

Improvements in Very Long-Period Observations

A. T. Ringler¹, J. Steim², R.Widmer-Schnidrig³, P. Duffner³, D. Jones⁴, R. E. Anthony¹, C. R. Hutt¹, D. C. Wilson¹, T. Forbriger³

¹U.S. Geological Survey, Albuq. Seis. Lab., ²Quanterra, Inc., ³Black Forest Observatory, ⁴KBRwyle, Albuq. Seis. Lab.

Abstract

ir ability to unambiguously record long period (greater than 200 s) seismic signals (e.g. normal modes) is limited as a result of a combination of sensor noise, and the sensitivity of our recording equipment to non-seismic noise sources (e.g. pressure and temperature). With the recent d

Ouestions



vestigating the differences in horizontals at 100 to 200 s period. Initial time dependence will need to be further investigated.





gure 8: (Top) Stacked PSD estimates for ANMO fro ong with the 60th percentile (orange). We show the ext

Conclusions

 We should expect 5 dB or greater improvements at 100 s and longer periods in horizontal noise

with similar or better noise levels some of the very

 Locally induced tilt signals as well as better resolution of very long-period normal modes should

mer-Schnidrig, 2008) should be revisited with the improved data set that the GSN is producing. References

Widmer-Schnidrig, R., and Zumberge, M. (2014). Perform al Society of America, 104, 2422-2429. ki, A. M., and Anderson, D. L. (1981), Preliminary r er-Schnidrig, R. (2008). The horizontal hum of the Earth: A global background of spheroidal and toroidal modes, Geo tters, 35, L06304.

1993). Observations and modeling of seismic background noise, U.S. Geol. Surv. Open-File Rept. 93-322, 94 p

Answer to 2: Initial installation results look promising. However, we are still in-

2) Can the STS-6 compete with the best STS-1s in the GSN?



nsors starting September 7, 2018. The horizontals



r et al., 2014). Three 1.5 m cased boreholes were drilled