

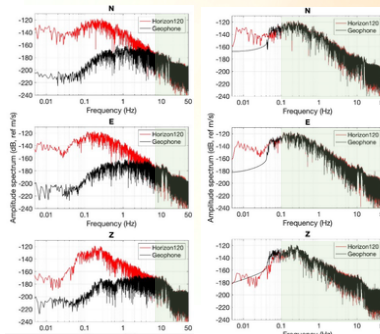
TexNet Station Requirements:

Sensor:

- 3-component orthogonal axis seismometer ✓
- Nominally flat velocity sensor response 10sec to 100Hz ✓
- Stainless steel or aluminum case for posthole/direct burial ✓
- The sensor cable should have an IP68 connector, dust tight and protected against the effects of continuous immersion in water. ✓

Datalogger:

- 24-bit digitizer ✓
- Sampling rate at least up to 200 sps ✓
- Integrated seedlink server for continuous streams of both waveform data and State-of-Health ✓
- Data transfer via the Internet allowing access from BEG network (TexNet Hub). ✓
- Timing using GPS. ✓
- Communication preferably using a web-based user interface. ✓
- Local storage ✓



Before and after instrument response correction



Real-time feed to any third party server

Alerts & Secure Web Portal

Station overall state of health and heartbeat transmission

Deploy to 1000ft

Stainless Steel

Self-orienting

9C = 3C Velocity + 3C Acceleration + 3C Magnetometer/Gyro



Enclosure, power, and communication:

- Ensure autonomous operation through solar power. ✓
- Ensure autonomous operation on solar power for a minimum of two (2) years. ✓
- A pole mounted weather-resistant enclosure with mountable solar panel on top. Enclosures must remain functional during deployments lasting at least two (2) years or longer. ✓
- Preferably two 110Ah batteries, a power regulator (with a user defined fail-safe shutoff voltage) and a 160W solar panel or comparable set up. ✓
- Data should be sent by telemetry to TexNet in real time. ✓



Other requirements:

- Sensor installation depth should be at least at 3ft in previously undisturbed surface material. ✓
- Orientation should ensure that the arrow printed on top of the sensor points towards geographic north (with compensation for magnetic declination in the area). If this isn't feasible, the azimuth clockwise from geographic north should be specified. ✓
- Provide metadata information in the form of: (a) Dataless SEED[1], (b) Response files[2], and (c) FDSN Station XML[3] ✓
- Station uptime should be more than 95% ✓
- Station should be fenced to avoid damage to the equipment, interference, and safety hazards. ✓