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MEMFIS - Multiple Electromagnetic Field and Infrasound Monitoring Array at Plostina - Vrancea.

An attempt to guess what's cooking.

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The paper presents a complex monitoring system that is partially deployed at Plostina site, Romania - PLOR.

Plostina is located at 45.8512 N latitude and 26.6499 E longitude, it's close to the epicentral zone in Vrancea and is one of the seismic stations under the administration of the ***National Institute for Earth Physics (NIEP)***, Romania.

Starting with July 2006, ***NIEP, AZEL - Designing Group S.R.L., University of Bucharest-Faculty of Physics and Institute for Spatial Sciences*** made a research consortium who's project "Complex Multidisciplinary Research System On Precursory Phenomena Associated With Strong Intermediate Vrancea Earthquakes, In Conformity With The Latest International Approaches - MEMFIS" is financed by the Romanian Ministry of Research and Education, through the Programme "Excellency Research".

Using specific instrumentation that will provide information on acoustic (both earth's seismic and atmosphere's infrasonic activities), electric, magnetic and electromagnetic fields, the consortium will verify if there are correlations which could be established between the behavior of these fields and the preparatory stage of strong intermediate earthquakes in Vrancea zone.

In this purpose, NIEP and AZEL will develop an array in the shape of a triangle, that will consist in three independent data collecting points, equiped with seismic sensors, infrasound stations, triaxial fluxgate magnetometers and electrometers.

In the same time, the observations will be improved by differential measuring methods involving simultaneous, time-sychronized, data aquisition from sensors located far from the epicentral zone (Surlari, Magurele and international observatories of geomagnetic field) and will take place in ULF and sub-ULF bands, between 0.001Hz and 25Hz.

The paper also presents the actual structure of the array, the auxiliary equipments and data communication protocol and format, as well as the next steps the partners will take toward a reliable and high quality acoustic and electromagnetic surveillance array in Romania.