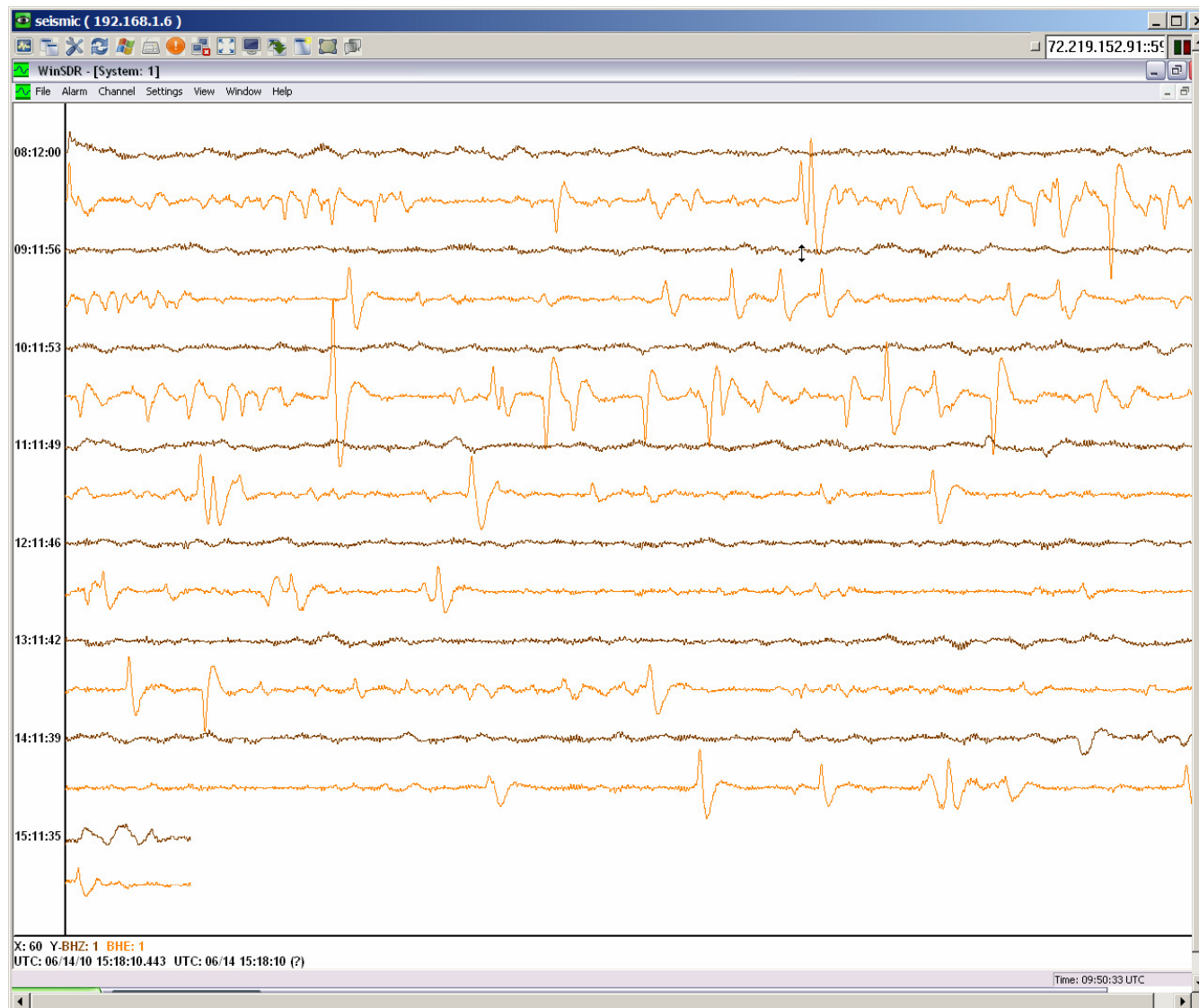


The effect of baking a leaf-spring seismometer

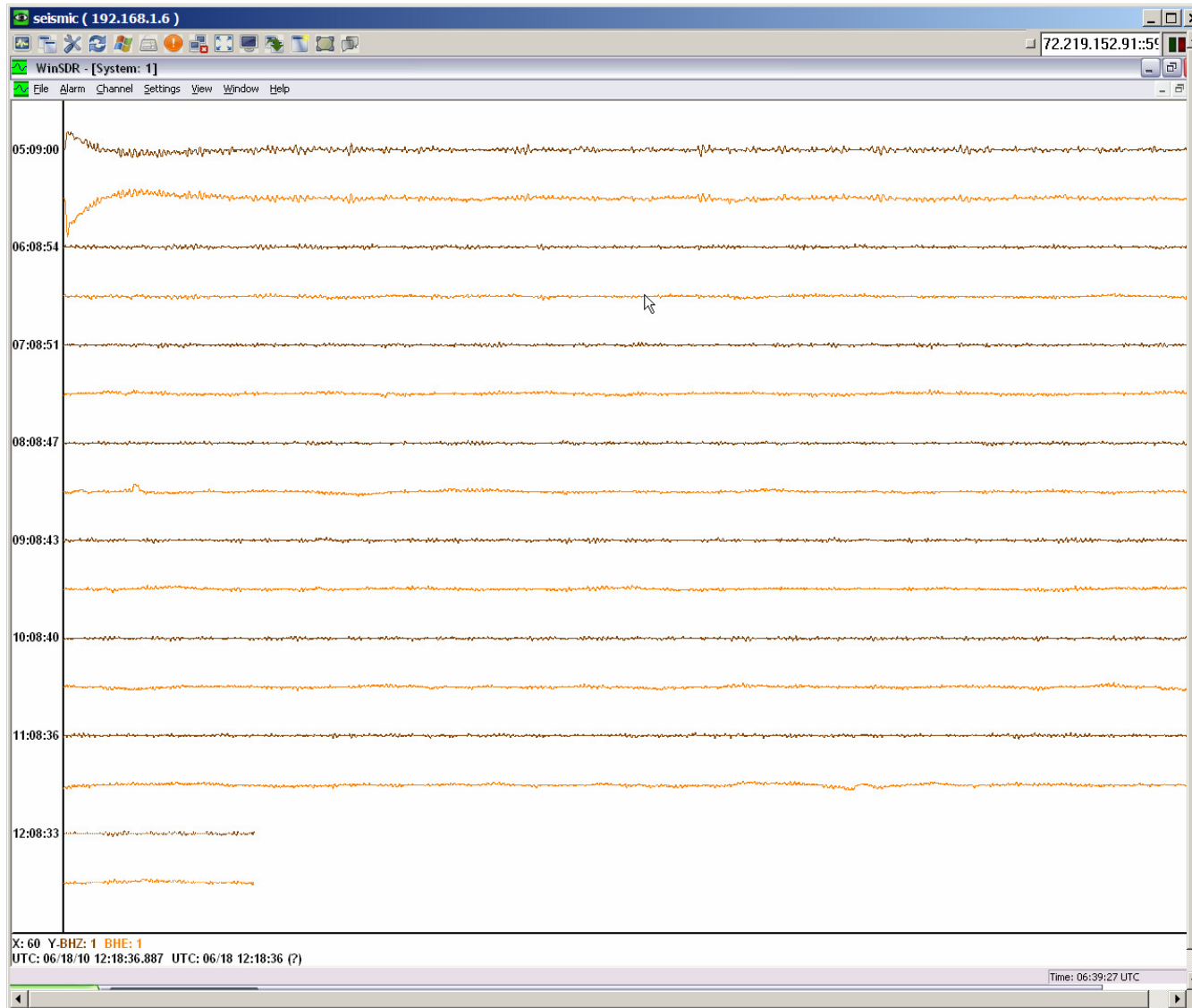
Following are displays of the output signals from two seismometers. The reference instrument is an ancient Guralp CMG-3 represented by the brown trace. The orange trace is Prototype #2 of the Yuma feedback vertical design.

After assembly, the Yuma was installed in the lab, using a pressure cover and thermal insulation, and recorded for 8 hours. The 'pops' characteristic of a newly assembled instrument are quite visible.

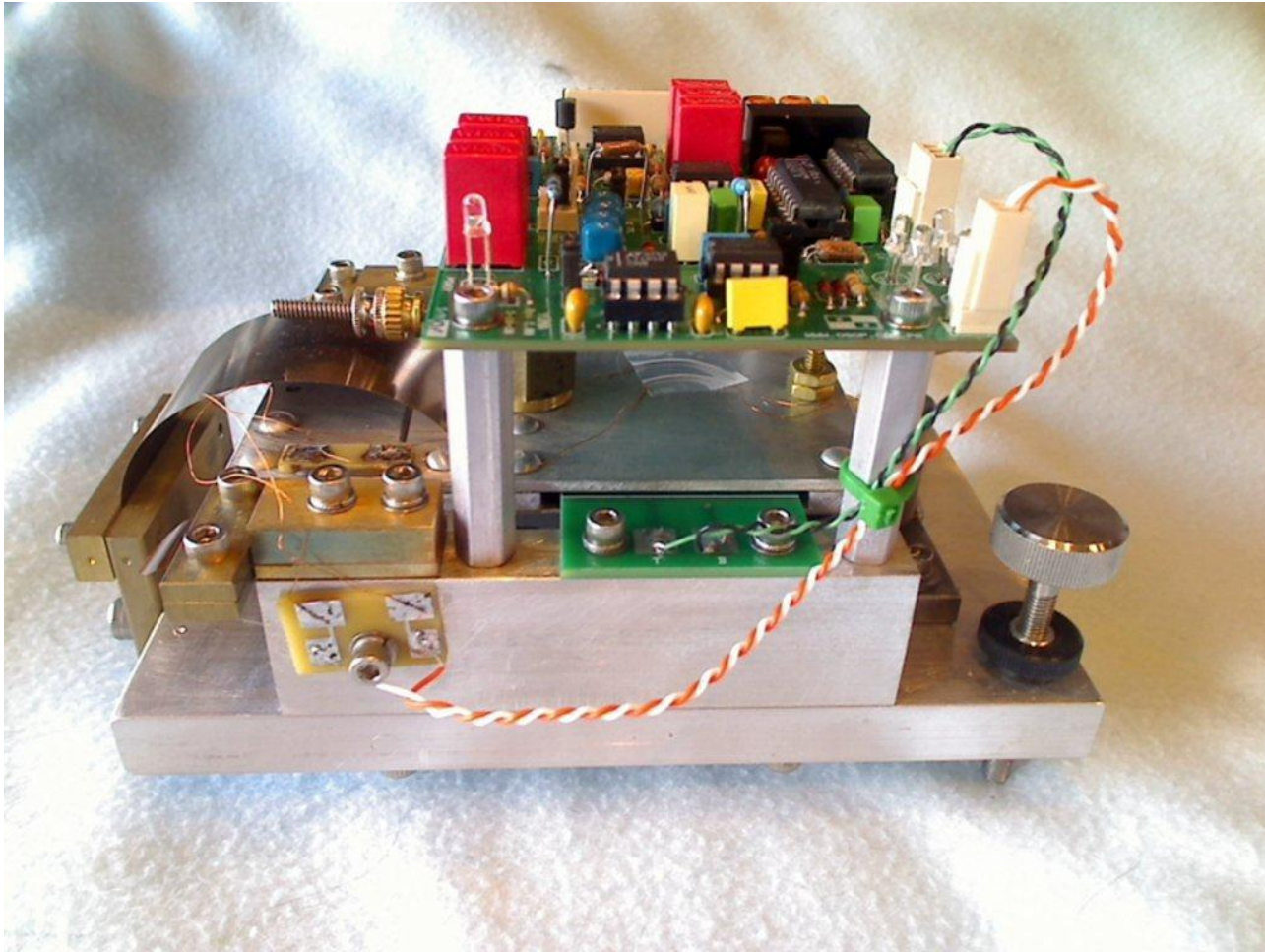
Then, after removing all circuit boards and wires, the magnet and the coil, the Yuma was subjected to a baking cycle of 10 hours at 320°F and allowed to cool in the oven. After reattaching the components which had been removed and very slightly shortening the spring to rebalance the boom, the second display was recorded. In that recording, made on a particularly quiet night, one can see that almost all the pops in the Yuma have disappeared.



Brown - Guralp CMG-3 No thermal insulation
Orange - Yuma Insulated Before baking



Brown - Guralp CMG-3 Insulation added
Orange - Yuma Insulated After baking 10 hours at 320°F



Yuma prototype #2