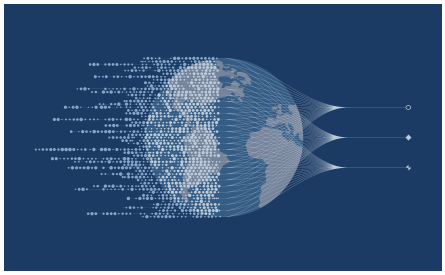

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from a Ultra Broad band Borehole seismometer with flat response over 5 decades of frequency is presented

The design details of the Ultra Broad Band (UBB) borehole feedback seismometer are presented including stable Hole-lock camping mechanism. The complete sensor stack weighs less than 20 Kg with a diameter of 89 mm.
The instrument has no mechanical resonances below 400 Hz. We achieved the bandwidth extension to high frequencies with improvements of the mechanical design, i.e. the arrangement of the pivots and the geometry of the spring.

Cost effective Ultra Broad Band Borehole seismometer results are presented. We show test results from a system installed in 200 meter deep Borehole comparing results to a surface Broad-Band sensor

The Broad band sensor system High frequency noise performance cuts the NLNM close to 20 Hz. The system is capable of detecting Eart tides.

Unlike “Tilted Galperin” topology the “Classic Orthogonal” topology used in this system provide borehole tilt information from the Horizontal components. Furthermore the advantages of a “Classic Orthogonal” Broad band sensor system is presented with detailed results

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