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X-ray space telescope launched

PASADENA, Calif., June 13 (UPI) -- NASA said its NuSTAR X-ray observatory went into orbit Wednesday after it was dropped from an aircraft over the central Pacific Ocean.

An L-1011 "Stargazer" aircraft, operated by Orbital Sciences Corp. of Dulles, Va., took off from Kwajalein Atoll with the Nuclear Spectroscopic Telescope attached to Orbital's Pegasus XL rocket, both strapped to the belly of the aircraft.

At noon EDT, the rocket dropped from the L-1011, free-falling for 5 seconds before firing its first-stage motor.

About 13 minutes later, NuSTAR separated from the rocket, reaching its final low-Earth orbit, NASA's Jet Propulsion Laboratory in Pasadena, Calif., reported Wednesday.

"NuSTAR spread its solar panels to charge the spacecraft battery and then reported back to Earth of its good health," Yunjin Kim, the mission's project manager at JPL, said. "We are checking out the spacecraft now and are excited to tune into the high-energy X-ray sky."

NuSTAR will detect the highest energy X-ray light from the cosmos, seeing through gas and dust to reveal black holes lurking in our Milky Way galaxy, as well as those hidden in the hearts of faraway galaxies, mission officials said.

"With its unprecedented spatial and spectral resolution to the previously poorly explored hard X-ray region of the electromagnetic spectrum, NuSTAR will open a new window on the universe and will provide complementary data to NASA's larger missions, including Fermi, Chandra, Hubble and Spitzer," Paul Hertz, NASA's Astrophysics Division director, said.

Oldest census record of Japan discovered

DAZAIFU, Japan, June 13 (UPI) -- Archaeologists say wooden tablets found in southwestern Japan and dated to the seventh century are believed to be the oldest census record in Japan's history.

Unearthed in the city of Dazaifu in Fukuoka prefecture, the tablets were examined in infrared light, which revealed writing on one 12-inch by 3-inch tablet, China's Xinhua News Agency reported Wednesday.

The writing contains at least 16 names of families together with their titles and relationships along with words related to change of address or historical place names, researchers said.

The tablet is believed to be a census registration note of a type used in the period between A.D. 685 and 701, they said.

"The discovery is epoch-making to learn how the ancient government controlled people living in regions of the southwestern Japan before the Nara period (701-794), when the enactment of Taiho Ritsuryo formed a nation managed under the 'ritsuryo' legal code system," Nobuhide Yamamura, a representative of Dazaifu's cultural assets section, said.

Although similar wooden tablets dating to the eighth century have been found in other areas of Japan, the Dazaifu artifact is the country's oldest record of information about local residents, researchers said.

Smartphone can get cash from ATM

LONDON, June 13 (UPI) -- A British bank says its customers will be able to get cash from its ATMs without a card, using their smartphones instead.

Royal Bank of Scotland customers can request as much as \$150 via their smartphone and will receive a six-digit code to enter into the ATM to receive the cash, the BBC reported Wednesday.

RBS said the technology would help customers who had forgotten their bank cards or allow the people to leave their wallets at home in favor of carrying a cellphone.

"It is a really simple and secure way to help our customers get cash whenever and wherever they need it," Ben Green, head of mobile at RBS, said.

Access to the phone app for requesting cash requires a password, and the withdrawal code will be hidden until the user taps the phone screen, bank officials said, to prevent thieves from looking over the user's shoulder to steal the code.

Problems reported in U.S. germ laboratory

ATLANTA, June 13 (UPI) -- A U.S. bioterror germ lab has had ongoing problems with airflow systems designed to help prevent the release of infectious agents, government documents show.

The problems involve Biosafety Level 3 labs at the Centers for Disease Control and Prevention in Atlanta, USA Today reported Tuesday.

The labs are used for experiments involving anthrax, dangerous strains of influenza, the SARS coronavirus and other microbes that could possibly be used as bioweapons.

In February, air from inside a potentially contaminated lab briefly flowed out into a "clean" corridor while a group of visitors who weren't wearing any protective gear were touring the facility, internal CDC e-mails showed.

While the agency said no one had been infected, one expert says the incident represents a major violation of laboratory operating standards.

CDC documents about problems at the labs "raise serious concerns," Rutgers University biosafety expert Richard Ebright said. "There appear to be significant irregularities."

CDC engineers have expressed concerns about the air containment systems since at least 2010, USA Today reported.

The CDC has declined to respond to questions submitted in writing about the problems inside the high-containment labs, the newspaper said.

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