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Sensor to detect radiation level

Scientists at the Defence Research and Development Organisation's (DRDO) Jodhpur laboratory have developed a sensor that can detect radiation levels in case of any nuclear accident, PTI reports from Jaisalmer.

"Derald Nuclear" the sensor, which can be fitted on a drone, can detect gamma radiation from the height of 50 metres.

"This perhaps is the only equipment that can detect radiation from radioactive substances this way," said S R Vadera, Outstanding Scientist and Director, Defence Laboratory, Jodhpur.

"Take for example Mayapuri where a radioactive leak was detected. In such an event, the equipment can be flown over the area and we can easily pinpoint the source of the radiation," Vadera added.

The Hindu
21 Mar, 2016

DRDO to open 5,000-acre range in Chitradurga by mid-year

A part of the 5,000-acre DRDO Aeronautical Test Range at Chitradurga is now ready to be inaugurated around June.

It will begin activities for a few flight projects in about six months and expand the range in stages, a top DRDO official said here on Saturday.

The ATR, costing a total of Rs. 2,500 crore, is being developed at Challakere taluk of Chitradurga, about 200 km from here.

K. Tamilmani, Director-General (Aero R&D) who heads the dozen or so labs of the DRDO aeronautical cluster, said on the sidelines of a seminar that runway, air traffic control tower and test installations together costing Rs. 350 crore had been constructed at the campus.

With this, the DRDO can start testing some of the indigenous products being developed, including the naval and trainer versions of the Light Combat Aircraft, the unmanned air vehicles Rustom 1 and 2; and the Airborne Early Warning & Control Systems meant for surveillance.

Apart from the DRDO, the Chitradurga multi-agency mega complex will house facilities of Bhabha Atomic Research Centre, Indian Space Research Organisation and the Indian Institute of Science. Dr. Tamilmani said the DRDO had estimated that its aeronautical segment alone would need critical, high-value test facilities worth Rs. 10,000 crore over the next 10 years for various indigenous plans. They include an aerodynamic test facility, an engine test facility and test ranges for aircraft and helicopters that were under development. A 26-acre engine test facility costing Rs. 1,500 crore was planned at Rajanukunte near Bengaluru.

The seminar was organised by the NGO, Engineering India foundation, and Bengaluru-based computer simulation technology based company Pro-SIM.

India's defence lab develops thermal imaging radar to look through walls

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The Through Barrier Imaging Radar, named 'Divyachakshu' (divine eye), has been developed by Defence Research and Development Organisation's (DRDO) Electronics & Radar Development Establishment (LRDE) based in Bangalore and is going through development trials now.

"The radar can produce images from the other side of the barrier up to a distance of 20 metres. It catches the thermal signatures and movements in a room can be clearly seen," a scientist working on the project told IANS on condition of anonymity.

The radar tracks heat on the other side of the wall and gives real time thermal image, which can disclose the movement, number of people and other important information about the situation on the other side of the barrier.

"In a hostage situation, the radar can help give an idea about the number of people inside the room and their movement," the scientists said.

According to experts, the nature of movements can help in locating the terrorists and differentiating them from the hostage. The development of the radar was triggered by the Mumbai terror attack of November 2008, where terrorists took hostages at several locations, including hotel Taj Mahal, Oberoi Trident and Nariman House.

The device will also prove useful in situations such as the recent attacks in Gurdaspur, Punjab, where terrorists entered the Dina Nagar police station, or the Pathankot airbase and two of the terrorists went on to hide in a building. The project was started in 2010 and the development trials are expected to conclude by the year end.

"We are looking at the Army, the BSF and paramilitary forces as the buyers," the scientist said.

The Indian Army at present does not have such an equipment. Apart from the distinction of being indigenously developed, the equipment cost is low. The scientist said the device costs around Rs. 35 Lakh, while similar devices in the international market cost around Rs. 2 crore.

Efforts are also on to bring down the weight of the device from present 6-7 kg.

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