

# ISRO, scientists decode flickering X-ray signals from black hole

NEW DELHI, Aug 18 (IANS)

A MULTI-INSTITUTIONAL team of scientists from the Indian Space Research Organisation (ISRO), and the Indian Institute of Technology (IIT) Guwahati has uncovered a mysterious X-ray signal pattern emitted from a distant black hole located nearly 28,000 light-years from Earth.

The team, including those from Haifa University, Israel, observed the X-ray brightness from the black hole GRS 1915+105, using data from India's space observatory AstroSat. The team observed that the signals alternated between bright and dim phases, each lasting several hundred seconds. The discovery sheds



light on how black holes grow and shape their cosmic neighbourhoods. "Our study provides direct evidence for the origin of X-ray flickering. We have found that this flickering is linked to modulations in the corona surrounding the black hole," said Dr. Anuj Nandi, U. R. Rao

Satellite Centre at ISRO.

"We have found the first evidence of rapid X-ray flickering, repeating nearly 70 times per second (about 70 Hz), occurring during the high-brightness phases of the source. Interestingly, these fast flickers disappear during the low-

brightness phases. This new understanding was made possible by AstroSat's powerful, unique observational capabilities," added Prof. Santabrata Das, Department of Physics, IIT Guwahati.

The team observed that the X-ray brightness from the targeted black hole alternated between two distinct phases: one bright and one dim.

During the brighter phases, when the flickers are strongest, the corona becomes more compact and significantly hotter. In contrast, during the dimmer phases, it expands and cools, causing the flickers to disappear. This clear correlation points to the compact, oscillating corona as the likely source of these fast signals.

# Rlys commissions India's 1st removable solar panel system between tracks



Banaras Locomotive Works, Varanasi commissioned India's first 70m removable solar panel system, 28 panels, 15KWp, between railway tracks.

(PTI)

NEW DELHI, Aug 18 (ANI)

THE Ministry of Railways on Monday announced a milestone in green energy innovation, with Banaras Locomotive Works (BLW), Varanasi, commissioning India's first removable solar panel system installed between railway tracks.

In a post on X, the Ministry said, "Indian Railways marks a historic first! Banaras Locomotive Works, Varanasi, commissioned India's first 70m removable solar

panel system (28 panels, 15KWp) between railway tracks--a step towards green and sustainable rail transport."

Earlier on August 10, Indian Railways flagged off the first industrial salt-loaded rake from Sanosara (Bhuj-Naliya section) to Dahej, Railway Minister Ashwini Vaishnaw said on Sunday.

Sharing an X post, he said that this industrial salt-loaded rake will open "new avenues" for the region's salt industry.

# India, China ties must be guided by 3 mutuals: EAM Jaishankar to Wang

NEW DELHI, Aug 18 (PTI)

**INDIA** and China should adopt a "candid and constructive" approach in moving ahead in the ties that must be based on mutual respect, mutual sensitivity and mutual interest, External Affairs Minister S Jaishankar conveyed this to his Chinese counterpart Wang Yi on Monday.

In his opening remarks at a meeting with Wang, the External Affairs Minister



External Affairs Minister S Jaishankar in a meeting with Chinese Foreign Minister Wang Yi in New Delhi on Monday. (ANI)

pitched for taking forward the de-escalation process in the border areas along the Line of Actual Control (LAC) in eastern Ladakh that witnessed over a four-year face-off between the militaries of the two nations.

Jaishankar held wide-ranging talks with the Chinese Foreign Minister shortly after he landed in Delhi on a two-day visit that came days ahead of Prime Minister Narendra

(Contd on page 5)

# Zelenskyy, Trump hope for ~~trilateral~~ talks with Putin

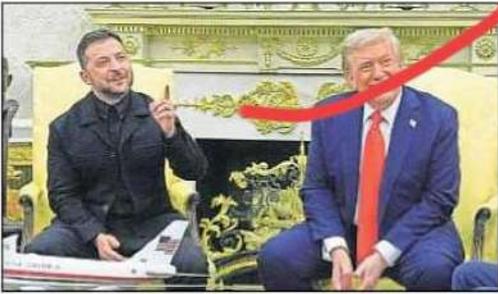
WASHINGTON, Aug 18 (AP)

**PRESIDENT** Volodymyr Zelenskyy and President Donald Trump expressed hope that Monday's critical talks with Ukrainian and European leaders at the White House could lead to trilateral talks with Russian President Vladimir Putin to bring an end to Russia's war on Ukraine.

Monday's hastily assembled meeting comes after Trump met on Friday with Russian President Vladimir Putin and has said that the onus is now on Zelenskyy to agree to concessions that he said could end the war.

"If everything works out today, we'll have a trilateral," Trump said, referring to possible trilateral talks among Zelenskyy, Putin and Trump. "We're going to work with Russia, we're going to work with Ukraine."

"We are ready for trilateral as



President said," Zelenskyy said. Zelenskyy had brought with him an extraordinary cadre of European leaders including NATO Secretary-General Mark Rutte, European Commission President Ursula von der Leyen, British Prime Minister Keir Starmer, French President Emmanuel Macron, German

Chancellor Friedrich Merz, Italian Premier Giorgia Meloni and Finnish President Alexander Stubb to show US President Donald Trump a united front against Russia.

The US President also said he would back European security guarantees for Ukraine.

(Contd on page 5)

## Putin dials PM Modi; briefs him on meet with Trump in Alaska

NEW DELHI, Aug 18 (PTI)

**RUSSIAN** President Vladimir Putin on Monday dialled Prime Minister Narendra Modi and apprised him of the summit he held with US President Donald Trump in Alaska, and discussed the prospects of a long-term solution to the conflict in Ukraine.

In the phone conversation, their second in the last 10 days, Modi conveyed to President Putin India's consistent position for a peaceful resolution of the Ukraine conflict and that it supports all efforts in this

regard. Trump and Putin met in Alaska for nearly three hours on Friday but the much-anticipated summit ended without a ceasefire deal.

"Thank my friend, President Putin, for his phone call and for sharing insights on his recent meeting with President Trump in Alaska," the Prime Minister said in a social media post.

"India has consistently called for a peaceful resolution of the Ukraine conflict and supports all efforts in this regard. I look forward to our continued exchanges in the days to come," he said.

Modi and Putin held the conversation hours before President Trump holds a crucial meeting with Ukrainian President Volodymyr Zelenskyy and several key European leaders in the White House.

It also came against the backdrop of strains in New Delhi's ties with Washington following President Trump slapping an additional 25 per cent tariff on India for its continued purchase of Russian crude oil.

The Prime Minister's Office (PMO) said Putin shared his assessment of his meeting with President Trump.