

# Space Weather Activities in Peru

By

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# VLF-station in “Punta Lobos” Scientific Base, Lima

- Established station with collaboration of CONIDA and San Marcos University, Lima
- Facilities of data Very Low Frequency – SAVNET project.
- Research in Solar Flares and Ionospheric perturbations.
- Research in earthquakes index using VLF data.

# The Center for Space Observations (COE)

- In cooperation with APSCO (Asia-Pacific Space Organization Organization):
- APOSOS Telescope (Asia-Pacific Ground-Based Space Object Observation System) for monitoring satellites and space debris.
- GNSS receivers for studies of the behavior of the ionosphere,
- Application of GNSS for Decision and policy maker was conducted online mode at 21th January ,2022 . 20 participants from 6 countries were participated
- In Huancayo houses the Cherenkov instrumentation of the Latin America Giant Observatory (LAGO) project, which studies the behavior of secondary Cosmic Rays.
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# Low-Latitude Ionospheric Sensor Network (LISN)

Is an international project that monitors the low, middle and high atmosphere in the equatorial region with the purpose of studying and forecasting the ionospheric phenomena, with special emphasis in dynamic and photochemical energy transport processes.

LISN data flow is managed through a Central Server —located at the Instituto Geofisico del Peru— in order to receive, to process, to store and to distribute the scientific information.

The real time information will be used in a Data Assimilation System of Ionosphere, for forecast using numerical models, and in deferred time the data will be available to users with investigation aims.

# Education and Research.

- The National University of San Marcos is formally authorized to function and operate, as an annex institution of the Faculty of Physical Sciences, the Astronomy and Space Climate Research Group.
- This institution is developing courses and research in Space Weather and we have made arrangements for cooperation with CONIDA and the Geophysical Institute of Peru - IGP for the management and use of their facilities (COE, Punta Lobos, Jicamarca and Huancayo Station).