# समाचार पत्रों से चयित अंश
# Newspapers Clippings

## दैनिक सामयिक अभिज्ञता सेवा

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INDIA BLOOMS

*Wed, 16 May, 2018*

# DRDO Awards: Union Minister for Defence Nirmala Sitharaman addresses gathering

The Union Minister for Defence, Nirmala Sitharaman addressing the gathering during the presentation of DRDO Awards - 2016 & 2017, in New Delhi on May 14, 2018.

The Union Minister for Defence, Nirmala Sitharaman giving away the Technology Leadership Award - 2016 to the Scientific Advisor to Defence Minister, Distinguished Scientist & Director General (Missiles & Strategic Systems), G. Satheesh Reddy, during the presentation of DRDO Awards - 2016 & 2017, in New Delhi on May 14, 2018. The Chairman DRDO

The Union Minister for Defence, Nirmala Sitharaman giving away the DRDO Lifetime Achievement Award - 2017 to the former Secretary Department of Defence R&D, Scientific Advisor to Defence Minister and Director General, DRDO, V.K. Saraswat, during the presentation of DRDO Awards - 2016 & 2017, in New Delhi on May 14, 2018.

The Union Minister for Defence, Nirmala Sitharaman giving away the DRDO Lifetime Achievement Award - 2016 to the former Secretary Department of Defence R&D, Scientific Advisor to Defence Minister and Director General, DRDO, Vasudev Kalkunte Aatre, during the presentation of DRDO Awards - 2016 & 2017, in New Delhi on May 14, 2018. The Chairman

*https://www.indiablooms.com/photos-details/N/4023/drdo-awards-union-minister-for-defence-nirmala-sitharaman-addresses-gathering.html*

the pioneer

*Wed, 16 May, 2018*

# Prez exhorts scientists to develop new apps to tackle pollution, water shortage

**By *TN Raghunatha***

President Ram Nath Kovind on Tuesday exhorted the scientists in the Department of Atomic Energy (DAE) facilities to continue to develop newer applications that could help the country deal with challenges like pollution and climate change, wastage of farm produce, water shortage, fighting disease and management of waste. Inaugurating the DAE facilities at the Bhabha Atomic Research Centre (BARC), Kovind said: " What is less known to the common people, is the work that all of you do for using nuclear technology in the areas of healthcare, food and agriculture, water resources management and environmental protection. Research in nuclear medicine is widely used both for diagnostic and therapeutic purposes".

"I am told that in the cancer hospitals associated with the Department of Atomic Energy thousands of cancer patients benefit from the applications developed by you. Also, a large number of medical centres are using the radioisotope products supplied by the Department of Atomic Energy both for diagnostics and treatment of patients," the President said. "I am happy that one of the facilities that I inaugurated today is the Multi-leaf Collimator System developed by BARC. This system will enhance the effectivenessof treatment of tumour," Kovind said. The President said that the research in nuclear science undertaken by the scientists at BARC had benefited our food processing and agriculture sector and thus directly benefited our farmers. "Your work has helped develop 43 mutant crop varieties that are more efficient and productive. Again, I am happy to have inaugurated one of these today - a mutant variety of DUBRAJ rice that has a shorter maturation cycle and hence requires fewer resources," he said.

"Applications of nuclear science have helped to increase the shelf life of fruits such as mangoes, papaya, and lichi. This has helped to reduce wastage and post-harvest losses, boosted farm exports and enhanced income of farmers. These are only some examples of how your work benefits these sectors, and the list of your work in this area is indeed a long one," Kovind said. Heaping praise on the contribution made by scientists in the field of nuclear science and technology, the President said: "The journey towards excelling in this cutting edge domain of science and technology started here at BARC, almost six decades ago. Since then, Department of Atomic Energy has grown to become a multidisciplinary organisation with facilities spread across the nation..... The whole world today acknowledges the self-reliant nature of India's nuclear establishment".

NEWS

*Wed, 16 May, 2018*

# India becomes 5th country in the world to have submarine-launched nuclear missile

India has become the fifth country in the world to have a fully-operational submarine-launched missile capable of carrying a nuclear warhead. The country is also in the process of developing a similar missile that can be launched from land with a range of about 600 kilometres. The missiles, named BO5, have been developed by scientists and were felicitated at the annual award ceremony of the Defence Research Development Organisation in New Delhi by Defence Minister Nirmala Sitharaman. Defence Minister Nirmala Sitharamam gave the "DRDO award for performance excellence" to A Joseph and M Ugender Redddy, who developed the BO5 and land version of that missile. The citation of the award said "It is

an indigenous missile with several innovative designs and unique mechanism. Numerous critical technology were proved in the successful trials which paved the way for developing other long-range submarine-launched Strategic Missiles and has the potential to launched from Submarine, Ship and Land."

"The successful induction of the submarine-launched nuclear missile completes India Nuclear Triad, or the ability to launch nuclear missiles from land, air and from underwater should the need arise", said a report by India Today. With this, India joins a small club of countries that include USA, Russia, China and France.

*https://www.indiatimes.com/news/india/india-becomes-5th-country-in-the-world-to-have-submarine-launched-nuclear-missile-345396.html*

The Statesman

***Wed, 16 May, 2018***

# Ellsberg's Nuclear Odyssey

***By Kurt Jacobsen and Sayeed Hasan Khan***

In 1964 two savvy Pentagon consultants, Daniel Ellsberg and his boss Harry Rowen, stumbled out of a showing of Stanley Kubrick's magnificent satire, Doctor Strangelove and morosely agreed that what they had just seen "was, essentially, a documentary." Everything they watched going deliriously haywire on screen to the point of igniting nuclear obliteration already had happened in reality or very well could happen, given all they knew about the defects, miscues and conceits riddling the bureaucratic control system over the use of nuclear weapons. The planet is incredibly lucky that nuclear weapons have not detonated in anger or by accident since World War II. Such luck cannot hold forever unless serious changes are made, but since then, Ellsberg reckons, nothing much has changed.

Ellsberg is the courageous true patriot who, along with Anthony Russo, risked a lifetime in prison to disclose the secretive Pentagon Papers, spilling in 1972 a multitude of official lies that instigated the Vietnam War. In doing so he hastened the end of that indefensible conflict. What few people appreciated at the time is that Ellsberg had also worked intensively on nuclear war strategy at the Air Force-funded RAND Corporation and as a Defence Department consultant. His new book, The Doomsday Machine: Confessions of a Nuclear War Planner is as profound a contribution by a former insider to public enlightenment as the earlier Vietnam episode for which Ellsberg is justly celebrated. Citizens in any nation possessing nukes ought to read this harrowing chronicle.

The Pentagon in the 1960s daintily avoided blunt terms such as "nuclear war plan," and labelled the key document more disarmingly, so to speak, the Joint Strategic Capabilities Plan. The innocuous title was artfully chosen to avoid attracting scrutiny outside Pentagon walls, and even the Secretary of Defence was for a long time kept in the dark. Ellsberg also writes of the case of an admiral deceiving the Secretary of Defence about the treaty-violating presence of a nuke-laden ship regularly moored inside Japanese waters. Ellsberg in his sleuthing also discovered, unlike the nice fiction that only the President can order nuclear use, those local commanders as a matter of policy exercised real autonomy over nuclear decisions. The nuclear "football" with launch codes that a Presidential aide totes around is just theater.

Ellsberg confirms along the way of a gripping narrative that the Air Force typically inflated Soviet ICBM capacity to win budgetary battles over the Navy and Army. (In 1962, approaching the Cuban missile crisis, the Air Force and the CIA estimated Soviet ICBMs at between one hundred and three hundred when the Soviets really possessed a grand total of 4, though they certainly had many short range nukes.) Ellsberg also learned that the "2 man rule" of agreement for firing nukes was easy to sidestep. So the scary and absurdist Doctor Strangelove spectre of one neurotic in the lower command chain starting a nuclear war was entirely possible.

Ellsberg ascertained upon visiting air bases that vaunted "fail-safe" measures were rarely practised because of the hazard of accidents, meaning accidents were all the likelier to occur in a genuine flight scramble. Contrary to widespread belief, no code exists for recalling strategic bombers once committed to attack, still less so recalling launched missiles (as Reagan initially believed).

All of this is perfectly, if crazily, logical. What if the President were killed? What if communications were disrupted? What if the enemy transmitted misleading messages to the attack force? Decisions then fall

into the hands of nervous gung-ho local commanders. Ellsberg advises that we be acutely appreciative of the abiding military mindset to accomplish any given mission, no matter what, which can overrule common sense.

Sobering common sense seems awfully urgent when confronting titanic forces such as a 25-megaton device that alone can unleash "more power than all wars in human history." When Ellsberg asked the Pentagon how many dead would ensue a US nuclear exchange with the USSR and China (which US planners did not differentiate), the number crunchers replied six hundred million, with a third of humanity afterward endangered by toxic after-effects.

Actually, the horrified Ellsberg adds, few would survive ensuing "nuclear winter," and the survivors, as Khrushchev remarked, would envy the dead. Under no circumstances then should a nuclear war be started, but as we know one very nearly was in October 1962. The US military was "itching to attack Cuba," yet an aggressive blockade, recon flights, and invasion preparations ordered by the Kennedy Cabinet also stirred a high risk of nuclear Armageddon. Unknown to the US, Soviet troops in Cuba had at least a hundred operational tactical nukes to throw against any invasion. The now renowned restraint of a Soviet sub-commander averted a nuclear torpedo launch. Ellsberg reveals several incidents demonstrating the crisis did not end until a month after it was officially declared over. Ellsberg notes that at the 1945 Alamogordo bomb test there were two major fears ~ (1) the bomb would fail; and (2) a vastly miscalculated explosion would incinerate New Mexico and perhaps the planet. The chance "was very small, but not zero."

They went ahead. Since then US strategy has been the deluded one of improving first-strike capability when all this aim does is inspire paranoia (and an arms buildup) in the enemy camp. Ellsberg lays out proposals for getting nukes off hair-trigger alert. The wider public morality is at stake here too. Prior to the Cuban missile crisis, Defence Secretary Robert McNamara told Ellsberg that neither he nor JFK would initiate nukes under any circumstances; but that this stance actually had to be kept secret for fear the Congress would impeach JFK for it. The childish bellicose mentality governing these weapons needs to be tamped down at every level.

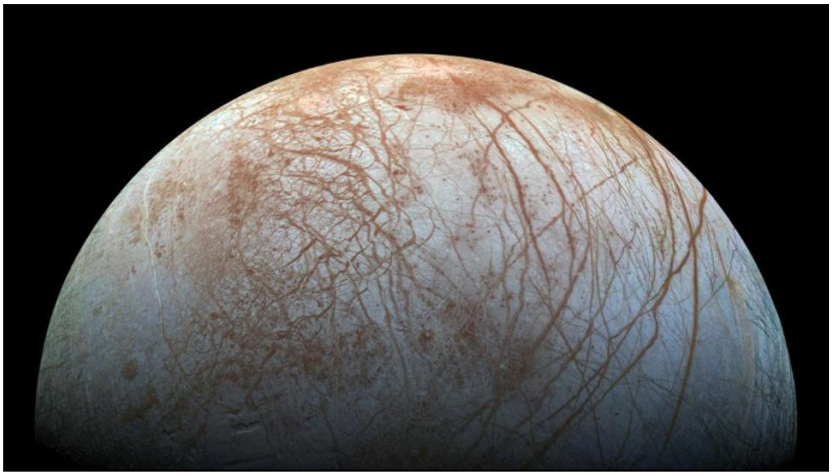
hindustantimes.com

***Wed, 16 May, 2018***

# NASA spacecraft provides new evidence of water plumes on Jupiter's moon, Europa

***The data was captured on Galileo's closest encounter with the moon on December 16, 1997, and has now been re-examined for evidence that a blip in the data it captured was caused when it crossed a water plume***

Scientists presented further evidence Monday for water plumes on the surface of Jupiter's moon Europa, raising hopes of probing the jets for signs of life around the second planet from Earth. Europa's frozen surface has long been thought to cover a salty ocean about twice the size of our planets. Given the suspected abundance of warm, liquid water under its kilometers-thick ice shell, the moon is considered a "top candidate" by NASA for life on a Solar System body other than Earth. But sending a robot craft to land on Europa and drill through its surface would be a much more costly and complicated Endeavour than, say, flying through a plume of water ejected from the moon's innards, and measuring its composition.



Twice before has NASA reported evidence, from its Hubble Space Telescope, for the existence of water plumes on

Europa, though this interpretation has caused much debate? The new data, reported in the scientific journal Nature Astronomy, comes from measurements made from much closer up during a flyby of NASA's now-expired Galileo spacecraft. The data was captured on Galileo's closest encounter with the moon on December 16, 1997, and has now been re-examined for evidence that a blip in the data it captured was caused when it crossed a water plume. The spacecraft, launched in 1989 to examine the fifth planet from the Sun with its dozens of moons, became the first in 1995 to enter the orbit of a gas giant planet.

Before ending its mission in 2003 with a planned crash into Jupiter's atmosphere, Galileo reported the first data suggestive of a liquid water ocean under Europa's surface. For the new study, experts measured variations in the moon's magnetic field and plasma waves as measured during Galileo's close flyby, and found they were "consistent" with the spacecraft crossing a plume. "These results provide strong independent evidence of the presence of plumes at Europa," they wrote.

The team reconstructed the spacecraft's path to pinpoint the plume's location on the moon's surface. "These findings will help plan future missions to Europa, such as NASA's Europa Clipper and ESA's Jupiter Icy Moons Explorer spacecraft, both of which are expected to arrive at Jupiter between the late 2020s and early 2030s," said a Nature summary.