



INSTITUTE OF ATMOSPHERIC PHYSICS, CZECH ACADEMY OF SCIENCES, PRAGUE, CZECH REPUBLIC

**IDENTITY**

**Institute**

Institute of Atmospheric Physics  
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SITE: <http://bleska.ufa.cas.cz/>.



**PRESENTATION**

The thunderstorm activity is continuously monitored in a favorable electromagnetic environment on the summit of La Grande Montagne (1028 m, 43.9410N, 5.4836E), Plateau d'Albion. These measurements are prepared as a ground-based counterpart of instrumentation which is being developed by the Institute of Atmospheric Physics in Prague for the TARANIS spacecraft.

The SLAVIA sensors (Shielded Loop Antenna with a Versatile Integrated Amplifier) detect horizontal components of the magnetic field fluctuations in a frequency interval from 5 kHz to 90 MHz. The loop surface is 0.23 m<sup>2</sup>, the maximum amplifier gain is 47 dB. The maximum sensitivity of the recording system is 6 nT/s/√Hz, corresponding to 1 fT/√Hz at 1 MHz.

Multidimensional ELF/VLF analyzer ELMAVAN-G (up to 25 kHz) is a clone of the ELMAVAN instrument which is being prepared by the Institute of Atmospheric Physics in Prague for the Resonance spacecraft project. We use two 12-turn magnetic loop antennas of 4 m<sup>2</sup> with preamplifiers ( E-W and S-N components and a 10-cm spherical electric antenna located 2 m above the ground . Online data are available at <http://bleska.ufa.cas.cz/>.

**RESEARCH THEMES**

- Continuous monitoring of thunderstorm activity
- Analysis of electromagnetic signals generated by intracloud processes
- Interferometric measurements
- Analysis of subionospheric propagation of lightning generated signals

**KEY WORDS**

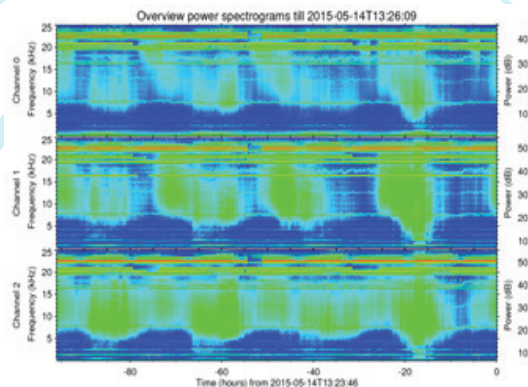
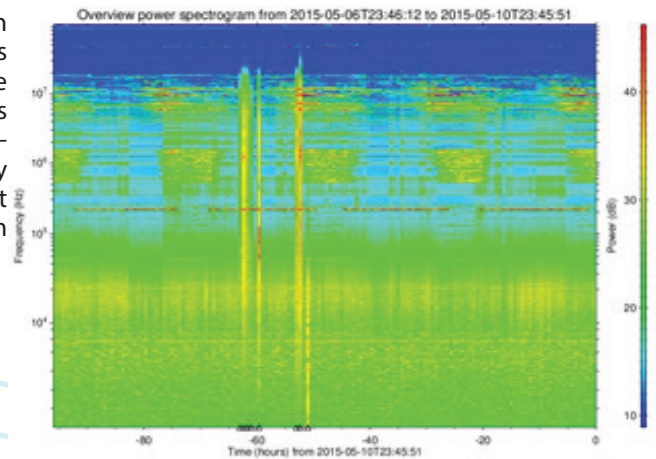
Atmospheric electricity  
Thunderstorms  
Lightning discharges  
Electromagnetic signals generated by lightning flashes  
Instrumentation  
Antennas

**WEBSITE LSBB LINK**

<http://www.lsbb.eu/index.php/fr/ct-menu-item-19/ct-menu-item-58/ct-menu-item-60/ct-menu-item-66>

**LSBB PROJECT**

Overview of four days of high frequency measurements using SLAVIA sensors. The yellow and red vertical lines correspond to strong broadband signals generated by lightning flashes occurring at distances up to 500 km from the receiving site.



Overview of four days of very low frequency measurements: vertical electric field component (channel 0); E-W and S-N magnetic-field components (channels 1,2). The variations in the wave intensity are connected with diurnal changes of ionospheric properties.



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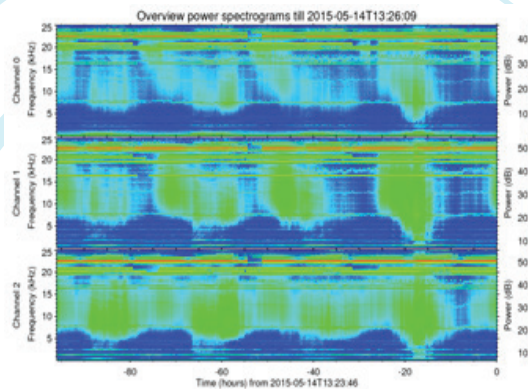
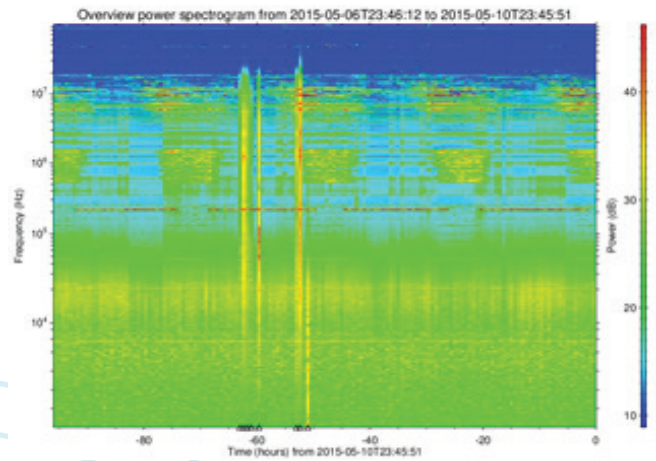
SITE: <http://bleska.ufa.cas.cz/>.



PRESENTATION

PROJET LSBB

THÈMES DE RECHERCHE



MOTS CLÉS

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LIEN SUR LE SITE DU LSBB

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