizons spacecraft has entered hibernation, reported by Johns Hopkins University Applied Physics Laboratory.



**Two Vostochny launches expected in late 2017** Russia plans to hold two launches from its newest Vostochny space centre in the Far East this December, the head of the Roskosmos space corporation told the Rossiiskaya Gazeta government daily.



**NASA could use a miniaturised satellite to test Europa moon's dust and radiation** Studying the dust particles around Jupiter's famous icy moon would indirectly reveal details about its surface, and its habitability prospects.



**Milky Way stars on the move - satellite data used to see into the future** The motion of 2 million stars over the course of 5 million years into the future is depicted in this new animation from the European Space Agency. Data from their Gaia Mission was used to create it.



**Metal detected in Mars' Atmosphere** NASA's MAVEN spacecraft has spotted iron, magnesium and sodium ions <sup>2+</sup> electrically charged atoms - high up in the Red Planet's atmosphere over the past two years, a new study reports.



**Researchers bemoan limited space weather prediction capabilities** Despite current low levels of solar activity, space weather experts warned April 5 that the sun could still produce powerful and unpredictable storms that could disrupt activities in space and on the earth.



**Russia could stay with the International Space Station to 2028** The orbital outpost is presently slated to be retired as early as 2024.



**Saturn moon 'able to support life'** Saturn's ice-crust moon Enceladus may now be the single best place to go to look for life beyond Earth. The assessment comes on the heels of new observations at the 500km-wide world made by the Cassini probe. It has flown through and sampled the waters from a subsurface ocean that is being jetted into space. Cassini's chemistry analysis strongly suggests the Enceladean seafloor has hot fluid vents - places that on Earth are known to teem with life.



**China considering cooperation with Russia on space debris** China is contemplating developing cooperation with Russia with respect to space debris, China's National Space Administration Secretary-General Yulong Tian told Sputnik.



**No Roscosmos plans to send space tourists to ISS before 2020** Russia's Roscosmos state corporation has no plans to send space tourists to the country's segment of the International Space Station (ISS) before 2020, Roscosmos deputy director general for international cooperation told Sputnik in an interview.



**BRICS states want to expand cooperation to space science** Secretary-General of China's National Space Administration Yulong Tian said that the BRICS countries are interested in broadening the space cooperation to space science mission and telecommunication.

## Recent Launch Activities

**Long March 3B launches experimental ChinaSat-16 satellite** The Chinese returned to launch action with the lofting of a new experimental communications satellite from the Xichang Satellite Launch Centre. The launch was conducted by the Long March 3B G2 'Chang Zheng-3B/G2' (Y43) from the LC2 Launch Complex in Sichuan province.

(12 April 2017)

**Success for SpaceX 're-usable rocket'** SpaceX has successfully re-flown a segment from one of its Falcon 9 rockets. The first-stage booster, which was previously used on a mission 11 months ago, helped send a telecommunications satellite into orbit from Florida's Kennedy Space Center. It marks an important milestone for SpaceX in its quest for re-usability.

(31 March 2017)

**Delta IV launches WGS-9 military communications satellite** The U.S. military communications satellite WGS-9 has launched into orbit atop a United Launch Alliance Delta IV rocket.

(20 March 2017)

**New Japanese spy satellite in orbit** Japan launched a new spy satellite into orbit to help keep an eye on the nation's unpredictable, nuclear-armed neighbour, North Korea. The Information Gathering Satellite (IGS) Radar 5 lifted off atop a Japanese H-IIA rocket from Tanegashima Space Centre in southern Japan.

(18 March 2017)

## Development Activities

**China's lunar sample return mission will pave way for future ambitions** Later this year, China is launching the Change'5 spacecraft to return a sample from the Moon. The mission will pave the way for future ambitions, including crewed trips to the lunar surface.

(7 April 2017)

**China planning long-term deep-space robotic missions** China's space organizations are beginning to plan science missions beyond Mars, even as its engineers prepare to return samples from the Moon to Earth this year, and from Mars by 2030.

(6 April 2017)

**Russia to build first new-generation 'Federation' spacecraft by 2021** The first Russian next-generation manned spacecraft called the Federation, which is 80 percent built of composite materials, will be manufactured by 2021, Russia's Energia space corporation said.

(22 March 2017)

**ESA's Jupiter mission moves off the drawing board** Demanding electric, magnetic and power requirements, harsh radiation, and strict planetary protection rules are some of the critical issues that had to be tackled in order to move ESA's Jupiter Icy Moons Explorer - Juice - from the drawing board and into construction.

(17 March 2017)

**Blue Origin developing 10,000-lb. lunar polar lander** A robotic lunar lander capable of delivering as much as 10,000 lb. of cargo to a permanent outpost on the rim of the Moon's polar Shackleton Crater could make its first flight by July 2020, with a little help from NASA. Blue Origin owner Jeff Bezos said that his company has been working on a cargo lander that would support a human base set up in a zone of almost full-time sunlight on the crater's rim.

(4 March 2017)

**China hopes to conduct second mission to Mars by 2030** China is likely to conduct its second Mars mission, aimed at collecting soil samples for analysis, by 2030, according to the China Aerospace Science and Technology Corporation (CASC).

(3 March 2017)

**Chinese cargo spacecraft set for liftoff in April** In April, China will launch a cargo spacecraft into orbit as part of a schedule to develop an international space station as soon as 2020. A Tianzhou-1 cargo spacecraft could be headed into space "as early as mid-April" atop a Long March-7 Y2 rocket, representing a major milestone for China's space programme.

(27 February 2017)

**NASA's audacious Europa missions are getting closer to reality** NASA announced progress on a spacecraft that would assess whether Jupiter's Moon Europa is habitable, and earlier this month, an agency-sponsored science team released a report on a separate lander mission that would directly search for signs of life.

(27 February 2017)

## ISS Activities

**Two Russians, one American land back on Earth from ISS** Two Russian cosmonauts and a US astronaut touched down safely in central Kazakhstan Monday following a 173-day mission aboard the International Space Station. NASA astronaut Shane Kimbrough was accompanied by Russian space agency cosmonauts Sergei Ryzhikov and Andrei Borisenko.

(11 April 2017)

**Russia could stay with the International Space Station to 2028** The orbital outpost is presently slated to be retired as early as 2024.

(10 April 2017)

**Spacewalks to advance Space Station commercial crew dockings** NASA is prepped to lay the groundwork for the installation of the second of two U.S. International Space Station commercial docking ports with a series of spacewalks.

(24 March 2017)

**SpaceX Dragon returns to Earth** After carrying nearly 5,500 pounds of supplies and experiments to the International Space Station on Feb. 23, the SpaceX Dragon capsule officially detached and began its descent to Earth.

(19 March 2017)

**NASA developing contingency plan for commercial crew delays** NASA plans to complete by the middle of March a contingency plan for ensuring access to the International Space Station should its two commercial crew partners suffer additional delays.

(25 February 2017)

## Space Tourism

**No Roscosmos plans to send space tourists to ISS before 2020** Russia's Roscosmos state corporation has no plans to send space tourists to the country's segment of the International Space Station (ISS) before 2020, Roscosmos deputy director general for international cooperation told Sputnik in an interview.

(11 April 2017)

**China considering cooperation with Russia on space debris** China is contemplating developing cooperation with Russia with respect to space debris, China's National Space Administration Secretary-General Yulong Tian told Sputnik. (12 April 2017)

**China's BeiDou system to expand cooperation to SE Asia** China's home-grown BeiDou Navigation Satellite System (BDS) will expand its cooperation to Thailand and Sri Lanka, and then to the entire Southeast Asia, in a bid to go global, the system's operator has said. (1 April 2017)

**Decommissioned Earth Science satellite to remain in orbit for decades** A NASA Earth science satellite whose mission is ending this week will remain in orbit through the middle of the century, far longer than the limit set by orbital debris mitigation guidelines. (30 March 2017)

**Satellites shed new light on earthquakes** Satellite radar scans of last year's earthquake in New Zealand are changing the way we are thinking about earthquake hazards in regions where our planet's tectonic plates meet. (25 March 2017)

**ICESat-2 to provide more depth to sea ice forecasts** In March, the Arctic sea ice pack is supposed to reach its greatest extent - but this year it's far below average, off by an area about the size of Texas and New Mexico combined. Satellite observations currently reveal how much of the ocean surface is covered by ice, but there is another critical measurement to make. (23 March 2017)

**30 years of deforestation** While the world marks the International Day of Forests, satellites continue to monitor the long-term effects of human activities on our planet's precious resources. (22 March 2017)

**Copernicus Sentinel-2B delivers its first images** Just over a week after being lofted into orbit, the European Union's Sentinel-2B satellite delivered its first images of Earth, offering a glimpse of the 'colour vision' it will provide for the Copernicus environmental monitoring programme. (16 March 2017)

**NASA studies growing Louisiana deltas** The Louisiana coastline is sinking under the Gulf of Mexico at the rate of about one football field of land every hour (about 18 square miles of land lost in a year). But within this sinking region, two river deltas are growing. The Atchafalaya River and its diversion channel, Wax Lake Outlet, are gaining about one football field of new land every 11 and 8 hours, respectively. (28 February 2017)

**Using high-resolution satellites to measure African farm yields** Stanford researchers have developed a new way to estimate crop yields from space, using high-res photos snapped by a new wave of compact satellites. The approach, detailed in the February 13 issue of the journal of the Proceedings of the National Academy of Sciences, could be used to estimate agricultural productivity and test intervention strategies in poor regions of the world. (25 February 2017)

**Turn satellites into sparkling fireworks to burn up space junk** Satellite debris that falls to Earth could be deadly, but pellets made of a heat-generating mixture could help them burn up safely in the atmosphere. (19 February 2017)

**100 Earth-shattering remote-sensing applications and uses** This list may change the way you feel about how this industry is changing our world and the way we think. (13 February 2017)

**CryoSat reveals lake outbursts beneath Antarctic ice** A novel way of using ESA's CryoSat mission has revealed how lakes beneath Thwaites Glacier drained into the Amundsen Sea - potentially the largest such outflow ever reported in this region of West Antarctica. (11 February 2017)

**Keeping space communications reliable for an "always on" world** So many of the services we all depend on today are powered by space communications. Without space the world economy, in many ways, turns back half a century in time. For some time now, we have been hearing from the Pentagon that space is no longer the sanctuary it once was. (7 February 2017)

**Sea ice cover in 2016 is lowest ever recorded** Latest data from ISRO's weather monitoring satellite SCATSAT-1 has revealed changes in the sea ice cover over the Arctic and the Antarctic. According to ISRO, the changes in the Arctic summer minimum sea ice cover were observed using SCATSAT-1 data collected on October 02, 2016, and compared it with OSCAT data collected on October 02, 2011. It was observed that sea ice cover during 2016 is lower than that observed in 2011, which was earlier lowest sea ice record. (6 February 2017)

**Satellites counting whales from space revolutionising monitoring techniques for researchers** A research team in Perth is becoming familiar with what whales look like from space. They have commissioned two satellite images to be taken from 600 kilometres above Earth in order to do an accurate headcount of humpbacks migrating up the WA coast. (5 February 2017)

**Time to make sure Europe's troubled satnav system really flies** Europe's costly Galileo satnav network has been branded a vanity project. In an isolationist world, it now seems a wise insurance policy, says Paul Marks. (4 February 2017)

**ISRO to launch backup satellite to replace IRNSS-1A** India will launch one of its back up navigation satellites this year as a replacement to IRNSS-1A satellite, whose three atomic clocks have failed, ISRO said. The agency denied the existence of similar problems with the rubidium atomic clocks in another navigation satellite. (4 February 2017)

**African villagers use satellite data to help save wild chimpanzees** Given that chimpanzees are a keystone species and the closest extant relative to humans, their rapid decline in the wild has sparked widespread concern. In response, NASA and the Jane Goodall Institute partnered on a project that aims to use space-down views of chimpanzee habitats to guide local activists involved in conservation. (31 January 2017)

**Tiny satellites to make big contributions to science** CubeSats were designed as educational tools and technological proofs-of-concept, demonstrating their ability to fly and perform needed operations in the harsh space environment. As the capabilities of these nanosatellites increase and their possible contributions grow, they've earned their own place in space. (30 January 2017)

**Europe's new geostationary satellite platform for the telecommunications market** The Hispasat 36W-1 telecommunications satellite, the first in a new satellite platform called SmallGEO, developed and built in Germany, was launched to space on 28 January 2017 at 02:03 CET (27 January, 22:03 local time). (29 January 2017)

**NOAA's GOES-16 satellite sends first images to Earth** GOES-16, the first spacecraft in NOAA's next-generation of geostationary satellites, has sent the first high-resolution images from its Advanced Baseline Imager (ABI) instrument. Included among them are a composite color full-disk visible image of the Western Hemisphere captured on January 15, 2017. (25 January 2017)

**Saturn moon 'able to support life'** Saturn's ice-crusted moon Enceladus may now be the single best place to go to look for life beyond Earth. The assessment comes on the heels of new observations at the 500km-wide world made by the Cassini probe. It has flown through and sampled the waters from a subsurface ocean that is being jetted into space. Cassini's chemistry analysis strongly suggests the Enceladean seafloor has hot fluid vents - places that on Earth are known to teem with life.

(14 April 2017)

#### **New Horizons spacecraft enters hibernation**

The New Horizons spacecraft has entered hibernation, reported by Johns Hopkins University Applied Physics Laboratory.

(13 April 2017)

#### **Milky Way stars on the move - satellite data used to see into the future**

The motion of 2 million stars over the course of 5 million years into the future is depicted in this new animation from the European Space Agency. Data from their Gaia Mission was used to create it.

(13 April 2017)

**Metal detected in Mars' Atmosphere** NASA's MAVEN spacecraft has spotted iron, magnesium and sodium ions ?? electrically charged atoms - high up in the Red Planet's atmosphere over the past two years, a new study reports.

(12 April 2017)

**Cassini prepares for last plunge** NASA's unmanned Cassini spacecraft is preparing for its final plunge into Saturn later this year, after two decades of helping Earth-bound scientists make new discoveries about the sixth planet from the Sun and its mysterious rings.

(8 April 2017)

**NASA observations reshape basic plasma wave physics** When NASA's Magnetospheric Multiscale - or MMS - mission was launched, the scientists knew it would answer questions fundamental to the nature of our universe - and MMS hasn't disappointed. A new finding, presented in a paper in Nature Communications, provides observational proof of a 50-year-old theory and reshapes the basic understanding of a type of wave in space.

(6 April 2017)

#### **Prolific Mars Orbiter Completes 50,000 Orbits**

The most data-productive spacecraft yet at Mars swept past its 50,000th orbit this week, continuing to compile the most sharp-eyed global coverage ever accomplished by a camera at the Red Planet. In addition, the spacecraft - NASA's Mars Reconnaissance Orbiter (MRO) - recently aided preparations for NASA's next mission to Mars, the InSight lander.

(3 April 2017)

**NASA orbiter shows Mars lost 90 per cent of its CO<sub>2</sub> to space** The MAVEN spacecraft has completed the key part of its mission: to track down how much argon Mars's atmosphere is giving up as a proxy for carbon dioxide loss

(2 April 2017)

#### **ExoMars: Rover scientists to study Mawrth Vallis option**

Scientists are going to investigate a second site on Mars as a possible destination to send ESA's 2021 rover. Scientists spent two days considering the options and plumped in the end for Mawrth Vallis - an area rich in clay minerals that must have formed during prolonged rock interactions with water. Mawrth joins Oxia Planum, which was selected for study in 2015.

(29 March 2017)

#### **New treasures from Juno: Jupiter dazzles during fourth close approach**

Image processor Björn Jónsson shares some of his latest stunning images of Jupiter, created using data from NASA's Juno spacecraft.

(28 March 2017)

#### **NASA's SDO sees a stretch of spotless Sun**

For 15 days starting on March 7, 2017, NASA's Solar Dynamics Observatory, or SDO, returned visible light images of a yolk-like spotless sun. This is the longest stretch of spotlessness since the last solar minimum in April 2010, indicating the solar cycle is marching on toward the next minimum, which scientists predict will occur between 2019- 2020.

(26 March 2017)

#### **China's first cargo spacecraft to make three rendezvous with Tiangong-2**

China's first cargo spacecraft Tianzhou-1 is expected to dock with the orbiting Tiangong-2 space lab three times after its planned launch in April, sources said. Tianzhou-1 will be sent into space from the Wenchang Space Launch Center in south China's Hainan Province aboard a Long March-7 Y2 carrier rocket.

(9 March 2017)

#### **Orbiter steers clear of Mars moon Phobos**

NASA's MAVEN spacecraft performed a previously unscheduled manoeuvre to avoid a collision in the near future with Mars' moon Phobos. The Mars Atmosphere and Volatile Evolution (MAVEN) spacecraft has been orbiting Mars for just over two years, studying the Red Planet's upper atmosphere, ionosphere and interactions with the sun and solar wind.

(4 March 2017)

#### **Increasing the sensitivity of next-generation gravitational wave detectors**

Nearly one year ago the LIGO Collaboration announced the detection of gravitational waves, once again confirming Einstein's theory of General Relativity. This important discovery by the Advanced Laser Interferometer Gravitational-Wave Observatory (aLIGO) has spurred great interest in improving these advanced optical detectors.

(27 February 2017)

#### **Kepler's 'second life' - DLR researchers find six planets**

In 2009, NASA's Kepler space probe was launched, embarking on a mission to hunt for exoplanets. In 2013, due to the failure of two of its reaction wheels, the mission had to be modified. Mission control managed to change the operational modus and manoeuvre the telescope orbiter into a different position in its orbit around the Sun that enabled the mission to continue.

(24 February 2017)

#### **Wonderful potentially habitable worlds around TRAPPIST-1**

Scientists have found seven, Earth-size planets orbiting a star just 40 light years away. Three lie in the habitable zone and could have water on their surfaces.

(23 February 2017)

#### **NASA's Kepler mission could detect exomoons formed by giant impacts**

The hunt is on for moons orbiting distant exoplanets - but only the most massive "exomoons" may be detectable.

(21 February 2017)

#### **Juno Jupiter probe won't move into shorter orbit**

NASA's Juno spacecraft won't move into a closer orbit around Jupiter as originally planned, agency officials announced.

(20 February 2017)

**Big data for the universe** Astronomers at Lomonosov Moscow State University in cooperation with their French colleagues and with the help of citizen scientists have released "The Reference Catalog of galaxy SEDs" (RCSED), which contains value-added information about 800,000 galaxies.

(13 February 2017)

#### **Who will get first dibs on the powerful James Webb Space Telescope?**

NASA has issued solicitation for science projects using the long-awaited and incredibly powerful successor to Hubble, which is scheduled to launch next year.

(10 February 2017)

#### **Angling up for Mars science**

ESA's latest Mars orbiter has moved itself into a new path on its way to achieving the final orbit for probing the Red Planet.

(9 February 2017)

#### **Gravitational wave detector prepares to peer into bizarre stars**

It has already made the discovery of the decade ?? next LIGO aims to model weird events so we can recognise them when they arrive

(8 February 2017)

#### **WorldView-4, DigitalGlobe's newest satellite, enters service**

DigitalGlobe's WorldView-4 high-resolution-imaging satellite entered service this week, following nearly three months of in-orbit testing and calibration.

(7 February 2017)

#### **NASA spacecraft to hunt for Earth's asteroid 'ghosts'**

NASA's asteroid-sampling Osiris-Rex mission will search for possible Trojan asteroids that could be travelling along with Earth around the sun.

(5 February 2017)

#### **Galactic X-rays could point way to dark matter**

A small but distinctive signal in X-rays from the Milky Way could be key to proving the existence of dark matter. That is the claim of US scientists who analysed the energy spectrum of X-rays gathered by NASA's Chandra satellite. They found more X-ray photons with a particular energy than would be expected if they were produced only by familiar processes. Those photons could in fact have been generated by the decay of dark matter particles, say the researchers.

(2 February 2017)

#### **Fermi sees gamma rays from 'hidden' solar flares**

An international science team says NASA's Fermi Gamma-ray Space Telescope has observed high-energy light from solar eruptions located on the far side of the sun, which should block direct light from these events.

(1 February 2017)

#### **Close views show Saturn's Rings in unprecedented detail**

Newly released images showcase the incredible closeness with which NASA's Cassini spacecraft, now in its "Ring-Grazing" orbits phase, is observing Saturn's dazzling rings of icy debris. The views are some of the closest-ever images of the outer parts of the main rings, giving scientists an eagerly awaited opportunity to observe features with names like "straw" and "propellers."

(31 January 2017)

 **Two Vostochny launches expected in late 2017** Russia plans to hold two launches from its newest Vostochny space centre in the Far East this December, the head of the Roskosmos space corporation told the Rossiiskaya Gazeta government daily.

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 **SSL completes agreement to partner with DARPA on satellite servicing** Space Systems Loral (SSL) announced that it has signed and executed an agreement with the U.S. Defense Advanced Research Projects Agency (DARPA) to develop advanced capabilities for servicing and maintaining spacecraft in geostationary orbit.

(13 April 2017)

 **SES and Luxembourg government extend SATMED E-Health contract** SES and the Luxembourg Ministry of Foreign and European Affairs report that they have extended a contract to maintain and support SATMED, an e-health satellite platform, until 2020.

(11 April 2017)

 **Ukraine in talks with ESA to become member** Ukraine's State Space Agency is currently in accession discussions with the European Space Agency (ESA) to become its member.

(10 April 2017)

 **Russia critical to ExoMars Project says Italian Space Agency Head** Russia is a fundamental partner in the joint project between the European Space Agency (ESA) and Russia's Roscosmos space corporation ExoMars, Italian Space Agency (ASI) President Roberto Battiston told Sputnik.

(8 April 2017)

 **Norway joins US Strategic Command space data sharing programme** The U.S. Strategic Command is to share space situational services and data with Norwegian government agencies under a memorandum of understanding.


(8 April 2017)

 **Russia offering Brazil to develop Gonets-like satellite system** Director General of Russia's Reshetnev Information Satellite Systems company said that Russia is offering Latin American states, in particular Brazil, to develop a satellite communications system similar to Gonets system, which will be capable to completely meet the communication needs of the region.

(6 April 2017)

 **Russian plant to overhaul nearly all Proton rocket engines in 2017** Russia's Voronezh Mechanical Plant will overhaul nearly all the recalled engines for the Proton launch vehicles this and next year, the head of Russia's Energomash space and rocket engine manufacturer told Sputnik. Energomash Director General Igor Arbuzov said the 71 engines constitute "almost all of the second and third stage reserves."


(4 April 2017)

 **ISRO to outsource satellite manufacturing after 30 years** Having been unable to keep pace with satellite fabrication, the ISRO is involving private industry to bridge the gap.

(3 April 2017)

 **Ukraine firms to supply rockets for spaceport** Ukraine's aerospace giants Yuzhmash and Yuzhnoye Design Office have agreed to supply rockets to launch satellites into space from a new spaceport to be built in eastern Canada. This tracks with a trend of Ukraine industry of replacing traditional Russian partners with new Western ones.

(1 April 2017)

 **Russia hopes India will join initiative on non-deploying weapons in space** Russia hopes India will join the Russian initiative on non-deployment of weapons in outer space, Russian Foreign Ministry's Non-Proliferation and Arms Control Department Director Mikhail Ulyanov said. Ulyanov reminded that in 2004, Russia took a unilateral decision not to be the first to place weapons in outer space, setting a good example for other countries to follow suit.

(29 March 2017)

 **Vietnam set to produce satellites by 2022** Vietnam targets to self-develop Lotusat-2 by 2022 when its technical facilities for satellite research, assembly, integration and testing are ready to operate, according to the Vietnam National Satellite Center (VNSC).


(27 March 2017)

 **Bangladesh to join India's South Asia Satellite initiative** Bangladesh has signed an agreement with India to formally join New Delhi's 'South Asia Satellite' initiative, through which the Indian Space Research Organisation (ISRO) will launch a communication satellite for serving the South Asia region.

(27 March 2017)

 **Russian Aerospace Forces to launch over 20 spacecraft** Russia's Aerospace Forces in 2017 are planning to launch 15 carrier rockets into space, during which over 20 spacecraft will be placed into orbit," the forces' commander, Col. Gen. Viktor Bondarev, said


(20 March 2017)

 **NASA studying shared Venus science objectives with Russia** A team of NASA-sponsored scientists are meeting with the Russian Academy of Sciences' Space Research Institute (IKI) to continue work on a Joint Science Definition Team study focused on identifying shared science objectives for Venus exploration.

(14 March 2017)

 **UK funding space entrepreneurs** The UK Space Agency has awarded just under 150,000 pounds to three business incubation centres across the UK which will support entrepreneurs and small companies in the space industry. The Agency is working with UK industry to deliver world-class science innovation support, in line with the Government's Industrial Strategy, which emphasises the importance of science, innovation and skills.


(14 March 2017)

 **Potential NOAA cut would be devastating** On the surface, it may appear that the administration is actually prioritizing NOAA's weather prediction and warning apparatus, given the smaller 5 percent cuts to the National Weather Service and National Marine Fisheries Service. That's in contrast to the 22 percent and 26 percent spending reductions for NOAA satellites and NOAA weather and climate research, respectively.


(13 March 2017)

 **ISRO makes more space for private sector participation in satellite making** The Indian Space Research Organisation (ISRO) is thinking of ways to enhance involvement of the private sector in its future satellite launches and include local firms in making integrated systems and sub-systems. It is part of the larger efforts of the Indian agency to augment capabilities and tap the growing commercial market for space-based surveillance and communication.


(12 March 2017)

 **NASA Transition Authorization Act passes House** On March 7 the House passed the 'NASA Transition Authorization Act of 2017' which authorizes appropriations of \$19.5 billion for the space agency in fiscal year 2017.

(11 March 2017)

 **Kuwait Space Agency - a pipedream or reality** A number of Kuwaitis have started to wonder whether it was feasible to have a national space programme.

(11 March 2017)

 **India has capability to develop space station, says top official** India has the capability to develop a space station, a top official of the state-owned space agency has said. "We have all the capabilities to set up a space station. The day the country takes the decision, we will okay the project. Just draw a policy and provide us necessary funds and time," Indian Space Research Organisation (ISRO) chief A.S. Kiran Kumar told media.

(7 March 2017)

 **Turkey moves closer to launching own space agency** A draft bill for legislation to create a Turkish Space Agency is finalised and readied for review by the Turkish parliament. Finalising this long-envisioned dream will determine the country's space policies and help develop a national space industry.

(6 March 2017)

## Opportunities

### **NASA AFRC Internship - NASA (United States)**

previous work. Students are given an opportunity to interact with NASA researchers, engineers, and technicians in design, construction, implementation, verification

### **NASA Ames SPHERES/Astrobee Facility - NASA (United States)**

NASA Ames SPHERES/Astrobee Facility Brief description of duties: The successful applicant would be involved with software development and general support of the

### **NASA Journalism and Multimedia Fall Internship - NASA (United States)**

INTRODUCTION: NASA invites students working towards degrees in journalism, communications, media relations, science writing, interactive journalism, or broadcast

### **NASA LaRC Autonomy Incubator - NASA (United States)**

This is a multidisciplinary team consisting of engineering from a variety of disciplines including aeronautic, electrical, computer, and mechanical. Other disciplines

### **NASA LaRC: Crew Systems and Aviation Operations - NASA (United States)**

NASA is conducting research in the areas of intelligent flight systems, autonomous systems, aviation operations, flight deck systems, and crew

### **NASA LaRC: Flight Deck Technologies - NASA (United States)**

NASA is conducting research into Increasingly Autonomous Systems (IAS) for the flight deck. This work involves computer programming, machine learning, and human in

### **Cloud Engineer**

You will be working on the development of a Drought Flood Mitigation System for Uganda. You will be part of the RHEA team working together with different project partners consisting of commercial companies, NGOs and governmental organisations. Tasks and Activities The scope of work will include Collaborate with PMs and internal IT to understand system needs for our cloud applications Work collaboratively with software engineers to deploy and operate our systems Help automate and streamline our software development operations and processes Build and maintain tools for deployment, monitoring and operations Troubleshoot and resolve issues in our dev, test, staging, and production environments Skills and Experience The following skills and experience are mandatory You will be able to use a wide variety of open source technologies cloud services You have at least 1 year of experience with Amazon AWS You have experience in Linux administration, SQL Server, and MongoDB You have experience wi...

### **Copernicus Marine and Ocean Training Service**

Closing date 17th May 2017 The key person shall support the exploitation and uptake of the Copernicus marine data, in particular through the planning and delivery of training activities and engagement with user groups. The prime audiences for the training shall include staff of operational centres, research institutions and businesses. PROFILE The key person shall have the following educational background and 5 to 10 years overall working experience and 3 to 5 years specific experience in the areas mentioned below Mandatory skills Detailed understanding of the ocean products offered by EUMETSAT, and in depth knowledge across the S3 instruments. Significant experience of the management of training from needs assessment to evaluation of training for user groups. Excellent skills in delivering training and facilitating workshops. Experience in using satellite data in marine research and operations. Understand the processes used to retrieve marine geophysical parameters across the Senti...

### **Data Management Analyst, NASA Project Open Data - SGT,Inc. (United States)**

SGT CAREERS DATA MANAGEMENT ANALYST, NASA PROJECT OPEN DATA Engineering Moffett Field, California Job ID: 20308 I'm Interested! DESCRIPTION Interested in improving

### **Data Quality Engineer**

As Data Quality Engineer, you will provide support for the management of Sentinel2 quality control and sensor calibration operations. Doing operational coordination of product quality baseline updates in operations and by providing a critical review of all MPC deliverables in Operations Operations reports, procedures, actions, anomaly management, etc.. Tasks and Activities The scope of work will include Provide support for the management of Sentinel2 Mission Performance Centre MPC quality control and sensor calibration MultiSpectral Instrument MSI ground processing chain operations Provide support to the operational coordination of product quality baseline updates in operations Provide a critical review of all MPC deliverables in Operations Operations reports, procedures, actions, anomaly management, etc Monitor the MPC Operational Service performance via the setup and maintenance of metrics on the on quality control and sensor calibration tasks, and support the review of the

defined...

### **Development of Advanced Optical Diagnostics for NASA Ground Test Facilities - NASA (United States)**

of several non-intrusive, advanced optical measurement techniques for use in NASA wind tunnel facilities in support of several strategic thrusts identified

### **Engineer, Spacecraft Subsystem ADCS Propulsion**

SES is the worldleading satellite operator with a fleet of more than 50 geostationary satellites. The company provides satellite communications services to broadcasters, content and internet service providers, mobile and fixed network operators and business and governmental organizations worldwide. SES stands for longlasting business relationships, highquality service and excellence in the satellite industry. The culturally diverse regional teams of SES are located around the globe and work closely with customers to meet their specific satellite bandwidth and service requirements. SES holds a participation in O3b Networks, a next generation satellite network combining the reach of satellite with the speed of fiber. Where others see barriers, we see opportunities. Do you enjoy supporting customers realizing breakthrough value? Do you stay attuned to your customers needs and visions? Do you like to work openly and supportively together with your colleagues and customers? Our work involv...

### **Engineering internship with SOFIA at NASA Armstrong - NASA (United States)**

Provide potential experience in leadership, engineering, and astronomy. The student will assist the SOFIA Program in the development and integration of various

### **Facilities Management Process Improvement - NASA Independent Verification and Validation (IV&V) Program Support Office (PSO) - NASA (United States)**

Activities for which internship efforts within the NASA Independent Verification and Validation (IV&V) Program Support Office (PSO) consist of basic facilities

### **Infrastructure Engineer**

Closing date 5th May 2017 PROFILE The key person shall have the following educational background and 5 to 10 years overall working experience and 3 to 5 years specific experience in the areas mentioned below Mandatory skills Bachelor degree in Electrical or Computer Engineering or equivalent working experience. Familiarity with data centre infrastructure elements power, cooling, space management, racks, cabling and patching copper and fibre. Familiarity with data centre operations procedures access, security, maintenance windows, mission critical processes, etc. Experience in coordinating simple projects 510 resources, project budget order of magnitude up to 20K EUR. Good communications skills with external and internal resources and stakeholders. Business acumen to identify financially viable and sustainable technical solutions. User experience related to some current ERP or workflow management system such as SAP, Oracle, Siebel or Remedy. Proficiency in work procedures related to ...

### **Network Infrastructure and Solutions Engineer**

Solenix is specialized in the provision of highquality software engineering, technical consulting and operations services in the aerospace domain. This vacancy note concerns an onsite consulting position at EUMETSAT in Darmstadt, Germany. Network Infrastructure and Solutions Engineer 1713053 Job Description We are looking for a Network Infrastructure engineer for our client EUMETSAT. You shall be part of a team that supports the full range of Comms Systems, from provision of support to new networks systems requirement and design, support of operational systems and those transitioning to operations status, and integration of legacy systems and their eventual replacement or decommissioning. This will require the ability to switch rapidly between the multitudes of roles e.g. project support, operations as required. To support developing and deploying network infrastructure and solutions for current and emerging operational networks, your tasks will include Network infrastructure and solu...

### **Payload Integration & Test Lead - NASA Surface Water Ocean Topography (SWOT) Mission - NASA's Jet Propulsion Laboratory (United States)**

universe of opportunities waiting for you! The Jet Propulsion Laboratory (JPL) is NASA 's lead center for robotic exploration of the solar system. Our core competency

### **Senior MC Applications Engineer**

HE Space is a successful international space company. For over 35 years, we have been supporting our customers with qualified experts in the field of engineering, science and administration. We are currently looking for a Senior MC Applications Engineer to support our customer in Germany. Senior MC Applications Engineer Key Tasks and Responsibilities As a Senior MC Applications Engineer, you will have the following responsibilities Development and maintenance of spacecraft MC components Software development using C and Java Preventive, corrective and evolutive maintenance of existing systems Verification and testing activities Analysis, planning and management of application system upgrades Software and technical support to the endusers of the applications On occasions, provision of standbycall out support to operations. Skills Experience You will have the following qualifications and relevant experience University degree in a relevant engineering discipline Software development for I...

### **Senior/Senior Advanced Quality Engineer (NASA) - KBRwyle (United States)**

Title: Senior/Senior Advanced Quality Engineer ( NASA ) Location: US-US-MD-GREENBELT Job Number: 00336429 KBRwyle seeks an experienced Quality Engineer to provide

**Software engineer for space projects**

WHO ARE WE? GMV [www.gmv.com](http://www.gmv.com) is a privately owned technological enterprise group with an international presence employing more than 1.200 staff. Founded in 1984, GMV mainly operates in eight large sectors for both public and private organizations Aeronautics, Space, Defense, Health, Security, Transportation, Telecommunications and Information Technologies. GMV currently runs 8 work centers in Spain and offices in France, Germany, India, Malaysia, Poland, Portugal, Romania, USA, Colombia and United Kingdom. We recruit and hire excellent engineers, and encourage innovation, technical excellence and continuing education. Our engineers regularly present papers at technical conferences, continue their education more than 85 have a masters degree, and we reinvest more than 12 of budget in IRD projects. This striving for excellence, innovation and flexibility is a major part of our culture. We provide very competitive compensation, attractive benefits, and a great work environment with lots of...

**Student Trainee (Engineering Technician) - NASA Pathways Intern Employment Program - Armstrong Flight Research Center (United States)**

4/12/2017 (5 day(s) away) ## Job Overview Summary About the Agency The NASA Pathways Intern Program provides students with the opportunity to explore NASA

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