ID: Type: **Poster**

4.3-P3. Modern seismological monitoring system as a 'big science' engineering

In recent years, number of seismic stations in a seismograph network and/or a seismic array increased dramatically. Real-time transmission and processing of continuous waveforms have been facilitated by modern digital technology. 'Data intensive research' becomes one of the characteristics of the application of such a monitoring system. As a result, modern seismological monitoring has evolved into a complex system which has started to possess some features of 'big science' engineering. This provides seismological observation and interpretation with new clues to the rethinking of the traditional earthquake prediction experiment site which have not been as successful as expected, and the newly developed earthquake early warning system which faces to the challenge of effective functioning and sustainability. One of the unique, and sometimes neglected, contributions of the International Monitoring System (IMS) is that it has provided good experiences for such a reflection. These experiences, as well as their methodological formulation, are heuristic for the design and planning of the next generation seismic networks, the novel earthquake prediction experiment site, and earthquake early warning system.

Primary author: WU, Zhongliang (Institute of Geophysics□CEA)

Presenter: WU, Zhongliang (Institute of Geophysics□CEA)

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