

# समाचार पत्रों से चयित अंश Newspapers Clippings

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Mon, 15 Jan, 2018

## High-altitude trials of indigenous gun

By Sandip Dighe

PUNE: The Defence Research and Development Organisation (DRDO) is all set to carry out high altitude (HA) trial of 155 mm 52-calibre advanced towed artillery gun system (ATAGS) in Sikkim next week. ATAGS has been jointly developed by DRDO and the private sector. In September last year, it successfully cleared the desert trials.

A senior DRDO official told TOI on Wednesday, "We will carry out HA trial next week in Sikkim. A team of scientists from Armament Research and Development Establishment (ARDE) and the army team will carry out the trial together. The duration of trial is not yet fixed but it generally goes on for a few weeks."

DRDO had carried out deserts trials in Rajasthan in September last year and its scientists claimed that the trials achieved the desired results. In fact, ATAGS set a record during desert trials, firing shells to a range of 48km, against the army's requirement of 40 km, the DRDO sources informed.

"The HA trial is crucial and tough as the gun will have to perform in different weather and geographical conditions. During the trial, a large number of extended range full bore artillery ammunition will be fired from the gun," a senior DRDO official told TOI over phone from New Delhi on Wednesday.

The Ministry of Defence (MoD) had sanctioned the ATAGS project in September 2012 and DRDO, in collaboration with Bharat Forge and Tata Power, has developed two prototypes of ATAGS. These prototypes underwent maiden structural stability trials in December 2016 at Proof and Experimental Establishment, a government test facility at Balasore in Odisha, the sources added.

After completing all the trials, the army will conduct its own trials and analyse each result. "If the army has a doubt on a particular aspect, it will be again revisited and corrected," the sources added.

ATAGS has an all-electric drive, an advantage over traditional hydraulic drives which exist in other towed guns. The electric drives of ATAGS helps in handling ammunition, opening and closing the breech mechanism and ramming the round into firing chamber. The gun is expected to be inducted into the Indian Army by 2020, DRDO sources said.

<https://timesofindia.indiatimes.com/city/pune/high-altitude-trials-of-indigenous-gun/articleshow/62501179.cms>

**MAIL TODAY**

Tue, 16 Jan, 2018

## Nirmala to go on sortie in Sukhoi 30 MKI

By Ajit K Dubey

*Defence minister would fly over Jodhpur on Wednesday*

Defence minister Nirmala Sitharaman will undertake a sortie in Indian Air Force's frontline Su-30MKI combat aircraft over Jodhpur on Wednesday, while reviewing the operational preparedness of the force. "The Defence minister will undertake the sortie to gauge and review the operational preparedness and combat capabilities of the armed forces," an Air Force spokesperson said.

The Defence minister was earlier scheduled to fly the Su-30MKI last month, but she could not go there due to her involvement in the BJP duty to elect the chief minister of Himachal Pradesh after the conclusion of

assembly polls. Sitharaman would be sitting in the rear-seat behind the main pilot in the twin-seat Russian-origin plane.

The squadron getting the honour to fly the Defence minister is 31 Squadron 'Lions', which is based out of Jodhpur. Recently, the Defence minister had spent time on the INS Vikramaditya aircraft carrier where she was shown the combat capabilities of the MiG-29K naval fighters along with other carrier operations of the maritime force. Soon after taking over as Defence Minister, Sitharaman had visited the Air Force base in Jamnagar where she was briefed about the capabilities of the MiG 21 fighter plane and also the overall operations undertaken by the service.

The Su-30MKIs form the backbone of the Indian Air Force as 13 squadrons (over 270 planes) of the aircraft would be inducted in the force by the year 2020, replacing the outgoing MiG-21s and MiG 27s of the force. The Jodhpur air base is part of Air Force's Gandhinagar-based South Western Air Command whose area of responsibility is spread across Gujarat and Western Rajasthan against the Pakistan border. On January 8 Sitharaman had visited the Goa naval area.

She was accompanied by Admiral Sunil Lanba, the Chief of the Naval Staff. The Defence minister boarded Indian Naval Ships operating off Goa for 'Raksha Mantri Day at Sea'.



*Tue, 16 Jan, 2018*

## **Bonhomie Saves Spike Deal**

*By Vineeta Pandey*

The India-Israel deal for the Spike Anti-Tank Guided Missile, which was scrapped over cost and technology transfer issues, is back on track after Prime Minister Narendra Modi and his Israeli counterpart Benjamin Netanyahu held extensive talks on Monday to strengthen ties in the strategic areas of Defence and counter-terrorism. A total of nine agreements were signed in the areas of film co-production, cyber security, and oil and gas between the two countries on Monday.

On the Spike missile, the two sides discussed the possibility of procuring the weapon for the Indian Army under a new format. While the contours of the procurement of the missile, including the quantity, transfer of technology and other aspects, have been left for the officials to discuss, there was a general agreement between the two sides to take forward the issue once again after the Defence Ministry had cancelled the deal.

The Defence Ministry had earlier desired to buy 321 launchers and 8,356 Spike missiles from Rafael Advanced Defence System for the Indian Army. However, the idea was shelved after the Defence Research and Development Organisation announced it can make such missiles at home.

It is learnt that India may still go for the deal under Government-to-Government purchase. Under this, number of Spike Missiles might be lesser but India may get the advantage of transfer of technology to help indigenous production of the missile. "PM Modi hoped that more Defence companies will come forward with transfer of technology," Vijay Gokhale, Secretary, Economic Relations, said after the talks.

"In Defence, I have invited Israeli companies to take advantage of the liberalised FDI regime to make more in India with our companies. Second, we are venturing into less explored areas of cooperation, such as oil and gas, cyber security, films, and start-ups. And third, we are committed to facilitating the flow of people and ideas between our geographies...We are working with Israel to make it easier for our people to work and visit each other's countries, including for longer work durations," Modi said, while summing up the talks, in a Press statement.

The joint statement too reflected the mood for collaboration and joint ventures in the Defence sector under the Make-in-India initiative.

The Defence Ministries of the two countries will be now holding discussions sometime this year to initiate active involvement of the public and private sectors, for viable, sustainable and long-term cooperation in the Defence industry.

Similarly, collaboration in the cyber-security field is expected to be intense between India and Israel with sharing of information and training of experts. Indian Ambassador to Israel Pawan Kapoor explained that this cooperation was so far between the private companies of the two countries, but now it has been expanded at the Government level.

In the oil and gas sector, the two sides will explore opportunities for joint projects, including collaboration in upstream sector activities. Two countries will hold the next meeting of the Joint Working Groups on Homeland and Public Security in February. The two PMs also affirmed their commitment to fight terrorism together.

“Recognising the grave threat that terrorism poses to peace and security, including from non-state actors, both PMs reiterated that there can be no justification for acts of terror on any grounds whatsoever and advocated strong measures against terrorists, terror organisations, those who sponsor, encourage or finance terrorism or provide sanctuary to terrorists and terror groups,” the joint statement said.

“We want our people to be safe and secure. We remember Mumbai (terror attack of 2008). We grind our teeth and we fight back,” Netanyahu said.

On the sensitive issue of Palestine, the two PMs discussed the developments pertaining to the Israeli-Palestinian Peace Process. “They reaffirmed support for an early resumption of peace talks between Israelis and Palestinians for arriving at a comprehensive negotiated solution on all outstanding issues, based on mutual recognition and effective security arrangements, for establishing a just and durable peace in the region,” the joint statement said.

Netanyahu offered Israel's cutting edge technology for the improvement of agriculture and water conservation. On improving trade and investment, the two sides agreed for an early conclusion of negotiations for Free-Trade Agreement, and a Bilateral Investment Treaty.

Netanyahu is on a six-day reciprocatory visit to India to mark the culmination of commemorative year to celebrate 25 years of diplomatic relations between India and Israel. “As our first honoured guest in 2018, your visit marks a special beginning to our New Year calendar,” Modi said while welcoming the Israeli PM and his wife. Responding to Modi's hospitality and warmth, Netanyahu quipped, “PM Modi anytime if you want to do yoga, it will be big stretch, but I will be there.”



*Tue, 16 Jan, 2018*

## **Beyond The News: How India-Israel ‘marriage made in heaven’ is shaped by geopolitics**

*By Jyoti Malhotra*

As Israel’s Prime Minister Benjamin Netanyahu visits India, just months after PM Modi’s July 2017 visit to Israel, ties have never seemed warmer. But clear pragmatic factors are balancing the passion.

Prime Ministers Narendra Modi and Benjamin Netanyahu may be setting the Twitter-sphere on fire with their one-liners about the India-Israel “marriage made in heaven” and materialising on earth, but geopolitics sometimes has an uncomfortable way of intruding into the present.

Forty-eight hours before the Prime Minister broke protocol and welcomed Netanyahu with open arms at Delhi's Palam Airport, Union Road Transport and Highways minister Nitin Gadkari was overseeing a \$600 million pact with Iran's Roads and Urban Development minister Abbas Ahmad Akhoundi, one which will enable Tehran to buy locomotives and freight cars from India.

Gadkari was open about India's ambitions in the latest chapter of the Great Game rivalry that is unfolding in inner Asia. "The new trains will also be used in the Chabahar-Zahedan railroad to accelerate development of the Chabahar Port in line with India's goal to connect to Central Asia and ultimately Europe through this Iranian port," Gadkari said.

The BJP leader's unspoken message was clear. Iran is integral to Delhi's determination to expand its influence — not only in Afghanistan, where a third consignment of wheat moving through Chabahar reached that country last week, after Pakistan reiterated that it would not allow access to Indian goods through its territory — but also as an integral link in the North-South Corridor that India hopes to build as a counter to China's One Belt One Road (OBOR) Initiative.

Still, in Delhi, over the last couple of days, prime ministerial rhetoric about the India-Israel partnership has ruled the airwaves. "In Prime Minister Netanyahu," Modi said on Monday, "I have a counterpart who is equally committed to taking the India-Israel relationship to soaring new heights." Alongside, Netanyahu insisted that "Israel and India are living proof that democracy works," and that both countries "know the pain of terror. We fight back, we never give in."

But interestingly, Netanyahu's much-vaunted "marriage made in heaven" remark, describing the 26-year-old diplomatic relationship between India and Israel, is not even original. In March 2017, in Beijing, as he wooed Chinese President Xi Jinping, as well as the country's business community, seeking China's investment in Israel and a greater role in Middle Eastern affairs — despite Chinese Premier Li Keqiang saying Beijing hoped that both Israel and Palestine would abide by a "correct decision" to a two-state solution — Netanyahu soldiered on. "We are your perfect junior partner for that effort... I believe this is a marriage made in heaven," the Israeli PM told the Chinese.

Almost certainly, India's China hands — foreign secretary S Jaishankar and upcoming foreign secretary Vijay Gokhale, India's ambassador to China at the time of Netanyahu's visit — remember those remarks. So, as ties between Delhi and Beijing deteriorate, and India looks to other powers like the US to help bolster its own spine, the establishment is bound to balance the enthusiasm of its political class.

Whether or not Modi believes that the future lies in buying Israeli drones or cementing ties in defence — India is Israel's largest defence partner, with business estimated at two billion dollars, despite the recent cancellation of the 8000 Spike anti-tank missiles deal worth \$500 million — agriculture and Bollywood, Delhi's strategic constraints outside its diminishing Palestinian relationship will force it to backpedal the passion.

Some of that will be manifest in symbolic, but significant, gestures, such as India's recent vote against the USA at the United Nations deliberation on changing the capital of Israel from Tel Aviv to Jerusalem. It is important to remember that Modi is also going to Oman as well as the UAE on February 11 as a keynote speaker at the World Government Summit, and that the UAE has promised a \$75 billion fund to invest in India. Modi must know, with elections coming up 16 months from now, that it may not be politic to take chances with India's large diaspora in the Gulf and Arab world.

It may in fact be argued that Modi is simply taking the rising arc of the bilateral relationship — announced by then-foreign secretary J N Dixit, 26 years ago, on January 29, 1992, just as Congress leader and Prime Minister P V Narasimha Rao was embarking on a plane to attend the UN General Assembly — to its logical conclusion. The demolition of the Babri Masjid was still 11 months away when Rao and Dixit went public that morning with their announcement of starting diplomatic ties between India and Israel. Intense Arab criticism of India following the demolition of the mosque was also still in the future. It was thus clear even at the time that India's decision, in the wake of the disintegration of the Soviet Union, India's best friend, was aimed at expanding its global options.

According to M K Bhadrakumar, strategic affairs analyst and a close confidante of Dixit, “At the time, Narasimha Rao was running a minority government and dealing with several political crises at home. Abroad as well, the world was in flux... It was clear that Rao and Dixit needed greater wiggle room. To announce diplomatic relations with Israel was a leap of faith that had become necessary.” Today, Bhadrakumar adds, “PM Modi is changing the complexity of that pragmatic, transactional relationship and giving it the colouring of a strategic relationship.”

There is already talk of India going back on its own decision to cancel the \$500 million anti-tank missile deal under the aegis of ‘Make in India’. Certainly, Israel’s national security advisor Meir Ben-Shabbat has met his Indian counterpart Ajit Doval in this regard. And despite commentary in the Israeli press that Netanyahu is using his India visit to distract from personal scandal and political churning at home, Prime Minister Modi’s ardour in showing Netanyahu around Ahmedabad remains undimmed.

Certainly, when all the heavy-lifting and mutual compliment-paying is said and done, the banter between the two leaders will go down as being illustrative of their comfort with each other. Netanyahu is reported to have told Modi, soon after their speeches on Monday morning, “My friend, any time you want to do a yoga class with me, it’s a big stretch, but I’ll be there.”



*Tue, 16 Jan, 2018*

## **MoD hikes salary of re-employed officers**

*By Vijay Mohan*

The Ministry of Defence has issued orders to revise the salary of superannuated officers who have subsequently opted for re-employment in the armed forces, consequent to the implementation of the Seventh Pay Commission.

Re-employed officers in the defence services after retirement have been excluded from the purview of the respective Army, Navy and Air Force Officers Pay Rules 2017 that had re-fixed the salaries of regular officers last year.

The pay revision for re-employed officers will cover all such officers who were under re-employment on or after January 1, 2016, the date of effect for the Seventh Pay Commission, the ministry’s orders issued earlier this week state. As a welfare measure and also to mitigate shortage of officers, the defence services offer re-employment to retired officers up to the rank of Brigadier for a maximum four years.

The existing ceiling of Rs 80,000 per month for drawing pay plus gross pension on re-employment has been enhanced to Rs 2.25 lakh per month, the maximum basic pay prescribed for officers under Level 17 of the new pay matrix. The ‘ignorable part’ of pension, which is the amount that is not considered for deduction while calculating the pay for re-employment, has been enhanced from Rs 4,000 to Rs 15,000.

The initial pay of a re-employed officer will be fixed in accordance with Rule 7 of the Army, Navy and Air Force Officers Pay Rules, which deals with the methodology of pay fixation of regular officers in the revised pay matrix as per their rank and seniority and the recommendations of the pay commission thereof.

Revised pension under the Seventh Pay Commission, as applicable to the officer on retirement, excluding the ‘ignorable part’ of the pension, shall be deducted from the pay on re-employment in live with the general policy of the government, though they will be entitled to dearness allowance and military service pay with effect from January 2016. In addition to the revised pay, re-employed officers will continue to draw retirement benefits that they were permitted to get under pay commission recommendations.

## Indo-US joint military exercise ‘Vajra Prahar’ to be held in Seattle

*The exercise will mainly focus on special operations in urban areas.*

IN line with the increasing military cooperation between India and the US, yet another edition of the joint military exercise ‘Vajra Prahar’ will be held at Joint Base Lewis-McChord (JBLM) in Seattle, in which a 45-member Special Forces team from Indian Army’s Southern Command will train alongside US soldiers in the third week of January.

‘Vajra Prahar’ is a Indo-US Special Forces joint training exercise conducted alternately in India and the US. Though the exercise began in 2010, there was a gap of three years between 2012 and 2015. The last edition was held in Jodhpur in March 2017. This edition’s Indian Army team is from the Pune-headquartered Southern Command.

“The fact that a team from the Special Forces is participating takes the effort to a different level, as these forces have very special skill sets and training methods. This sends a very strong message about Indo-US relations to other countries,” an Army officer said.

“The aim of the exercise is to promote military relations between the two countries by enhancing interoperability and mutual exchange of tactics between Special Forces. The objectives of the joint training is to share the best practices between the two armies and to develop joint strategies by sharing expertise of conducting operations in a counter-insurgency and counter-terrorism environment, while capitalising on the rich repository of experiences of each other armies,” said another officer.

The exercise will mainly focus on special operations in urban areas.



A demonstration organised by Armoured Corps Centre and School and Mechanised Infantry Regimental Centre in Ahmednagar, on Monday. Sandip Daundkar

## Army ready for stronger action: Bipin Rawat

*He said the Army was working closely with other security forces to maintain pressure on terrorists.*

New Delhi: In a blunt message to Pakistan on Monday, Army Chief General Bipin Rawat said the Army was ready to escalate its offensive against Pak-backed terror groups if forced to do so even as he asserted that no anti-India activities will be allowed to succeed in Jammu and Kashmir.

The Army Chief, in his address to Army personnel on the occasion of Army Day, said the Pakistani Army has been actively trying to aid terrorists sneak into India along Line of Control (LoC) in J&K. "We will not let these anti-national elements to succeed at any cost. If we are forced, then we may escalate our military action and carry out (the) 'other action'," he said adding that the Army is using its might to "teach them a lesson."

"Terrorists and their handlers are creating various challenges within the country by adopting new tactics," he said.

"Targeting of Amarnath pilgrims, attacking policemen and Army personnel from Jammu and Kashmir, including murder of Lt Ummer Fayaz, were attempts to attack national unity and divide the society," Gen. Rawat added.

He said the Army was working closely with other security forces to maintain pressure on terrorists.

For more than a year, in a major shift in the counter insurgency tactics to toughen the rules of engagement in Kashmir, the Indian Army has operated in a "seek and engage" mode and brought back the Cordon and Search Operations (CASO) operations that were abandoned in 2002 after a public hue and cry over rights violations.

The change in tactics was necessitated because militants were believed to be hiding among the civilian populace and using them as human shields while many civilians have been found to be harbouring militants.

At the same time, the Army has been forcefully responding to all ceasefire violations by Pakistani troops along the Line of Control with a tit-for-tat approach.



## Army kills 7 Pak soldiers in raid across border

*By Amir Karim Tantray*

The Army struck hard as it killed seven Pakistani soldiers and injured four others in the Mendhar sector of Poonch district today.

The action is being seen as revenge for the death of Lance Naik Yogesh Bhadane, who was killed in a ceasefire violation in the Sunderbani sector of Rajouri district on January 13.

Sources said Indian soldiers crossed the Line of Control (LoC) and killed seven Pakistani soldiers. "Four other Pakistani soldiers were injured in the action with no injuries reported on the Indian side," said a source.

"Our operation was in retaliation to Pakistani provocation of January 13 in which Lance Naik Yogesh Bhadane was killed," he added. Pakistan has confirmed the death of its four soldiers and issued a statement

reading: “The troops were busy in line communication maintenance along the LoC in Jandrot-Kotli sector when they were fired upon and hit with heavy mortars by Indian forces.”

This is the first major strike by the Indian Army this year against the Pakistani troops along the LoC. In the past also, the Army has been retaliating strongly whenever Pakistan violates the ceasefire agreement and kills Indian soldiers. Today’s action came a day after the Army Chief called for ramping up the heat on Pakistan to cut the flow of cross-border terror activities.

Pakistan’s Inter-Service Public Relations had claimed that three Indian soldiers were killed and a “few injured” in an exchange of fire, but the claim was rejected by the Army here. “We haven’t lost any soldier in the action,” said an Army officer. The action was undertaken on a day when the Indian Army is celebrating Army Day across the country. Meanwhile, Pakistan today summoned Indian Deputy High Commissioner JP Singh to protest the deaths of its soldiers.



*Tue, 16 Jan, 2018*

## **Army General Bipin Rawat’s remarks on Doklam ‘unconstructive’: China**

"China and India are important neighbours... The two countries should enhance strategic communication and eliminate strategic doubt and conduct strategic cooperation," he said.

Hitting out at Army chief General Bipin Rawat for calling Doklam a disputed territory, China on Monday stated his “unconstructive” comments were not helpful for maintaining peace at the borders. Responding to Gen Rawat’s comments, Foreign Ministry spokesman Lu Kang said his comments were against the consensus reached between Prime Minister Narendra Modi and President Xi Jinping at the BRICS summit last September to revive the ties and preserve peace on the border.

On Saturday, Gen Rawat suggested that India needs to shift focus from its border with Pakistan to that of China and spoke of pressure being exerted by Beijing along the Line of Actual Control (LAC).

“Last year, India-China relations have witnessed some twists and turns,” Lu said and referred to Modi-Xi consensus and the high-level talks since December to improve the ties. “The dialogue and consultation have shown sound momentum of improvement and development,” he said.

“Under such background, the unconstructive remarks by the Indian senior official (Gen Rawat) not only go against the consensus reached by the two heads of state but also do not conform to the efforts made by the two sides to improve and develop bilateral relations,” Lu said, adding that the remarks cannot help to preserve the tranquillity and peace at the border areas.

When asked which of Gen Rawat’s comments that China is taking exception to, Lu pointed the Indian Army chief’s remarks on Doklam wherein he said it is a disputed territory between Bhutan and China. “I have made myself clear, if the senior official according to the report referred to the Donglang – I think you are clear about our position – Donglang belongs to China and has always been in the effective jurisdiction of China,” Lu asserted.

He also reiterated China’s stand that the Sikkim section of the India-China boundary has been delimited by the 1890 “historical convention” between the then British government and China, which Beijing claims settled the boundary in that particular section spanning to about 200 kms. One of the primary demand of China is the settlement of the boundary in that particular section based on the treaty and that the two sides negotiated for a settlement for the rest of the LAC which spans about 3,488 kms. Both sides have held a total of 20 rounds of border talks to resolve the issue.

“Donglang is China’s territory. China will continue to exercise its sovereignty rights in accordance with the historical convention and steadfastly uphold its territorial sovereignty,” Lu said.

On the other hand, Bhutan had lodged a diplomatic protest with China when Chinese troops began building a road in the Doklam area in June. Indian troops had raised objection to the construction of the road, which led to a 73-day standoff.

Subsequently, the standoff was resolved after Chinese troops halted road building and India withdrew its troops from the area.

In an apparent reference to Gen Rawat’s comment that Doklam is a disputed territory between Bhutan and China, Lu said, “the remarks of the Army chief mentioned by you once again showed that the illegal trespass of the Indian border troops is quite clear-cut in nature. Donglang belongs to China.”

“We require the Indian military to learn lessons and abide by the historical convention and earnestly uphold the peace and tranquillity for the border areas and create a sound atmosphere for the political development of bilateral relations,” he said.

Describing both China and India as important neighbours, Rawat said both nations are at the critical stage of the national development and rejuvenation and, therefore, they should enhance strategic communication and eliminate strategic doubt and conduct strategic cooperation.

“We urge the Indian side to follow through on the important consensus of the two leaders to do more things to preserve peace and stability of the border area and refrain from doing things which may complicate the situation, constructively handle the relevant affairs and promote steady development of bilateral relations.

“This serves the common interest of the whole region and the interest of the Indian side,” Lu added.



*Tue, 16 Jan, 2018*

## **China N-sub in disputed isles: Japan**

Japan said on Monday that a Chinese naval submarine spotted in waters off flashpoint islands in the East China Sea was one of its new type of nuclear-powered attack vessels.

Earlier, China said three of its “Coast Guard vessels conducted a patrol in waters off the Diaoyu Islands,” Beijing’s name for the contested isles called Senkaku in Japan. Japanese Navy protested last Thursday after it spotted Jiangkai II class frigate and an unidentified submarine in disputed waters.



*Tue, 16 Jan, 2018*

## **When a Hawaii-like ‘missile mistake’ may trigger a real war**

*The text was apparently sent by mistake when an employee at Hawaii’s Emergency Management Agency pushed a wrong button during a shift handover.*

### **What just happened in Hawaii?**

Suddenly, at 8:07 AM on Saturday, residents received a text message on their mobile phones, stating, “Ballistic missile threat inbound to Hawaii. Seek immediate shelter. This is not a drill.” Hawaii has text and email warnings and recently re-introduced Cold War-era sirens too.

## **But, given that there was no missile attack, why was this message sent?**

The text was apparently sent by mistake when an employee at Hawaii's Emergency Management Agency pushed a wrong button during a shift handover. But the message was sent despite a prompt onscreen which requested confirmation. The incorrect alert was corrected by email 18 minutes later — but, for the next 38 minutes, there was no follow-up phone text correction.

## **What was the public response?**

Many reported trauma as they confronted what they felt was the end of their lives. Some took shelter in basements, even hid under manholes, while a few stoics decided they'd rather die looking at Hawaii's famed sea beaches. With residents trying to call or text loved ones, telephone services jammed briefly.

## **What was the government response?**

Several apologies followed; the Governor of Hawaii, David Ige, said he was extremely upset about the mistake. A federal investigation has begun. Officials have said a 'cancellation template' would be created for corrections to be sent faster to mobile phones. In addition, two people would sign off on such an alert. Politically, opponents of US President Donald Trump held him responsible for the trauma. Trump supporters shot back that Hawaii was run by a Democrat government.

## **Why is this such a big deal anyway?**

Historically, given that it was bombed by the Japanese at Pearl Harbor on December 7, 1941 — making the USA enter World War II — Hawaii feels impending attacks sharply. Hawaii lies 4,661 miles away from North Korea. Estimates say Kim Jong-un's missile collection includes the 'Hwasong 14', with a strike range of 6,000 miles. A North Korean missile could strike Hawaii in 20 minutes. The Pacific Command would take five minutes to issue alerts; residents would get 15 minutes, like on Saturday, for shelter.

Nuclear experts are also underlining that a mistaken message could start an unintended war. Some cite a Korean passenger airline which, in 1983, en route to Seoul, flew into Soviet airspace. Mistaking it for a US spy vessel, Soviet officials shot down the Korean flight, killing all 269 people on board. That tragedy could be repeated for nuclear deterrence involves 'first-strike stability' — firing first to disarm your opponent. A misunderstanding may lead the USA into a strike. And the 38-minute lag, between the message and its correction, may have pushed Pyongyang into action, fearing the 'warning' was a cover for an American attack.



*Tue, 16 Jan, 2018*

# **Causes of False Missile Alerts: The Sun, the Moon and a 46-Cent Chip**

*By Matt Stevens and Christopher Mele*

As strange, serious and scary as the erroneous emergency notification Saturday about a missile attack against Hawaii may have been, it was far from the first such false alarm the country has faced.

Every decade since the dawn of the nuclear age has seen its share of close calls, experts said. During the Cold War, the government routinely dealt with hundreds of anomalies that could have led to a nuclear launch.

But it is rare for a false alert about an impending missile attack to actually reach the public, said Garrett M. Graff, who has written about the extensive preparations made to allow the government to continue in the event of a nuclear or terrorist attack. Mr. Graff, the author of "Raven Rock: The Story of the U.S. Government's Secret Plan to Save Itself — While the Rest of Us Die," said in a phone interview that the alert on Saturday, coming at a time of heightened tensions with North Korea, was "pretty unprecedented."

“This was the precise scenario that is very top of mind for U.S. officials and civilians across the country,” he said.

As emotional and disruptive as the false alert was, it was not the most dangerous episode of its kind because it did not reach the military’s chain of command or decision-makers in government, he said.

Here is a look at a few cases when it did:

### **Oct. 5, 1960: The moon tricks a radar**

A false alarm came when an early warning radar in Greenland reported to North American Air Defense Command headquarters that it had detected dozens of inbound Soviet missiles.

The report thrust Norad to its maximum alert level, according to the Union of Concerned Scientists, but officials later determined that the radar had been fooled by the “moonrise over Norway.”

### **Nov. 9, 1979: A ‘war game’ tape causes six minutes of worry**

Computers at Norad indicated that the United States was under attack by missiles launched by a Soviet submarine. Ten jet interceptors from three bases in the United States and Canada were scrambled, and missile bases went on “low-level alert,” The New York Times reported.

When satellite data had not confirmed an attack after six minutes, officials decided that no immediate action was necessary, according to the Union of Concerned Scientists and The Times.

Investigations later discovered that a “war game” tape had been loaded into the Norad computer as part of a test. A technician mistakenly inserted it into the computer.

“The tape simulated a missile attack on North America, and by mechanical error, that information was transmitted into the highly sensitive early warning system, which read it as a ‘live launch’ and thus initiated a sequence of events to determine whether the United States was actually under attack,” The Times reported.

### **June 3, 1980: 2,200 missiles that never came**

Less than a year later, computers once again issued a warning about a nuclear attack.

Bomber and tanker crews were ordered to their stations, the National Emergency Airborne Command Post taxied into position and the Federal Aviation Administration prepared to order every airborne commercial airliner to land, according to the Union of Concerned Scientists and The New Yorker.

President Jimmy Carter’s national security adviser, Zbigniew Brzezinski, got a call informing him that 2,200 missiles were heading toward the United States.

Then Mr. Brzezinski got another call: It had been a false alarm. An investigation later found that a defective computer chip — costing 46 cents — was to blame.

### **Sept. 26, 1983: Similar problems on the other side**

Stanislav Petrov, a 44-year-old lieutenant colonel in the Soviet Air Defense Forces, was the duty officer at a secret command center outside Moscow when the alarms went off.

Computers warned that five missiles had been launched from an American base.

“For 15 seconds, we were in a state of shock,” he later recalled in an interview with The Washington Post.

Colonel Petrov, according to his obituary in The Times, was a pivotal cog in the decision-making chain. His superiors at the warning-system headquarters reported to the general staff of the military, which would consult with the Soviet leader, Yuri V. Andropov, on whether to launch a retaliatory attack.

Electronic maps and screens were flashing as he tried to absorb streams of information. His training and intuition told him a first strike by the United States would come in an overwhelming onslaught, not “only five missiles,” he told The Post.

After five nerve-racking minutes, he decided the reports were probably a false alarm.

And they were.

The satellite had mistaken the sun's reflection off the tops of clouds for a missile launch.

### **Aug. 11, 1984: A joke by the president prompts an alert**

Preparing for his regular Saturday afternoon radio broadcast, President Ronald Reagan quipped in a live microphone that he had "signed legislation that will outlaw Russia forever" and that "we begin bombing in five minutes."

Months later, The Times reported that two days after President Reagan's joke, a low-level Soviet military official ordered an alert of troops in the Far East.

The alert was said to have been canceled about 30 minutes later by a higher authority.

American intelligence officials contended the alert was "a nonevent." *The New York Times*

## **THE ASIAN AGE**

*Tue, 16 Jan, 2018*

### **Secured unhackable computer network getting close to reality**

*It tests the security of the quantum devices prior to engaging in communications with the whole network.*

Scientists have developed a method of securely communicating between multiple quantum devices, bringing a large-scale, unhackable network closer to reality. To date, communicating via quantum networks has only been possible between two devices of known provenance that have been built securely.

"We're in a technology arms race of sorts. When quantum computers are fully developed, they will break much of today's encryption whose security is only based on mathematical assumptions," said Ciaran Lee, from University College London in the UK.

"To pre-emptively solve this, we are working on new ways of communicating through large networks that don't rely on assumptions, but instead use the quantum laws of physics to ensure security, which would need to be broken to hack the encryption," said Lee, lead author of the study published in the journal *Physical Review Letters*.

"Our approach works for a general network where you don't need to trust the manufacturer of the device or network for secrecy to be guaranteed," said Matty Hoban, from University of Oxford in the UK.

"Our method works by using the network's structure to limit what an eavesdropper can learn," Hoban said. The approach bridges the gap between the theoretical promise of perfect security guaranteed by the laws of quantum physics and the practical implementation of such security in large networks.

It tests the security of the quantum devices prior to engaging in communications with the whole network. It does this by checking if the correlations between devices in the network are intrinsically quantum and cannot have been created by another means.

The correlations are used to establish secret keys which can be used to encrypt any desired communication. Security is ensured by the unique property that quantum correlations can only be shared between the devices that created them, ensuring no hacker can learn the key.

"Our work can be thought of as creating the software that will run on hardware currently being built to realise the potential of quantum communications," Lee said.

## New technology to map wiring of brain emerges

*Scientists have created a new technique to map the network of connections within the brain, an advance that help scientists understand how the organ works.*

The human brain is composed of billions of neurons wired together in intricate webs and communicating through electrical pulses and chemical signals. Although neuroscientists have made progress in understanding the brain's many functions - such as regulating sleep, storing memories, and making decisions - visualising the entire "wiring diagram" of neural connections throughout a brain is not possible using currently available methods. Using *Drosophila* fruit flies, researchers at California Institute of Technology (Caltech) in the US have developed a method to easily see neural connections and the flow of communications in real time within living flies.

The research, published in the journal *eLife*, is a step forward toward creating a map of the entire fly brain's many connections, which could help scientists understand the neural circuits within human brains as well. "If an electrical engineer wants to understand how a computer works, the first thing that he or she would want to figure out is how the different components are wired to each other," said Carlos Lois, research professor at Caltech. "Similarly, we must know how neurons are wired together in order to understand how brains work," he said.

When two neurons connect, they link together with a structure called a synapse, a space through which one neuron can send and receive electrical and chemical signals to or from another neuron. Even if multiple neurons are very close together, they need synapses to truly communicate. Researchers developed a method for tracing the flow of information across synapses, called TRACT (Transneuronal Control of Transcription). Using genetically engineered *Drosophila* fruit flies, TRACT allows researchers to observe which neurons are "talking" and which neurons are "listening" by prompting the connected neurons to produce glowing proteins.

With TRACT, when a neuron "talks" - or transmits a chemical or electrical signal across a synapse - it will also produce and send along a fluorescent protein that lights up both the talking neuron and its synapses with a particular colour. Any neurons "listening" to the signal receive this protein, which binds to a so-called receptor molecule - genetically built-in by the researchers - on the receiving neuron's surface.

The binding of the signal protein activates the receptor and triggers the neuron it is attached to in order to produce its own, differently coloured fluorescent protein. In this way, communication between neurons becomes visible. Using a type of microscope that can peer through a thin window installed on the fly's head, the researchers can observe the colourful glow of neural connections in real time as the fly grows, moves, and experiences changes in its environment.

## E-firecrackers in the works to combat pollution

New Delhi: The festival of lights may soon go fully electronic.

Scientists from top government-backed research institutes are developing smokeless, eco-friendly "e-crackers" that will simulate the lights, colours and sounds emitted by traditional firecrackers but neither add to pollution, nor be a fire hazard.

India's premier Council of Scientific and Industrial Research (CSIR) laboratories under the Union science and technology ministry have been asked to create a substitute for firecrackers in a bid to check pollution, which spikes every year in several cities across north India, including Delhi, right after Diwali.

"The electronic devices will produce cracking and bursting sounds and lights but there won't be any smoke because there won't be any chemical combustion," said Santanu Chaudhury director of CSIR's Central Electronics Engineering Research Institute (CEERI) located in Pilani.

The scientists say a prototype will be ready in six months, and the e-crackers may even be ready for use before Diwali this year.

"The idea was discussed in a meeting held by the Union science and technology minister Harsh Vardhan on January 5. The minister urged scientists to develop electronic firecrackers that will help reduce pollution after Diwali," said D Saha, head of the air quality laboratory at pollution watchdog CPCB.

The CPCB (Central Pollution Control Board) is India's top pollution watchdog.

E-firecrackers have small pods connected to each other with wires and twinkling LEDs . When turned on, they produce sounds and lights similar to the conventional firecrackers. Some countries, including China, have already come up with a few non-polluting firecracker variants.

These Chinese crackers were sold in Indian markets this Diwali, but India is trying to come up with its own, more affordable, variants .

"This is the first time Indian scientists are trying to develop such e-crackers ," said Chaudhury.

While CEERI is developing e-fireworks, researchers at National Environmental Engineering Research Institute (NEERI) in Nagpur are working on a pollution-free version of traditional firecrackers.

Firecrackers are highly polluting because manufacturers use a range of compounds that use metals such as barium, antimony, copper and lithium, which emit toxic fumes.

Delhi suffered its worst smog in 17 years after firecrackers and fireworks worth crores of rupees were burnt on Diwali in 2016. In 2017, the Supreme Court banned the sale of crackers in the National Capital Region around Diwali, but there was spike in pollution levels again last year, primarily due to crackers procured from outside the region.

"Our research will comprise of two phases. In the first phase, we will work on how to cut down the amount of pollutants which are emitted from firecrackers. Then, we will try to come up with pollution-free crackers ," said Rakesh Kumar, director of CSIR-NEERI.

Scientists say they are also testing chemicals that could be used in manufacturing smokeless firecrackers, including Azide-based compounds that produce the harmless nitrogen gas on combustion.