

Broadband Seismometer

The seismometer is intended for mass observations. The pendulum of the seismometer has a period regulated up to 2 seconds. The feedback circuit is of the force-balance type. As the converter of fluctuations of the pendulum to an electric signal the differential capacitor converter is used with a resolution better 10^{-10} m. The sensor electronic self-noise is below the NLNM from 100 sec to 10Hz. As a result the seismometer represents a force-balance velocimeter with a response as flat as possible in a range of frequencies 0.0083 – 40 Hz. Set includes one vertical and two horizontal seismometers, control and conditioning unit ("Host-box"). Vertical and horizontal seismometers are designed on the basis of physical pendula with identical mechanical parameters. The "host-box" contains a DC/DC converter, electronic feedback circuits, and other control, output and calibration signal distribution. The seismometer can automatically re-center the boom position. The "host-box" provides separate input to the calibration coil to allow individual excitation of the sensor.

Standard velocity response is flat from 120 seconds to 40 Hz.

The velocity response can be made flat up to 240 sec period if desired.

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Track Classification: Theme 3: Advances in Sensors, Networks and Processing