Comparative analysis of characteristics of the broadband seismometer with the capacitor converter and foreign analogs

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Abstract. The family of seismometers with the capacitor converter of mutual movement of inertial weight and the basis of the device in an electric signal is developed. High sensitivity, standardization of the electronic scheme, sufficient simplicity of production, adjustment and calibration does them perspective for mass production. To assess the possibility of using the developed instruments as the import-substituting ones, comparative studies of the records received at the same time on one pedestal of the broadband sensor with the capacitor SM-3E converter and import instruments STS-2 and CMG-6T were conducted.

Keywords: broadband seismometer, capacitor converter, amplitude-frequency response characteristic, phase-frequency response characteristic, seismic registrar, sensitivity of the seismic channel, power spectral density.