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DRDO identifies 20 acres for AMCA project in Coimbatore

*The ISRO will also be launching two more defence satellites sometime in July/August with its new rocket Small Satellite Launch Vehicle (SSLV)
'IAF is looking for instrumentation and calibration from industries'*

The Defence Corridor to come up in Coimbatore will get a major boost with the country's premier defence project of making the Advance Medium Compact Aircraft (AMCA) expected to take shape here.

Air Marshal B. Suresh, Air Officer Commanding-in-Chief, Southern Air Command, said here on Wednesday that 20 acres had been identified by the Defence Research and Development Organisation (DRDO) for the AMCA project in Coimbatore.

"Air Force Station Sullur is unique that it's the IAF's only airbase to accommodate and operate fighter, transport, and helicopter aircraft together. It is one of the most active air bases of the IAF. The Defence Minister last month announced the opening of the Tamil Nadu Defence Corridor of which Coimbatore is an integral part. With that happening, Sullur will gain added importance," said Air Marshal Suresh at Air Force Station, Sullur.

According to him, Coimbatore is a hub of industries and that is one of the reasons why the Defence Minister has announced the opening of Defence Corridor here.

"When we talk about the aviation industry, we need to have an ecosystem around it. IAF is already looking for instrumentation and calibration from industries here," he said.

A. K. Puntambekar, Air Officer Commanding at Air Force Station, Sullur, said, "We have interactions with the industry regularly in the form of seminars and conferences wherein we have got encouraging participation. Our demands and the capabilities of the local industries are worked out in such interactions. As a result, over the years, we have been able to develop many indigenous items for fighter and transport aircraft which are already in service and use".

Adding more on the indigenisation, Air Marshal Suresh said that IAF was till able to operate very old aircraft by developing parts for them as procuring spares was difficult.

"So there is a need for indigenisation. Not many people know that IAF has indigenised 47,000 to 49,000 lines of spares. These range from small parts to major components. That is where the strength of Coimbatore is and it is the future," he said.

Citing the commendation for indigenously developed Light Compact Aircraft from every quarters, Air Marshal Suresh pointed out that it was not affordable to keep depending on foreign supplies.

"Make in India has a very strong thrust. For this, we need to have a system, skill care centre and an industry in place. That is where the strength of Coimbatore lies. So, whatever we have now will be multiplied tenfold. I can assure you that this will happen in the next five to ten years," he said.

<https://www.thehindu.com/news/cities/Coimbatore/drdo-identifies-20-acres-for-amca-project-in-coimbatore/article26394363.ece>

ISRO to launch defence satellite in March for DRDO

The ISRO will also be launching two more defence satellites sometime in July/August with its new rocket Small Satellite Launch Vehicle (SSLV)

In a special mission in March, the Indian space agency will launch an electronic intelligence satellite Emisat for the DRDO, 28 third party satellites and also demonstrate its new technologies like three different orbits with a new variant of Polar Satellite Launch Vehicle (PSLV) rocket, said a top official. The exact date has not been specified yet.

"It is a special mission for us. We will be using a PSLV rocket with four strap-on motors. Further, for the first time we will be trying to orbit the rocket at three different altitudes," K. Sivan, Chairman, Indian Space Research Organisation (ISRO) told IANS. "The main passenger for the PSLV rocket will be the defence intelligence satellite Emisat belonging to Defence Research and Development Organisation (DRDO).

"The satellite weighs about 420 kg. The 28 satellites belonging to our customers would cumulatively weigh about 250 kg," Sivan said. The DRDO's Emisat is an electronic intelligence satellite, he added. The ISRO will also be launching two more defence satellites sometime in July/August with its new rocket Small Satellite Launch Vehicle (SSLV).

In January, the space agency launched a defence imaging satellite Microsat R for the DRDO. Sivan said, after launching Emisat at an altitude of 763 km, the rocket will be brought down to put into orbit the 28 satellites at an altitude of 504 km. "Following that the rocket will be brought down further to 485 km where the fourth stage will turn into a payload platform carrying three experimental payloads - one developed by the students of Indian Institute of Space Science and Technology, besides ISRO's own technology demonstrator and a Hamsat," Sivan said.

The PSLV is a four-stage engine expendable rocket with alternating solid and liquid fuel. In its normal configuration, the rocket will have six strap-on motors hugging the rocket's first stage. On January 24, the ISRO flew a PSLV with two strap-on motors while in March it will have four strap-on motors. The Indian space agency also has two more PSLV variants viz Core Alone (without any strap-on motors) and PSLV-XL a larger rocket. The ISRO selects the kind of rocket to be used based on the weight of satellites it carries.

<https://www.news18.com/news/tech/enemies-alert-isro-to-launch-defence-satellite-in-march-for-drdo-2050049.html>



और मिग 21 ने तबाह कर दिया आधुनिक एफ-16

मिग-21 बाइसन की ख्रासियते

2230 किमी प्रतिघंटा
विमान की रफ्तार

14.7 मीटर
विमान की लंबाई

5846 किग्रा
विमान का वजन

जंग स्थितियों से नहीं लड़ी जाती है। इसके लिए जवानों के जोश और जख्म की जरूरत होती है। इसका उदाहरण हाल ही में भारतीय जांचक अभिनंदन वर्दमान ने पेश किया, जहां उन्होंने भारतीय सीमा में घुस आए पाकिस्तानी एफ-16 विमानों को न केवल खदेड़ बाहर किया बल्कि उनमें से एक विमान को तबाह करने में कामयाबी हासिल कर ली। किसी को भी जानकर हैस हो सकती है कि मिग-21 के मुकाबले एफ-16 लड़ाकू विमान कहीं ज्यादा ताकतवर और आधुनिक है। दोनों विमानों की सुविधाओं पर एक नजर:

एफ-16 की ख्रासियते
2120 किमी प्रतिघंटा
विमान की रफ्तार

15.06 मीटर
लंबाई

8570 किग्रा
विमान का वजन

- साल 2006 में 110 मिग-21 जेट विमानों को अद्युक्त किया गया था। इस अपग्रेडेशन में इसे और शक्तिशाली बनाते हुए मल्टी-मोड राइबर और बेहतर संचार प्रणाली के साथ बेहतर विमान बनाया गया था। इसकी मारक क्षमता 1470 किमी है।
- इस अपग्रेडेशन के साथ इसकी मारक क्षमता भी पहले से ज्यादा अपग्रेड की गई। इसके साथ ही विमान में आर-73 आर्चर शॉर्ट रेंज और आर-77 मीडियम रेंज एंटी-एयरक्राफ्ट मिसाइलों से लैस होने के बाद इसकी हवा से हवा में मारक क्षमता में भी प्रभावशाली तरीके से काफी सुधार किया गया।
- मिग-21 बाइसन पायलटों को हेलमेट-माउंटेड साइट भी अद्युक्त की गई जो कि अब मिराज 2000 जैसे अन्य अपग्रेडेड जेट के पायलटों द्वारा पहना जाता है।
- मिग-21 सोवियत रूस का बनाया हुआ लड़ाकू विमान है।

- मिग-21 विमान साल 1972 में पहली बार सेवा में आया। तब से अब तक मिग में बहुत सारे बदलाव हुए हैं।
- यह फाइटर प्लेन बड़े तादात में एकसाथ गोला बारूद साथ ले जाने में सक्षम है।
- मिग-21 बाइसन के बाई और कॉकपिट से गोलियां बरसाने की व्यवस्था की गई है। एक बार में यह फाइटर प्लेन लगभग 420 राउंड एक साथ ले जा सकता है।
- मिग-21 बाइसन फाइटर प्लेन हवा से हवा में मिसाइलों को मार गिराने के अलावा जमीन पर भी हमला करने में सक्षम है।
- मिग-21 बाइसन में कैमिकल और क्लस्टर बम ले जाने की व्यवस्था भी की गई है। इसके अलावा यह विमान लगभग 1000 किलो तक के वजन वाले कई तरह के बम भी अपने साथ ले जा सकता है।

- एफ-16 रॉकेट, हवा से हवा में मार करने वाली मिसाइल, हवा से सतह पर मार करने वाली मिसाइल और हवा से जहाज तक मार करने वाली मिसाइल के साथ-साथ कई तरह के बम से लैस है। इसमें रबर ऑन-बोर्ड भी होता है।
- यह अमेरिका द्वारा निर्मित चौथी जेनरेशन का सबसे आधुनिक लड़ाकू विमान है।
- यह एक एक इंजन वाला सुपरसोनिक नल्टीरोल लड़ाकू विमान है।
- उमदा जीपीएस नेविगेशन भी इसकी ख्रासियत है।
- इस विमान में एडवांस स्नाइपर टारगेटिंग पॉइंट भी है। किसी भी मौसम में काम करने में सक्षम
- इसमें प्रेमलेस बबल कॉनोपी है, जिससे देखने में सुविधा होती है। सीटें 30 डिग्री पर मुड़ी हैं, जिससे पायलट को जी-फोर्स की अनुभूति कम होती है।

33 honoured with India's most-coveted science prize

Dr Aditi Sen De of Harish Chandra Research Institute, Allahabad, is the only woman among the 33 scientists who were awarded for the year 2016, 2017 and 2018

Several Indian Institutes of Technology (IITs) combined won eight awards at the ceremony for the coveted Shanti Swarup Bhatnagar Prize for Science and Technology, in New Delhi. Close behind the IITs was the Indian Institute of Science, Bengaluru (IISc), which won seven prizes at the ceremony.

Prime Minister Narendra Modi gave away the Shanti Swarup Bhatnagar Prize — India's most coveted science and technology award — to 33 winners of past three years on the occasion of National Science Day in Delhi on Thursday.

Dr Aditi Sen De of Harish Chandra Research Institute, Allahabad, is the only woman among the 33 scientists who were awarded for the year 2016, 2017 and 2018.

De was given the award in the “physical sciences” category for her contributions in quantum communication. She is the only woman to receive the award in this category. The last woman scientist to receive the award was Dr Vidita Vaidya, a neuroscientist from the Tata Institute of Fundamental Research, Mumbai. She received the prize in 2015 in the “medical sciences” category.

So far, the award has gone to 16 women and 519 men.

The award was instituted in 1958 in the honour of eminent scientist Dr Shanti Swarup Bhatnagar, who was also the founder director and chief architect of the Council for Scientific and Industrial Research (CSIR), a government-funded research and development organisation, which now runs several laboratories and institutes across the country.

The prize comprising a citation and Rs 5 lakh in cash is given each year to outstanding researchers in seven disciplines.

“I feel that the science can be global but the technology should be local, suited to the needs of the people of the country. Our scientists and science organisations should not work in silos, rather they should work together to build a brighter future,” said Modi.

“If this is done, the farmer and the soldier will benefit from science and research,” he added referring to the phrase by Lal Bahadur Shastri “Jai Jawan, Jai Kisan” to which former Prime Minister Atal Bihari Vajpayee had added “Jai Vigyan” and in January this year PM Modi added “Jai Anusandhan” during the Indian Science Congress, an annual event.

Scientists who were awarded

| | |
|---------------------------------|---|
| Dr Rishikesh Narayanan | Biological Sciences |
| Dr Suvendra Nath Bhattacharya | Chemical Biology |
| Dr Partha Sarathi Mukherjee | Chemical Sciences |
| Dr Sunil Kumar Singh | Earth, Atmosphere, Ocean and Planetary Sciences |
| Dr Avinash Kumar Agarwal | Engineering Sciences |
| Dr Venkata Narayana Padmanabhan | Engineering Sciences |
| Dr Amalendu Krishna | Mathematical Sciences |
| Dr Naveen Garg | Mathematical Sciences |
| Dr Niyaz Ahmed A S | Medical Sciences |
| Dr Subramaniam A Ramakrishna | Physical Sciences |
| Dr Sudhir Kumar Vempati | Physical Sciences |
| Dr Deepak Thankappan Nair | Biological Sciences |
| Dr Sanjeev Das | Biological Sciences |
| Dr G Naresh Patwari | Chemical Sciences |
| Dr S Suresh Babu | Earth, Atmosphere, Ocean and Planetary Sciences |
| Dr Aloke Paul | Engineering Sciences |
| Dr Neelesh B Mehta | Engineering Sciences |
| Dr Amit Dutt | Medical Sciences |
| Dr Deepak Gaur | Medical Sciences |
| Dr Nissim Kanekar | Physical Sciences |
| Dr Vinay Gupta | Physical Sciences |
| Dr Ganesh Nagaraju | Biological Sciences |
| Dr Thomas Pucadyil | Biological Sciences |
| Dr Rahul Banerjee | Chemical Sciences |
| Dr Swadhin Kumar Mandal | Chemical Sciences |
| Dr Madineni V Ratnam | Earth, Atmosphere, Ocean and Planetary Sciences |
| Dr Parthasarathi Chakraborty | Earth, Atmosphere, Ocean and Planetary Sciences |
| Dr Amit Agrawal | Engineering Sciences |
| Dr Ashwin Anil Gumaste | Engineering Sciences |
| Dr Amit Kumar | Mathematical Sciences |
| Dr Nitin Saxena | Mathematical Sciences |
| Dr Ganesan Venkatasubramanian | Medical Sciences |
| Dr Aditi Sen De | Physical Sciences |

Addressing the scientists, Modi said, “You all live your lives in laboratories and you have a tradition of pilot projects. After the pilot, a project is made scalable. So, recently there was a pilot project, now we need to do the real thing. Earlier, it was a practice. And the real thing is: today’s winners need a standing ovation.”



PM Narendra Modi with the winners at the ceremony

The PM went on to say that scientists and scientific institutes should come together to work for India’s future. Speaking at the event, Union science minister Dr Harsh Vardhan commended CSIR for improving its global ranking. “Over the last few years, under the guidance of our prime minister, our scientists have achieved a lot, especially CSIR that was ranked number nine on a list of 1,207 institutes of the world,” he said.

<https://www.hindustantimes.com/india-news/33-honoured-with-india-s-most-coveted-science-prize/story-dPSaAkYdVxw2qmXiGA439H.html>