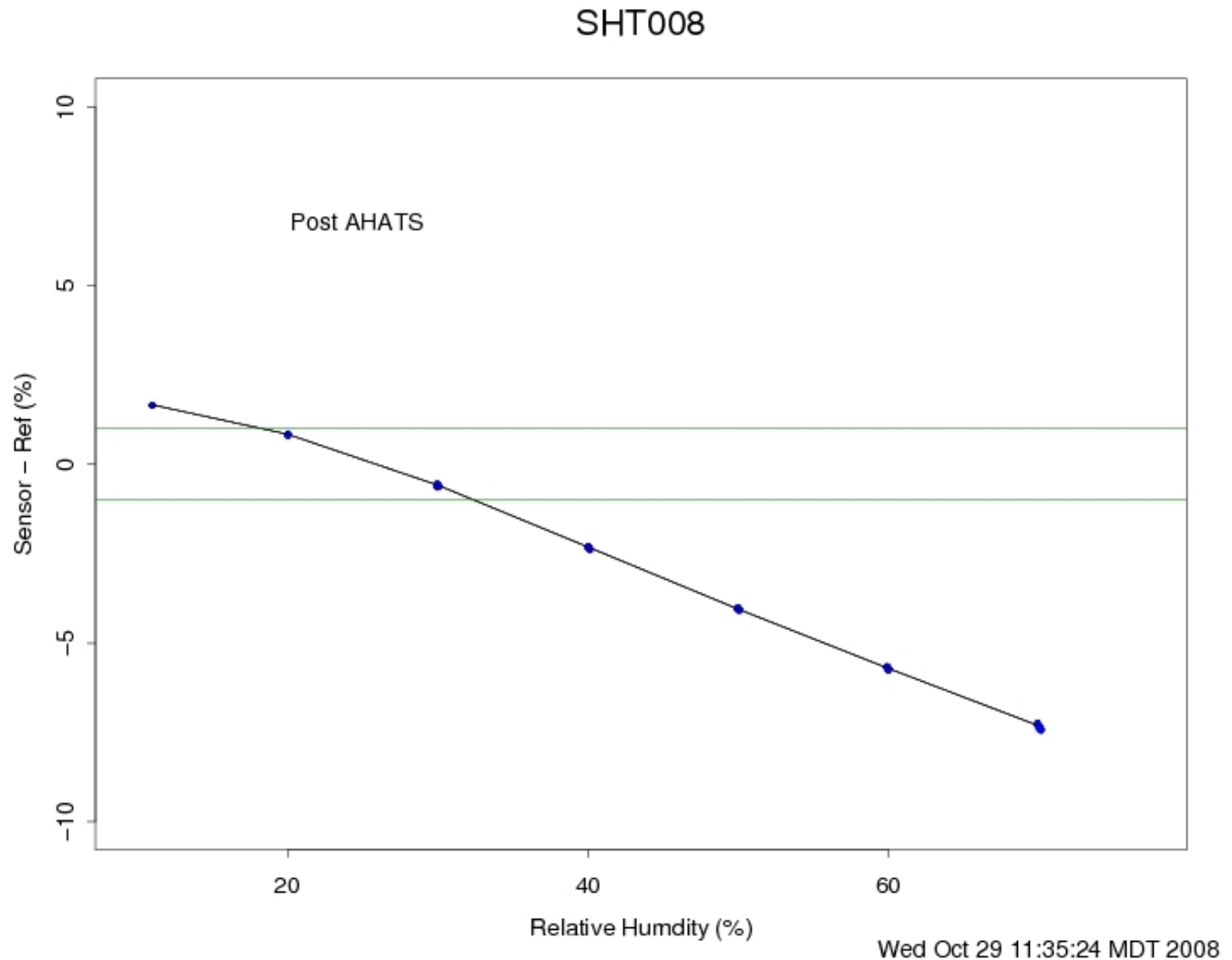


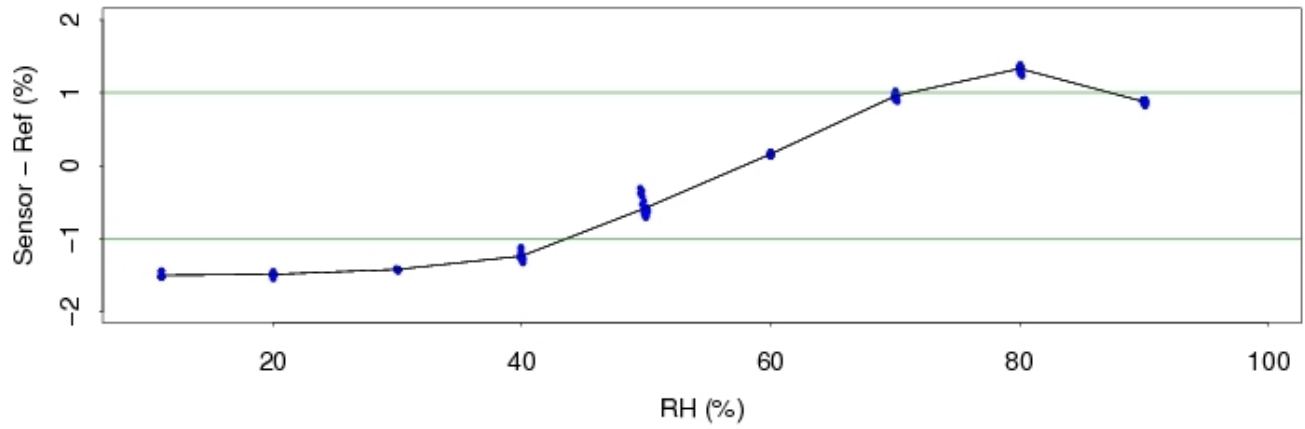
Post cals on temperature and humidity

Post cals were conducted on the SHT probes. Temperature results were within +/- 0.1C. All sensors were within .05C except for sensors SHT001 (error: -.08C) and SHT006 (error: .07C). The humidity is a different story. Over the range of 10% to 90% the average error for all the sensors went from 1% to -8%. The figure below is an example. There was no obvious reason for the change in the calibration. One possibility is the fine dust at the AHATS site.

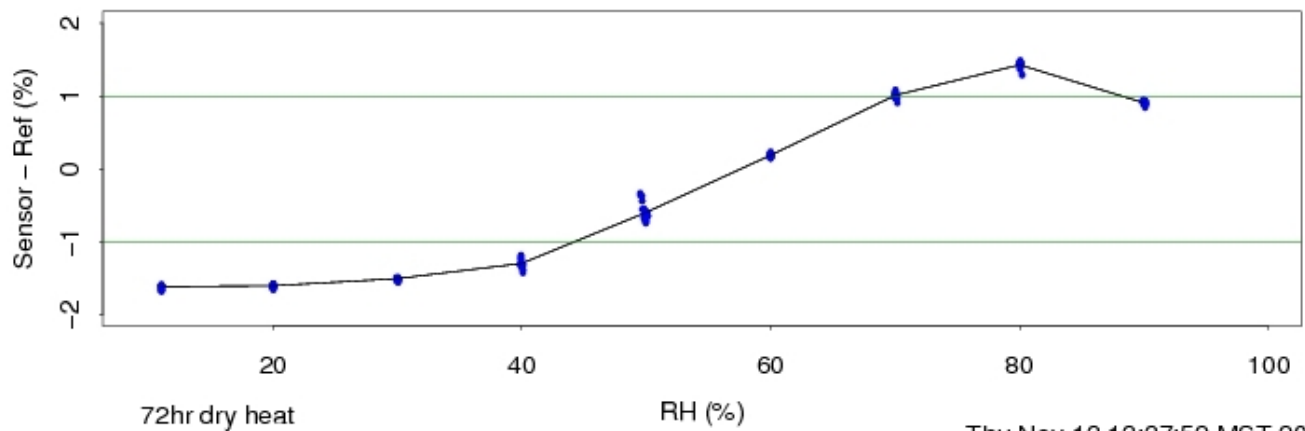


A set of tests were conducted to try and restore the sensors. This was based on information from Sensirion. Two sensors were cleaned with distilled water then baked for 24 hours at 90C. The sensors were then run in the humidity chamber at 25C, 90% for 48 hours. This reduced the error to about -4% at 90%. A second test was conducted using a sonic cleaner before the baking test. This thought was the fine dust was imbedded in the sensor. The results were similar to the previous test. The third test was to similar to the first one except that the sensors were baked at 90C for 72 hours then put in the humidity chamber at 25C, 90 %. The figure below shows the result from this test. Based on this result we will perform the same procedure on the remaining sensors and hope to have similar results. Unfortunately there is no way to determine when the sensors started going bad.

SHT008



SHT004



72hr dry heat

Thu Nov 13 13:37:52 MST 2008