Central University of Haryana

Department of Physics and Astrophysics

Central University of Haryana, Mahendergarh 123031, India

- 140 km from National Capital: New Delhi
- 300 km from State Capital: Chandigarh

EIC Members (02):

1. Dr. Ramandeep Kumar (Faculty)
2. Dr. Meenu Thakur (Faculty)

Student Contribution:

One PhD student and two or more MSc students (for one semester dissertation work) may join

Possible Contribution to ePIC:

- DAQ, Simulations, Physics Analysis

Faculty Profile

Dr. Meenu Thakur (PhD: Panjab University; Postdoctorate: Florida State University)

Previous Work:
- Detector instrumentation for detection of low energy neutrons produced in inverse kinematics using RESONEUT setup at FSU, US
- Fission studies of super-heavy nuclei: mass gated neutron multiplicity measurements performed using India's largest neutron detector array (NAND) at IUAC, New Delhi
- Testing and installation of neutron scintillator detectors, gamma detectors (HPGe and BGO), position sensitive MWPC detectors and Silicon detectors

Skills (Hardware & Software):
- Tools: FORTRAN, C, C++, ROOT, MINUIT,
- Simulation Tools: PACE2, PACE4, MODEFF, FLUKA, GEANT4
- Target fabrication and characterization techniques
- Hands on experience with different detector systems and related electronics setup
- Experience of using NIM, CAMAC, and VME based DAQ systems

Dr. Ramandeep Kumar (PhD: Panjab University)

Previous Work:
- Fabrication and Characterization of Resistive Plate Chambers (for CMS detector)
- Study of Double Parton Scattering processes at the LHC

Skills:
- Tools: C++, Python, ROOT
- MC Event Generators: PYTHIA8, MADGRAPH, SHERPA, POWHEG, HERWIG++