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Construction of the Facility for Antiproton and Ion Research (FAIR) in Germany and Indian contribution

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India is a founder-member country to participate in the construction of international multipurpose accelerator facility called the Facility for Antiproton and Ion Research (FAIR) at Darmstadt, Germany. Bose Institute, Kolkata, has been designated as the Indian shareholder of the FAIR GmbH and the nodal Indian Institution for managing the FAIR programme from India.

Indian participation in FAIR is twofold. Firstly, the advancement of knowledge in astrophysics, high-energy physics, nuclear physics, plasma physics and biophysics through the participation of Indian researchers, engineers and students of Institutes and Universities across the country in various experiments planned at FAIR. In addition to this, India is also contributing high-tech equipment as in-kind supplies to FAIR.

Our active involvement in overseeing the designing, manufacturing and supply of in-kind items e.g. power converters, vacuum chamber, beam stoppers, IT cable etc. for accelerator and coordinate participation of Indian scientists in the experiments including detector development, physics simulation, experimental data analysis at FAIR under the project entitled "India's participation in the construction of Facility for Antiproton and Ion Research (FAIR) at Darmstadt, Germany", turning this mission into reality.

India is participating in the NUSTAR and CBM experiments at FAIR and in particular Bose Institute is involved in the Compressed Baryonic Matter (CBM) experiment, to study and characterize the matter created in the relativistic nucleus-nucleus collisions at low energy and moderate to high baryon density.

In this talk the details of FAIR facility and the experiments at FAIR will be presented.

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