

## EM STUDIES IN CORINTH GULF SEISMIC GAP (GREECE)

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In the frame of Demeter mission (CNES) and a CEFIPRA contract with India, an EM monitoring system was developed in Corinth Gulf seismic area with the objective to operate systematic observations, from DC up to several kHz. The EM stations bound a seismic gap, along which a magnitude 6 earthquake is expected. At the stations, horizontal electric and three components magnetic fields are recorded at 100 Hz. The visual/manual analysis and processing of time series become hardly effective because of enormous volumes of data (several To per year) that should be examined. Automatic analysis has to be done with accurate cross-correlated data processing. Therefore, new algorithms have been developed and systematically used. They are based on fuzzy logic (FL) and artificial intelligence (AI) methods. Now, we systematically use FLASAR algorithm (Fuzzy Logic Algorithmical System for Anomaly Recognition) developed by the authors in the research of EM anomalies with time. Up to now, small magnitude earthquakes ( $M < 4$ ) have been recorded in the vicinity of the EM stations ( $< 120$  km). A large number of the earthquakes which hypocenters are along the seismic gap have produced co-seismic electric signals. The characteristics of data are complex, and the non-formal criteria are used in experts' data processing.

earthquake, electric, magnetic signals, Corinth, Greece