

**4 August 2017**

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Science and  
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programmes**

**Airbus and  
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satellite solid-  
state power  
amplifiers**

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The British Interplanetary Society

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**First iodine fuelled thrusters pass critical design tests** An iodine fuelled solar electric propulsion system that will enable an entirely new range of small spacecraft mission passes major Critical Design Review milestone



**GeoSat orders continue trending down** Orbital ATK President and CEO Dave Thompson says his company foresees maybe just 10 orders of geocommunications satellites for all of 2017.



**Moon Express looks to astronomy for lunar foothold** Moon Express Inc. recently agreed with the International Lunar Observatory Association to collaborate on the first in a succession of compact, multi-user astronomical observatories at the Moon's South Pole by 2019.



**India to build second RLV demonstrator by 2018** The unmanned, unpowered RLV-TD is a space shuttle-like subscale reusable spaceplane that is launched atop a booster rocket.



**Tricorders in space: Not just a 'Star Trek' dream anymore** A tricorder may soon be an essential part of every voyaging astronaut's tool kit, and not just in the "Star Trek" universe.



**Company loses contact with communications satellite while changing orbit** A 20-year old satellite in fleet operator EchoStar's constellation is drifting after an anomaly the company said has crippled communications.



**US Senate restores funding for NASA Earth Science and satellite servicing programmes** An appropriations bill approved by a Senate committee would restore funding for several NASA Earth science missions slated for termination by the administration as well as a satellite servicing programme.



**In Space, This is the Age of Reusability** First and foremost, it's hard to make profit in space. This is because we haven't learnt how to recycle rockets yet.



**Two Voyagers taught us how to listen to space** As NASA's twin Voyager spacecraft were changing our understanding of the solar system, they also spurred a leap in spacecraft communications.



**NASA's planetary protection officer will defend Mars, not Earth** A NASA job advert has made for excited headlines, but the agency isn't hiring someone to protect us from aliens - it wants someone to protect alien microbes from us



**Airbus and Russia to build up to 50 satellite solid-state power amplifiers** The head of Space Equipment at Airbus DS stated that SynerTech company and Russian Space Systems is planning to make up to 50 solid-state power amplifiers within the next year. SynerTech company, a joint enterprise of Airbus Defence and Space (DS) aerospace company and Russian Space Systems, is planning to make up to 50 solid-state power amplifiers within the next year, Jean-Pierre Domenge



**Vega orbits two Earth observation satellites** Arianespace has launched two Earth observation satellites for civil and military applications: OPTSAT-3000 for the Italian Ministry of Defence; and Venus, a mission of the Israel Space Agency (ISA) - a government body sponsored by the country's Ministry of Science and Technology - and the French CNES space agency.



**UK space companies to develop international partnerships** The UK Space Agency is working with research institutions, industry and non-profit organisations to develop strong international partnerships to help tackle economic, societal and environmental issues using satellite technology. The Agency will award funding through its International Partnership Programme (IPP), which is designed to partner UK space expertise with overseas governments.

## Recent Launch Activities

**Vega orbits two Earth observation satellites**  
Arianespace has launched two Earth observation satellites for civil and military applications: OPTSAT-3000 for the Italian Ministry of Defence; and Venus, a mission of the Israel Space Agency (ISA) - a government body sponsored by the country's Ministry of Science and Technology - and the French CNES space agency.  
(3 August 2017)

**New crew arrives at Space Station after speedy 6-hour trip**  
A Soyuz spacecraft carrying a crew of three linked up with the International Space Station, doubling the orbiting lab's population and kicking off a five-month mission for its space traveling trio.  
(29 July 2017)

**Soyuz carrier rocket blasts off From Baikonur**  
A Russian Soyuz-2.1a rocket blasted off from Baikonur Cosmodrome. The rocket is delivering over 70 satellites to Earth's orbit, including the Kanopus-V-IK orbiting spacecraft equipped with Earth-viewing cameras to map the planet in colour to aid emergency responders, crop managers and environmental scientists.  
(18 July 2017)

**Russia orbits forest fire monitoring satellite**  
The Kanopus-V-IK forest fire monitoring satellite was delivered into its designated orbit, Roscosmos reported.  
(17 July 2017)

## Development Activities

**United Launch Alliance to launch Astrobotic mission to the Moon**  
Astrobotic and United Launch Alliance report that Astrobotic's Peregrine Lunar Lander will be onboard a ULA launch vehicle in 2019, during the 50th anniversary of Apollo 11.  
(31 July 2017)

**India to build second RLV demonstrator by 2018**  
The unmanned, unpowered RLV-TD is a space shuttle-like subscale reusable spaceplane that is launched atop a booster rocket.  
(30 July 2017)

**Ariane 6 & Vega C rockets will secure independent space access for Europe**  
Ariane 6 launch facilities are under construction in French Guiana along the Vega rocket is getting a n will increase the capabilities of the the space agency and European launch industry.  
(27 July 2017)

**NASA'S first asteroid deflection mission enters next design phase**  
The first-ever mission to demonstrate an asteroid deflection technique for planetary defence - the Double Asteroid Redirection Test (DART) - is moving from concept development to preliminary design phase, following NASA's approval on June 23.  
(8 July 2017)

**Russian devices for ExoMars mission to be ready late 2017**  
Two Russian devices to be mounted on the Mars rover of the ExoMars 2020 mission are nearly ready, by the end of 2017 they will be supplied to the European Space Agency, head of the Russian Academy of Sciences' Space Research Institute laboratory Daniil Rodionov told Sputnik.  
(4 July 2017)

**Rocket failure may delay China's space station and moon missions**  
The second rocket failure in two weeks is likely to cause delays for China's ambitious space programme whilst the causes are under investigation  
(4 July 2017)

**Chinese media report Long March 5 rocket failed soon after launch**  
The launch of China's March-5 Y2 rocket has failed as the satellite failed to enter the preset orbit. At 7.5 tones, the spacecraft was the heaviest China has ever launched. According to state-run media, Shijian-18 was to test China's new Dongfanghong-5 (DFH- 5) satellite platform and carry out in-orbit experiments including Q/V band satellite communication, satellite-ground laser communication technologies and an advanced Hull electric propulsion system.  
(2 July 2017)

**LISA Gravitational-Wave Observatory Selected as ESA L3 Mission**  
In a meeting on 20 June 2017 ESA's Science Programme Committee selected the space- based gravitational-wave detector "Laser Interferometer Space Antenna" (LISA) for ESA's third large (L3) mission in the "Cosmic Vision" plan.  
(1 July 2017)

## ISS Activities

**Astronauts grow cucumbers in space to help scientists understand root growth**  
Which factor is more important to root growth: gravity or water? To find out, scientists recruited astronauts to grow cucumbers on the International Space Station.  
(25 July 2017)

**US spy satellite buzzes ISS**  
Vigilant amateur satellite observers keep tabs on a recently launched US spy satellite that is getting a little to close to the ISS for comfort  
(13 June 2017)

**NanoRacks deploys CubeSats from Cygnus spacecraft**  
NanoRacks said that it successfully deployed four Spire LEMUR-2 CubeSats from Orbital ATK's Cygnus spacecraft at a nearly 500-kilometre orbit.  
(12 June 2017)

**John Glenn Cygnus departs ISS begins secondary mission**  
Orbital ATK reports that its Cygnus spacecraft successfully unberthed from the International Space Station, beginning the next phase of its mission before it reenters Earth's atmosphere. The "S.S. John Glenn" now conducts three secondary payload missions including the Saffire-III fire experiment, deployment of four CubeSats and an experiment to further study spacecraft conditions upon  
(7 June 2017)

**Thomas Pesquet returns to Earth**  
ESA astronaut Thomas Pesquet landed on the steppe of Kazakhstan today with Russian commander Oleg Novitsky in their Soyuz MS-03 spacecraft after six months in space. Touchdown was after a four-hour flight from the International Space Station.  
(2 June 2017)

## Space Tourism

**Virgin Galactic Aims to Fly Space Tourists in 2018, CEO Says**  
Richard Branson's Virgin Galactic is on track to begin commercial passenger spaceflights before the end of 2018, the company's chief executive said.  
(1 May 2017)

**CubeSats swarm Earth orbit** A boom in nanosatellites could revolutionize space science and industry, but also dramatically increase the hazards of space junk

(26 July 2017)

**Galileo handover** After four years of work, the ESA team tasked with keeping the world informed on the status of the Galileo satellite navigation system has formally passed on its responsibility to a European Union agency. This shift is part of a wider transfer of responsibilities, as this month see the official handover of the running of the Galileo system from ESA to the European Global Navigation Satellite Systems Agency, or GSA.

(24 July 2017)

**ESA drives to move past Galileo clock issue**

The European Space Agency says its well on the way to a full constellation of 24 operational satellites, the continuing renewal of which would probably require an average two satellites to be launched every year.

(14 July 2017)

**World's first demonstration of space quantum communication using a microsatellite**

The National Institute of Information and Communications Technology of Japan who developed the world's smallest and lightest quantum-communication transmitter (SOTA) onboard the microsatellite SOCRATES, have succeeded in the demonstration of the first quantum-communication experiment from space.

(12 July 2017)

**OneWeb vouches for high reliability of its deorbit system**

Satellite broadband startup OneWeb says no other system on its low-Earth orbit satellites will be built for higher reliability than the deorbit module it is including to prevent the creation of space debris.

(12 July 2017)

**Satellites see giant iceberg split from Antarctic**

One of the biggest icebergs ever recorded has just broken away from Antarctica. A US satellite observed the berg while passing over a region known as the Larsen C Ice Shelf. An infrared sensor on the American space agency's Aqua satellite spied clear water in the rift between the shelf and the berg.

(12 July 2017)

**India plans to roll out national GPS in 2018**

The Indian Space Research Organisation is set to offer GPS from its own navigation system for mobile users from next year, aiming to make it more accurate than foreign competitors' products.

(8 July 2017)

**Europe's Galileo satnav identifies problems behind failing clocks**

Investigators have uncovered the problems behind the failure of atomic clocks onboard satellites belonging to the beleaguered Galileo satnav system, the European Commission said. For months, the European Space Agency - which runs the programme - has been investigating the reasons behind failing clocks onboard some of the 18 navigation satellites it has launched for Galileo.

(5 July 2017)

**Satellite image project that helps spot and stop slavery sites from space**

A crowdsourcing project at the University of Nottingham, England which aims to - via satellite imagery - identify notorious sites that could be involved in modern slavery globally, has attracted a number of online volunteers.

(4 July 2017)

**Space junk colution? Tiny cubesat to test new de-orbiting thruster**

A tiny satellite that reached orbit will make history when it comes back down to Earth.

(3 July 2017)

**Satellite image showcases centuries of desertification in India**

A new image from the European Space Agency's Copernicus Sentinel-2A satellite showcases the extreme aridity of India's Thar Desert. Geologic and archaeological analysis suggests the region, which encompasses more than 123,000 square miles in India and Pakistan, was once green and lush. Centuries of farms have depleted water resources and taxed the soil, slowly drying out the land.

(24 June 2017)

**Global nanosatellite market anticipated to reach \$6.35 billion by 2021**

According to a new market intelligence report, the global market is expected to reach \$6.35 billion by 2021, growing at a CAGR of 37.91% during the forecast period. With the emergence of space technologies, which enable satellites to operate under harsh space environment, it has become easier to carry out cost-effective space missions.

(23 June 2017)

**Magnetic space tug could target dead satellites**

Derelict satellites could in future be grappled and removed from key orbits around Earth with a space tug using magnetic forces.

(21 June 2017)

**Quantifying the effects of climate change**

Last year was the hottest on record, Arctic sea ice is on the decline and sea levels continue to rise. In this context, satellites are providing us with an unbiased view of how our climate is changing and the effects it is having on our planet.

(6 June 2017)

**China launches advanced satellite navigation positioning system**

China has launched a national satellite navigation and positioning system, the largest in the country Li Weisen, deputy director of the National Administration of Surveying, Mapping and Geoinformation, said that the system consists of 2700 base stations, a national database centre and 30 provincial level database centres. The system, featuring faster speed, higher accuracy and wider coverage, will be compatible with other satellite navigation systems, such as BeiDou.

(29 May 2017)

**Russia aims for 15 remote sensing satellites in orbit by 2020**

Russian President Vladimir Putin stated that the remote sensing technologies must be used to boost the Russian defense and security, develop the economy and social sphere, and increase the quality of the state's governance. The number of operating Russian remote sensing satellites orbiting the Earth will reach 15 by 2020, Russian President Vladimir Putin said.

(25 May 2017)

**New nano-satellite fleet starts launch in June**

An Australian-backed company is to launch the first three of a planned fleet of 200 new nano-satellites in the third week of June. Sky and Space Global (SAS) says the satellites will provide affordable communication services to those who are currently underserved across the equatorial belt.

(18 May 2017)

**Novel use of satnav saves precious water**

Water conservation is a growing concern globally, and particularly for farmers in the USA, where decades of irrigating huge fields has depleted vital resources of fresh surface water and groundwater. An ESA spin-off that can help to preserve water supplies while guaranteeing crop irrigation is now undergoing final testing.

(15 May 2017)

**Iridium deploys first 10 Next satellites**

Iridium Communications has integrated the first set of its Next satellites into the existing operational constellation to improve communications for shipping. This followed a rigorous testing and validation process of the 10 satellites in orbit.

(11 May 2017)

**New look at satellite data questions scale of China's afforestation success**

China has invested more resources than any other country in reversing deforestation and planting trees. However, given the large scale of these programmes it has been difficult to quantify their impact on forest cover. A new study shows that much of China's new tree cover consists of sparse, low plantations as opposed to large areas of dense, high tree cover.

(8 May 2017)

**Satellites track Antarctic ice loss over decades**

Over two decades of observations by five radar satellites show the acceleration of ice loss of 30 glaciers in Western Palmer Land in the southwest Antarctic Peninsula.

(3 May 2017)

**Company loses contact with communications satellite while changing orbit** A 20-year old satellite in fleet operator EchoStar's constellation is drifting after an anomaly the company said has crippled communications.  
(4 August 2017)

**ALMA confirms complex chemistry in Titan's atmosphere** Saturn's largest moon, Titan, is one of our solar system's most intriguing and Earth-like bodies. It is nearly as large as Mars and has a hazy atmosphere made up mostly of nitrogen with a smattering of organic, carbon-based molecules, including methane (CH<sub>4</sub>) and ethane (C<sub>2</sub>H<sub>6</sub>). Planetary scientists theorize that this chemical make-up is similar to Earth's primordial atmosphere.  
(2 August 2017)

**NASA tests Webb Telescope's communication skills** NASA called, and the Webb telescope responded. NASA's James Webb Space Telescope recently completed its Ground Segment Test Number 1 (GSEG-1), for the first time confirming successful end-to-end communication between the telescope and its mission operations centre.  
(2 August 2017)

**NASA's Voyager Spacecraft Still Reaching for the Stars After 40 Years** Humanity's farthest and longest-lived spacecraft, Voyager 1 and 2, achieve 40 years of operation and exploration this August and September. Despite their vast distance, they continue to communicate with NASA daily, still probing the final frontier.  
(1 August 2017)

**Smallest satellite ever paves way for planned interstellar fleet** Breakthrough Starshot, the \$100 million project to send tiny spacecraft to Alpha Centauri, successfully operated a mini-satellite in orbit for the first time.  
(29 July 2017)

**Has Cassini found a universal driver for prebiotic chemistry at Titan?** The international Cassini-Huygens mission has made a surprising detection of a molecule that is instrumental in the production of complex organics within the hazy atmosphere of Saturn's moon Titan.  
(28 July 2017)

**Cassini finds surprises for Saturn's magnetic field** Even though it doesn't have long left to go, Cassini is busy surprising scientists with data it has collected while plunging through Saturn's rings.  
(27 July 2017)

**Norwegian microsatellite deploys first-of-kind Yagi antenna** The Norwegian Space Centre has announced successful deployment of critical antennas and probes on the NORsat-1 and NORsat-2 microsatellites built by Canada's Space Flight Laboratory (SFL) and launched on 14 July from Kazakhstan. Most notable was deployment of a large Yagi antenna from NORsat-2 that will provide first-of-its-kind VHF Data Exchange (VDE) from space.  
(25 July 2017)

**First lunar observatory for Moon's south pole in 2019** The International Lunar Observatory Association (ILOA) and Moon Express have announced a collaboration for the delivery of an instrument to image the Milky Way from the lunar surface  
(25 July 2017)

**A new way to search for gravitational waves?** Scientists suggest looking for gravitational waves in data from a mission that is looking at star positions  
(22 July 2017)

**A Final Farewell to LISA Pathfinder** With the push of a button, final commands for the European Space Agency's LISA Pathfinder mission were beamed to space on July 18, a final goodbye before the spacecraft was powered down. LISA Pathfinder had been directed into a parking orbit in April, keeping it out of Earth's way. The final action this week switches it off completely after a successful 16 months of science measurements.  
(18 July 2017)

**First close-ups of Jupiter's Great Red Spot from Juno flyby** The closest-ever observations of our solar system's biggest storm could tell us how deep into Jupiter it extends and how it has continued to rage for centuries  
(13 July 2017)

**Hubble Telescope captures stars forming just after the Big Bang** Paired with a cosmic magnifying glass, NASA's Hubble Space Telescope has revealed insight into star formation in the early universe.  
(9 July 2017)

**SES transfers capacity from AMC-9 satellite following significant anomaly** SES has announced that, following a significant anomaly, the company is in the process of transferring capacity from its AMC-9 satellite. The incident was noted on the morning of Saturday 17 June 2017. SES has taken immediate action in contacting all customers and is working to transfer services to alternative satellite capacity in order to minimise disruption.  
(7 July 2017)

**Artificial brain helps GAIA catch speeding stars** With the help of software that mimics a human brain, ESA's Gaia satellite spotted six stars zipping at high speed from the centre of our galaxy to its outskirts. This could provide key information about some of the most obscure regions of the Milky Way.  
(7 July 2017)

**NASA releases Kepler Survey Catalog with hundreds of new planet candidates** NASA's Kepler space telescope team has released a mission catalogue of planet candidates that introduces 219 new planet candidates, 10 of which are near-Earth size and orbiting in their star's habitable zone, which is the range of distance from a star where liquid water could pool on the surface of a rocky planet.  
(20 June 2017)

**The future of the Orion constellation** A new video, based on measurements by ESA's Gaia and Hipparcos satellites, shows how our view of the Orion constellation will evolve over the next 450 000 years. Stars are not motionless in the sky: their positions change continuously as they move through our Galaxy, the Milky Way.  
(17 June 2017)

**A whole new Jupiter: First science results from NASA's Juno mission** Early science results from NASA's Juno mission to Jupiter portray the largest planet in our solar system as a complex, gigantic, turbulent world, with Earth-sized polar cyclones, plunging storm systems that travel deep into the heart of the gas giant.  
(26 May 2017)

**Juno spacecraft has close encounter with Jupiter's cloud tops in sixth flyby** Juno skimmed the cloud tops of Jupiter at a range of just 3,500 kilometres during its close approach, NASA officials said. The manoeuvre marked the sixth time the Juno probe's orbit has brought it up close with Jupiter.  
(21 May 2017)

**LIGO could detect gravitational waves' permanent space-time warp** When gravitational waves permanently distort space-time, it causes a 'memory signal' which may help LIGO find some of the universe's most exotic objects  
(20 May 2017)

**Fermi satellite observes billionth gamma ray with LAT instrument** On April 12, one of the spacecraft's instruments - the Large Area Telescope (LAT), which was conceived of and assembled at the Department of Energy's SLAC National Accelerator Laboratory - detected its billionth extraterrestrial gamma ray.  
(15 May 2017)

**Astrophysicists find that planetary harmonies around TRAPPIST-1 save it from destruction** When NASA announced its discovery of the TRAPPIST-1 system back in February it caused quite a stir, and with good reason. Three of its seven Earth-sized planets lay in the star's habitable zone, meaning they may harbour suitable conditions for life. But one of the major puzzles from the original research describing the system was that it seemed to be unstable.  
(14 May 2017)


**First results from Jupiter probe show huge magnetism and storms** Observations from the Juno spacecraft are confounding astronomers with revelations about the weather and magnetism of our solar system's biggest planet  
(5 May 2017)

**Cassini radio signal from Saturn picked up after dive** The Cassini spacecraft is sending data back to Earth after diving in between Saturn's rings and cloudtops. The probe executed the daredevil manoeuvre on Wednesday - the first of 22 plunges planned over the next five months - while out of radio contact.  
(27 April 2017)

**NASA's Cassini, Voyager missions suggest new picture of Sun's interaction with galaxy** New data from NASA's Cassini mission, combined with measurements from the two Voyager spacecraft and NASA's Interstellar Boundary Explorer, or IBEX, suggests that our sun and planets are surrounded by a giant, rounded system of magnetic field from the sun - calling into question the alternate view of the solar magnetic fields trailing behind the sun in the shape of a long comet tail.  
(26 April 2017)

**China's first cargo spacecraft docks with space lab** China's first cargo spacecraft, Tianzhou-1, successfully completed docking with an orbiting space lab, the Beijing Aerospace Control Center said.  
(24 April 2017)

**Gaia's snapshot of another galaxy** While compiling an unprecedented census of one billion stars in our Galaxy, ESA's Gaia mission is also surveying stars beyond our Milky Way. A new image of M33, also known as the Triangulum galaxy, shows tens of thousands of stars detected by Gaia, including a small stellar census in its star-forming region NGC 604.  
(24 April 2017)

 **US Senate restores funding for NASA Earth Science and satellite servicing programmes** An appropriations bill approved by a Senate committee would restore funding for several NASA Earth science missions slated for termination by the administration as well as a satellite servicing programme.

(4 August 2017)

 **UK space companies to develop international partnerships** The UK Space Agency is working with research institutions, industry and non-profit organisations to develop strong international partnerships to help tackle economic, societal and environmental issues using satellite technology. The Agency will award funding through its International Partnership Programme (IPP), which is designed to partner UK space expertise with overseas governments.

(3 August 2017)

 **Loss of MexSat-1 satellite not to hinder Russian-Mexican space cooperation** Mexico is ready for strengthening space and hi-tech cooperation with Russia despite an unsuccessful launch of the Russian Proton-M carrier rocket in 2015, which led to the incineration of Mexico's MexSat-1 communications satellite, Mexican Ambassador in Moscow Norma Bertha Pensado Moreno told Sputnik.


(28 July 2017)

 **Iran in 'successful' test of satellite-launch rocket** Iran has tested a satellite-launch rocket. It said the launch vehicle, named Simorgh after a bird in Iranian mythology, was capable of propelling a satellite weighing 250 kilograms to an altitude of 500 kilometres

(28 July 2017)

 **Japan's first private rocket set for launch** Japan's first privately developed rocket has been scheduled for launch on July 29 by developer Interstellar Technologies (IST).


(26 July 2017)

 **UK wants continued EU Copernicus participation** The UK has given the clearest statement yet of its desire to stay within the European Union's Copernicus Earth observation programme after Brexit.


(21 July 2017)

 **Egyptosat-2 replacement to be launched in 2019** The launch of the Egyptosat-A satellite has been scheduled for 2019, Deputy Chief Executive Officer of Russia's RSC Energia corporation Alexander Derechin said.


(21 July 2017)

 **Canadian presence in US space initiatives swells** Vancouver's MacDonald, Dettwiler and Associates is making inroads in satellite-servicing markets once dominated by U.S. companies.


(20 July 2017)

 **Luxembourg Adopts Space Resources Law** The government of Luxembourg has passed a bill giving companies the rights to space resources they extract from asteroids or other celestial bodies.

(20 July 2017)

 **Heinrich Hertz satellite shows military reluctance to expand commercial satcom** The German government's decision to contract for a new telecommunications satellite is the latest example of governments' continued reluctance to outsource satellite telecommunications to the private sector. It will also likely mean reduced purchases of commercial satellite services as the Bundeswehr moves more of its requirements to the government-owned Heinrich Hertz satellite. The formal go-ahead for Heinrich Hertz, which has been debated for several years inside the German government before being approved by the German parliament, was confirmed on June 28.

(19 July 2017)

 **Netherlands and Norway join forces in space** The Netherlands and Norway are going to conduct scientific research in the field of space. It concerns matters that are relevant to military operations. The focus is on designing a 'space demonstrator' using a small satellite.

(18 July 2017)

 **Ghana launches satellite into orbit** Ghanasat-1 was released from the International Space Station, nearly a month after its launch from the Kennedy Space Center on Elon Musk's SpaceX flight 11.


(10 July 2017)

 **Russia to carry out five launches from Vostochny Space Centre in 2018** Russia will conduct five launches from the Vostochny space center in Russia's Far East in 2018, Deputy Prime Minister Dmitry Rogozin told Sputnik. Vostochny is expected to reduce Russia's dependency on the Baikonur space centre in Kazakhstan. Baikonur is on lease to Russia until 2050.

(8 July 2017)

 **Japan reveals plans to put astronaut on moon by 2030** Japan has revealed ambitious plans to put an astronaut on the Moon around 2030 in new proposals from the country's space agency. This is the first time the Japan Aerospace Exploration Agency (JAXA) has said it aims to send an astronaut beyond the International Space Station, an agency spokeswoman told AFP.

(3 July 2017)

 **Launch of Hellas Sat 3 satellite brings Cyprus into the space era** The launch of the Hellas Sat 3 satellite, the biggest European telecommunication satellite, promotes Cyprus into the space era and more specifically in space technology, Minister of Transport, Communication and Works Marios Demetriades has told CNA. Demetriades, who attended the launch of the satellite at the European Space Station of Kourou, in the French Guiana, said that the Hellas Sat 3 satellite will bring many benefits for Cyprus.

(2 July 2017)

 **President Trump Re-Establishes National Space Council** U.S. President Donald Trump signed a long-awaited executive order June 30 re-establishing the National Space Council.


(1 July 2017)

**India, Portugal shake hands on space cooperation** Indian Prime Minister Narendra Modi during his visit to Lisbon agreed with Portuguese authorities on creation of alliance to advance space research, the Indian Foreign Ministry said in a statement. India, Portugal sign a memorandum of understanding (MoU) on cooperation in the field of space, according to the statement.

(29 June 2017)

 **Studies into UK National Microgravity Experiments Call for Proposals** The UK Space Agency is making funding available for studies...

(29 June 2017)

 **Russia, Brazil consider joint space launches from Brazilian spaceport** #Russia and #Brazil are considering the possibility of conducting joint launches of carrier rockets from a Brazilian space centre, Russian President Vladimir Putin said.

(27 June 2017)

 **Vietnam, Israel sign agreement on space technology cooperation** The Vietnam National Satellite Centre and the Israel Space Agency inked an agreement on cooperation in science and technology and peaceful use of outer space, in Hanoi. At the signing ceremony, Israeli Ambassador to Vietnam Meirav Eilon Shahar said under the agreement, the two sides will boost cooperation in such areas as earth observation, space industry, and satellite activities.

(22 June 2017)

 **NASA, CNES express commitment to joint exploration** France and the United States have a long history of cooperation in space, combining their talents over the years to advance science and launch exploration missions whose results have been instrumental in creating entirely new fields of research. The leaders of the two space agencies, Acting NASA Administrator Robert Lightfoot, and CNES President Jean-Yves Le Gall, reaffirmed the agencies' cooperation efforts.

(21 June 2017)

 **Galileo contract faces Brexit crunch** A contract signed is giving a German-UK consortium the go-ahead to build another eight satellites for Galileo - Europe's version of GPS. OHB System of Bremen and SSTL of Guildford have so far produced all of the fully operational satellites in the constellation. But it is highly unlikely that SSTL, which assembles the timing and navigation payloads on the spacecraft at its Surrey factory, will have completed its share of the production effort by Friday 29 March, 2019 - the date for Britain's withdrawal from the EU.

(21 June 2017)

## Opportunities

### **NASA Immersive 360th Multimedia and Video Winter/Spring Internships - NASA (United States)**

INTRODUCTION: Immerse yourself in NASA via our first internship dedicated to exploring the intersection of science and immersive/360 multimedia storytelling. Work

### **NASA Information Assurance Engineer - KeyLogic (United States)**

As a NASA Information Assurance Engineer you will become an integral part of our growing organization. As a member of the KeyLogic Team, you will be able to expand

### **NASA IV&V Guidance Navigation & Control Software Engineer - Engility (United States)**

is the sole provider of Independent Verification and Validation (IV&V) services to the NASA IV&V Program located in Fairmont, West Virginia. At the NASA IV&V

### **NASA IV&V Software Engineer - Engility (United States)**

is the sole provider of Independent Verification and Validation (IV&V) services to the NASA IV&V Program located in Fairmont, West Virginia. At the NASA IV&V

### **NASA IV&V Systems Engineer - Engility (United States)**

is the sole provider of Independent Verification and Validation (IV&V) services to the NASA IV&V Program located in Fairmont, West Virginia. At the NASA IV&V

### **NASA IV&V Systems Engineer - Engility Corporation (United States)**

is the sole provider of Independent Verification and Validation (IV&V) services to the NASA IV&V Program located in Fairmont, West Virginia. At the NASA IV&V

### **NASA Journalism, Multimedia, Social Media Winter/Spring Internships - NASA (United States)**

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

### **NASA Programs Acquisition Manager - Centech (United States)**

Overview: THE CENTECH GROUP, Inc. (CENTECH(R)) is seeking a Capture Manager/ NASA Programs Acquisition Manager. The person in this position will manage the

### **NASA Programs Acquisition Manager - THE CENTECH GROUP (United States)**

THE CENTECH GROUP, Inc. (CENTECH(R)) is seeking a Capture Manager/ NASA Programs Acquisition Manager. The person in this position will manage the CENTECH-approved

### **NASA UAS Traffic Management (UTM) project - NASA (United States)**

As part of the NASA UAS Traffic Management (UTM) project, research is in progress to enable integration of small unmanned aerial vehicles (UAV) into the National

### **Analogue and Digital Electronics Engineer**

You will have the opportunity to provide engineering support to the Future Missions Office and Prodex Office at the European Space Agency located in Noordwijk, The Netherlands. Tasks and Activities The scope of work will include Design of analogue and digital electronics in support of various payload instrument validation activities with a particular emphasis on detector readout electronics Manufacturing and test of electronic circuits Supporting electronic system, components and electrooptical sensor characterisations in the sections laboratories Development of firmware and instrument control and readout software Supporting the development and maintenance of the technical infrastructure needed to validate payload technologies Generally supporting office activities contributing to the elaboration and implementation of the Science Programme technology development plans Evaluation of proposals in response to calls for missions, participation in reviews, payload expertise in support of s...

### **Assistant ProgrammeProject Controller**

Serco is a specialist at delivering vital services on behalf of European, National and Local Governments. Serco Europe employs a large workforce in Belgium, Luxembourg, France, Switzerland, Germany, Holland, Spain, Italy and the UK. Our European operations have ca. 2,000 employees delivering critical services to public institutions throughout Europe. Package description Full details on application. Relocation assistance provided if applicable. Main responsibilities General administrative support to the MetOp Second Generation MetOpSG Programme Coordination with and backup for the Administrative Assistant to the MetOpC and Sentinel5 Projects Processing of all incoming and outgoing documentation and correspondence, including use of Documentation Management Systems e.g. Eclipse for registration and distribution Support users for retrieval of documents from local DMS, DMSs from external partners and/or industry, out of paper archives, other sources like ESTEC library, scanned documents on ...

### **Auditor - Headquarters, NASA (United States)**

ensures the financial health of the Agency, including responsibility for ensuring that NASA resources are effectively employed toward the achievement of NASA 's

### **Branch Customer Services Associate/ NASA Goddard Branch - NASA Federal Credit Union (United States)**

largest credit unions in the region and top performing in the nation, NASA Federal Credit Union members enjoy banking with an organization that's well established,

### **Business Development Director- NASA - The Aerospace Corporation (United States)**

The Civil Systems Group is seeking qualified individuals experienced in working with NASA for the position of Account Director. The position supports the NASA

### **Business Student Trainee - NASA Pathways Intern - USAJobs (United States)**

JOB SUMMARY: About the Agency The NASA Pathways Intern Program provides students with the opportunity to explore NASA careers and gain meaningful developmental

### **Climate Science Communication Engineer**

Aurora is an established supplier of skilled manpower to ESA and in particular at ESTEC and ESAC. Aurora has the opportunity to expand our support to ESA in the domain of EOPSC ESA Climate Office. Happiness of our employees has proven key to obtaining excellent results and a client who also regards us highly for excellent service. Overview The main responsibilities of the post are to expand the awareness, utilisation and scientific impact of EO data for climate research and applications. The incumbent shall maximise the contribution of European Earth Observation science including ESAs flagship programme on climate science the Climate Change Initiative CCI to future IPCC assessments and reports, and support and inform the implementation of global policy decisions taken at COP21 in Paris, December 2015. In their capacity, the incumbent shall be responsible for ensuring effectively delivery of the Climate Change Initiatives knowledge exchange strategy as well as providing support and adv...

### **Data Reprocessing Engineers**

Would you like to apply your Computer Science background to understanding more about changes in global weather and climate? Are you a naturally analytical and innovative person who likes to look at data in different ways? EUMETSAT is the European operational satellite agency for monitoring weather, climate and the environment, pulling together the resources of 30 Member States. We observe the atmosphere and ocean and land surfaces from Space using a system of satellites, 365 days a year, offering images and data to provide insights into weather situations, environmental hazards and climate change. Our work helps users worldwide to monitor changes in these to protect lives, lifestyles and properties. Developing the next generation of satellites, we look to shape our future. We have been gathering information from satellites for over 30 years and want to use this data to best effect. As a result, two opportunities have arisen to join the busy Data Processing Systems and Applications Com...

### **Drupal Developer in the Earth Science Project Office at NASA Ames Research Center - Bay Area Environment (United States)**

environment. Like working with a small dedicated team where your input helps NASA Earth Science Research. The Bay Area Environmental Research (BAER) Institute, a

### **Earth Observation Applications Support Engineer**

HE Space is a successful international space company. For over 30 years, we have been supporting our customers with qualified experts in the field of engineering, science and administration. We are currently looking for a Earth Observation Applications Support Engineer to support our customer in the United Kingdom. Earth Observation Applications Support Engineer Responsibilities As part of the ESA climate office, your responsibilities are to expand the awareness, utilisation and scientific impact of EO data for climate research and applications, in particular for the ocean but also for other domains of the earth system. The tasks include conducting scientific data exploitation activities and research studies to address gaps in knowledge as part of the contribution of European Earth Observation science to future IPCC assessments and reports, supporting and informing the implementation of global policy decisions taken at COP21 in Paris, December 2015. Key Tasks Establishing a dialogue w...

### **EGNOS NLES RIMS Performance Engineer mf**

A vacancy for a EGNOS NLES RIMS Performance Engineer mf has arisen within Airbus Defence and Space in Munich Ottobrunn. The successful

applicant will join TSEIG4 Navigation Products. Position pending on successful contract award to Airbus for EGNOS V3 phase CD. EGNOS is a satellite based European augmentation system for GPS signals and the upcoming European Navigation system Galileo. Currently the next generation EGNOS V3 is under development. The Ranging and Integrity Monitoring Stations RIMS are a central element of the SpaceBased Augmentation System SBAS like EGNOS to generate the SBAS message contents used for Open Service and SafetyofLife applications. The Navigation Land Earth Stations NLES are the uplink stations of EGNOS and in charge of disseminating the data to the users within the service area. Your main tasks and responsibilities will include Monitoring the proper implementation of the RIMS and NLES specifications imposed by system Characterizing the RIMS and NLES pe...

#### **ERT Officer NASA -Ci (Titusville FL) - Chenega Corporation (United States)**

to support emergency response operations. TheERT Officer,after completion of required NASA Federal Arrest Authority and if required, Federal Magistrate Program

#### **Full Stack Development - NASA Open Source - Qualified Technical Services, Inc (United States)**

Work Location: NASA Ames Research Center (Mountain View, CA) Minimum Citizenship: US Citizen Clearance: US Government REQUIREMENTS Education: BS Discipline(s):

#### **Ground Stations Software Engineer**

Do you have the engineering skills to support the development and upgrade of our ground stations software, including monitoring and control applications for future satellite systems, in particular the EUMETSAT Polar System Second Generation EPSSG? EUMETSAT is the European operational satellite agency for monitoring weather, climate and the environment. We observe the atmosphere, ocean and land surfaces from Space using a system of satellites, 365 days a year, offering images and data to provide insights into weather situations, environmental hazards and climate change. Our work helps users worldwide to monitor changes in these to protect lives, lifestyles and properties. Developing the next generation of satellites, we look to shape our future including our ground station infrastructure. These activities have opened up an opportunity for a Ground Stations Software Engineer to join our System Engineering and Projects Division. In this role you will be responsible for providing engineer...

#### **Human Space Flight- Project Engineer, NASA HQ - The Aerospace Corporation (United States)**

of The Aerospace Corporation, brings engineering expertise and valued capabilities to NASA . In this Project Engineer role you will provide overall technical

#### **Ingenieur Matriaux applications optiques HF**

Centre National dEtudes Spatiales Le Centre National dEtudes Spatiales propose aux pouvoirs publics la politique spatiale de la France et la met en uvre dans 5 grands domaines stratgiques Ariane, les Sciences, lObservation, les Tlcommunications et la Dfense. Plus que jamais la conquete spatiale est au cur de la vie quotidienne des citoyens avec des retombes conomiques et sociales cls. Les 2 500 collaborateurs du CNES se rpartissent au sein de 4 centres dexcellence bass Toulouse, Paris et en Guyane. Ingenieur dtudes et dveloppement Ingenieur matriaux Substrats et dpts pour des applications optiques, vous avez en charge le support fonctionnel sur plusieurs projets dans le domaine des matriaux et procds utilis sur les systmes optique embarqus. Vos actions portent sur une participation lanalyse des documentations, aux revues projets, au suivi des avancements et un support vers les industriels et laboratoires scientifiques. En accord avec le projet, vous dfinissez les plans dessais, assur...

#### **Ingenieur Systeme PicMeApp hf**

Airbus Defence and Space est une division dAirbus Group, ne du regroupement des activits de Cassidian, dAstrium et dAirbus Military. Cette nouvelle division est le numro un europen de lindustrie spatiale et de la dfense, le numro deux mondial de lindustrie spatiale et fait partie des dix premires entreprises mondiales du secteur de la dfense. Elle ralise un chiffre daffaires annuel denviron 14 milliards deuros avec un effectif de quelque 40 000 employs. Un poste dIngenieur Systeme PicMeApp hf est pourvoir chez Airbus Defence Space Toulouse. Vous rejoindrez lorganisation CISINT. Le groupe dactivit INTELLIGENCE du CIS dAirbus DS CISINT a lanc le programme Services Numriques Intelligence pour largir son domaine daffaires au sein de ses marches verticaux existants et des marches inexploits, tels que B2C Business to Consumer ou B2b2C partenaires daffaires de taille moyenne, au moyen dapplications et de solutions mobiles et bases sur le Cloud. Le projet PicMeApp vise ouvrir ces marches B2C et B2...

#### **Junior Software Engineer**

Junior Software Engineer 172055 Job Description We are looking for a Junior Software Engineer to join the Engineering Team in our offices in Darmstadt, Germany. Solenix is an independent and international company providing engineering and consulting services in the space market. Among our customers are space agencies like ESA and EUMETSAT. We are specialized in distributed systems and client applications, using modern technologies with a focus on high performing, robust and light solutions. Our Engineering Team is a group of motivated, dynamic and creative people who enjoy highquality work, as well as a relaxed and flexible work atmosphere. If you are passionate about software technologies and you want a versatile role, we are looking for you! You will be involved in all phases of the software development lifecycle in current and future projects. This role has a lot of potential for career development within the company. Required Skills and Experience You should be able to demonstrate...

#### **LEO Spacecraft Operations Engineers 3 posts**

Are you an experienced Spacecraft Operations Engineer willing to support flight operations of the Metop satellites and the development and operations preparation of future LEO satellite systems? EUMETSAT is the European satellite agency for monitoring weather and climate. Bringing together the resources of 30 Member States, we develop and operate a range of satellite systems surveying the atmosphere, ocean and climate that deliver information 24 hours a day. Our data is vital to weather forecasts that enable us to protect lives and property as well as monitoring the changing climate. EUMETSAT is now developing the next generation of satellite systems, shaping its longterm future. We are inviting applications from experienced engineers keen to work with highly advanced satellite technology in a dynamic operational environment. We are recruiting for 3 positions that will provide suitable candidates the opportunity to support the preparation of operations for the future LEO satellite

sys...

### **Meteosat Spacecraft Operations Engineers 2 posts**

Are you an experienced Spacecraft Operations Engineer SOE able to manage routine spacecraft operations whilst also supporting the preparation of operations for future geostationary satellites? EUMETSAT is the European satellite agency for monitoring weather and climate. Bringing together the resources of 30 Member States, we develop and operate a range of satellite systems surveying the atmosphere, ocean and climate that deliver information 24 hours a day. Our data is vital to weather forecasts that enable us to protect lives and property as well as monitoring the changing climate. EUMETSAT is now developing the next generation of satellite systems, shaping its longterm future. We are inviting applications from engineers with experience of the space sector and keen to work in a high availability, 24/7 operational environment. We have 2 roles that will provide suitable candidates the opportunity to support the preparation of operations of the future Meteosat Third Generation MTG satelli...

### **MetOp Programme Administrator**

Aurora is an established supplier of skilled manpower to ESA and in particular at ESTEC and ESAC. Aurora has the opportunity to expand our support to ESA in the domain of BMC Business Management, Controlling Administration. Happiness of our employees has proven key to obtaining excellent results and a client who also regards us highly for excellent service. Overview The contractor will provide support to the MetOp Programme. The principle tasks and responsibilities will include General administrative support to the MetOp Second Generation MetOpSG Programme Coordination with and backup for the Administrative Assistant to the MetOpC and Sentinel5 Projects Processing of all incoming and outgoing documentation and correspondence, including use of Documentation Management Systems e.g. Eclipse for registration and distribution Support users for retrieval of documents from local DMS, DMSs from external partners and/or industry, out of paper archives, other sources like ESTEC library, scanned...

### **Network Operations Centre Engineer 2 positions Ground Segment**

Thorn SDS has a requirement for Network Operations Centre Engineers to join our team based at the European Space Agency, Darmstadt, Germany. This is a great opportunity to develop and grow your career in a multinational environment under the guidance of industry experts. Candidates must be excellent communicators in the English language with a passion for the Space Industry, and must have a widebased understanding of radio, telecommunications, and IT systems in an operational environment. Ideally candidates will have some experience of control systems or satellite ground segment. We will train you on all aspects of the ESA Ground Segment and in return you will be expected to work hard and contribute fully to a critical 24x7 service to ESA. This is a role with huge potential and we fully expect candidates to progress enormously, advancing into other engineering roles. At Thorn SDS we are always seeking to identify high quality individuals who are looking to start a career in the space ...

### **Oceanographer**

Aurora is an established supplier of skilled manpower to ESA and in particular at ESTEC and ESAC. Aurora has the opportunity to expand our support to ESA in the domain of EOPSC ESA Climate Office. Happiness of our employees has proven key to obtaining excellent results and a client who also regards us highly for excellent service. Overview The main responsibilities of the post are to expand the awareness, utilisation and scientific impact of EO data for climate research and applications, in particular for the ocean but also for other domains of the earth system. The tasks include conducting scientific data exploitation activities and research studies to address gaps in knowledge as part of the contribution of European Earth Observation science to future IPCC assessments and reports, supporting and informing the implementation of global policy decisions taken at COP21 in Paris, December 2015. In their capacity, the incumbent shall provide support to and advise on the detailed scientifi...

### **PHP Developer in the Earth Science Project Office at NASA Ames Research Center - Bay Area Environment (United States)**

time. The team operates in a flexible work environment and is based at the NASA Ames Research Center in the heart of Silicon Valley. Duties and Responsibilities: We

### **Planetary Protection Officer - NASA - NASA (United States)**

Planetary Protection Officer NASA - NATIONAL AERONAUTICS AND SPACE ADMINISTRATION Salary: \$124,406 to \$187,000 / per year For more information, please visit

### **Program Analyst - Headquarters, NASA (United States)**

Job Overview ## Job Overview Summary About the Agency For the 5th year in a row, NASA has been ranked the best Large Agency to work for in the federal government by

### **Science Driven Long Duration Venus Lander Concepts (NASA Space Academy at Glenn) - NASA (United States)**

1. Brief background & NASA mission/program support: Venus is a key planet to help better understand Earth and our solar system. Due to the thick acidic cloud layers,

### **Senior Cyber Security Engineer - NASA - SAIC (United States)**

Senior Cyber Security Engineer - NASA (Job Number:429105) Description: SAIC is hiring a Senior Cyber Security Engineer for our NASA engagement in Greenbelt, MD

**Senior Cyber Security Engineer - NASA Job - SAIC (United States)**

Senior Cyber Security Engineer - NASA (Job Number:429105) \*Description:\* SAIC is hiring a Senior Cyber Security Engineer for our NASA engagement in Greenbelt, MD

DISCLAIMER: Jobs posted in this section are accurate to the best of our knowledge but are generated automatically from multiple third-party sources and may contain duplicates.

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# INTERNATIONAL ASTRONAUTICAL CONGRESS 2017

ADELAIDE, AUSTRALIA  
25-29 SEPTEMBER 2017

68<sup>TH</sup> IAC  
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