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Status of India-based Neutrino Observatory Project

The India-based Neutrino Observatory (INO) collaboration is planning to setup an underground laboratory for carrying out front ranking experiments in the area of neutrino physics and related fields. A massive 50 kton magnetized Iron Calorimeter (ICAL) detector will be built to study atmospheric neutrinos and to make precision measurements of the parameters related to neutrino oscillations. Since ICAL will be able to distinguish neutrino events from anti-neutrino events by detecting the sign of the produced muon, it will also be possible to study the earth matter effect and thereby the neutrino mass hierarchy problem. This detector could also be used as a very long base line detector during the neutrino factory era. In this talk we plan to give a brief status report of the INO project and the ICAL detector.

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