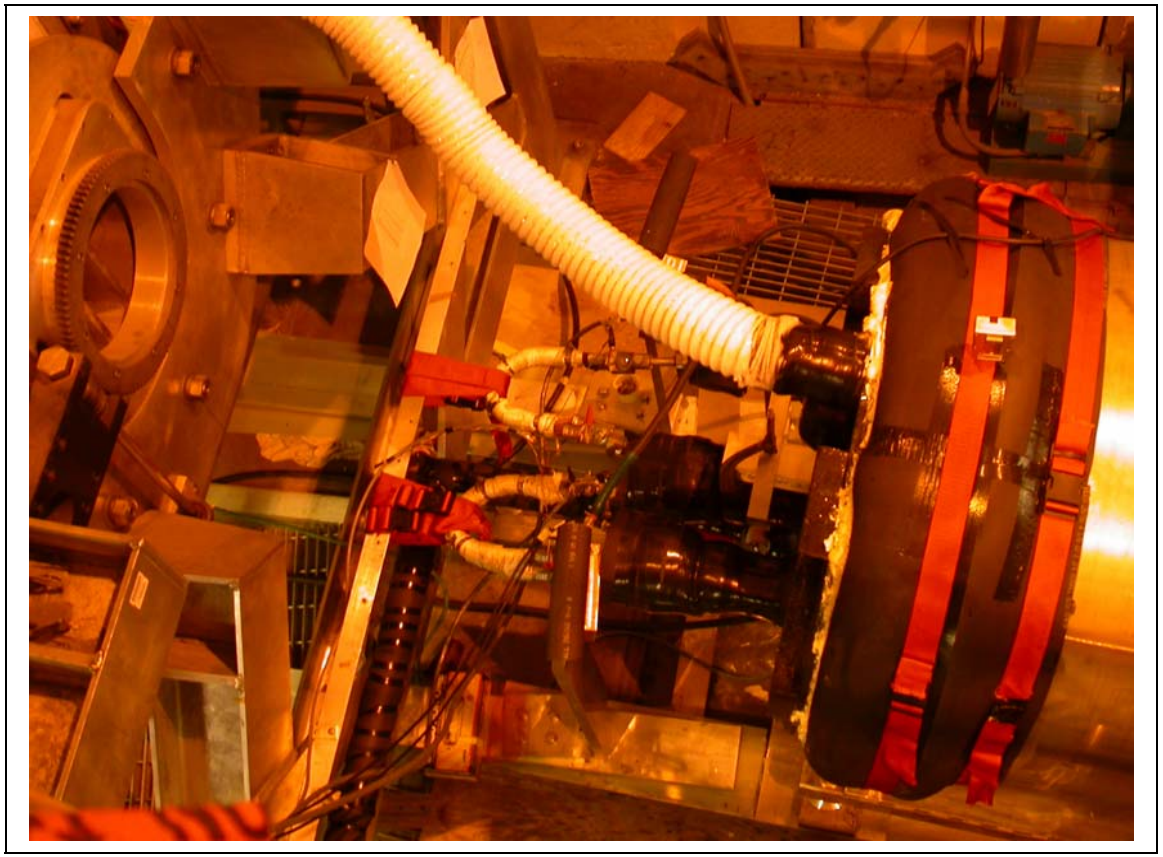


MERIT Magnet Testing Status
Wednesday March 29 2006 VRVS

Peter H. Titus, MIT Plasma Science and Fusion Center
(617) 253 1344, titus@psfc.mit.edu, http://www.psfc.mit.edu/people/titus

Status:

We have done .6 and 1T shots starting from 80K using the higher voltage tap

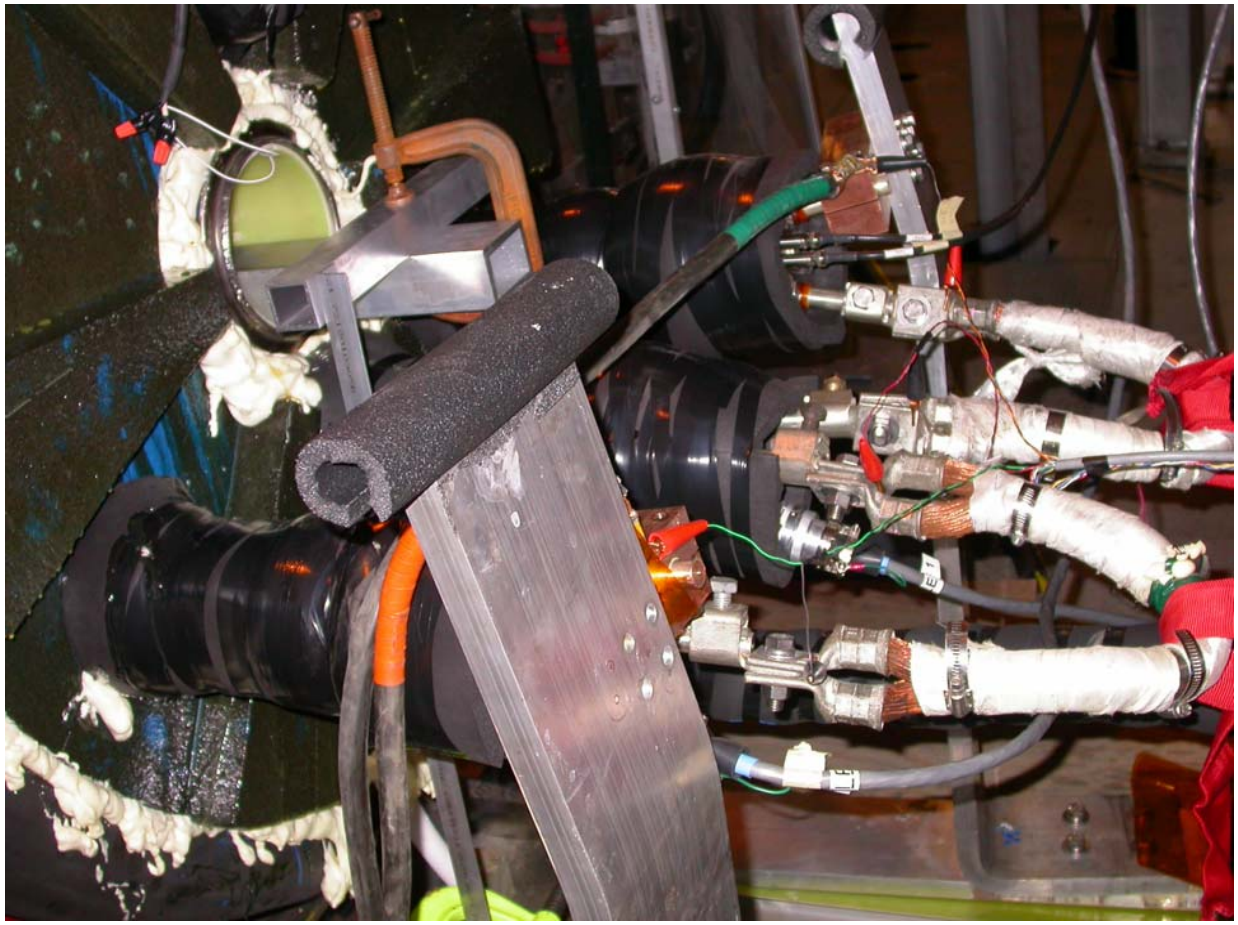
We have cooled the magnet to 80 K Tuesday and This morning.

We plan 3 and 7 T shots today

We have taken a lot of cooldown data. 5 CERNOX are giving data. T1 on the spline tube is working and measured temperatures are consistent with the a higher temp near the bore. We used coil resistances during cooldown to measure temp. – Data reduction still on-going.

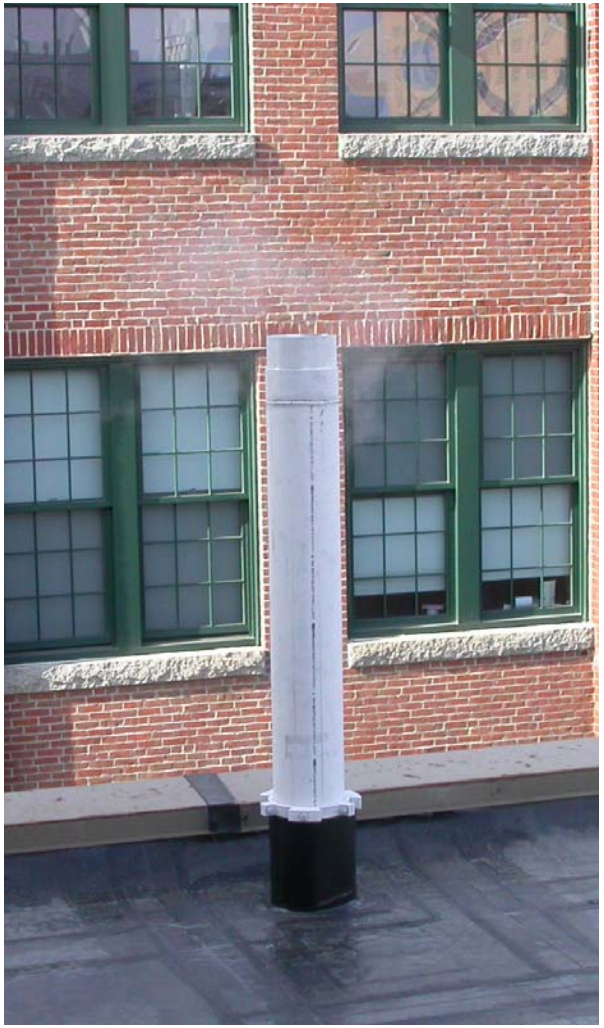
There appears to be a larger heat leak in the bore than the bore heater, which is just positioned at the terminal end, can defrost. We will need bore heaters along the full length.

Cooldown displacements have been recorded.



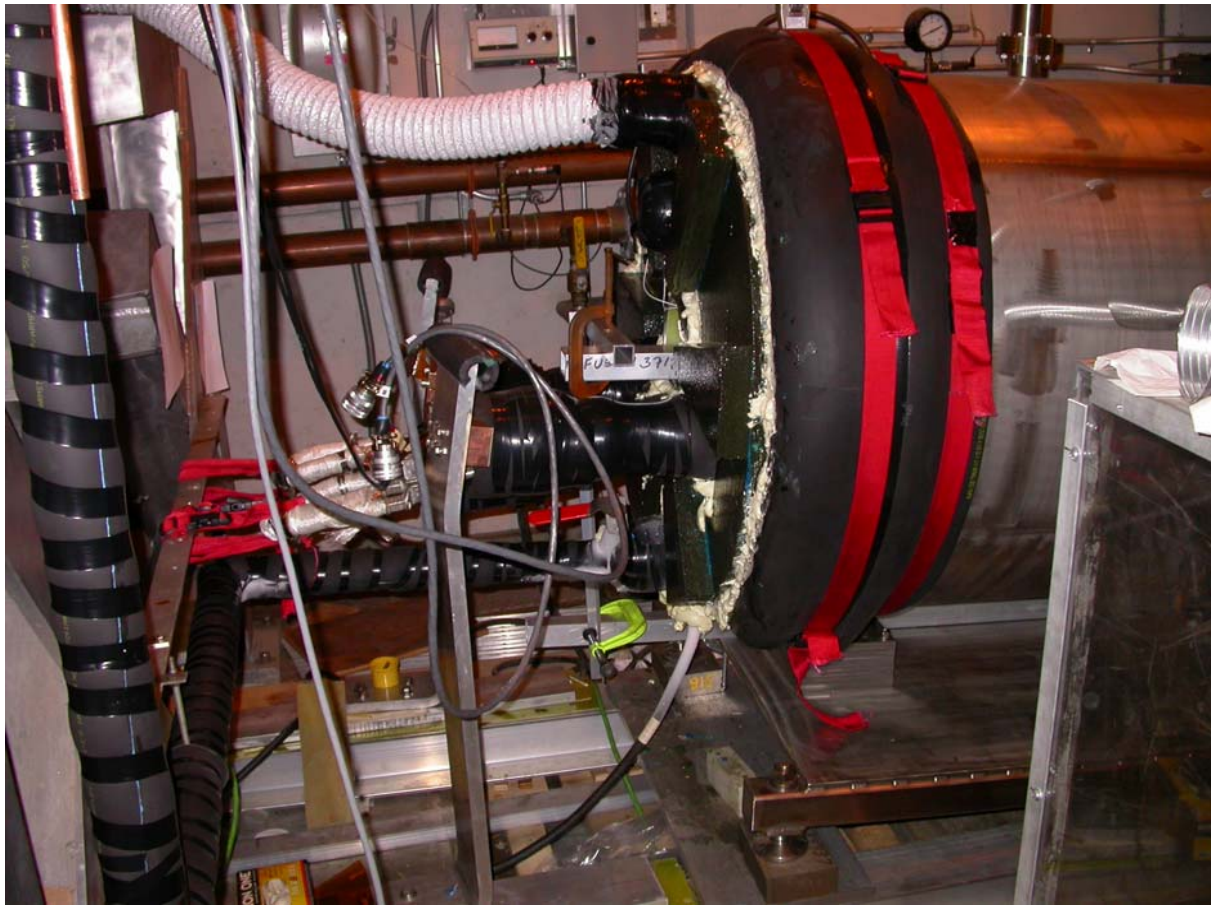
Cooldown displacement fixture and individual segment voltage taps shown

Tuesdays measured magnet constant = .16T/79 amps. Power supply data acquisition has been updated with the measured magnet constant.

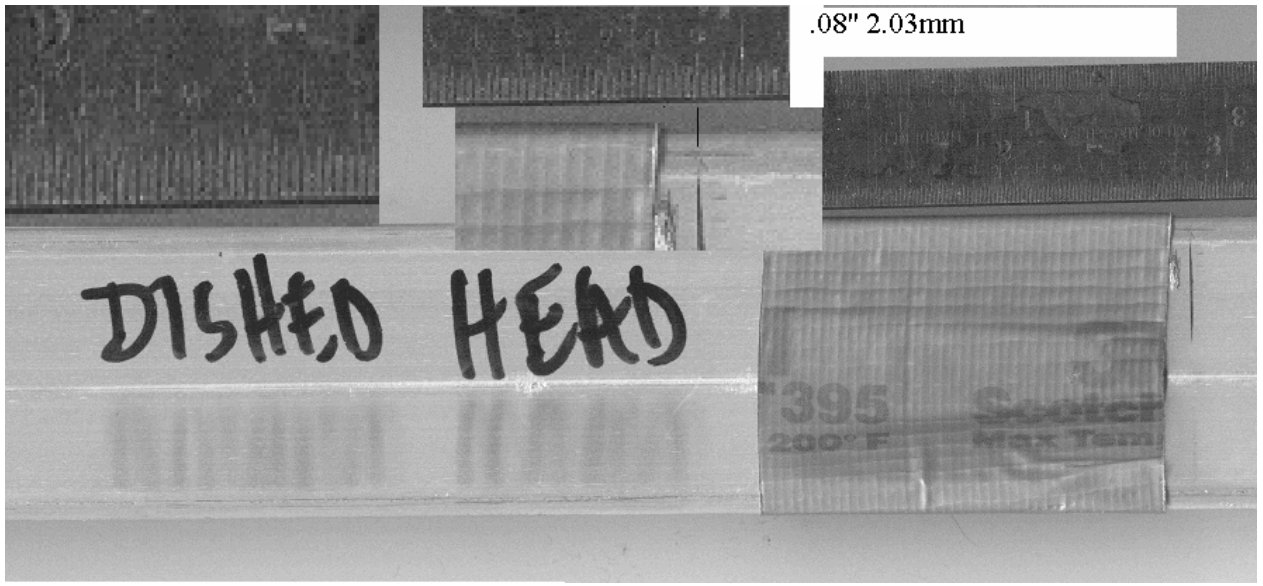


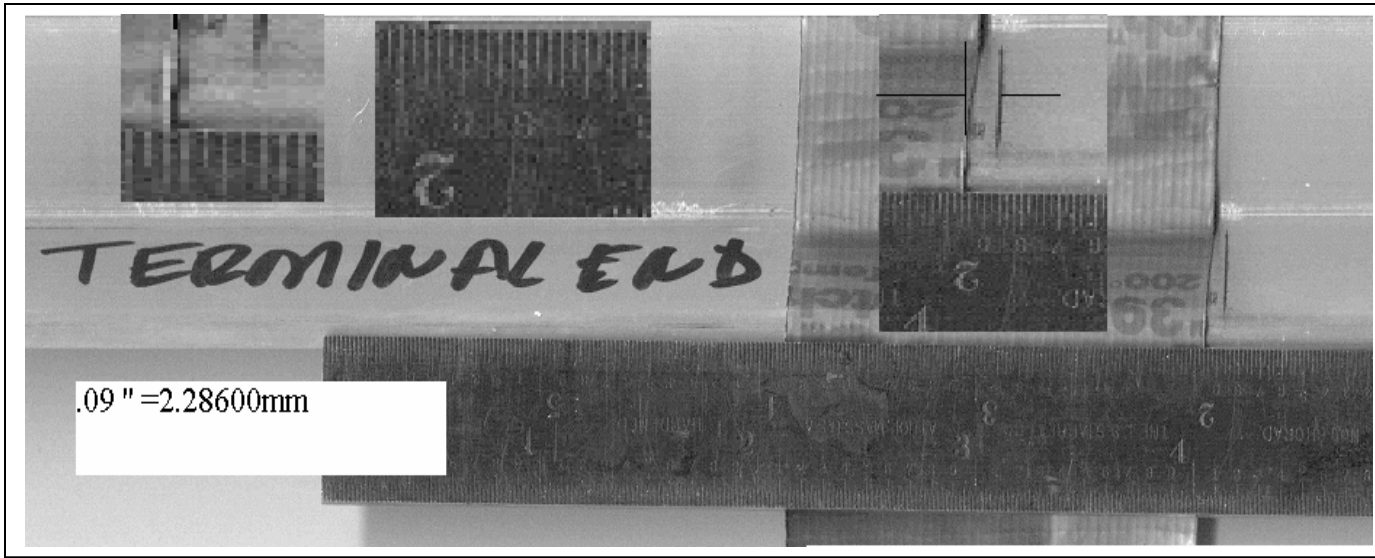
Nitrogen Gas being vented.

The vent pipe warms the N2 gas. It actually takes a while to get cold gas out the vent

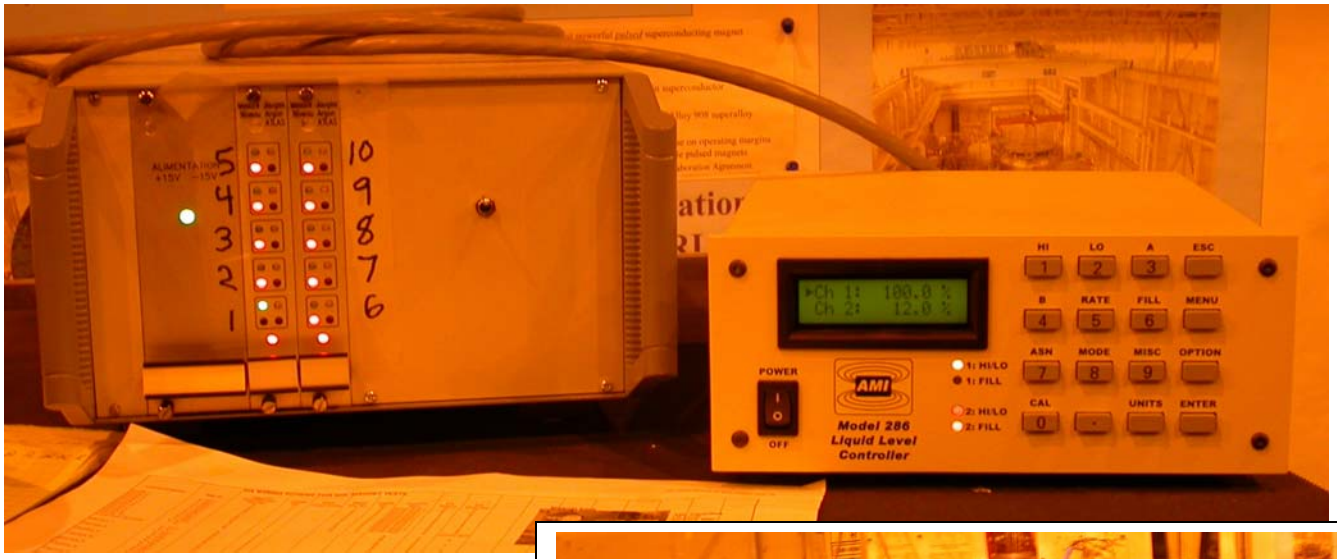


Coolddown Contractions to 80K, Tuesday March 28 2006

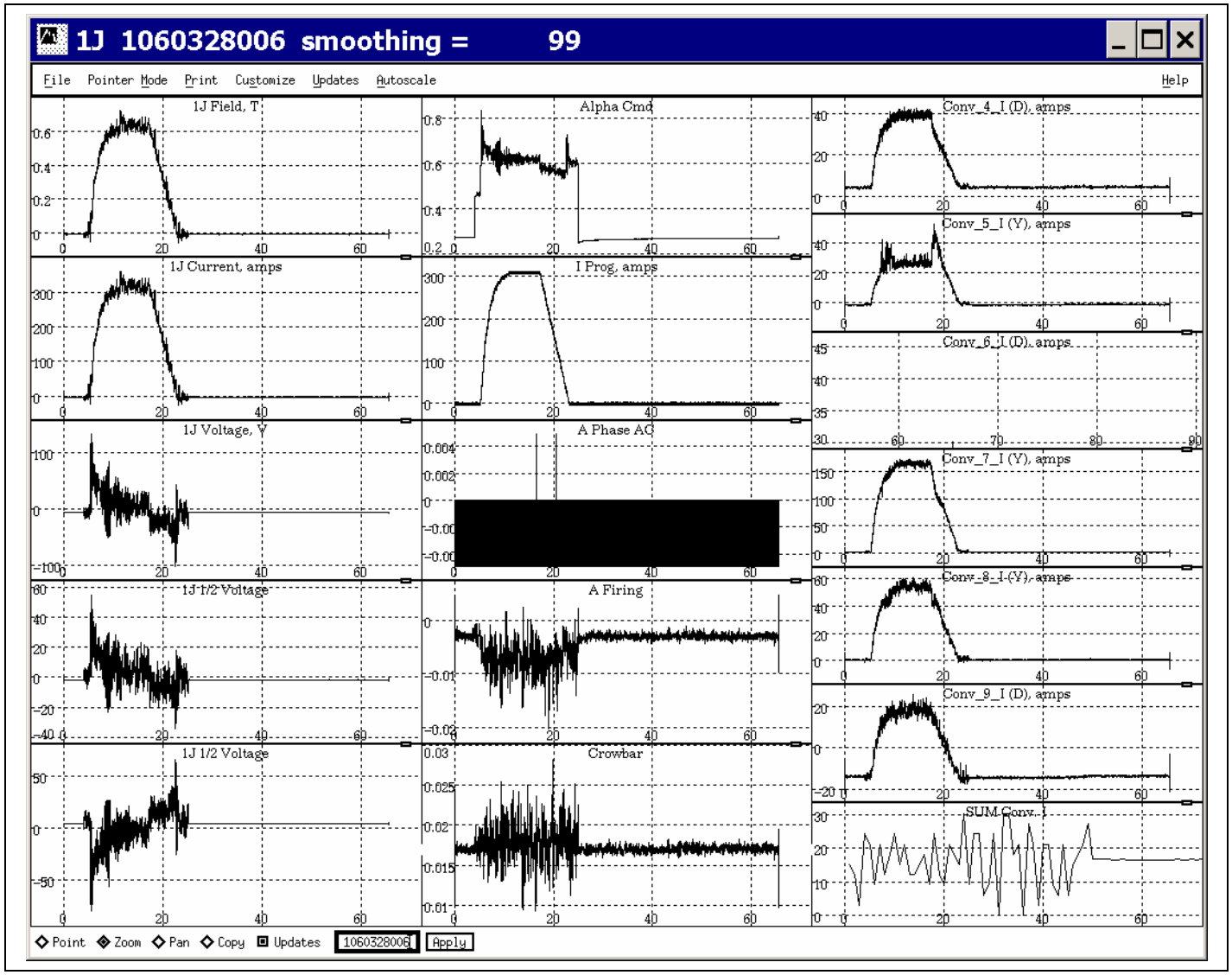




Discrete level sensor is not working. – Only one sensor goes green.- Capacative sensors are fairly reliable qualitative indications of level. Not sure about absolute calibration yet.



.6T 80K start Shot, Tuesday March 28



1 Tesla 80 K start shot Tuesday March 28