

From September 11, 2015, in cooperation with EMSEV, the **investigations of natural electric field variations preceding to earthquakes**

had been started in the territory of Bishkek Geodynamic Proving Ground. For the purpose of natural electric field observations two special electromagnetic stations were arranged in Shavai and Issyk-Ata points. At the Shavai station the electric fields registration has been conducted with the help of 24-bit DAS (data acquisition system) LS-8800 of 0.01 Hz to 40 Hz frequency range. The sampling frequency of measurements is 100 Hz. As a sensor we use the system of 100-m orthogonal electrical dipoles with non-polarized electrodes oriented by cardinal directions.

At Issyk-Ata station the system of observations is similar to above but has another type of DAS.

On the first of July 2014 both stations were upgraded: electrodes have been changed, the receiver dipoles were lengthened and monocomponent vertical seismometers were installed.

As a result of natural electric field monitoring there was collected the data base comprising observations from 11.11.2011 till current moment which includes:

1. For Shavai station – 50 GB data in binary format and 750 GB of data converted in ASCII text format. Data is presented in the form of one-hour files (size of 25 MB) which comprises 100 Hz records with 3 measuring channels.

2. For Issyk-Ata station – 30 GB data in binary format and 100 GB of data converted in ASCII text format. Data is presented in the form of one-day files (size of 90-270 MB) which comprises 20 Hz and 4- Hz records with 4 and 6 measuring channels.

To analyze and compare the data obtained at above described stations we use the data of closest to points of observations KNET stations (Kyrgyz Network of seismic stations) and the data of operational electromagnetic and geomagnetic observations of Research Station RAN in Bishkek city.

Written by Administrator

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Sampling frequencies of 40 Hz and 100 Hz corresponded to “B” and “H” channels of KNET seismic stations and were selected to simplify joint analyses of natural electric and seismic fields. Vertical seismometers were installed in 2014, what allows precise determination of seismic wave arrival directly at the station of electromagnetic observations.

In November, 2011, in the territory of RS RAS in cooperation with EMSEV the First International Symposium has been held where researchers from the universities of Japan, Greece, France and Russian Federation took an active part. In October, 2012, at the Conference on electromagnetic phenomena connected with seismic and volcanoes activity in Japan RS RAS researchers presented 3 reports.





As agreed by the RS RAS and EMSEV the work conference devoted to contemporary state of electromagnetic investigations is to be held every year in Japan, Greece or Kyrgyzstan.

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