

EARTHQUAKE PREDICTION METHODS ON RESULTS OF COMPLEX OBSERVATIONS (UZBEKISTAN)

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Study of premonitory symptoms of earthquakes has been carried out at the close of sixties. On the base of analyses of geological, seismotectonic, geophysical and other data three geodynamic polygons have been selected: Tashkent, Ferghana and Kyzylkum polygons. Seismic, electromagnetic, hydrogeoseismic, deformometric and other premonitory symptoms of earthquake have been studied. Regularities of manifestations of geophysical and geochemical premonitory symptoms have been established and carried out methods of prognosis of locality, magnitude and time of earthquake. In 1975-1980 there was the initial stage of earthquake prognosis. Eleven prognostic stations have been created within Uzbekistan territory and complex regime observations on seismic, electromagnetic, geochemical, hydrodynamic, deformometric and other premonitory symptoms have been organized. Data of regime observations every day passed to Tashkent, operatively treated and regular control on seismic conditions carried out. Prediction of strong and sensible earthquakes prove to be correct 70%. The most correct results were the predictions of strong earthquakes such as Alai, November 1, 1978 ($M=6.8$); Pap. February 18, 1984 ($M=5.7$) and Chimion, May 6, 1982 ($M=5.6$). Results of complex of hydrogeoseismic, electromagnetic, seismic and deformometric regime observations have been used for prognosis of these and other earthquakes. On the base of this observations before Gasly (1976, 1984), Alai (1978), Chimion (1982), Pap (1984), Jirgital (1984), Kairakkum (1985) and other strong earthquakes anomalous variations of parameters have been proved. It is established, that duration and anomaly amplitude depend on magnitude and epicentral distance of being ahead earthquakes. Anomalies comparison indicate their sequence, viz.: long-term portents begin to manifest within seismic parameters and deformation fields of Earth, average-term portents have been reverberated within geophysical fields and in some parameters of underground waters. Short-term portents as a rule have been reflected in hydroseismics and geophysics.