

समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा

A Daily Current Awareness Service



रक्षा विज्ञान पुस्तकालय
Defence Science Library
रक्षा वैज्ञानिक सूचना एवं प्रलेखन केन्द्र
Defence Scientific Information & Documentation Centre
मेटकॉफ हाऊस, दिल्ली 110054
Metcalf House, Delhi-110054

The Indian Express
12 May, 2016

Air chief in Pune today to inaugurate IAF's e-maintenance system

Though the project has several layers of operation, the IAF would opt for online management of its maintenance systems through a web-based application.

An Electronic Maintenance Management System (e-MMS), hailed by the Indian Air Force as one of the biggest automated military maintenance systems in the world and an important milestone in IAF history, would be inaugurated by the Chief of Air Staff, Air Chief Marshal Arup Raha on Thursday at the Air Force Station in Pune.

Though the project has several layers of operation, the IAF would opt for online management of its maintenance systems through a web-based application. The project would comprise configuration management systems, fleet planning and management, maintenance repair and an overhaul.

“The project would be an important asset in conflict situations for quick fleet mobilisation. All maintenance works on our aircrafts would be electronically monitored. The system has a central console, thus helping us get rid of paper works and heavy logbooks,” an IAF officer said.

IAF officials said that the system would seamlessly connect squadrons, wings, commands, and Air Headquarters after its implementation. The work environment is expected to become more efficient and operational availability of all fleets and systems can be monitored in real time at various hierarchical levels.

A press release issued by the Defence PRO said, “The contract for the project e-MMS was signed with Wipro as a System Integrator (SI) on February 4, 2013. The scope of its implementation IAF extends to all echelons in the maintenance hierarchy and functioning. The project is one of the largest Maintenance Repair Overhaul (MRO) IT implementation in the world, which would help IAF to transform from a paper-based legacy maintenance system to an online system.”

For the inauguration ceremony, Air Marshal RK Dhir, Air Officer Commanding-in-Chief of South Western Air Command; Air Marshal PP Khandekar, Air Officer-in-Charge (Maintenance); and Soumitro Ghosh, President (India and Middle East), Wipro; along with other officials from IAF and Wipro would be present.

The Indian Express has reported in the past about the Modernisation of Airfield Infrastructure (MAFI) project, which has been implemented at 30 air bases of the IAF, including eight key airfields along the India-China border, as part of its modernisation efforts. The project included installation of advanced air-traffic management systems along with category-2 airfield lighting systems and state-of-the-art navigational aids that are helping flying operations at night and in adverse weather conditions.

First Post
12 May, 2016

Has DRDO taken Defence Minister Parrikar and India for a ride?

By Prakash Katoch

On 30 March, 2016, media headlines stated: ‘Enough of Akash, says Army as it opts for Israeli missiles’.

The report quoting MoD sources went on to say that the Army has made it clear that it does not want any more Akash regiments after it gets the first two ordered earlier for Rs 14,180 crore, with

six firing batteries and hundreds of missiles each. This marks a major blow to the 'Make in India' policy, especially since the Navy is turning to France for similar requirements after dumping the Akash missiles for its warships due to "stabilisation problems".

The message was unmistakable

First, military prefers imported systems, especially the Army - why else would they stop after "ordering" two regiments worth of Akash?

Second, the military was shattering the 'Make in India' dream kickstarted by Prime Minister Narendra Modi.

On 27 April 2016, a Press Information Bureau (PIB) release gave details of products/systems developed by the Defence Research and Development Organisation (DRDO) that have either been inducted in the defence forces or are in the process of trials/production/induction, as listed by Defence Minister Manohar Parrikar in a written reply to KC Tyagi in the Rajya Sabha. This list included the Akash Weapon System. On 4 May, 2016, another PIB release carried a written reply by Parrikar to Sanjay Raut in the Rajya Sabha with respect to the Akash Weapon System, which can be summarised as the following:

- Proper trials of Akash missile were conducted prior to induction into Armed Forces
- Development user trials were completed 'successfully' in 2007
- Orders were placed for two squadrons by IAF in 2008 and six squadrons in 2010
- User trial of production equipment was done successfully in 2012
- Post-induction user trials for Akash Air Force equipment was conducted successfully in 2014
- An order was placed for two regiments by the Indian Army and First Off Production Model (FOPM) trials were successfully conducted in 2014
- Post-induction trials by the Army were conducted successfully in 2016
- Akash Missile System is successfully inducted and is performing as per the expectations of the armed forces.

The production of Akash is being handled by Bharat Electronics Ltd and Bharat Dynamics Ltd with the help of a number of major and MSME industries spread all across the country. So, Akash is a successful example of the 'Make in India' policy and proves that the government's initiatives are successful in defence manufacturing.

What are we missing here?

Does the military deserve to be kicked for its penchant for imports and the way it undermined 'Make in India'? To start with, the Akash Weapon System has nothing to do with Modi's call for 'Make in India' given in 2014. Akash was one of the five core missile systems of the integrated guided missile development program launched by the DRDO in 1984; Akash was to replace the Russian Kvadrat System with the Army for providing air defence cover for mechanised forces during manoeuvre battles. Some 23 years later, when the trials were done in 2007, these were a complete fiasco. The Army found that while on the move, Akash could not negotiate undulating ground appropriately and had difficulty in acquiring even slow-moving helicopters, leave alone fast-moving aircraft.

The Army therefore rejected Akash outright because it did not meet the requirement of providing air defence for mechanised forces during manoeuvre battles. So Akash was 'given' to the IAF. The IAF

did not mind because IAF deploys air defence weapons for protection of vulnerable points and vulnerable areas in layers. So, Akash became one of the air defence weapon in this multi-layered air defence.

In early 2015, the media exploded with the news that the Army will finally get some desperately-needed supersonic firepower to take on enemy fighters, helicopters, drones and sub-sonic cruise missiles after years of grappling with obsolete air defence weapons with the “Improved Akash Weapon System”, and what made this even more significant was that the improved Akash Weapon System is 96 percent indigenous.

Quoting ministry of defence sources, the report said that Parrikar was slated to symbolically hand over the first Akash to the Army in early April, adding the first full Akash Regiment should be ready by June-July 2015 with second one following by end-2016. But what the Army found to its horror is that this so called ‘Improved Akash’ is still incapable of providing air defence for mechanised forces during manoeuvre battle like the vintage Kvadrat.

So, the Army perforce has to use the ‘Improved Kvadrat’ in static role. It is for the same reason, that the Navy rejected Akash; for problem of stabilization. What should a matter of grave concern that this while we already have the technology of guns firing on the move past several years; – naval guns aboard ships and tanks in Army - the T-90 Russian tank being by far the best for accuracy on the move. Why could this technology not be incorporated in the Akash Weapon System despite three decades of development – to acquire and engage targets on the move.

The question that the civilian friends would ask is why did the Army accept the two Akash Regiments in the first place? The fiasco of the 2007 Development User trials compared to what the Defence Minister recently apprised the Rajya Sabha has been mentioned above. The system puts tremendous pressure on the Services on the plea that when so much money and time has been spent on developing a product / system, at least buy “some” to compensate the development / part development costs.

Such pressure is invariably at the level of the Defence Secretary or Secretary Defence Production. The Army would have likely agreed for two regiments worth because Army’s air defence equipment anyway is 90% obsolete. Perhaps then there was a move to make Army buy more of these Akash regiments, and that is where the Army said enough is enough. Since Akash does not meet the operational requirements of the Army, quite naturally, Army has gone in for procurement of four QR-SAM regiments through the global tender route. Missile systems from Israel, Russia and Sweden have undergone extensive field trials conducted by the Army.

The results have not been officially declared but Israeli Spyder QR-SAMs have reportedly topped in the trials. For reasons discussed above, the IAF sure is inducting more Akash squadrons but if Akash was so versatile (despite three decades of development), why would IAF be looking for imports. It may be noted that IAF is inducting four Spyder QR-SAM squadrons February 2017 onwards.

One does not expect Defence Minister Parrikar to know the above and his written replies perforce are drafts prepared by the MoD bureaucrats. But the question is when the Defence Minister says in his written reply, “*Akash Missile System is successfully inducted and is performing as per the expectations of the Services ... Thus, Akash, is a successful example of ‘Make in India’ and proves government’s initiatives are successful in defence manufacturing*”, how much of it is true?

Hasn't Parrikar and the nation been taken for a ride?

Akash incidentally is just one example of inadequate and unaccountable functioning of the DRDO. Scores of articles have highlighted multiple products and inadequacies in a long list of products and systems, leave aside numerous CAG reports indicating rampant corruption and sub-standard products. As per recent reports, Government is contemplating setting up not-for-profit firm to foster innovation and create R&D ecosystem.

Hopefully, this firm would also focus on military and dual-use R&D too, because the DRDO has hardly been able to meet military's requirements. Much thought is needed on the issue.

*Defense News
11 May, 2016*

Official: India Will Postpone S-400 Triumph Purchase

New Delhi — Contrary to the defense minister's claim in parliament Tuesday that the Indian Air Force will acquire five firing units of the S-400 long-range surface-to-air missile (LRSAM) system between 2017 and 2022, one senior Ministry of Defence (MoD) official who requested anonymity says a budget crunch will prevent such a purchase for at least two years.

"Our priority is to clear the global buy of \$8.9 billion for Rafale fighters, \$1.5 billion for very short range air defense (VSHORAD) man-portable systems and \$1.5 billion in short-range surface-to-air missile (SRSAM) systems. There is no money for other foreign purchases," the official said.

On Tuesday, Defence Minister Manohar Parrikar said the Defence Acquisition Council approved at its Dec. 17 meeting the purchase of the S-400 LRSAM systems along with associated equipment and missiles from Russia.

Five units of the Russian-made S-400 Triumph systems will cost \$4.5 billion.

The S-400 Triumph system is capable of intercepting and destroying airborne targets at a distance of up to 400 kilometers (250 miles), and can simultaneously engage up to six targets.

The Indian Air Force (IAF) wants the S-400 systems to fill holes in its fledgling air defense strength and allow it to strike multiple targets, including ballistic missiles and stealth aircraft, a senior IAF official said.

"However, IAF has yet to conduct trials of S-400 systems in Russia," he said.

*The Indian Express
12 May, 2016*

Defence Logistics agreement won't be signed during Modi's US trip, little progress on other agreements

The LEMOA agreement is based on the Logistics Support Agreement (LSA) signed by the US with its closest allies.

The signing of the Logistics Exchange Memorandum of Agreement (LEMOA) for exchange of military logistics services between India and the US is unlikely to happen during Prime Minister Narendra Modi's visit to the US next month. The progress on other major agreements announced last month during US Defence Secretary Ashton Carter's visit is also very slow.

The highlight of Carter's visit to India in early April was the in-principle announcement by the two countries to sign LEMOA, an agreement which will allow the militaries of either country to avail

logistics facilities on other's bases as per an established process, provided the two sides agree to it. Defence Minister Manohar Parrikar had then announced that no further comments can be made till the draft of LEMOA is returned by the defence ministry to Pentagon, which he expected to take around four weeks.

Senior defence ministry sources, however, told The Indian Express that the draft of LEMOA has still not been shared with the Pentagon. "The process of inter-ministerial consultations is on and our effort is to conclude it as early as possible. We are hopeful of signing it in the near future. But there is no chance of LEMOA being signed during the Prime Minister's visit," a senior official said.

The Indian Express has also learnt that the Pentagon had sent the draft of LEMOA in January itself, which was negotiated by the defence ministry with a legal team from Pentagon in February this year. Defence ministry confirmed that it had received the drafts in January, and had undertaken negotiations with the team from Pentagon.

"Drafts of the agreements, including LEMOA were delivered in the third week of January and we had a team of experts visit in the first week of February. They discussed each agreement with the members of MEA and MOD at the Joint Secretary level. JS (AMS) and JS(PIC) had received these drafts, besides others, and the drafts were also with the Indian Army, Air Force and Navy," US defence sources involved in the negotiation of agreements told The Indian Express.

The LEMOA agreement is based on the Logistics Support Agreement (LSA) signed by the US with its closest allies. The LSA has been tailored to reflect India's concerns, where the language has been amended, as per Indian officials, "to reinforce the non-contractual nature of the agreement".

According to American sources, "there were minor changes in the text suggested during the negotiations. Sometimes we got the feeling if flying a team of lawyers from Pentagon to Delhi was really worth it."

Carter had also announced the finalisation of a White Shipping Agreement between India and the US, which also got delayed after the senior Pentagon official dealing with it, cancelled his trip to Delhi this month. According to Navy officials, "We already have a similar agreement with five countries and see no problems here. This agreement though will be signed by the Shipping ministry."

Another item mentioned during Carter's Delhi visit was the Aircraft Carrier Working Group established between the two navies, which is also unlikely to see any progress. This was to allow the transfer of American technologies to Indian Navy for the construction of its second indigenous aircraft carrier. While US officials expect the information exchange annexure to be shared by India in a couple of months' time, Indian Navy officials have told The Indian Express that this will have to await the finalisation of their own Project Report.

The Ministry of Defence has allotted Rs 25 crore to study and prepare a project report for the second indigenous aircraft carrier. A team of three officers, under a Rear Admiral, is working on the study. Once finalised, the report will freeze the navy's requirement, thereby allowing it to prepare the information exchange annexure to be shared with the US, sources in the navy said.

The Times of India
12 May, 2016

Parrikar to visit Oman, UAE

New Delhi: Defence Minister Manohar Parrikar will leave on a four-day visit to Oman and UAE next week as part of India's outreach to the strategically important and energy-rich Middle East through greater cooperation across sectors.

Parrikar is set to leave for Oman on May 18 during which he will call on the top leadership there and hold bilateral talks with his counterpart. Oman, considered to be closest to India among the Gulf Cooperation Countries (GCC), had signed a military protocol with India in 1972, which led to a three-year deputation of Indian Navy personnel to man Oman's Navy in 1973.

An MoU on defence cooperation was also signed between India and Oman in 2005.

Areas of cooperation include joint military exercises, military training and IT, educational courses and exchange of observers and formal visits.

Parrikar will also visit UAE, which was one of the countries visited by Prime Minister Narendra Modi last year.

His visit to the country will coincide with an air exercise being held between the air force of both countries. Indian fighter planes will stop by in UAE on the way back from the Red Flag air exercise in the US.

Following Modi's visit, India and UAE had decided to establish a strategic security dialogue and boost defence ties besides resolving to work together in counter-terrorism operations, combating money laundering, drug trafficking and trans-national crimes.

The two sides had agreed to strengthen defence relations, including through regular exercises and training of naval, air, land and Special Forces, and in coastal defence.

The UAE also conveyed to India that it will cooperate in manufacture of defence equipment in India.

Ahead of Parrikar's visit, a flotilla of three warships had reached Dubai on May 7 to demonstrate India's commitment to maritime relations with countries in the Gulf region.

The Economic Times
13 May, 2016

US-India Defence Cooperation Act in Senate

Washington: Ahead of Prime Minister Narendra Modi's expected visit here next month, two top American senators have introduced a legislation which if passed by Congress would elevate the status of the Indo-US defence relationship on par with that of America's closest allies like NATO and Israel. The US-India Defence Technology and Partnership Act was introduced in the Senate by Senators Mark Warner and John Cornyn on Wednesday. The legislation has been sent to the Senate Foreign Relations Committee for necessary action.

The Tribune
13 May, 2016

Pakistan again rakes up Kashmir issue at UN

Raking up the issue of Kashmir in the UN, Pakistan said denial of fundamental human rights to Kashmiris is an “injustice” and the failure to address prolonged outstanding disputes would be seen as “double standards” practiced by the world body.

Pakistan’s Permanent Representative to the UN Maleeha Lodhi said at a General Assembly debate on peace and security that it is the “duty” of the global community to ensure UN resolutions on the issue are fulfilled.

Sovereign equality of nations, settlement of international disputes by peaceful means and avoidance of the use or threat of use of force are fundamental principles entrenched in the UN Charter, said the Ambassador.

The UN, however, “will be seen to practice double standards if it continues to condone military aggression or foreign interventions, ignore persisting situations of foreign occupation and denial of the right of self-determination to people living under occupation and also if it fails to address prolonged outstanding disputes,” she said here yesterday.

The Ambassador said the United Nations was created with the “very purpose to prevent and stop these injustices – injustices such as the denial of fundamental human rights to the people of Palestine and Kashmir”.

“Isn’t it our collective and solemn duty to keep the promises made to them through numerous resolutions of this body? How can this body command the respect it deserves if its own edicts are flouted,” she said.

Lodhi added that UN member nations need some introspection as to why the Security Council is “reluctant” to refer legal disputes to the International Court of Justice.

“And if we have no credible answers to these questions except the imperatives of realpolitik, the world at large will view the United Nations as little more than a political tool in the hand of the powerful few. This impression would hardly inspire trust,” she said.

Pakistan has repeatedly raised the issue of Kashmir at various UN platforms but India has strongly asserted that references to Kashmir by Pakistan in UN fora is unwarranted and constitute a clear interference in its internal affairs.

Mail Today
13 May, 2016

Pakistan’s F-16 Predicament

Much to Islamabad’s chagrin, the message coming out from Washington is loud and clear. Pakistan is now being asked to pay for F-16 jets from of its own pocket. The message that the US is sending to Pakistan after it threatened to yank financing for F-16 jets ordered by the country cannot be more categorical.

Purchase

Pakistan can still purchase the fighter jets, but Senate Foreign Relations Committee chairman Senator Bob Corker has promised to block any US funding for the deal in a reflection of congressional anger at the Pakistani government for what many say are its close relationships with

anti-American Islamist militants. The jets, along with other military equipment, approved for sale to Pakistan will cost around \$700 million to the US exchequer. Earlier this year, the Obama Administration had approved the sale of up to eight F-16 fighter jets to Pakistan.

But Bob Corker announced earlier this week that Pakistan will have to pay full price for its purchase of eight F-16 fighter jets from the United States. Senator Corker commented, "Given congressional objections, we have told the Pakistanis that they should put forward national funds for that purpose." Some members of the US Congress, led by Sen. Corker, had objected to the use of US funds to subsidise the sale of the F-16s to Pakistan based on what they see as the Pakistani government's support of militant groups that have targeted Americans and Afghans and their inadequate support of the Afghan peace process.

Pakistan is now reportedly exploring alternative options, such as the Russian SU35 and the Chinese J10 and J20 stealth fighters. Sartaj Aziz, the Pakistani prime minister's adviser on foreign affairs, said that Pakistan will "opt for jets from some other place" if US funding is not arranged. It is clear that even if this immediate matter of F-16 sale is resolved, The US-Pakistan relations are only going to go downhill. And this has been clear for quite some time now. In many ways, this was bound to happen. Pakistan could not have expected to play China and the US against each other for this long. Moreover, Pakistan's dubious role in Afghanistan is creating a strong backlash in the US.

In his address to a joint session of Afghanistan's two houses of parliament last month, Afghan President Ashraf Ghani threatened to lodge a formal complaint against Pakistan at the UN. In a departure from his earlier stand, Ghani called on Pakistan to forego attempts to bring the Taliban to negotiations and take military action against the militant group.

Diplomatic

The Afghan president threatened, "If we do not see a change, despite our hopes and efforts for regional cooperation, we will be forced to turn to the UN Security Council and launch serious diplomatic efforts." Despite Pakistan's repeated assertions that it would go after Taliban leaders who refused to engage in the peace process involving Afghanistan, Pakistan, the United States, and China, negotiations have stalled and deadly attacks in Afghanistan have increased as the Taliban carries out its spring offensive.

On April 19, Afghan Taliban-claimed attack against a security agency responsible for protecting senior government officials and VIPs, which killed 64 people and injured 347 others. Afghanistan has alleged that this deadly attack in Kabul was planned by the Haqqani network in Pakistan. Rather than engaging Pakistan, Kabul is now talking of isolating Pakistan in response. Dawa Khan Meenpal recently suggested that "Pakistan is in the state of isolation. We want to use diplomatic initiative to isolate Pakistan at regional and international levels and to tell the world community where terrorists are and which country and intelligence (agency) support them." Washington's anger is reflective of this growing divide in Afghanistan-Pakistan relations.

Sale

When the Obama Administration had decided to go ahead with the sale of F-16s to Pakistan, India's reaction was strong. It had openly disagreed with the US stand that this sale would help in the fight against terrorism and instead has argued that it would be used against India. The US Ambassador to India was summoned to underscore India's displeasure. Delhi is seriously concerned about the changing balance of air power in the region as Pakistan today has four squadrons of F-16 fighters, all built with the US assistance.

But Indo-US ties today are at a completely different level. As Prime Minister Narendra Modi gets ready to address the US Congress next month, Washington and Delhi need to find a better way of managing Pakistan so as not to impact the positive trajectory of their bilateral ties. There is a larger strategic reality that confronts India and the US beyond Pakistan. This is clear from recent attempts by the two states to swap anti-submarine warfare technology in order to counter the threat from Chinese submarines. It is likely that a joint US-India exercise on anti-submarine warfare will take place in the Philippine Sea and include Japan as the two navies gear up to hedge against patrols by Chinese nuclear-armed submarines.

Pakistan is being sent a message from the US polity that it cannot forever blackmail the US. India should remain alive to such changes in the US and leverage them accordingly.

Deccan Herald
13 May, 2016

Moscow blasts US missile system in Romania

Moscow: The Kremlin on Thursday insisted the deployment of a US missile defence system to Romania was a "threat" to Russia's security, despite Washington saying it was not aimed at undermining Moscow's defences.

"From the very beginning of this whole story, we have said that according to our experts' opinion, we are convinced that the deployment of the missile defence system is truly a threat to Russia's security," Kremlin spokesman Dmitry Peskov said.

A US missile defence interception station in Deveselu, southern Romania, became operational on Thursday and will become part of a broader NATO missile shield to defend members against short and medium-range ballistic missiles.

Relations between Nato and Russia have severely deteriorated since Moscow annexed Crimea from Ukraine in March 2014, sparking concern among other eastern European countries that they too could be the targets of Russian aggression.

Moscow has consistently accused NATO of trying to contain it since the collapse of the Soviet Union opened up the former Eastern Bloc.

US assistant secretary of state Frank Rose said on Wednesday that the system was intended to counter threats from the Middle East above all and was not "designed for or capable of undermining Russia's strategic deterrence capability."

Vladimir Komoyedov, the head of Russia's parliamentary committee on defence, said that the system's deployment was a "direct threat" to the country and that it would reinforce its military capacities.

The Hindustan Times
13 May, 2016

China 'coordinating' with Pak to block India's entry into NSG

China would like to project its position as 'neutral' when in reality it is 'working in tandem with Pakistan to stall India's application'

WASHINGTON DC: China and Pakistan are closely coordinating moves to block India's entry into the Nuclear Suppliers Group (NSG). Beijing is using Pakistan's Non Starter position with the NSG to block India's application in the name of parity, stating that it would either support NSG entry for both India and Pakistan, or none of them.

Talking about the China Pakistan grand strategy to stall India's admission into the NSG, US sources who work with the NSG said from all counts it does appear that China and Pakistan are coordinating to stop the Indian entry.

Sources pointed to the fact that when India sought an information session with the NSG Participating Governments (PGs) at the recent NSG Consultative Group meeting on April 25 and 26, where it would have made a formal presentation to the NSG Group in support of its membership, Pakistan requested for a similar discussion slot with the NSG PGs.

Sources said that even though Pakistan was fully aware that its request would be rejected, it made its application at the cue of China, in order for Beijing to look even-handed when it sought the rejection of both requests on grounds of parity. Providing an insight into the China-Pakistan plan to stall India, sources say that Pakistan is now going to write to all the NSG PGs about its wish to join the NSG. The Pakistani application, added sources, is "just a decoy" for China to reject both applications on grounds of parity. China knows that Pakistan does not stand a chance at the NSG, and most of the NSG states will reject Islamabad's application.

By taking the lead in rejecting the Pakistani application along with that of India, China would like to project its position as "neutral" when in reality it is "working in tandem with Pakistan to stall India's application".

US sources are disappointed with the Chinese tactics of "using Pakistan's non credentials with the NSG to settle scores with India". Sources say that this strategy is not a secret and during Pakistan President Mamnoon Hussain's visit to China in November 2015, China revealed its hand when it told President Hussain that if India is allowed to get NSG membership, China would ensure that Pakistan also joins the group.

The Chinese government told President Hussain that "if India is allowed to join the NSG and Pakistan is deprived of NSG membership, Beijing will veto the move and block the Indian entry".

US sources have seen through China's game of "either both or none" in the NSG. They say that India's non-proliferation credentials can never be compared with Pakistan's, as Pakistan has a history of "selling nuclear technology to rogue states such as Libya". They point to the father of Pakistan's nuclear bomb, Dr AQ Khan, and his global nuclear trade.

Also the West fears that Pakistan's nuclear weapons, especially the tactical version that it is now in the process of developing, can easily find their way into the hands of terrorists, as Pakistan's nuclear command is extremely vulnerable to penetration by Islamic hardliners.

Sources say that China is aware of this situation, and is mindful of the fact that Pakistan can never be considered for membership in any global nuclear club, but that won't stop China from using Pakistan as a "parity token to stop India which is fast emerging as China's competitor".

US sources added, "China would be naive to expect that there won't be an Indian reaction, and especially a commercial one, as China is mindful that India is fully qualified to join the NSG, and by playing the 'parity card', China is only hurting its own interests with India."

The Hindustan Times
13 May, 2016

CBI questions former ISRO chief over Antrix-Devas deal

According To the Cbi Fir, An Official Of The ACL Allegedly Manipulated The Contract To Favour Devas Despite Its Ineligibility

NEW DELHI: The CBI on Thursday questioned ISRO's former chairman G Madhavan Nair in connection with its probe related to alleged irregularities in the 2005 deal between Antrix Corporation Limited (ACL) and Bengaluru's private firm Devas Multimedia Private Limited (DMPL).

In March last year, CBI had registered an FIR in the case, according to which the then executive director of the ACL — ISRO's commercial arm — allegedly manipulated the contract to favour the firm despite its ineligibility. The FIR alleged that a “wrongful gain” of ` 578 crore was caused to the private firm and a corresponding loss to the exchequer due to the pact.

The pact, which was later cancelled by India in 2011, was on delivery of video, multimedia and information services to mobile receivers and mobile phones via two geo-stationary satellites. CBI said in its FIR that after the alleged omissions and commissions on the part of accused persons surfaced, the agreement dated January 28, 2005 was annulled by Antrix as directed by the Cabinet Committee on Security headed by the then Prime Minister Manmohan Singh.

Nair was questioned at the CBI's headquarter for several hours over details related to the controversial pact that saw his early exit as ISRO's chairman as he was the head of the governing council of Antrix when the deal was finalised.

After registering its FIR last year, CBI had carried out searches in Bengaluru at the premises of DMPL and of Antrix's former executive director KR Sridhara Murthi.

The CBI FIR had named Murthi, MG Chandrasekhar and R Vishwanathan of private firm Forge Advisors, DMPL and unnamed officials of Antrix, Isro and DoS.

The Statesman
13 May, 2016

Pokhran-II Tests Yet To Start

Eighteen years after the landmark Pokhran-II nuclear tests, work on a project announced to commemorate the event is yet to begin. India had conducted nuclear tests in Pokhran in 1974 and later on May 11 and May 13, 1998. “The district administration had planned to install models in the building of Khadi Gramodyog in Jaisalmer. “It was to be developed as a place to commemorate the nuclear tests but the work is still pending.

Deccan Herald
13 May, 2016

Einstein's relativity theory valid 13 bln light yrs from earth

Scientists have made a 3D map of 3,000 galaxies 13 billion light years from Earth, and found that Einstein's general theory of relativity is valid even far into the universe, reports PTI from Tokyo.

Since it was discovered in the late 1990s that the universe is expanding at an accelerated rate, scientists have been trying to explain why.

The mysterious dark energy could be driving acceleration, or Einstein's theory of general relativity, which says gravity warps space and time, could be breaking down.

To test Einstein's theory, researchers including those from the Kavli Institute for the Physics and Mathematics (Kavli IPMU) and University of Tokyo in Japan, used data on more than 3,000 distant galaxies to analyse their velocities and clustering.

Their results indicate that even far into the universe, general relativity is valid, giving further support that the expansion of the universe could be explained by a cosmological constant, as proposed by Einstein in his theory of general relativity.

"We tested the theory of general relativity further than anyone else ever has. It's a privilege to be able to publish our results 100 years after Einstein proposed his theory," said Teppei Okumura, Project Researcher at Kavli IPMU.

BREATH TEST FOR MALARIA

Diagnosing malaria may soon be as easy as taking a simple breath test, researchers in the US claim



THE MALARIA ODOUR

Dr Audrey Odom, an assistant professor at Washington University in St. Louis, began working on a device after her team discovered the malaria parasite produces aromatic organic compounds called terpenes that give off a scent

These compounds, when in the blood, can get into the lungs and out in the air the body exhales

TESTING THE THEORY

The research team moved to a pilot study in Malawi, where it was able to detect and diagnose malaria with 100% accuracy in the breath of children

"We really envision this working just like a breathalyzer test when you get pulled over for drink driving," Odom said

The device would be less expensive than current diagnostic tools and wouldn't require trained personnel

ANOTHER MALARIA INNOVATION

Two students from Burkina Faso have designed a mosquito-repellent soap from natural oils and plants

They say it will be a simple and affordable way to end malaria in Africa. The soap is yet to be tested to ensure it is effective and safe for human use.



FAST FORWARD

Here's a peek into the future. A car-sized sled powered by electromagnets rocketed to 187 kmph through the Nevada desert outside Las Vegas during a test ride

THE FUTURE OF TRANSPORT?

Hyperloop is promoted as a revolutionary form of public transport, in which capsules with 28 people would be fired along a rail gun into low-pressure tubes

The technology uses levitating pods that move through a tube using electricity and magnets

The pods are designed to travel at more than 1,120kmph

SUPERSONIC SPEED

The aim is to get the capsule to move at the speed of sound and travel between LA and San Francisco — or Bangalore and Chennai (about 350km) — in just 30 minutes

MORE SUPPORTERS

The firm announced on Tuesday the French national rail had joined its list of backers. It has so far raised \$80mn from investors

THE NEVADA TEST

An early test of a Hyperloop prototype (in pic, above) in the Nevada desert showed it could successfully accelerate to 187kmph in 1.1 seconds

The demonstration was the first public glimpse of how exactly Hyperloop would work. It was done by the start-up Hyperloop One, one of the firms working on the vision laid out by Elon Musk, the entrepreneur behind Tesla and Space X

COMING UP

Hyperloop One wants to start moving cargo by 2019 and people by 2021



HOW IT WILL WORK?

Compressor sucks air to pull the pod forward

The pod is enclosed in a tube to minimise resistance from air

A magnetic levitation system keeps the pods afloat.

**1,120
kmph
Potential speed**

PHOTO: REUTERS; ILLUSTRATION: AFP