

Recordings of M8.3 Kuril Islands EQ with Metrozet STS-1 Electronics

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Metrozet has deployed commercial prototypes of its STS1-E300 electronics at Berkeley Seismological Laboratory. During these tests, the Metrozet electronics were operating with one horizontal STS-1 (in an E-W orientation) and one vertical STS-1 (Z orientation). The sensors are co-located and co-aligned with a set of reference STS-1 sensors (utilizing original Streckeisen factory electronics) at BKS.

Background noise testing (using dual sensor coherence techniques) has indicated that the Metrozet electronics are providing self-noise levels at or below that of the original electronics. *Of particular interest to scientists, however, is the response of the new electronics to a large teleseismic event.*

This document shows seismograms from an M=8.3 event: Kuril Islands, November 15, 2006; 11:14:16UTC

The plots shown below show data which is de-convolved using a scalar responsivity factor only.

The plots show data from sensors using Metrozet STS1-E300 electronics (white traces) and from the BKS reference sensors (with factory electronics).

Plots are shown for both the Z and the E sensors.

Plots are shown for data decimated to 1 Hz, 0.05 Hz and 0.005 Hz.

The plots are superimposed. Use your browsers zoom buttons to see details.

WHITE: STS-1 with Metrozet STS1-E300 Electronics

RED: STS-1 with Factory Electronics

A. Z-Axis Data; 1 Hz

M8.3 Kuril Islands EQ
11/15/2006 11:14:16 UTC

Data recorded at BSL from STS-1 sensors with Metrozet Electronics
and from BKS reference sensors

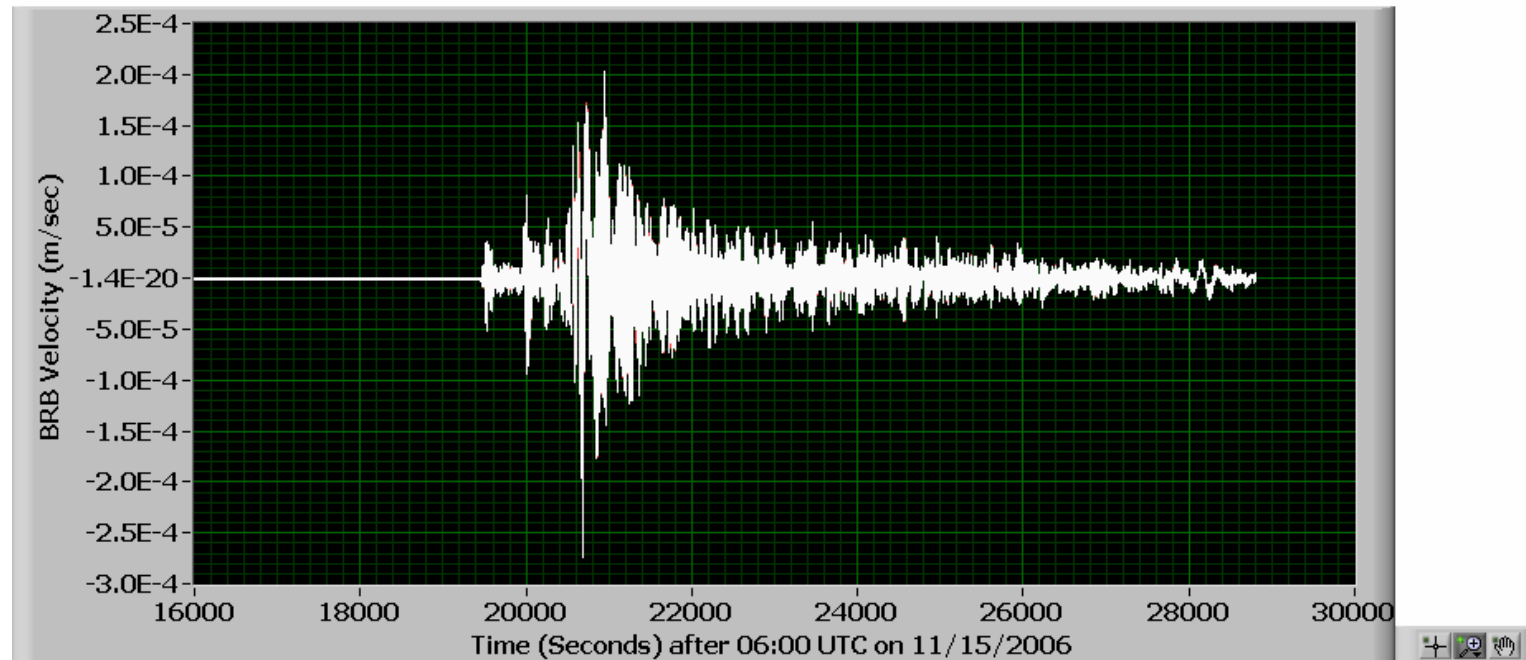
Data decimated to 1 Hz Data Rate
Only a scalar de-convolution has been performed

LH5(Z)/Metrozet 003

LHZ(Z)



Time Series



Time (Seconds)



BRB Velocity (m/



WHITE: STS-1 with Metrozet STS1-E300 Electronics
RED: STS-1 with Factory Electronics

B. Z-Axis Data; 0.05 Hz

M8.3 Kuril Islands EQ
11/15/2006 11:14:16 UTC

Data recorded at BSL from STS-1 sensors with Metrozet Electronics
and from BKS reference sensors

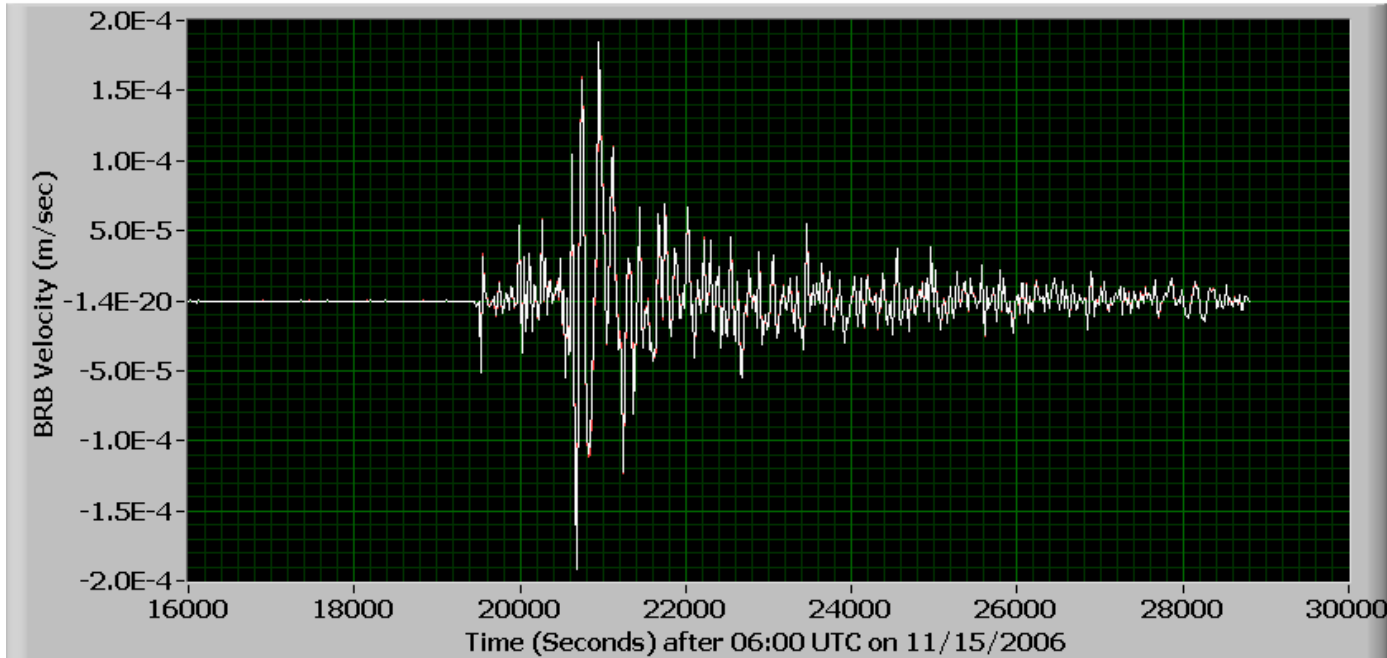
Data decimated to 0.05 Hz Data Rate
Only a scalar de-convolution has been performed

LH5(Z)/Metrozet 003

LHZ(Z)



Time Series



Time (Seconds)



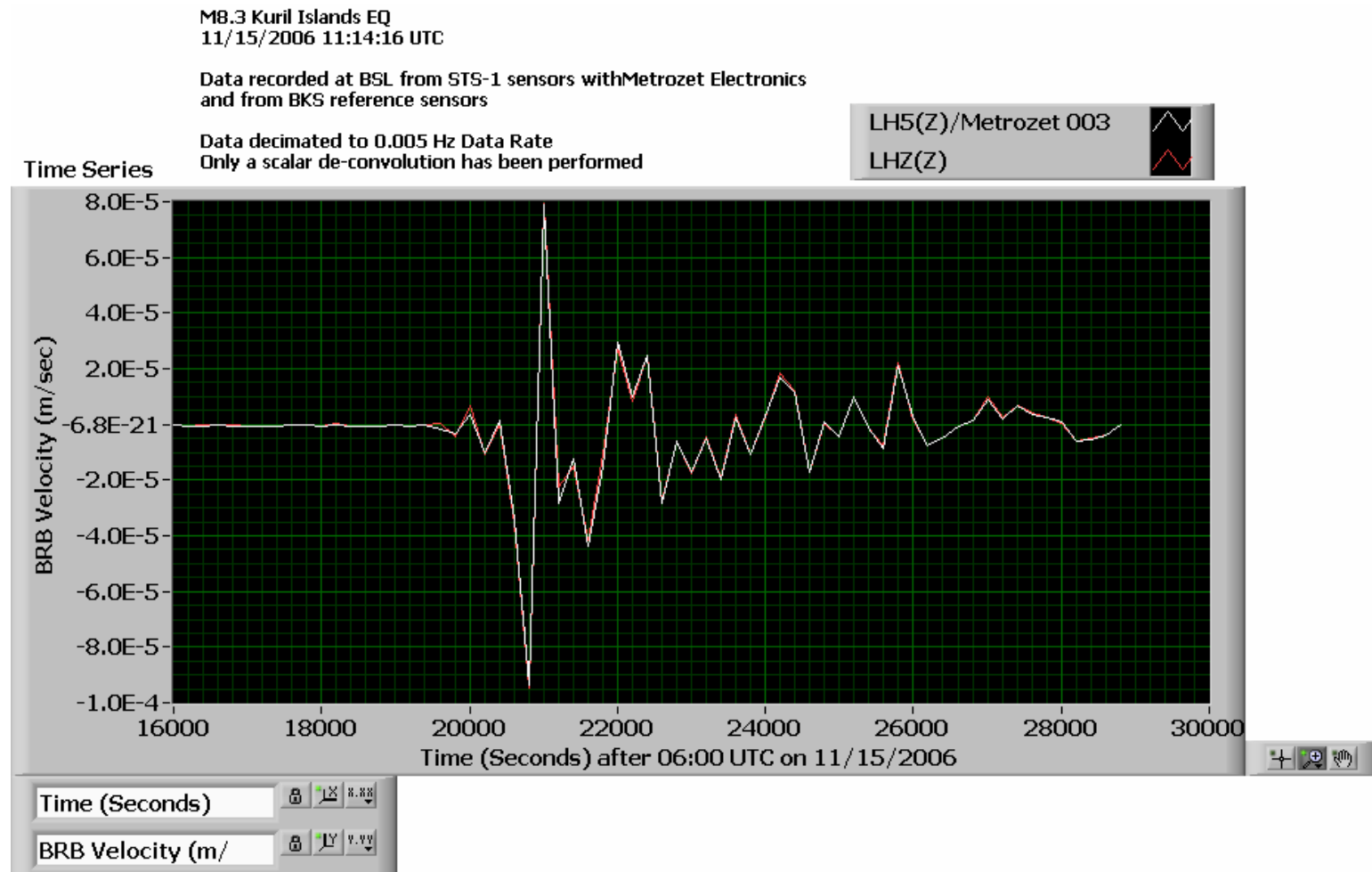
BRB Velocity (m/



WHITE: STS-1 with Metrozet STS1-E300 Electronics

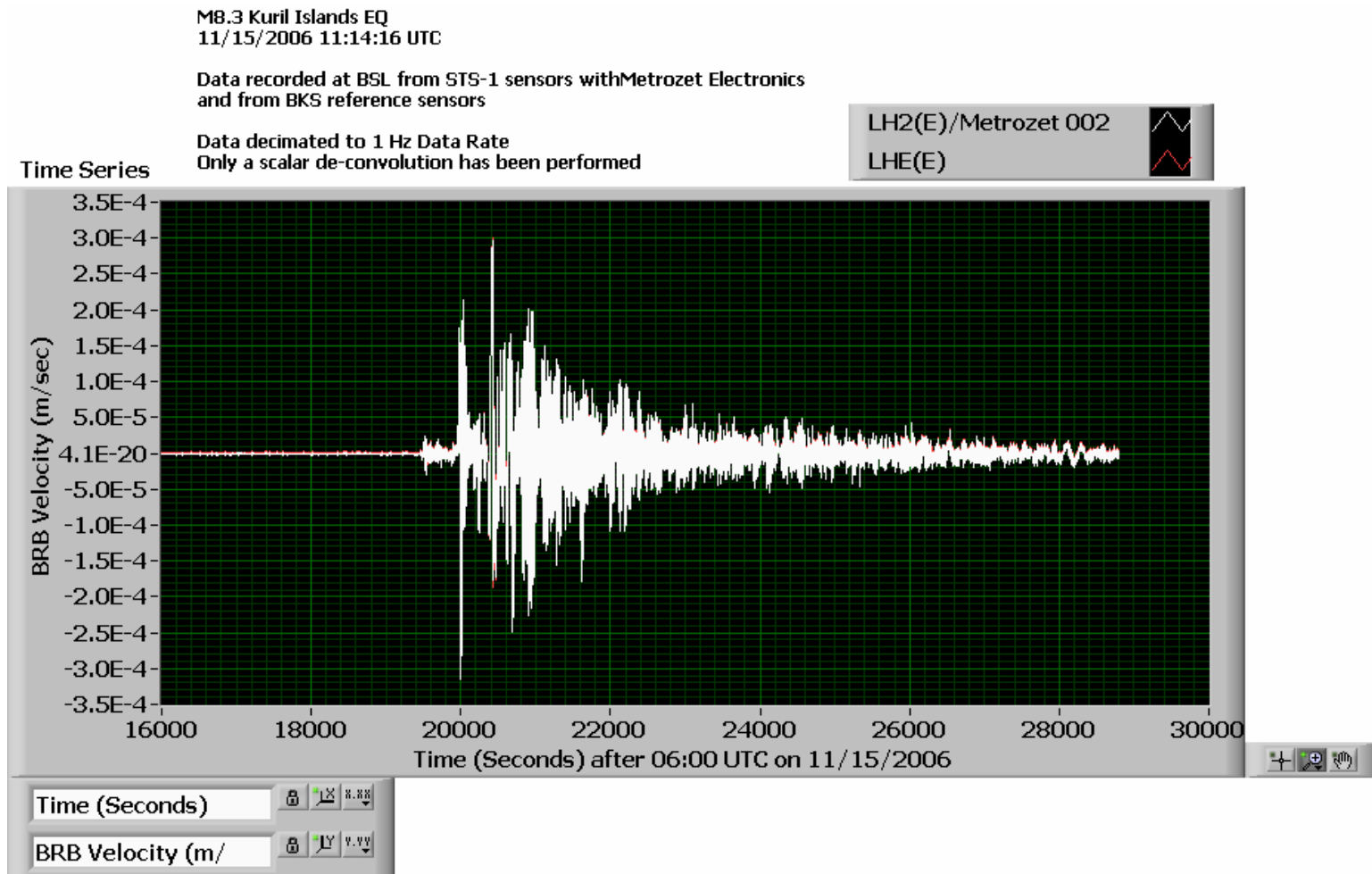
RED: STS-1 with Factory Electronics

C. Z-Axis Data; 0.005 Hz



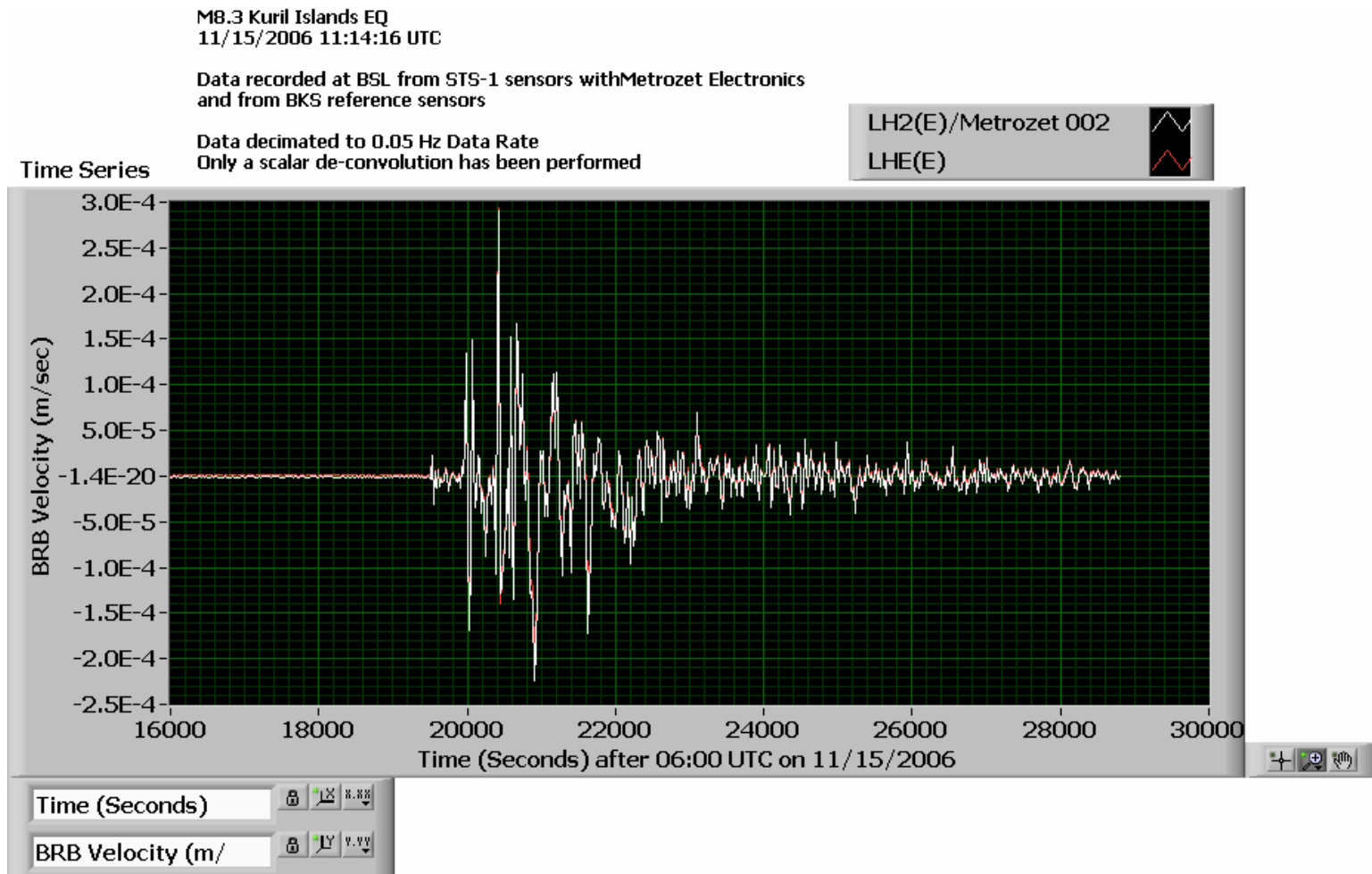
WHITE: STS-1 with Metrozet STS1-E300 Electronics
RED: STS-1 with Factory Electronics

D. E-Axis Data; 1 Hz



WHITE: STS-1 with Metrozet STS1-E300 Electronics
RED: STS-1 with Factory Electronics

E. E-Axis Data; 0.05 Hz



WHITE: STS-1 with Metrozet STS1-E300 Electronics
RED: STS-1 with Factory Electronics

F. E-Axis Data; 0.005 Hz

