

Reference Network

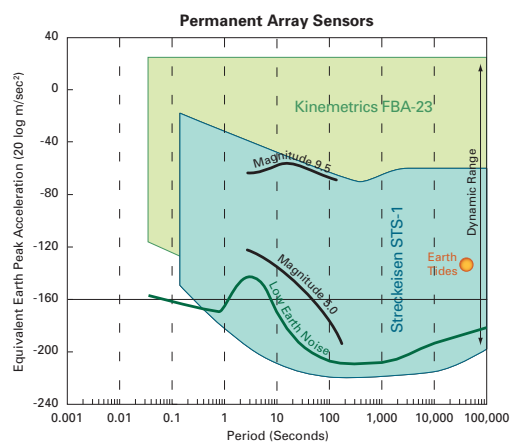
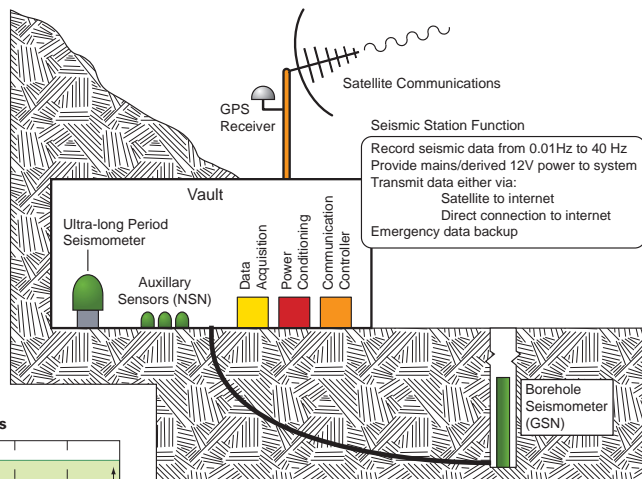
USArray Permanent Seismic Station

Purpose

Regional and Teleseismic
Lithospheric and Crustal Structure
Earthquake Source
Seismicity

Characteristics

Permanent Reference Array
Continuous Real Time Telemetry
Ultra-Long Period
Secure



Reference Network montage. The deployment of a typical station includes a vault to protect the ultralong-period seismometers and auxiliary sensors, digitizer/recorder, power systems and communications controllers. The vault also supports a mast for the GPS receiver which provides timing to the recorder, and a data telemetry system. Some sites will use a borehole seismometer instead of the ultra-long period vault sensor. The amplitude response shows the full broadband spectral response of these systems. The lowermost photograph shows, from left-to-right, Streckeisen STS-2 seismometer, accelerometer, borehole seismometer, digitizer/recorder, and 3-component Streckeisen STS-1 seismometer. The white box is a thermal insulation cover that fits over the STS-1 to reduce noise induced by air currents within the vault.