

Facility for Antiproton and Ion Research

August 8, 2026 • vajiramandravi.com



VAJIRAM & RAVI
Institute for IAS Examination



Facility for Antiproton and Ion Research

Facility for Antiproton and Ion Research Latest News

Recently, the first of three units of beam catcher equipment, an integral part of the beam line, has reached the International Mega Science Project, Facility for Antiproton and Ion Research (FAIR) site.

About Facility for Antiproton and Ion Research

- It is a large **multipurpose particle accelerator** facility **being built at Darmstadt, Germany**.
- It is being developed and built in **cooperation with international partners**.
- India's contribution to this is funded jointly (50:50) by the **Department of Science and Technology (DST) and Department of Atomic Energy (DAE)** of Government of India.
- **Bose institute, Kolkata** has been **designated as the Indian shareholder** in the FAIR GmbH and the **nodal Indian Institution** for the **implementation of FAIR programme in India**.
- Bose institute is an **autonomous R&D Institute** under the Department of Science & Technology, Ministry of Science & Technology, Government of India,
- **India became** one of the **founding members** of this initiative **in 2010**.

Key Facts about Beam Catcher Equipment

- It is one of the key **elements of the super fragment separator** (super-FRS) that produces the **radioactive beams**.
- It is required to absorb the **remnants from the primary heavy-ion beams of energy 0.4-1.5 GeV/nucleon** when it hits the production **target for production of radioactive beams**.
- The absorbers of the beam are **housed in a vacuum chamber** which will remain under vacuum level of $\sim 10^{-7}$ mbar.
- The absorbers, made of **fine-grained graphite and hyper pure copper**, are subjected to motorized horizontal and vertical movements inside the chamber with a precision of mm scale.
- It was designed by the **Central Mechanical Engineering Research Institute (CSIR-CMERI)** in Durgapur under the supervision of Bose Institute.

Source: **PIB**

Source: <https://vajiramandravi.com/current-affairs/facility-for-antiproton-and-ion-research/>

© Vajiram & Ravi. For personal use only.