

Rationale for short-period sensors application with extended frequency response for strong earthquake registration

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Abstract. The paper proves short-period sensors application with extended frequency response as a reasonable alternative to broadband seismometers. We assessed magnitude uncertainties between magnitudes determined by data of short-period and broadband sensors for earthquakes with $M > 6$ recorded at the territory of the geophysical observatory “Mikhnevo” in 2014. Data analysis consisted in body wave magnitude and surface wave magnitude estimation by means of standard seismological methods. Magnitude errors correspond to the magnitude uncertainties in seismological catalogs.

Keywords: short-period sensors, extended frequency response, frequency range, earthquakes, magnitude errors, magnitude uncertainties.