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Subject   PR#36: SEVAN Network expanding to India Jawaharlal Nehru University

A network of particle detectors located at middle to low latitudes,
SEVAN (Space Environmental Viewing and Analysis Network) aims to
improve fundamental research of the particle acceleration in the
vicinity ofthe sun and the space environments.

The new type of particle detectors will simultaneously measure changing
fluxes of most species of secondary cosmicrays, thus turning into a
powerful integrated device used for exploration ofsolar modulation
effects. The first four SEVAN modules operated at Aragats
Space Environmental Center in Armenia, on the slopes of mountain. Aragats.

In 2009 we deploy SEVAN units in Croatia and Bulgaria. In fall of 2010 we
launch SEVAN unit in 2010 in Remote Sensing Applications Laboratory, School
of Environmental Sciences, Jawaharlal Nehru University, New Delhi, India.
We plan to send SEVAN unit to Slovakia in 2011.

Ground based particle detectors measure time series of secondary particles
born in cascades originating in the atmosphere caused by primary ions and solar
neutrons. Ground based particle detectors measure time series of secondary
particles born in cascades originating in the atmosphere caused by the protons
and stripped ions accelerated in Galaxy and in vicinity of Sun. The networks of
particle detectors can predict upcoming space storms tens of minutes before
arrival of energetic protons from Sun and hours before the arrival of huge
clouds of plasma ejected by the sun and traveling in the interplanetary
space with speed up to 2000 km/sec. Reliable forecasts of the major geomagnetic
and radiation storms are of great importance because of the failures
of the major space and earth surface based technologies as well as posing
radiation hazard on crew and passengers of satellites and aircraft and
on the Global Positioning System (GPS) and other communication technologies
using radio.

Figure 1.

The CRD experts (from left to right) Karen Arakelyan, David Pokhcraryan
and new SEVAN host Prof. JNU Saumitra Mukherjee.

Figure 1