

## Potential Slovak contribution to ILWS

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### Space Activities in Slovakia:

Coordinated by the Slovak Commission for Space Research and Peaceful Uses of Space at the Council for Science and Technology of Government of Slovak Republic.  
Scientific activities are coordinated by the National Committee of COSPAR.

**ESA:** not a member yet. Ultimate goal: to become an ESA member

### Experience in science related to ILWS

#### *Space:*

Experience with design, construction, testing and running of relatively simple, monitoring type of devices for energetic particle measurements at low and high apogee orbits (15 experiments including those at Active, CORONAS I, INTERBALL-1 and 2, Magion-4 and 5, CORONAS F). Ground support equipment. Passive cosmic ray measurements on low orbits.

Data base on energetic particles from earlier energetic particle measurements.

Data analysis from energetic particle measurements in space. Study of physical phenomena within the magnetosphere and near its boundary regions according to energetic particle dynamics. Direct and indirect relations of cosmic rays and energetic particles to Space Weather. Solar energetic particles (charged as well as neutral emissions). Cosmic ray variability at various time scales.

Solar coronal activity in the wide range of time scales, relation to solar magnetic field, data analysis from satellites (SOHO, SUMER, CDS, EIT, TRACE)

Multiscale data analysis of intermittence in the solar wind (using ACE, WIND), neural network predicting of space weather.

#### *Ground based measurements:*

Continuous cosmic ray measurements by neutron monitor at Lomnický štít (preliminary data with 1 min update at <http://neutronmonitor.ta3>), relatively high statistical accuracy. Archive of data.

Continuous monitoring (1 min and 1 sec resolution) at the Hurbanovo geomagnetic observatory (IMO-Intermagnet observatory). Observations of solar flares and protuberances.

Solar coronal measurements at Lomnický štít by coronagraphs. Archive of coronal green line intensity data over long time period, H alpha prominences above the solar limb, sunspot drawings from 1944.

### Institutions involved:

Institute of Experimental Physics, SAS, Kosice (in collaboration with Technical U. and P.J.Safarik U. in Kosice)

Astronomical Institute, SAS, Stara Lesna

Geophysical Institute, SAS, Bratislava

Faculty of Mathematics, Physics and Informatics, Comenius U. Bratislava

Slovak Central Observatory, Hurbanovo