



The micro satellite COMPASS – 2 for investigation of seismo-ionospheric coupling.

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The system of the small satellites can be especially important for revealing and research of global and regional net of geological faults in an effort to plan searches of mineral resources and to forecast destructive earthquakes (volcanic eruptions). The prime objective of the COMPAS mission focuses on investigation of seismo-ionospheric coupling, with potential for secondary investigations into seismoelectromagnetic correlations. The main goals of the pathfinder mission are to investigate seismo-ionospheric anomalies in order to attempt to confirm the existence of such relationships. It will be a small step towards operational earthquake forecast. It is shown that COMPASS and the DEMETER mission are largely complimentary – with COMPASS providing more extensive measurements of seismo-ionospheric variations, with a possible secondary objective to investigate VLF emissions. Sounding of the ionosphere may also be used to study the reaction of the global ionosphere during magnetic storms and other solar-terrestrial events. It could become a very powerful support to other Space Weather dedicated projects such as TIMED, adding to thermospheric parameters measured by the project, the ionospheric ones.

The microsatellite COMPASS- 2, weighting 64 kg, is planned to launch to the circular orbit with height 600 km and inclination 79 degrees for development of the methods of monitoring and forecasting of natural disasters on the base of coordinated monitoring at the Earth and from space the pre-earthquake phenomena. It is expected to have close collaboration with ground-based experiments. The details of the measurements, instruments and general conception of the microsatellite system based on the COMPASS-2 mission are presented.