ID: **P5.2-177**   Type: **e-Poster**

# of Kazakhstan monitoring network data for the safety of nuclear facilities

Thursday, 1 July 2021 11:45 (15 minutes)

Since 1994, the Kazakh NNC RK has operated the contemporary monitoring system that includes seismic and infrasound stations. Five stations are included in the IMS: PS23, AS57, AS58, AS59, IS31. The main goal of the NNC RK network is monitoring of nuclear explosions in support of the CTBT. The data of NNC RK network are actively used in civil tasks, for example, to estimate the seismic hazard of places where the nuclear critical facilities are located.

Kazakhstan possesses the research nuclear reactors, LEU bank, tailing facilities, Tokamak and the infrastructure of the Semipalatinsk Test Site. A nuclear power plant is planned to be constructed in the future. All these facilities are located in tectonically different regions of Kazakhstan. The seismic hazard of many Kazakh regions was poorly investigated and, as a result, underestimated. The contemporary data of NNC RK network and archive materials were analyzed and generalized, the earthquake catalogues were created for the regions where nuclear facilities of RK are located. The tectonic structure was studied, the database of strong motions was created, and the seismic hazard of the regions was estimated. The necessity to create the early warning system for earthquakes at the regions of the research nuclear reactors location is shown.

Promotional text

The NNC RK operates the contemporary monitoring system since 1994, 5 stations are included into the IMS: PS23, AS57, AS58, AS59, IS31. Data of the NNC RK network are used in civil tasks, to estimate the seismic hazard of places where the nuclear critical facilities are located.

Primary authors: Ms ARISTOVA, Irina (Institute of Geophysical Research, Almaty, Kazakhstan); Ms SOKOLOVA, Inna (Institute of Geophysical Research, Almaty, Kazakhstan); Mr VELIKANOV, Alexander (Institute of Geophysical Research, Almaty, Kazakhstan); Mr SOKOLOV, Alexander (Institute of Geophysical Research, Almaty, Kazakhstan)

Presenter: Ms ARISTOVA, Irina (Institute of Geophysical Research, Almaty, Kazakhstan)

Session Classification: T5.2 e-poster session

Track Classification: Theme 5. CTBT in a Global Context: T5.2 - Experience with and Possible Additional Contributions to Issues of Global Concern such as Disaster Risk Mitigation, Climate Change Studies and Sustainable Development Goals