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In unprecedented support, US defends India's space weapons test saying it understands New Delhi's concerns

American leaderships says it understands India's concerns about space threats

By Chidanand Rajghatta

Washington: Some two decades after Washington came down like a ton of bricks on India for its Shakti nuclear tests, the United States on Thursday expressed unprecedented understanding and support for New Delhi's security concern while defending its recent space weapons test.

A hearing of the powerful US Senate Armed Services Committee on the proposal to establish a United States Space Force was the forum for lawmakers and defence officials to voice understanding of India's compulsions in going in for an anti-satellite test while seeking to establish global space norms and protocol that would include New Delhi.

"What should the rules environment be, and what should we be doing to try to promote rules? India is an ally. We're not talking about an adversary doing something. We're talking about them testing some capacity, but then that creates challenges for all kinds of uses of space. How should we be solving problems like that?" Virginia Senator Tim Kaine asked at the hearing, opening the floor for the Pentagon to express its support for New Delhi.

"The first lesson from the Indian ASAT is just the simple question of why did they do that. And the answer should be, I think to all the committee looking at it, is that they did that because they are concerned about threats to their nation from space, "

Responded US Strategic Command Commander General John E Hyten adding, "And therefore, they feel they have to have a capability to defend themselves in space. " It was an unprecedented moment in US-India relations, where despite close ties, administrations spanning both Democrats and Republicans have been leery of any significant advance by New Delhi in the military technology realm. In the immediate aftermath of the 1998 nuclear tests, the US secretary of state Madeleine Albright had castigated India saying it had "dug a hole" for itself by going overtly nuclear, leading her Indian counterpart Jaswant Singh to retort that "Culturally, Indians do not dig holes to bury themselves. "

That snarky exchange was a distant memory at Thursday's amicable Senate discussion as American policymakers sought to understand New Delhi's compulsions. Gen Hyten, in fact, echoed some of the arguments from New Delhi that India went into for a space weapons test because, as it happened with the nuclear non-proliferation regime, it did not want to be left out of any future global protocol or architecture on the subject.

Senator Kaine also drew a distinction between a similar Chinese test in 2007 which generated 100,000 pieces of debris, compared to the 400 from India's test. NASA had initially termed India's test and the debris it created as a "terrible, terrible thing" before it was told by the White House to reel back criticism and continue cooperation with India.

<https://timesofindia.indiatimes.com/india/in-unprecedented-support-us-defends-indias-space-weapons-test-saying-it-understands-new-delhis-concerns/articleshow/68852883.cms>

Pentagon defends India's A-Sat test, says country is concerned over 'threats' in space

Washington: India is concerned about the "threats" it faces in space, the Pentagon has said, defending the country for acquiring anti-satellite (A-Sat) missile test capabilities.

On March 27, India achieved a historic feat by shooting down its own loworbit satellite with a ground-to-space missile, making the country a space power.

The test made India the fourth country in the world after the US, Russia and China to have the A-Sat capabilities.

"The first lesson from the Indian A-Sat is just the simple question of why did they do that. And the answer should be, I think to all the committee looking at it, is that they did that because they are concerned about threats to their nation from space, " US strategic command commander General John E Hyten told members of the powerful Senate Armed Services Committee on Thursday.

"And therefore, they feel they have to have a capability to defend themselves in space, " Hyten told Senate Armed Services Committee while responding to a question from Senators on the need for India to do anti-satellite missile test, and the debris it generated in the space.

After India's test, NASA termed as a "terrible thing" the country's shooting down of one of its satellites, saying it created about 400 pieces of orbital debris, endangering the the International Space Station (ISS).

NASA administrator Jim Bridenstine had said about 60 pieces were tracked and out of which 24 are going above the apogee of the ISS.

Hyten advocated for the development of some kind of international norms of behaviour in space.

"And where those norms of behaviour should begin, from my opinion, is with debris, because as the combatant commander responsible for space today, I don't want more debris, " said the top Pentagon commander.

Raising the issue, Senator Tim Kaine said India announced last month that it had successfully conducted a test of an antisatellite weapon.

"So, they had something in low earth orbit. They used an anti-satellite weapon to down, and it resulted in - the estimate's right now 400 pieces of debris, 24 which are large enough to potentially pose a threat to the International Space Station, " he said.

"There have been other instances like this. There was a Chinese - a similar effort in 2007 that led to the catalogued 100,000 pieces of debris, many of which are still observing in debris fields that pose danger to other assets in space, " he said.

There was a collision in '09 between a working US satellite and a sort of defunct Soviet era satellite that -kind of a fender bender that produced debris. Then this debris causes challenges, he added.

"If we think that space is going to be more of a traffic jam, more satellites for all kinds of purposes up there, what should we be thinking about as a Senate in this committee or in Foreign Relations about sort of the rules?" he asked.

"What should the rules environment be, and what should we be doing to try to promote rules? India is an ally. We're not talking about an adversary doing something. We're talking about them testing some capacity, but then that creates challenges for all kinds of uses of space. How should we be solving problems like that?" Kaine asked.

<https://timesofindia.indiatimes.com/india/pentagon-defends-indias-a-sat-test-says-country-is-concerned-over-threats-in-space/articleshow/68842379.cms>

Sat, 13 April 2019

India's A-SAT mission planned in a way that debris will decay soon: DRDO Chief

Speaking at the Vivekananda International Foundation, a think-tank, Reddy said the location for the test was "well away" from the International Space Station (ISS)

Seeking to assuage concerns over the orbital debris created by India's A-SAT test, DRDO Chairman G Satheesh Reddy again assured that the mission was planned in a way that the resulting fragments will decay in a few weeks and there was no threat to the ISS.

Speaking at the Vivekananda International Foundation, a think-tank, Reddy said the location for the test was "well away" from the International Space Station (ISS).

"The debris will decay in a few weeks. That's how the whole mission was planned," he said.

Noting that the A-SAT test was an exemplary effort reflecting India's indigenous defence technology, the Defence and Research Development Organisation chief said more than 50 industries participated in the mission contributing 200 components to make the mission a success.

India shot down one of its satellites in space on March 27 with a ground-launched anti-satellite (A-SAT) missile to demonstrate this complex capability, joining the elite club of countries — the US, Russia and China — which have such capabilities.

The A-SAT test was successfully conducted with a new interceptor missile against a live orbiting satellite in the Low Earth Orbit (LEO) in a hit-to-kill mode.

This had raised concerns about the threat the debris will pose to global space assets, including the ISS.

During his address on Thursday, Reddy emphasised that India has to become self-sufficient in areas like making bulletproof jackets to manufacturing composite materials.

He said the DRDO is also focussing on small arms like carbines.

"Not much has happened in the area of small arms. We have taken this up very seriously. Based on the RFP (Request for Proposal) floated by the armed forces, we have started developing some of them. Some have gone through trials," Reddy said.

Elaborating on the Pinaka multi-barrel rocket launcher, he said it has been converted into a 'guided Pinaka' with an extended range. It is, he said, in the process of induction into the Army.

<https://www.moneycontrol.com/news/india/indias-a-sat-mission-planned-in-a-way-that-debris-will-decay-soon-drdo-chief-3812971.html>

Sat, 13 April 2019

Scientist Dr A K Singh conferred with Lifetime Achievement Award

The conclave was organised by the university to mark World Creativity and Innovation Day

By Dar Ovais

Chandigarh: Dr A K Singh was conferred with Lifetime Achievement Award during 4th APJ Abdul Kalam Innovation Conclave at Chandigarh University, Mohali Thursday.

Dr A K Singh, director at Life Sciences, DRDO, was honoured with Lifetime Achievement Award for his rich contribution in the field of life sciences, aerospace and aeronautics. The DST scientist has more than 18 patents and has contributed in more than 57 research publications at an international and national level.

The conclave was organised by the university to mark World Creativity and Innovation Day.

Dr Singh joined DRDO in 1988 and worked on various R&D projects. He has made significant contributions in Infection Imaging and Internal Decorporation of Fission Produced Radionuclides. He has developed a “Diagnobact” kit, for detection of infectious lesion. He has also introduced and nurtured pharmacosyntigraphy, i.e. application of nuclear medicine imaging in drug research.

“Innovation begins with an idea, which should be further encouraged to take shape of a futuristic technology to become beneficial for society” said Dr A K Singh, while addressing the students.

For innovating ‘Smart Trolley Bag’ that interacts with the traveler through voice and face, Pankaj Sharma, a third-year Electronics and Communication Engineering student, bagged first position and Best Innovation of the Year Award 2019.

<https://indianexpress.com/article/cities/chandigarh/scientist-dr-a-k-singh-conferred-with-lifetime-achievement-award-5671733/>



Mon, 15 April 2019

Army HQ to undergo major rejig

Number of officers proposed to be cut, new post of deputy chief of army staff to be created

By Mayank Singh

New Delhi: The world’s second largest army is ready for the biggest ever change in the organisational structure of its Delhi-based headquarters.

The changes have been proposed right from the Army chief down to the whole setup in Delhi, which frames and approves policies to defend the country. It was in 2018 that the Indian Army started four holistic studies, in the biggest exercise after independence to “transform itself into a more lethal force to meet the desired offensive and defensive capabilities of modern warfare by undergoing a complete transformation.”

The studies were on restructuring the Army headquarters, reorganising the Army, a cadre review of officers, and enhancing the colour service of soldiers. The current restructuring will take into account future requirements and ways to make the military lean and mean. The study on Army headquarters has proposed a major reorganisation to optimise the posting of

officers in various directorates and branches. In all, 1,332 officers, including the Chief of Army Staff, are posted at Army HQ, and the proposal is to trim the number to 1,203 officers, freeing 129 young officers to be deployed in the field.

The maximum number of officers is being released from the Information System Directorate, which looks after the net-centric vision of the Army. It has 94 officers of various ranks, including the Director General, who is a Lieutenant General. It is proposed to have 50 officers. Next is the Corps of Electronics and Mechanical Engineers, where 73 officers will serve and 28 will be released after the proposal is accepted. The Military Training Directorate will come down to 28 officers from 54, the Military Intelligence headquarters will be reduced to 81 officers from 99, and the Military Operations HQ will come down to 56 officers from 70.

Some offices will see an increase in their staff strength.

A new post of Deputy Chief of Army Staff has to be created who will oversee the work of Military Operations, Military Intelligence and Operational Logistics. This is meant to reduce the burden on the vice chief's office.

THE DETAILS OF OFFICERS OPTIMISED/ INCREASED IN IMPORTANT DIRECTORATE/ BRANCH IS GIVEN BELOW

A-Actual ● P-Proposed

DIRECTORATES	LT GEN		MAJ GEN		BRIGADIER		COLONEL		LT COL		TOTAL	
	A	P	A	P	A	P	A	P	A	P	A	P
COAS	-	-	1	2	2	2	8	11	4	9	15	24
VCOAS	1	1	-	2	2	3	2	6	1	10	6	22
DCOAS (Strategy)	-	1	-	-	-	1	-	1	-	1	0	4
DGIS	1	1	2	1	6	4	15	9	70	35	94	50
DG EME	1	1	4	4	5	4	19	18	72	46	101	73
DG MT	1	-	4	1	6	4	16	8	27	15	54	28
DG Sustenance	1	1	2	3	6	6	13	16	23	28	45	54

<http://www.newindianexpress.com/nation/2019/apr/15/army-hq-to-undergo-major-rejig-1964466.html>



Mon, 15 April 2019

World's largest plane makes first test flight

Stratolaunch is designed to carry and deploy satellites in space

The world's largest aircraft took off over the Mojave Desert in California on Saturday, the first flight for the carbon-composite plane built by Stratolaunch Systems Corp, started by late Microsoft co-founder Paul Allen, as the company enters the lucrative private space market.

The white airplane called Roc, which has a wingspan the length of an American football field and is powered by six engines on a twin fuselage, took to the air shortly before 7 a.m. Pacific time (1400 GMT) and stayed aloft for more than two hours before landing safely back at the Mojave Air and Space Port as a crowd of hundreds of people cheered.

“What a fantastic first flight,” Stratolaunch Chief Executive Officer Jean Floyd said in a statement posted to the company's website.

“Today's flight furthers our mission to provide a flexible alternative to ground launched systems, Floyd said. “We are incredibly proud of the Stratolaunch team, today's flight crew, our partners at Northrup Grumman's Scaled Composites and the Mojave Air and Space Port.”

The plane is designed to drop rockets and other space vehicles weighing up to 500,000 pounds at an altitude of 35,000 feet and has been billed by the company as making satellite deployment as “easy as booking an airline flight.”

Saturday's flight, which saw the plane reach a maximum speed of 189 miles per hour and altitudes of 17,000 feet, was meant to test its performance and handling qualities, according to Stratolaunch.

Allen, who co-founded Microsoft with Bill Gates in 1975, announced in 2011 that he had formed the privately funded Stratolaunch.

The company seeks to cash in on higher demand in coming years for vessels that can put satellites in orbit, competing in the United States with other space entrepreneurs and industry stalwarts such as Elon Musk's SpaceX and United Launch Alliance - a partnership between Boeing and Lockheed Martin.

Stratolaunch has said that it intends to launch its first rockets from the Roc in 2020 at the earliest. Allen died in October 2018 while suffering from non-Hodgkins' lymphoma, just months after the plane's development was unveiled.

“We all know Paul would have been proud to witness today's historic achievement,” said Jody Allen, Chair of Vulcan Inc and Trustee of the Paul G. Allen Trust. “The aircraft is a remarkable engineering achievement and we congratulate everyone involved.”

<https://www.thehindu.com/sci-tech/technology/worlds-largest-plane-makes-first-test-flight/article26836136.ece>

hindustantimes

Sat, 13 April 2019

Israeli spacecraft crashes onto moon after technical failures

The unmanned robotic lander suffered periodic engine and communications failures during the 21 minutes or so of the landing sequence, the support team said

Reuters: Yehud (Israel) The Israeli spacecraft Beresheet crashed onto the moon on Thursday after a series of technical failures during its final descent, shattering hopes of a historic controlled landing on the lunar surface.

The unmanned robotic lander suffered periodic engine and communications failures during the 21 minutes or so of the landing sequence, the support team said.

Beresheet, whose name is Hebrew for the biblical phrase “In the beginning”, had travelled through space for seven weeks in a series of expanding orbits around Earth before crossing into the moon's gravity last week.

The final manoeuvre on Wednesday brought it into a tight elliptical orbit around the moon, 15-17 km (9-10.5 miles) from the surface at its closest. From there it was a short, nail-biting and ultimately disappointing conclusion.

So far, only three nations have succeeded in carrying out a “soft” landing on the lunar surface: the United States, the Soviet Union and China.

<https://www.hindustantimes.com/world-news/israeli-spacecraft-crashes-onto-moon-after-technical-failures/story-Y0KKvDCWnpUtQxzY0o5dtN.html>



Sun, 14 April 2019

Beijing-based stock image provider watermarks black hole image, gets shut down

China Daily reported that the picture of the black hole, unveiled Wednesday, was added to Visual China’s stock with a copyright claim, “meaning anyone using the image without paying Visual China would be infringing on the copyright”

By Sowmiya Ashok

Beijing: The website of Beijing-based photo and media agency, Visual China Group, continued to be temporarily shut down Saturday after the company came under fire for claiming copyright of the first ever image of a black hole released earlier this week.

The Visual China Group is the largest stock image and media footage provider in China supplying to leading media companies in the country. Cyber administrators in Tianjin have begun an investigation and ordered the shutting down of any violations, state media reports said.

Visual China Group was accused of falsely watermarking images including the first image of the black hole, China’s national flag and also the country’s national emblem. On the Sina Weibo microblogging site, the question “Have you been watermarked by the Visual China Group yet?” became a trending topic after several companies joined in on the discussion wondering why their logos were under copyright as well.

Following this incident, chairman of Chinese office developer SOHO China, Pan Shiyi, wrote on Weibo that in 2017, he had received a call from Visual China pointing out that the copyright of the photos of Wangjing SOHO had been infringed. He wrote that the building was built by his company and the photographer was invited by them, and Visual China did not get back to him after these clarifications were made.

China Daily reported that the picture of the black hole, unveiled Wednesday, was added to Visual China’s stock with a copyright claim, “meaning anyone using the image without paying Visual China would be infringing on the copyright”. Soon after, Visual China had claimed the image of the black hole belonged to the European Southern Observatory and it had received authorisation for use. However, the Observatory said Visual China never contacted it for any purpose regarding the image, the report said. Meanwhile, the Communist Youth League of China also questioned the reason why the country’s national flag and emblem were watermarked with Visual China’s copyright. A website that tracks trending topic on Weibo said the post received multiple comments and was shared over 90,000 times with jokes that nearly every image in China has been claimed by the company.

“Companies such as China Merchants Bank joked around in the comment sections, wondering why their logo had not been watermarked by the company yet. Alipay also joined the discussion, saying: ‘Have we come too late?’” a report on the whatsonweibo.com website noted. “One commentator pointed out that photos of Taipei were labelled as photos of the ‘capital’ on their site, triggering hundreds of reactions on the company’s political stance on the Taiwan issue,” it added.

<https://indianexpress.com/article/world/beijing-based-stock-image-provider-watermarks-black-hole-image-gets-shut-down-5674440/>

वैज्ञानिकों ने तेल पीने वाले एक नए जीवाणु का लगाया पता

नई दिल्ली/टीम डिजिटल।वैज्ञानिकों (scientists) ने पृथ्वी के महासागरों के सबसे गहरे हिस्से मारियाना ट्रेंच (Mariana Trench) में तेल पीने वाले जीवाणु (Bacteria) का पता लगाया है। इससे पानी में फैले हुए तेल को स्थायी तरीके से हटाने में मदद मिल सकती है।

बता दें कि मारियाना ट्रेंच(Mariana Trench) पश्चिमी प्रशांत महासागर में करीब 11,000 मीटर की गहराई पर स्थित है। अध्ययन का नेतृत्व करने वाले चीन (china)के 'ओशन विश्वविद्यालय' के शियो हुआ झांग ने कहा, " हमें महासागर के सबसे गहरे हिस्से के बजाय मंगल ग्रह के बारे में अधिक पता है।"

अभी तक कुछ ही लोगों ने इस पारिस्थितिकी तंत्र में रहने वाले जीवों के बारे में अध्ययन किया है। ब्रिटेन के 'ईस्ट एंग्लिया विश्वविद्यालय' के जोनाथन टोड (jonathan todd) ने कहा, " हमारा दलमारियाना ट्रेंच (Mariana Trench) के सबसे गहरे हिस्से में लगभग 11,000 मीटर नीचे माइक्रोबियल जीवाणुके नमूने लेने गया। हमनेलाए गए नमूनों का अध्ययन किया और हाइड्रोकार्बन डिग्रेडिंग बैक्टीरिया (Hydrocarbon-degrading bacteria) के एक नए समूह का पता लगाया।"

टोड ने एक बयान में कहा, " हाइड्रोकार्बन कार्बनिक यौगिक हैं। जो हाइड्रोजन और कार्बन परमाणु के बने होते हैं। ये कच्चे तेल और प्राकृतिक गैस सहित कई स्थानों पर पाए जाते हैं। उन्होंने कहा, " इस तरह के सूक्ष्मजीव तेल में मौजूद यौगिकों को खा जाते हैं, और फिर ईंधन के रूप में इसका इस्तेमाल करते हैं। इस तरह के सूक्ष्मजीव प्राकृतिक आपदा से हुए तेल रिसाव को समाप्त करने में भी अहम भूमिका निभाते हैं। "

<https://m.dailyhunt.in/news/india/hindi/navodaya+times-epaper-navodayt/vaigyaniko+ne+tel+pine+vale+ek+nae+jivanu+ka+lagaya+pata-newsid-113721429>