# Scan of piezo drive trigger delay

- **For this timing scan, we picked an amplitude of 7.5V (a little more than required to give minimum rms vibration as identified on a previous plot. We scanned the time delay from 17,5 to 20.5 ms (2.5ms before the rf pulse to 0.5ms after the rf pulse)**

- **Observation is that at the point when the piezo sensor signal rms is minimized (minimum vibration), the cavity detuning across the flat-top is also minimized. (see the next two slides)**

Plot of rms piezo sensor signal vs time during the timing scan

- **This figure shows the rms of the piezo sensor signal over the duration of the scan. The minimum rms value is clearly seen at around 14:29:00**

PIEZO.CONTROLLER/C4.ACC6
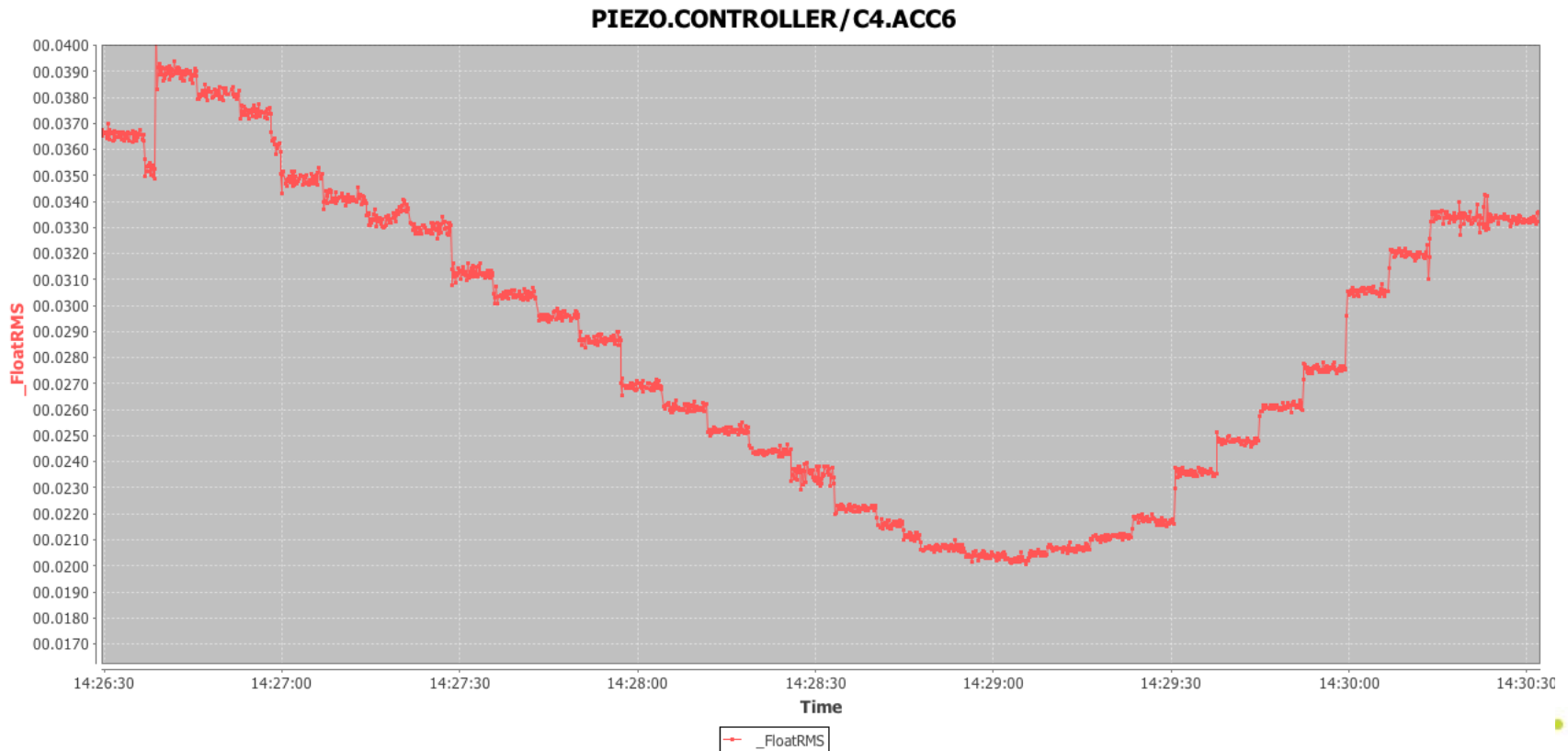
Piezo sensor amplitudes and probe I&Q
(piezo signal shows from 20ms before to 60ms after the rf pulse)

- **This figure shows the piezo sensor signal and the probe I&Q signals for three places in time in the scan, with the middle plot corresponding to the time of the minimum rms piezo signal. One minute before and one minute after the optimum are shown left and right.**