Geosciences Division
Physical Research Laboratory

Tuesday Seminar

Status of 1MeV PRL- Accelerator Mass Spectrometer (AMS) for the Measurement of ^{14}C, ^{26}Al and ^{10}Be.

Abstract

A New Accelerator Mass Spectrometry (AMS) Laboratory has been successfully installed at PRL-Thaltej Campus dedicated for the measurement of ^{14}C, ^{10}Be and ^{26}Al. This facility has been acronymed as PRL AURiS (Physical Research Laboratory Accelerator Unit for RadioIsotope Studies). The 1 MeV AMS system manufactured by High Voltage Engineering Europa B.V., The Netherlands comprises: (1) Ion source for production of negative ions (2) Low Energy Mass Spectrometer for the selection and injection of isotopes of interest, (3) 1 MeV Tandetron Accelerator for acceleration and Argon gas for molecular stripping, (4) High Energy Mass Spectrometer for focussing the isotopes leaving the accelerator into the Faraday Cups and towards the Ionisation detector, (5) 120^{o} Electrostatic Analyser (ESA) for focussing and further filtering followed by (6) a Low Background Magnet, and the Ionisation Detector for the measurement of the rare isotopes. Additionally, Automated Graphitisation Equipment (AGE3) for preparation of carbon samples as graphite for AMS measurement has been installed. The AMS facility can measure ^{14}C, ^{10}Be and ^{26}Al and would contribute towards the various research programmes in Oceanography, Geology, Climate Studies, Archeology, Hydrology and Planetary Sciences. Preliminary results obtained on performance of PRL AURiS would be presented.

Speaker: Dr. Ravi Bhushan
GSDN

Date	Time	Venue
25-Apr-2017	16:00 hrs	Ground Floor Lecture Hall

All are invited to attend and participate in discussion

Tea at 15:30 hrs

A. K. Sudheer, Geosciences Division