



New seismic instrumentation packaged for all terrestrial environments (including the quietest observatories!).

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The march to make every type of seismometer, weak to strong motion, reliable and economically deployable in any terrestrial environment continues with the availability of three new sensors and seismic systems including ones with over 200dB of dynamic range. Until recently there were probably 100 pier type broadband sensors for every observatory type pier, not the types of deployments geoscientists are needing to advance science and monitoring capability. Deeper boreholes are now the recognized quieter environments for best observatory class instruments and these same instruments can now be deployed in direct burial environments which is unprecedented. The experiences of facilities in large deployments of broadband seismometers in continental scale rolling arrays proves the utility of packaging new sensors in corrosion resistant casings and designing in the robustness needed to work reliably in temporary deployments. Integrating digitizers and other sensors decreases deployment complexity, decreases acquisition and deployment costs, increases reliability and utility. We'll discuss the informed evolution of broadband pier instruments into the modern integrated field tools that enable economic densification of monitoring arrays along with supporting new ways to approach geoscience research in a field environment.