India Commits 7 Million Euros to Italy's Elettra 2.0 Synchrotron Upgrade

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15 November 2026: India has committed over 7 million euros over five years from 2026-27 to the Elettra 2.0 synchrotron project at Trieste, Italy. The announcement came during Science and Technology Minister Dr Jitendra Singh's visit to the Elettra facility on 13 November. India is the second-largest user of Elettra's beamlines, with around 1,100 Indian proposals so far.

Elettra 2.0 and India's role

Funding: Over 7 million euros across five years starting 2026-27; earlier, DST had contributed about Rs 22 crore.

Upgrade: The Elettra 2.0 upgrade will replace the XRD2 and Xpress beamlines with micro-XRD and Xpress Superbend - sharper, faster structural analysis.

Usage: India is the facility's second-largest user; 50-60 Indian scientists use it every year, and Indian researchers have submitted about 1,100 proposals. An EPOC (Elettra Programme of Collaboration) framework governs India's access.

What is a synchrotron?

Definition: A particle accelerator that produces extremely bright X-rays/UV/IR light used to probe the atomic structure of materials, proteins, archaeological artefacts and semiconductors.

India's own: Indus-1 and Indus-2 at the Raja Ramanna Centre for Advanced Technology (RRCAT), Indore.

Why it matters: Drug design, battery materials, heritage science and nanotechnology all depend on synchrotron beamlines; access to a top global facility multiplies Indian research capacity.

Quiz: Test your knowledge

Q1: The Elettra synchrotron facility, to whose 2.0 upgrade India has committed over 7 million euros, is located in:

(a) Geneva, Switzerland(b) Trieste, Italy(c) Grenoble, France(d) Hamburg, Germany

Answer and explanation: (b) Trieste, Italy. India is its second-largest user; the upgrade replaces the XRD2 and Xpress beamlines.

Q2: India's own synchrotron sources Indus-1 and Indus-2 are located at:

(a) BARC, Mumbai(b) RRCAT, Indore(c) IUAC, New Delhi(d) VECC, Kolkata

Answer and explanation: (b) Raja Ramanna Centre for Advanced Technology (RRCAT), Indore.

Frequently Asked Questions (FAQ)

In short: India will give over 7 million euros (2026-27 onwards, five years) to Italy's Elettra 2.0 synchrotron upgrade; announced during Dr Jitendra Singh's 13 November visit.

Question: What is the Elettra 2.0 project?

The upgrade of the Elettra synchrotron at Trieste, Italy - including new micro-XRD and Xpress Superbend beamlines replacing XRD2 and Xpress.

Question: How much has India committed to Elettra 2.0?

Over 7 million euros over five years from 2026-27; DST had earlier contributed about Rs 22 crore to the facility.

Question: What is a synchrotron used for?

It produces intense X-ray/UV/IR beams to study atomic-level structure - used in drug discovery, materials science, archaeology and semiconductor research.

Sources:

https://ianslive.in/india-commits-over-7-million-euros-to-elettra-20-project-in-italy-dr-jitendra-singh--20261114173243

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