

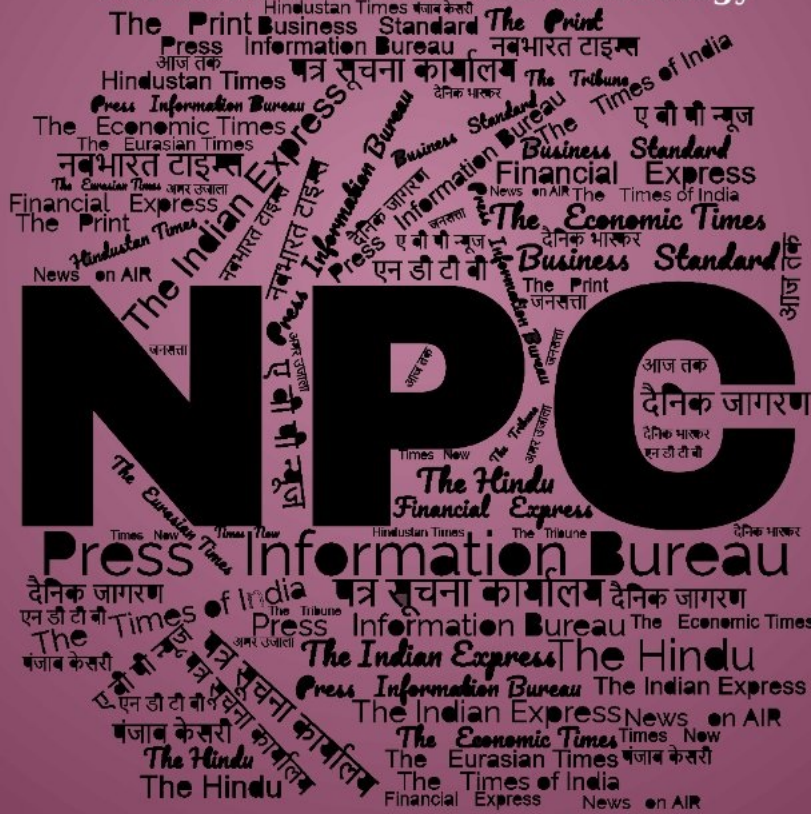
अक्टूबर
Oct
2023

खंड/Vol. : 48 अंक/Issue : 187
06/10/2023

समाचार पत्रों से चयित अंश Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

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Fri, 06 Oct 2023

IIT-BHU का 12वां दीक्षांत समारोह: टेक्नोक्रेट्स को मेडल देंगे DRDO चीफ; रक्षा आयात घटाने को लेकर, रीजनल सेंटर का करेंगे शुभारंभ

आज IIT-BHU का 12वां दीक्षांत समारोह है। रक्षा अनुसंधान एवं विकास संगठन (DRDO) के चेयरमैन डॉ. समीर वी कामत 1660 मेधावियों को उपाधि और 66 छात्रों को 108 गोल्ड-सिल्वर मेडल देंगे। 192 से ज्यादा रिसर्चर को PhD उपाधि भी मंच से दी जाएगी। दीक्षांत में IIT-BHU के बोर्ड ऑफ गवर्नर चेयरमैन पद्मश्री डॉ. कोटा हरिनारायन और डायरेक्टर प्रो. प्रमोद कुमार जैन भी रहेंगे। दीक्षांत के बाद DRDO चीफ समीर वी. कामत DRDO इंडस्ट्री-एकेडमिक एक्सीलेंस सेंटर का उद्घाटन करेंगे। यहां पर डिफेंस टेक्नोलॉजी के क्षेत्र में बड़े-बड़े रिसर्च होंगे।

पूर्वांचल में पहली बार डिफेंस सेक्टर पर रिसर्च का काम शुरू हो रहा है। इस सेंटर के द्वारा IIT-BHU और रक्षा अनुसंधान और विकास विभाग (DRDO) के बीच डिफेंस सेक्टर में भारत को आत्मनिर्भर बनाने पर तेजी से काम होगा। IIT-BHU ने इलेक्ट्रिकल इंजीनियरिंग विभाग में DRDO का रीजनल एक्सीलेंस सेंटर इंडस्ट्री एकेडमिया- सेंटर ऑफ एक्सीलेंस (DIA-CoE) बनाया गया है। रक्षा मंत्री राजनाथ सिंह ने पिछले साल 17 सितंबर को इस पर मंजूरी दी थी।

पाउडर मेटलर्जी और पॉवर वेव पर होंगे काम

यह सेंटर डिफेंस सेक्टर में खास और फ्यूचर की टेक्नोलॉजी के लिए तेज विकास पर रिसर्च करेगा। पहले फेज में पाउडर मेटलर्जी, इलेक्ट्रॉनिक, फंक्शनल सबस्टेंस, हाई पॉवर माइक्रोवेव सोर्स और डिवाइस सेक्टर में काम होगा। IIT-BHU के डायरेक्टर प्रोफेसर प्रमोद कुमार जैन ने कहा कि इस सेंटर का फोकस भारत के डिफेंस इंपोर्ट को घटाने और डिफेंस सेक्टर में आत्मनिर्भर बनाना है। इस सेंटर के रिसर्च आउटपुट सभी विभागों के लिए उपलब्ध होंगे। कई विभागों में DRDO के प्रोजेक्ट्स पर काम चल रहे हैं। इससे विभागवार रिसर्च में बेहतरी देखने को मिलेगी।

वेव वेपन पर काम कर रहे दोनों देशों के वैज्ञानिक

DRDO और IIT-BHU के वैज्ञानिक हाई पॉवर माइक्रोवेव एनर्जी, एक तरह का वेव वेपन पर काम कर रहे हैं। यह किसी देश के इलेक्ट्रॉनिक इक्विपमेंट को डिसेबल कर सकता है। दावा किया जा रहा है कि इससे इंसानों को कोई खतरा नहीं होता है। वहीं, वैज्ञानिकों का कहना है कि इससे रिडिएटेड इलेक्ट्रो मैग्नेटिक एनर्जी निकलता है। इस डिवाइस को लैब के प्लग या मिलिट्री वाहन के इंजन पर फिट किया जा सकता है। दुनिया में इस पर आधारित कुछ मिसाइल बनाए गए हैं। इसमें है बोइंग का CHAMP - काउंटर इलेक्ट्रॉनिक्स हाई

पॉवर्ड माइक्रावेव एडवांस मिसाइल प्रोजेक्ट और दूसरा THOR यानी कि टेक्निकल हाई पॉवर ऑपरेशनल रिसपांडर है।

सबसे ज्यादा मेडल इव्युरी और आर्यन को

दीक्षांत में प्रेशिडेंशिल गोल्ड मेडल दिव्यांश चंद्र रॉय और डायरेक्टर्स गोल्ड मेडल राघव सोनी को मिलेगा। सबसे ज्यादा 8 मेडल कंप्यूटर साइंस के इव्युरी हरीश और केमिकल इंजीनियरिंग के आर्यन जामवाल को दिया जाएगा। इनके अलावा इलेक्ट्रिकल के आशुतोष पांडेय ,इलेक्ट्रानिक्स इंजीनियरिंग से दिव्यांश चंद्र रॉय और शाश्वत कुमार मोहंती को 7 मेडल और अवार्ड दिए जाएंगे। IIT-BHU के डायरेक्टर प्रोफेसर प्रमोद कुमार जैन ने बताया कि संस्थान 9 एलुमनाई को भी प्रतिष्ठित एलुमिनस और एलुमिना छात्र पुरस्कार 2023-24 से सम्मानित करेगा। IIT-BHU में B-Tech के 954, IDD के 247, M-Tech, M-फार्मा के 223, MSc के 44 छात्रों को डिग्री मिलेगी।

<https://www.bhaskar.com/local/uttar-pradesh/varanasi/news/12th-convocation-of-iit-bhu-131948627.html>



Fri, 06 Oct 2023

‘Defence-aerospace focus should be on anti-drone tech especially after Russia-Ukraine war’

The Russia-Ukraine war has shown that the time of building missiles costing millions of dollars to shoot down unmanned vehicles like the drones has become obsolete is over and the focus should be on anti-drone technology by the defence and aerospace industry, said TS Special Secretary-Invest E. Vishu Vardhan Reddy on Thursday. Addressing a gathering of scientists, technocrats and industrialists at the one-day ‘Defence & Space Conclave – Enabling a global eco-system for innovations in disruptive technologies’ held by the CII, Mr. Reddy said the ongoing war had shown that there is lot to ‘catch up’ by the country on the aerospace arena. The Telangana government has been according top priority to the sector and is actively confabulating with the premier universities in United Kingdom, France and United States to set up an exclusive aerospace university and is hopeful of grounding it early next year, he disclosed. Hyderabad hosts close to 1,000 micro, small and medium scale industries involved in the sector and the government is quite keen to help them scale up and is ready to collaborate with the industrial associations to set up an ennobling eco-system in place, said Mr. Reddy.

Former chairman of the DRDO and president of the Aeronautical Society of India G. Satheesh Reddy said industry needs assured supply orders, funding and research and development facilities for the country to become an exporter in the aerospace area. “We have come a long way over the years where 60% of our needs are being met indigenously but we can do more with emerging disruptive technologies and smart materials,” he said, tracing the growth of the sector over the last 40 years. Midhani Chairman and Managing Director S.K. Jha and DRDO-DG Chandrika Kaushik said both the organisations are ready for collaborations from inception to the finishing stage for making various materials, components and entire products too in a wide range used in the strategic fields including missiles, arms, weapons, communication systems, etc.

Ananth Technologies chairman and managing director Subba Rao Pavuluri sought a level playing field for the industry. Bharat Biotech executive director and CII-TS vice chairman Sai D. Prasad also spoke.

<https://www.thehindu.com/news/national/telangana/defence-aerospace-focus-should-be-on-anti-drone-tech-especially-after-russia-ukraine-war/article67384813.ece>

Defence News

Defence Strategic: National/International



Thu, 05 Oct 2023

Indian Navy Develops Indigenous Navigation System, Anti-Swarm Drones to Safeguard from Enemy Attacks

The Indian Navy has developed an navigation system and an anti-swarm drone, capable of building walls around its own warships or assets to protect them from any attack by enemy drones, said officials.

Speaking to ANI on the anti-swarm drone ammunition, Commander Indian Navy, MNPasha said, "The speciality of this ammunition is it has 300 steel balls, on detonation, it will spread and create a wall of balls and it will destroy the drones. It is highly effective and completed lab trials." As drones become more accessible and sophisticated, it is imperative to develop robust systems that can effectively counter their malicious use. The anti-swarm drone ammunition serves as an essential tool in bolstering national security.

Another Naval Officer spoke on the indigenous navigation systems of the Indian Navy and said, "Apart from the virtual training, we have multiple indigenous systems displayed which includes the indigenous navigation console that has been fitted on multiple Indian naval platforms and has been successfully deployed for trials for over three months now." The Indian Navy is progressing with the development of niche technologies through its Swavlamban initiative. The programme, launched last year, involves collaborating with start-ups and MSMEs to develop technologies such as autonomous weaponized swarms, underwater swarm drones, fire-fighting robots, and more. "The indigenous combat information and control system that has been deployed for the Indian na-

val submarines is in use. It helps us to gather data from multiple sensors and weapon systems and merge it together," he said.

These two systems actually represent the indigenization in its true sense as well as the total comprehensive integration for the Indian naval ships and submarines, added the Naval officer.

Speaking about NISHAR (Network for Information Sharing), the Naval officer said, "This system provides a common frame of network where all can come up together and use a common network of communication together."

"With this, we have become one of the few navies that have the capability to operate with a common communication network when carrying out our exercises with friendly foreign countries," he added. The Dronaam counter-drone system was displayed at the Indian Navy 's Swavalamban 2023 exhibition yesterday in the national capital.

The Indian Air Force placed orders for 100 of these systems which jam the communication of the drones with their ground station. These guns were deployed in the G20 Summit also by the Indian Air Force. This is completely indigenous and has won the IDEX competition in 2021, said Akshay Jain, Gurutva Systems on Wednesday.

The drone is capable of building an iron wall around its own warships or assets to protect it from any attack by enemy swarm drones including hundreds of drones. The 30mm ammo is used by the AK-630 close-in weapon system. The ammunition has been developed in partnership with a defence research lab in Pune. In anti-swarm drone ammunition, a single shell will burst and disperse 300 steel balls and multiple shells will be fired. A wall of steel will be created in the air that will protect the assets from any aerial or drone attack. The ammunition will be fired from an AK 630 gun mounted on a ship. The Navy is working on a proximity fuse that makes it more lethal as with this technology it bursts near the drone.

<https://www.aninews.in/news/national/general-news/indian-navy-develops-indigenous-navigation-system-anti-swarm-drones-to-safeguard-from-enemy-attacks20231005093519/>



Thu, 05 Oct 2023

India Conveys Concerns to U.S. over American Envoy to Pakistan's Visit to Gilgit-Baltistan

India on Thursday said it raised its concerns with the U.S. over American envoy to Islamabad Donald Blome's recent visit to Gilgit-Baltistan in Pakistan-occupied Kashmir and called on the world community to respect the country's sovereignty and territorial integrity.

External Affairs Ministry Spokesperson Arindam Bagchi asserted that Jammu and Kashmir is an integral part of India.

He also rejected U.S. Ambassador to India Eric Garcetti drawing a parallel to Mr. Blome's travel to Gilgit-Baltistan to an American delegation's visit to Srinagar to attend meetings relating to G-20.

"Our position on the entire Union territory of Jammu and Kashmir being an integral part of India is well known. We would urge the international community to respect our sovereignty and territorial integrity," Mr. Bagchi said when asked about Mr. Blome's visit.

"We have raised our concerns about that visit by the US ambassador to Pakistan with the U.S. side," he said.

Mr. Blome visited Gilgit-Baltistan last month.

Asked about Mr. Garcetti's comments on the matter, Mr. Bagchi said: "We do not think the two situations are equivalent." In October last year too, India raised its concerns with the U.S. after Mr. Blome visited Pakistan Occupied Kashmir.

When asked about Mr. Blome's visit, Mr. Garcetti said two weeks ago: "It's not my place to react to the United States ambassador in Pakistan but I know he's been before, and we've had obviously part of our delegation in Jammu and Kashmir during the G-20 as well." He also said that the Kashmir issue can only be resolved by India and Pakistan.

<https://www.thehindu.com/news/national/india-conveys-concerns-to-us-over-american-envoy-to-paks-visit-to-gilgit-baltistan/article67385998.ece>



Thu, 05 Oct 2023

China's Assertiveness more Evident with its Rise: CDS Gen Chauhan

China's assertiveness is more evident now with its rise and India will have to take this aspect into account in its overall 'strategic calculus', Chief of Defence Staff Gen Anil Chauhan said on Thursday while delving into various national security challenges and profound geopolitical changes.

'This all what I said comes with a little bit of a caveat because of the northern neighbor. In this strategic calculus, India will have to take into account the emergence of China as a major power,' the Chief of Defence Staff said.

'China's assertiveness is more evident with its rise. India has a major dispute on its northern borders with China and will have to play the strategic autonomy card...,' he added.

Referring to disruptions in the global geopolitical order, Gen Chauhan also underlined the need for India to continue maintaining 'strategic autonomy' in its approach and highlighted how New Delhi was moving forward from its approach of 'non-alignment' to an era of being a 'Vishwa-mitra' -- a friend to the world.

He also cited India's nuclear tests in 1998, its 'neutral and a nuanced' stand on the Russia-Ukraine war and the decision to go ahead with procurement of S-400 missile systems from Moscow notwithstanding threats of sanctions as examples of the country exercising its 'strategic autonomy'.

'I believe that India has transited ahead from non-alignment of yesteryears to self-alignment as you said to maybe multi-alignment,' he noted.

The Chief of Defence Staff also summarised India's journey of being non-aligned to that of exercising strategic autonomy.

'If I were to summarize the journey of India from non-alignment to exercising of strategic autonomy, it can be based on what I can say is three S. First is securing India. Next is self-reliance. And lastly, shaping the environment to India's advantage and benefit,' he said.

Gen Chauhan also elaborated on economic aspects of global geopolitics and that the global balance of power can be shifted by economic alignment and even issues like morality, righteousness and convergence of global interests.

'In India's famous epic Mahabharata, Lord Krishna shifted the balance of power towards the Pandavas. His military might went to the Kauravas but it was only his righteousness and sage advice which shifted the balance of power,' he said.

'And ultimately the Pandavas emerged victorious in that particular war. We as a nation have utilised the G20 platform to leverage soft power to play a dominating role. So these are also important facts we must keep in mind when we take strategic decisions on how to get aligned in future,' he said.

Gen Chauhan said the global geopolitical environment is currently in a state of flux and India must exercise its options looking at its national interests.

Gen Chauhan also cited the financial crisis, disruptions in the global supply chains due to Covid-19, food and fertilizer shortages due to Russia-Ukraine conflict, the situation in the South China Sea as some of the manifestations of the geopolitical and geo-economic flux.

<https://www.deccanherald.com/india/chinas-assertiveness-more-evident-with-its-rise-cds-gen-chauhan-2714253>

THE ECONOMIC TIMES

Thu, 05 Oct 2023

Putin says Russia has Tested Next-Generation Nuclear Weapon

President Vladimir Putin said on Thursday that Russia had successfully tested a potent new strategic missile and declined to rule out the possibility it could carry out weapons tests involving nuclear explosions for the first time in more than three decades.

Putin said for the first time that Moscow had successfully tested the Burevestnik, a nuclear-powered and nuclear-capable cruise missile with a potential range of many thousands of miles.

He also told an annual gathering of analysts and journalists that Russia had almost completed work on its Sarmat intercontinental ballistic missile system, another key element of its new generation of nuclear weapons.

Putin, who has repeatedly reminded the world of Russia's nuclear might since launching his invasion of Ukraine on Feb. 24, 2022, said no one in their right mind would use nuclear weapons against Russia.

If such an attack was detected, he said, "such a number of our missiles - hundreds, hundreds - would appear in the air that not a single enemy would have a chance of survival".

Russia has not conducted a test involving a nuclear explosion since 1990, the year before the collapse of the Soviet Union, but Putin declined to rule out the possibility it could resume such testing.

He noted that the United States had not ratified the treaty that bans nuclear tests, whereas Russia had both signed and ratified it. It would be theoretically possible for the Duma, Russia's parliament, to revoke its ratification, he said.

Military analysts say a resumption of nuclear testing by Russia, the United States or both would be profoundly destabilising at a time when tensions between the two countries are greater than at any time in the past 60 years. In February, Putin suspended Russia's participation in the New START treaty that limits the number of nuclear weapons each side can deploy.

But there was no need, Putin said, for Russia to rewrite its doctrine on the actual use of nuclear weapons, which says it may fire them either in response to a nuclear strike against it or in the event of a threat to the existence of the state.

Responding to a question from Russian analyst Sergei Karaganov, who has advocated lowering the threshold for nuclear use, Putin said: "I simply don't see the need for this."

He added: "There is no situation today in which, say, something would threaten Russian statehood and the existence of the Russian state. No. I think no person of sound mind and clear memory would think of using nuclear weapons against Russia."

Karaganov has raised eyebrows among both Russian and Western strategic analysts by arguing that it is time for Russia to lower its threshold for nuclear use in order to "contain, frighten and sober up our opponents".

He wrote in one recent article that Russia should "shake up" its enemies by threatening nuclear attacks on European countries and U.S. bases in Europe.

<https://economictimes.indiatimes.com/news/defence/putin-says-russia-has-tested-next-generation-nuclear-weapon/articleshow/104194193.cms?from=mdr>



Fri, 06 Oct 2023

IAF must rely less on US' Troubled Aircraft Makers

By Abhijit Bhattacharyya

Till not so long ago, whenever one thought about aviation, it was mostly about the United States and its world-dominating aircraft manufacturers. This was even more so when talking about military fighter aircraft. In the 1970s, there were several manufacturers in the US, Europe and the then Soviet Union, but American aircraft were usually preferred. The Europeans -- France and

Sweden in particular, as well as the Anglo-French consortium -- too made fighter jets, but they had a narrower customer base of non-Western developing nations who could not afford or get American combat aircraft.

US warplanes then (and today) have a restrictive process for foreign buyers, and needed political clearance from Washington, which meant that the most modern aircraft went to "friendly" nations, and definitely not those linked with its perceived enemies. The Pentagon and the state department called the shots.

This continued till the Soviet Union's dismemberment in 1991, with the world fighter market dominated by the mutual "fear" factor created by "threat perception" of the US-led West and the USSR and its allies. Moscow then had 10 large fighter-cum-transport companies: Antonov, Beriev, Ilyushin, Kamov, MiG, Mil, Myasishchev, Sukhoi, Tupolev and Yakovlev. Though not perceived at par with "superior" Western technology, it still had its loyal, committed customer-base and a growing Third World clientele, mainly due to the West's strong "pick-and-choose" policy, of which India is well aware.

As the West, primarily the US, tried to "contain" New Delhi over its perceived closeness to Moscow, and blocked its access to fighter and military technology it's no surprise the USSR's share of India's defence market kept increasing. The United States too had over a dozen mega corporations competing among themselves to supply the needs of the Pentagon and its friends and allies, as it tried to enhance the profitability of its corporations and curb other aircraft manufacturers in the West to check cut-throat competition.

When the Soviet Union invaded Afghanistan in December 1979, the US had 84 "live" aircraft makers, of which 17 companies -- Beechcraft, Bell, Boeing, Cessna, Fairchild, Learjet, General Dynamics, Grumman, Gulfstream, Kaman, Lockheed, McDonnell Douglas, Northrop, Piper, Rockwell, Sikorsky and Vought were dominant.

In its heyday, the American aviation industry offered a variety of fighters, helicopters and transports to every buyer. But things rapidly changed from late twentieth and early twenty-first century. Two defining developments posed a serious challenge to US civil and military aviation manufacturing. The vacuum created by the USSR's demise was promptly filled by an initially benign but subsequently hostile and aggressive Dragon, challenging the "Made in USA" tag.

From the 1970s, the US sold over 4,600 F-16 fighters to 30-plus air forces, but the range and variety dwindled fast owing to mega-mergers and acquisition of its big corporations in the post-Cold War era. Biggies like General Dynamics, McDonnell Douglas, Rockwell and Vought no longer exist as independent outfits. Northrop and Grumman combined into one Northrop-Grumman company since 1994, making B-21 strategic bombers and E-2 Hawkeye Airborne Early Warning and Control Systems (AWACS). The biggest and largest combat aviation company, McDonnell Douglas, is Boeing since August 1997. Clearly, the US system won't tolerate anything other than "survival of the fittest and strongest", with deep pockets. Little wonder that the two main combat US aircraft companies now are Boeing and Lockheed as all others have been consumed by them, thereby making it a duopoly fighter market.

America's internal turbulence was thus a God-sent opportunity for the Dragon to penetrate deep into the US economic, commercial, technical, research and development facility system and create a tsunami, which also led to destabilisation of the American polity. Donald Trump's "Make America Great Again" (MAGA) movement can be attributed in part to the clear qualitative decline of the US' once redoubtable fighter aircraft dominance. Due to a series of monumental blunders by the US leadership and the big investors' sole motive being profits, US aviation has been stung deep.

The main combat aircraft companies do not any longer produce in-house aircraft parts. Outsourcing is resorted to in order to save time, costs and labour and enhance profits. In the process, the US has compromised with the safety, security and quality of its aviation products. The best of companies with reputation for quality are facing a crisis of confidence as their future appears bleak.

How else does one justify or defend the inexplicable Boeing 737 MAX accidents and the subsequent grounding of the entire fleet for over two years, leading to a colossal loss for the 107-year-old company's credibility, quality, manpower and balance sheet?

That's not all. Today, the worst possible nightmare for US military aviation is being faced by Lockheed Martin, the maker of the much-hyped F-35, which stands as the sole combat aircraft without any quality backup to fight and fly in the sky. That's really unusual as traditionally the US Air Force had the flexibility of at least a pair of fighters to complement each other, such as for "high" or "low" altitude air warfare. But the rot gripped the F-35, and incredible though as it may sound, the Dragon in the US company's boardroom disrupted and ruptured the pride of the West, at least for the foreseeable future. The F-35's "request-for-proposal" took place in 1995, and the first delivery happened only in 2011; after over 15 years! Most devastating, however, remains the recurring problem of accidents, some of which are mysterious and inexplicable.

Jane's Defence Weekly reported on November 10, 2010: "Troubled F-35 faces further US government review". On May 12, 2012, BBC News said: "Year-long probe found 1,800 cases of fake parts in US military aircraft; weak US supply chain and China's counterfeit market parts used in C-130J and Navy P-8A Poseidon" aircraft. Both the latter aircraft are, incidentally, in the Indian Air Force's inventory today.

Worse news came in January 2014: the Pentagon itself had "waived laws banning China-built components in US weapons systems to keep the \$392 billion Lockheed-Martin F-35 fighter programme on track".

Today, all Washington DC is complaining loudly at the China-inflicted damage to its weapons systems. But who created the Dragon menace in the first place? Why did the senior most US officials continue with their frequent visits to Beijing despite the clear evidence of Chinese espionage?

The eternally profit-pursuing Americans may themselves be destroying the US State forever. The Indian Air Force should take note of the plight of American aviation today and focus solely on indigenisation as it celebrates its 91st foundation day on October 8.

<https://www.deccanchronicle.com/opinion/columnists/051023/abhijit-bhattacharyya-iaf-must-rely-less-on-us-troubled-aircraft.html>



Fri, 06 Oct 2023

‘We Continue to Foster Stronger Defence Partnership with India’: US amid India-Canada Row

Amid a diplomatic row between India and Canada, the US said on Friday it would continue to foster a stronger defence partnership with India.

The statement comes after the US Embassy in India dismissed a report published by US-based POLITICO stating US Ambassador to India Eric Garcetti said relations between Washington and New Delhi can “get worse” in the wake of the diplomatic row between India and Canada over the killing of Khalistani activist Hardeep Singh Nijjar.

Pentagon Press Secretary Pat Ryder said, “We very much appreciate our relationship with India on a defence level. We continue to foster a stronger defence partnership with India and that is something that I think you’ll continue to see us do going forward,” Ryder told reporters.

In 1997, defence trade between India and the US was almost negligible, today it stands above USD 20 billion.

Speaking to reporters at a news conference, Ryder termed China a “pacing challenge” for the Department of Defence. “We do appreciate the partnership that we have with India and other countries in the Indo-Pacific region when it comes to preserving individual nations’ sovereignty and abiding by the international rules-based order that has preserved peace and stability for many years,” he said.

Last month, Canadian Prime Minister Justin Trudeau had accused India of being involved in the killing of Nijjar on Canadian soil. The Khalistani leader was shot dead outside a gurdwara in Surrey, British Columbia, on June 18 this year.

In the follow-up to the development, an article published in POLITICO on October 3 stated, “Garcetti told his in-country team that, because of the diplomatic spat with Canada, relations between India and the U.S. could get worse for a time,” quoting a US State Department official as saying. “Garcetti also has said the U.S. may need to reduce its contacts with Indian officials for an undefined period of time,” the Politico report stated further.

Further the report stated that when asked to comment on the matter, a US Department spokesperson echoed the words of the US Embassy spokesperson: “Ambassador Garcetti is a champion of our strong partnership with the Indian people and the Indian government. Our relationship with India is an important, strategic, and consequential partnership.”

The US raised concerns over Canada’s allegations and called for a full and fair investigation urging India to cooperate in the probe. “We are obviously quite concerned about the situation in Canada and we have cooperated closely with our Canadian counterparts. We have urged India to cooperate in the investigation and we’ll continue to do so,” said US Department of State Spokesperson Matthew Miller.

“India remains an important partner to the US and we work with them on a number of issues, but on this matter, we urge them to cooperate with the Canadian investigation,” he added.

<https://news.abplive.com/news/world/us-india-defence-partnership-pentagon-press-secretary-pat-ryder-amid-india-canada-row-1634136>

Indian Defence Minister Rajnath Singh to visit Italy and France next week

Indian Defence Minister Rajnath Singh is set to embark on a significant diplomatic mission next week, travelling to Italy and France to bolster India's strategic partnerships with these nations. A number of pacts are expected to be signed during the visit.

The visit to Italy is especially significant, as this year, both countries elevated their ties to a strategic partnership level. Italian Prime Minister Giorgia Meloni's two visits to Delhi this year further underlined the strengthening of relations. In March, Meloni paid a bilateral visit, and in September, she attended the G20 summit. During her March visit, both nations agreed to enhance their cooperation in the field of defence. It's noteworthy that in 2021, India lifted the ban on the Italian defence company Leonardo SpA (formerly known as Finmeccanica) and its subsidiary AgustaWestland, which had faced allegations of paying bribes to secure a \$48 million contract for the supply of 12 helicopters to India.

France, a well-established defence partner of India, has been instrumental in providing timely delivery of the 36 Rafale fighter jets ordered by India. The relationship between India and France in the defence sector has grown stronger, with both countries agreeing to jointly develop a combat aircraft engine during Prime Minister Narendra Modi's visit to Paris earlier this year. This collaboration extends to other areas, such as the Indian Multi-Role Helicopter (IMRH) programme, with India's Hindustan Aeronautics Limited (HAL) and France's Safran Helicopter Engine signing the agreement.

One of the key elements of this defence-industrial partnership between the two countries has been the transfer of technology. An example of this commitment is the contract between Safran Helicopter Engine and HAL for the transfer of technology related to the Shakti Engine, underscoring France's dedication to supporting technology transfer and the "Make in India" initiative.

Furthermore, both India and France have agreed to explore additional projects aimed at enhancing the capabilities of the Indian submarine fleet. Under the 2006 P-75 Scorpene Project, a significant partnership was formed to build six submarines with technology transfer at the Mazagaon Docks Ltd. The commissioning of the first submarine, INS Kalvari, in October 2017 marked a milestone in this collaboration.

As Rajnath Singh embarks on his diplomatic mission to Italy and France, the focus remains on further strengthening defence ties, fostering technology transfer, and enhancing cooperation in various facets of defence manufacturing. Both countries also share a deep historical connection, rooted in the sacrifices made by Indian soldiers during the tumultuous years of the World Wars. Monuments and memorials stand as enduring tributes to the valour and sacrifice of these Indian soldiers, serving as poignant reminders of their contributions in Italy's Cassino and France's Neuve-Chapelle.

<https://www.wionews.com/india-news/indian-defence-minister-rajnath-singh-to-visit-italy-and-france-next-week-643152>



Press Information Bureau
Government of India

Ministry of Science & Technology

Thu, 05 Oct 2023

Knowledge Exchange among Hubs can Translate Cyber Physical Systems into New Domains Boosting Sensors, Communication: Experts

Experts highlighted that the application of cyber physical systems in industry and society can translate the technology into new domains, aiding its usage in areas like sensors and communication and the hubs can bring this about by exchanging best practices and learning from each other, at the 3rd National Workshop on Technology Innovation in Cyber-Physical Systems (TIPS) in Kanpur.

Dr V K Saraswat, Member Science, Niti Aayog emphasised the need for cyber physical systems beyond Industry 4.0 and society 5.0. “If the two are combined, cyber physical systems can translate into new areas like cyber social systems, cyber biological systems and cyber enterprises systems. The common element in all such systems is sensors, communication and algorithms and the hubs need to pay attention on these,” he added.

While appreciating the work of the hubs and the participation of women in them, Dr Saraswat underlined that research and development on cyber physical systems and its translation should take place on mission mode to enhance the ecosystem, at the event organised to facilitate direct interaction between the NM-ICPS Mission Office, its Expert Committee members, and the TIHs, fostering collaboration and knowledge exchange.

The 3rd National Workshop on Technology Innovation in Cyber-Physical Systems (TIPS) is being organized by the Department of Science & Technology (DST), Government of India, under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) and hosted by C3iHub, a cybersecurity Technology Innovation Hub at IIT Kanpur from October 5th to 6th, 2023.

Dr. Kris Gopalakrishnan, Chairman, Mission Governing Body (MGB), NM-ICPS pointed out that research should create technology that can impact in society and can also be commercialised.

“Besides, sustainability of hub activity should be ensured through multiple revenue streams keeping in mind the roadmap of what is to be achieved,” he stressed.

Dr Akhilesh Gupta, Senior Adviser, DST and Secretary SERB elaborated that through the NM-ICPS mission 550 technologies, have been created, 12,000 jobs have been generated, 100 collaborations initiated, while it has led to 1400 publications and 50,000 trained manpower. “Consolidation and rationalisation is needed. The first step we have taken in this direction was to organise this

workshop with 5 thematic areas-- infrastructure, agriculture, health, defence and environment," he added.

The dignitaries inaugurated the expo in which 25 Technology Innovation Hubs (TIHs) are showcasing their cutting-edge technologies and research advancements.

Professor S Ganesh, acting director, IIT Kanpur, Dr Ekta Kapoor, Mission Director, NM-ICPS, DST as well as experts and representatives from all 25 hubs attended the event.

The National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) was approved by the Union Cabinet in December 2018, for a five-year period. The mission is spearheaded by the Department of Science and Technology (DST) and aims to advance the field of Cyber-Physical Systems (CPS) in India through research, innovation, and collaboration.

As part of the NM-ICPS implementation, 25 Technology Innovation Hubs (TIHs) have been established across reputed institutes in the country. These TIHs play a pivotal role in the mission's success by focusing on technology development and translation, human resource and skill development, entrepreneurship and start-ups development, and international collaborative research.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1964618>



Press Information Bureau
Government of India

Ministry of Science & Technology

Thu, 05 Oct 2023

Special Campaign 3.0 in full swing to achieve the Target of Department of Science and Technology (DST)

Department of Science and Technology has been conducting the Special Campaign 3.0 on Swachhata in the different buildings of Department and across all its Autonomous Bodies and subordinate offices of DST spread across various parts of the country.

Areas were identified for being cleaned up during the campaign period. The focus was to optimise space Management and to enhance the workplace experience in offices of DST and its autonomous organisations.

The Department along with its Sections/Divisions/Autonomous Bodies/Subordinate Offices identified more than 150 sites across the country to carry out cleanliness drive. Joint Secretary (Admn.), DST, inspected the identified cleanliness sites in the office premises and directed the senior officers to put their best efforts to achieve the target during the campaign period.

Under Swachhata Hi Seva Campaign, Joint Secretary (Admn.), DST, administered Swachhata pledge to all officials of DST to create awareness and commitment for a clean and garbage free India. Daily progress is being monitored by a dedicated Team and being uploaded on the SCPDM portal hosted by Department of Administrative Reforms and Public Grievances (DARPG). All the

26 Autonomous Bodies and subordinate offices are also participating in the campaign and celebrating it as a festival of cleanliness.

This year, space of more than 20,000 sq. ft. is anticipated to be freed after disposal of scrap and other redundant and serviceable material. A total of 8214 physical files have been identified for review and weeding out during the campaign. A total of 140 Electronic files have also been identified for closure.

Awareness about the campaign has been spread through different social media platforms like X (Formerly known as Twitter) Instagram, Facebook and LinkedIn. The campaign is in full swing to achieve the targets set by the Department of Science and Technology for the specified period.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1964616>



Thu, 05 Oct 2023

ISRO Gearing up for Gaganyaan Mission's First Abort Test of Crew Escape System this Month-End

ISRO plans to undertake an inflight abort test of the crew escape system by this month-end using a test vehicle developed as part of the country's ambitious maiden human spaceflight venture Gaganyaan.

"Preparations are going on. All vehicle systems have reached Sriharikota (for the launch). Final assembly is progressing. We are getting ready for launch by the end of October," Director of Vikram Sarabhai Space Centre (VSSC) S Unnikrishnan Nair told PTI on Thursday.

"(With) this crew escape system, we will demonstrate (validate) in different conditions like high dynamic pressure and for transonic conditions," Nair added Thiruvananthapuram-based VSSC is the lead centre of ISRO under the Department of Space.

An ISRO official said the crew escape system (CES) is the most important element in Gaganyaan.

According to ISRO officials, this month's launch of the test vehicle TV-D1 would be the first of the four abort missions of the Gaganyaan programme. It would be followed by the second test vehicle TV-D2 mission and first uncrewed mission of Gaganyaan (LVM3-G1).

The second series of test vehicle missions (TV-D3 & D4) and LVM3-G2 mission with robotic payload is planned next. The crewed mission is planned based on the outcome of the successful test vehicle and the missions in which no crew is on board, they said.

The test vehicle is a single-stage rocket, based on liquid propulsion, developed to validate the CES performance at different critical Mach numbers but Nair said it can be used for many purposes including space tourism.

“We are taking (the test vehicle) to transonic conditions. That means crossing the Mach number of one. We will go to something like Mach number of 1.2. That reaches around 12 km altitude. From there, the escape system will be activated, and that will go some 20 km, and from there the crew module will be released,” he explained.

“This vehicle can be used for space tourism, if any industry is interested. Same vehicle can take a crew module to 100 km and then come back. That’s possible. If anybody is interested, this vehicle can be used for that,” Nair said.

The Crew Module is habitable with Earth-like environment in space for the crew. It is of double-walled construction consisting of a pressurised metallic inner structure and unpressurised external structure with thermal protection system.

It houses the crew interfaces, human centric products, life support system, avionics and deceleration systems. It is also designed for re-entry to ensure safety of the crew during descent till touchdown.

According to ISRO officials, the Gaganyaan project would demonstrate India’s capability of taking a crew of two to three members to a circular orbit of about 400 km around the earth for a one-to-three days mission and bring them back safely to earth, by landing in a designated location in Indian sea waters.

The LVM3 rocket, the heavy lift launcher of ISRO, is identified as the launch vehicle for the Gaganyaan mission. It consists of solid stage, liquid stage and cryogenic stage. All systems in LVM3 are re-configured to meet human rating requirements and christened Human Rated LVM3 (HLVM3).

Nair said the LVM3 cannot be used for conducting tests to validate CES, saying it’s an expensive rocket.

<https://indianexpress.com/article/technology/science/isro-gaganyaan-crewed-mission-8970139/>



Thu, 05 Oct 2023

China to Double size of Space Station, Touts Alternative to NASA-led ISS

China plans to expand its space station to six modules from three in coming years, offering astronauts from other nations an alternative platform for near-Earth missions as the NASA-led International Space Station (ISS) nears the end of its lifespan.

The operational lifetime of the Chinese space station will be more than 15 years, the China Academy of Space Technology (CAST), a unit of China’s main space contractor, said at the 74th International Astronautical Congress in Baku, Azerbaijan, on Wednesday.

That would be more than the 10 years previously announced.

China's self-built space station, also known as Tiangong, or Celestial Palace in Chinese, has been fully operational since late 2022, hosting a maximum of three astronauts at an orbital altitude of up to 450 kilometers (280 miles).

At 180 metric tons after its expansion to six modules, Tiangong is still just 40% of the mass of the ISS, which can hold a crew of seven astronauts. But the ISS, in orbit for more than two decades, is expected to be decommissioned after 2030, about the same time as China has said it expects to become "a major space power."

Chinese state media said last year as Tiangong became fully operational that China would be no "slouch" as the ISS headed toward retirement, adding that "several countries" had asked to send their astronauts to the Chinese station.

But in a blow to China's aspirations for space diplomacy, the European Space Agency (ESA) said this year it did not have the budgetary or "political" green light to participate in Tiangong, shelving a years-long plan for a visit by European astronauts.

"Giving up cooperation with China in the manned space domain is clearly short-sighted, which reveals that the US-led camp confrontation has led to a new space race," the Global Times, a nationalist Chinese tabloid, wrote at the time.

Tiangong has become an emblem of China's growing clout and confidence in its space endeavors, and a challenger to the United States in the domain after being isolated from the ISS. It is banned by US law from any collaboration, direct or indirect, with NASA.

Russia, a participant in the ISS, has similar space diplomacy plans, suggesting that Moscow's partners in the BRICS group – Brazil, India, China and South Africa – could construct a module for its space station.

Roscosmos, the Russian space agency, said last year it was planning to build a space station comprising six modules that could accommodate up to four cosmonauts.

<https://edition.cnn.com/2023/10/06/china/china-space-station-double-size-intl-hnk-scn/index.html#:~:text=China%20plans%20to%20expand%20its,the%20end%20of%20its%20lifepan.>

