Future plans: ANURIB facility

ANURIB (Advanced National facility for Unstable and Rare Isotope Beams)
ANURIB will come up at VECC’s new campus at Rajarhat

Future expansion
ANURIB phase-1

Main Admin building, CNT & auditorium

LAB-1
Ancillary

RMC
BARC

East gate

Main gate

West gate

Water storage & pump

UGC-DAEF

Guest-house

NPCIL/AMD
Rajarhat Campus
10 km from Salt Lake campus
ANURIB (Advanced National facility for Unstable and Rare Isotope Beams)

at VECC's Rajarhat campus

**Phase-1**

- **SC electron LINAC**
  - 50 MeV, 100 kW
  - **Neutron Beam Facility**
  - **Low Energy Positron Facility**

- **50 MeV proton driver**
- **Target**
- **ECR Ion Source**
- **1+ Ion Source**
- **1+ RIB**
- **High resolution separator**
- **Stable isotope injection**
- **RFQ Cooler + MR-TOP**
  - **LEEF**
    - (Low Energy Expt. Facility)
  - **LASER SPECTROSCOPY**

**Material Science & biological studies with stable & RIBs**

**RFQ**

- **0.1 MeV/u**
- **1.0 MeV/u**
- **1.5 keV/u**

**LINAC**

- **50 MeV**
- **100 MeV**
- **100 MeV/u**

**Target**

- **n+ RIB**
- **High current Injector**

**Neutron Beam Facility**

- **Studies on drip line & near drip line nuclei**

**Low Energy Positron Facility**

- **Exotic fragments**
- **Stable Isotope Beam**
- **Secondary target**

**Next phase**

- **High power Target Module**
- **Write Technical Design Report**

**130 Cr. sanctioned in 2014 for**

- Complete Physics & Engg design
- AERB approval, Ph-1 building design, costing
- R&D on gap areas – e-Linac, SC-HI linac & High power Target Module

**EFNA**

- (Expt. Facility for Nuclear Astrophysics)

**EFNA**

- (Expt. Facility for Nuclear Astrophysics)

**LEEF**

- (Low Energy Expt. Facility)

**FCB**

- (Facility for Coulomb Barrier physics)

**TRAP**

**LASER SPECTROSCOPY**

**SC-HI LINAC**

- **7 MeV/u**
- **100 MeV/u**

**PFS**

- **Studies on drip line & near drip line nuclei**

**Accelerators**

**Experimental Facility**
REPORT OF THE INTERNATIONAL ADVISORY COMMITTEE

Advanced National Facility for Unstable & Rare Isotope Beams - ANURIB
April 2012

1. Executive Summary

The International Advisory Committee (IAC) recognizes that ANURIB will be unique in the world and will attract a national and international user community. The IAC is confident that ANURIB will secure a science community with intimate knowledge of nuclear physics and will provide India with world class facilities. The committee is fully confident that the electron linac baseline design will achieve the performance required by the ANURIB science program. The IAC is confident that, with the planned enhanced project management support commensurate with this large facility, the VECC management team is well qualified to bring ANURIB successfully online.

IAC
Dr. Nigel Lockyer          Dr. Bikash Sinha
Dr. Swapan Chattopadhyay  Dr. R.K. Bhandari
Dr. Yasushige Yano        Dr. Amit Roy
Dr Lia Merminga           Dr. S. Kailas
Dr. Andrew Hutton         Dr. Alok Chakrabarti
Dr. Mats Lindroos         Dr. A.K. Sinha
Joint Secretary R&D DAE