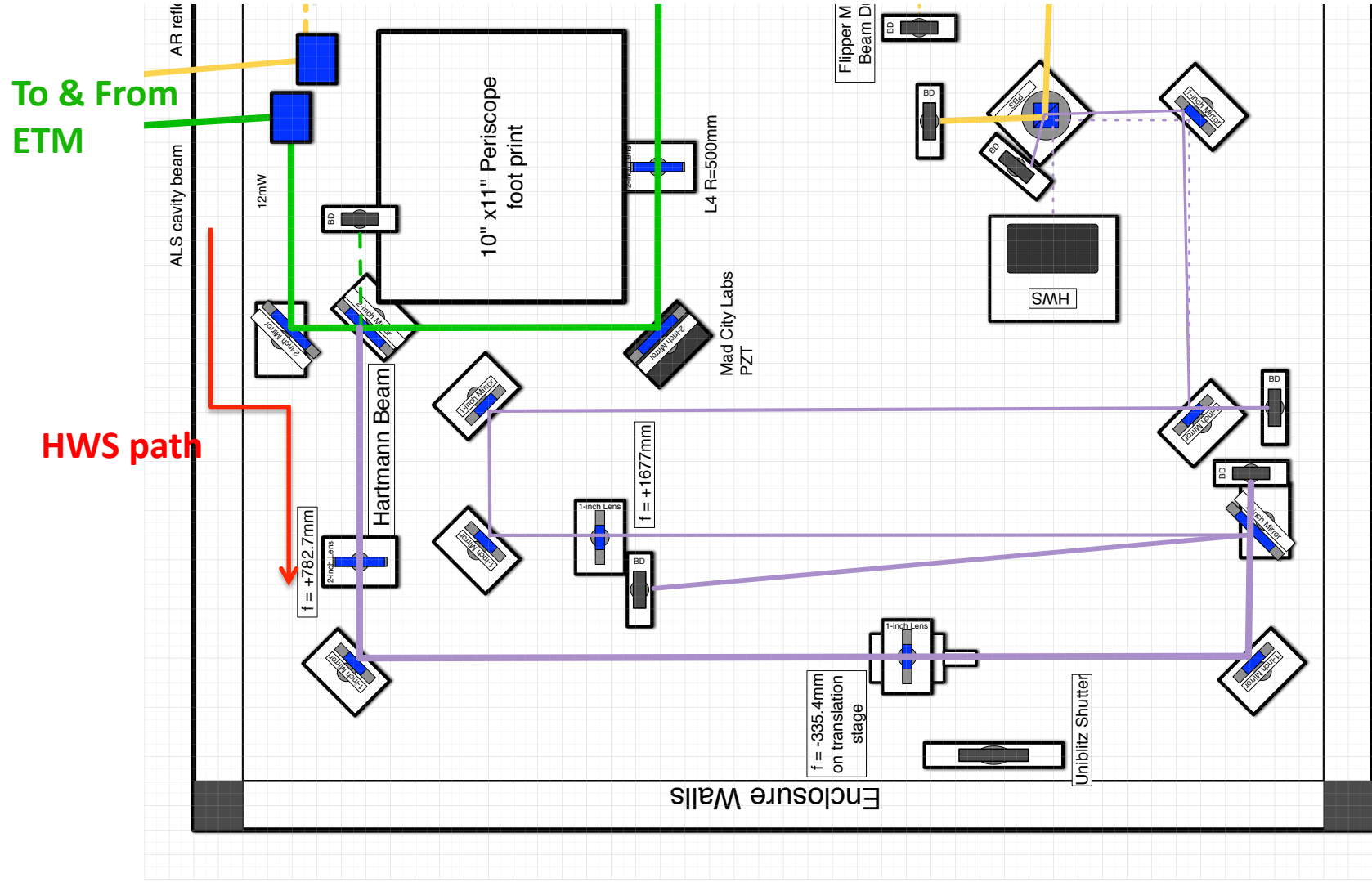


Hartmann sensor OAT update

July 18th 2012

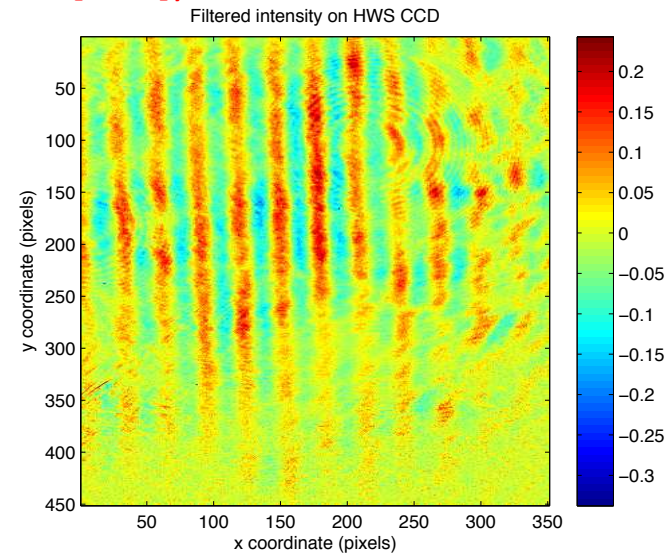
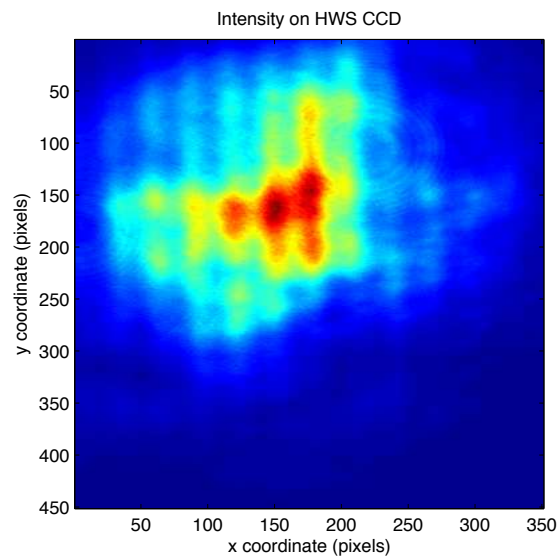
Aidan Brooks

Installation

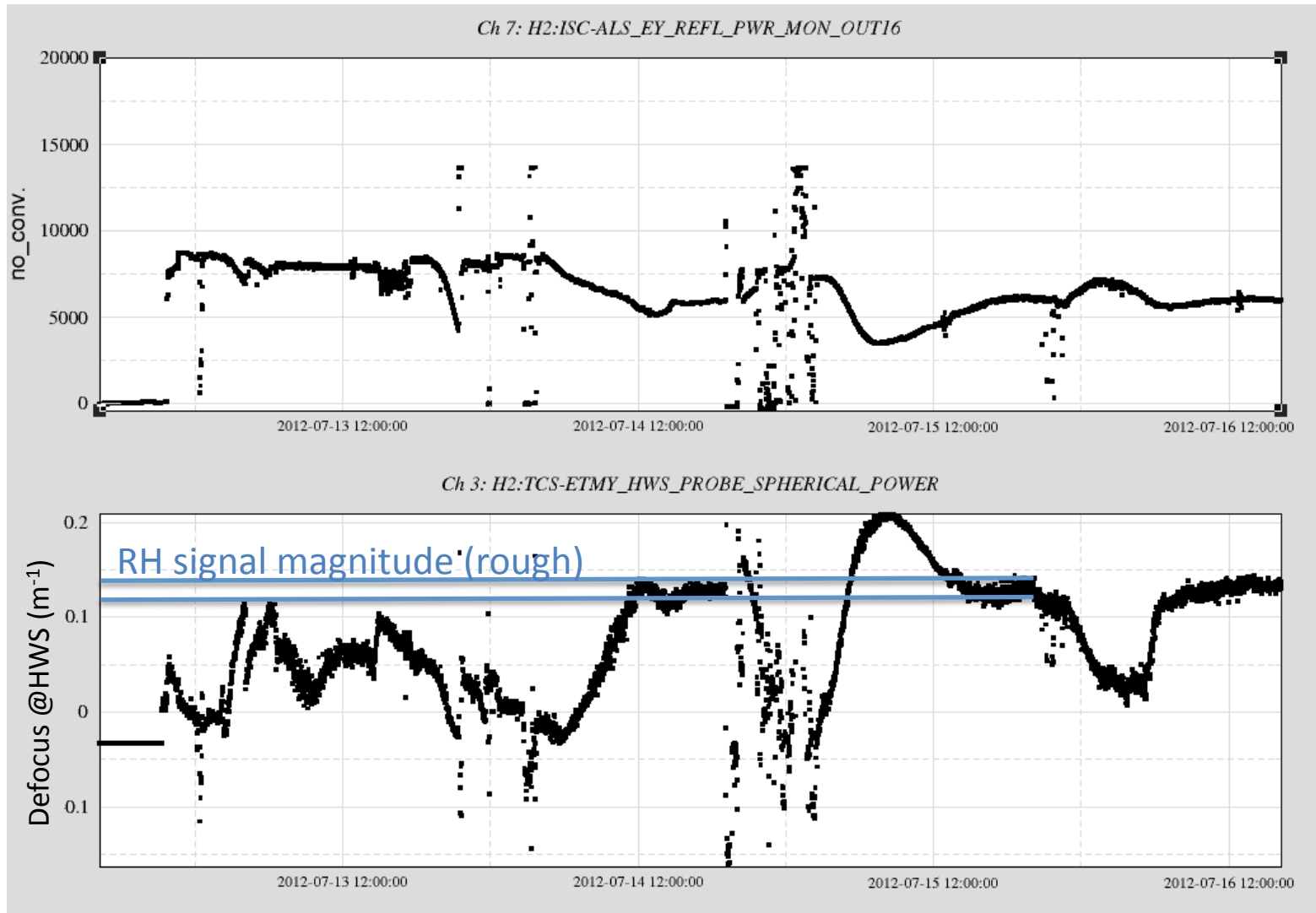


Intensity variations on HWS beam

Fringes!! – source unknown (although we have candidates [PBS])

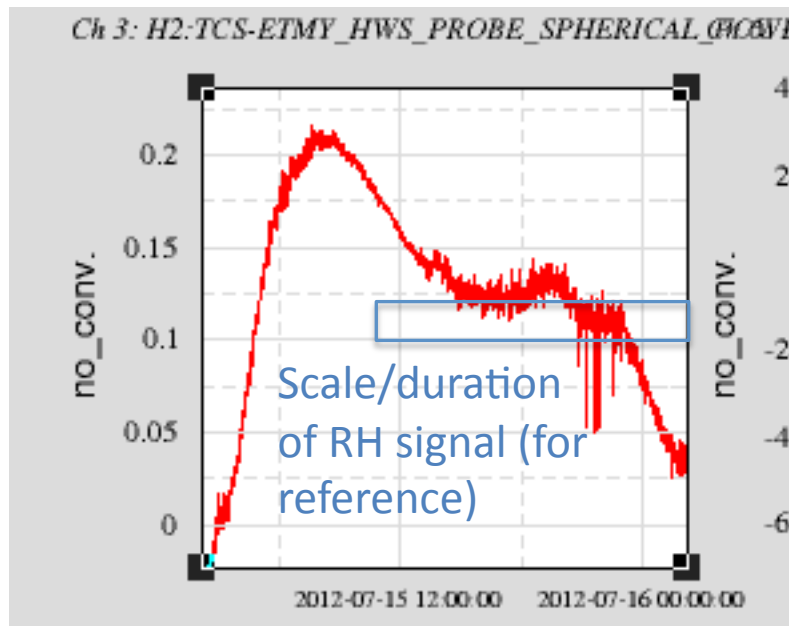


Coupling between lock and HWS spherical power

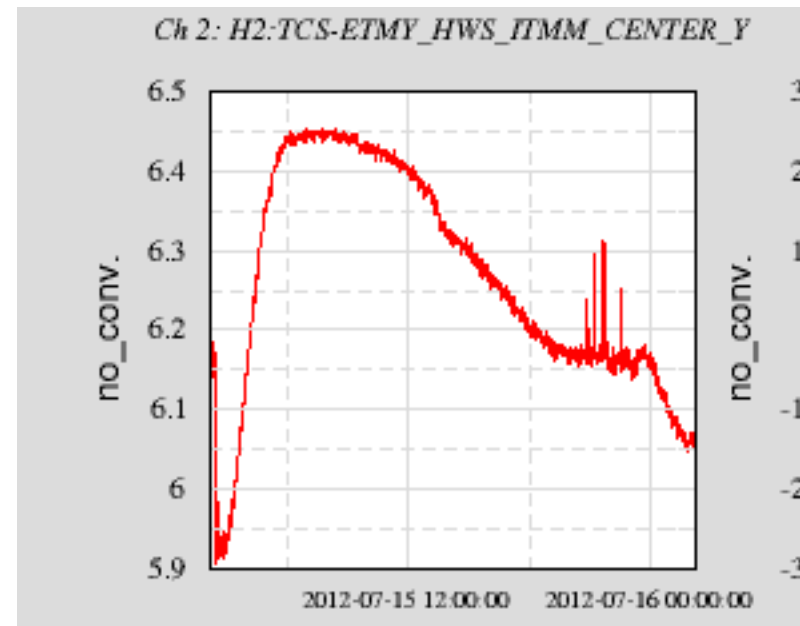


Coupling between alignment and HWS spherical power

- Coupling caused by spatial intensity variations (fringes) on HWS beam



Spherical power (m^{-1})

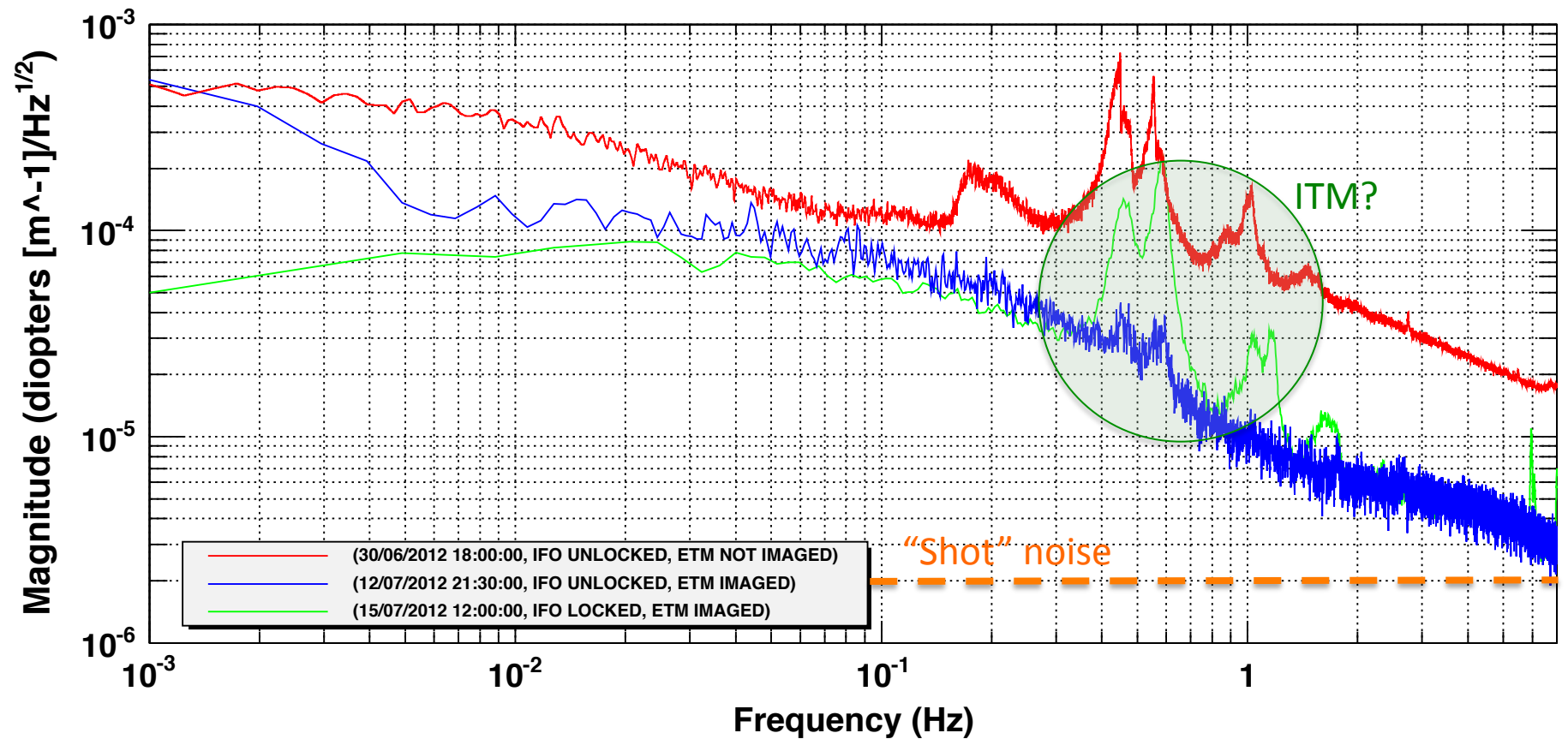


Beam position (mm)

Noise spectra

before and after imaging ETM onto HWS

H2:TCS-ETMY_HWS_PROBE_SPHERICAL_POWER (referenced to ETM) commissioning



Target sensitivity

- Defocus sensitivity target $<10^{-5} \text{ m}^{-1}$ at 3 hours
- Ring heater signal size: order of $5 \cdot 10^{-5} \text{ m}^{-1}$
- Time constant: 3-4 hours
- So... we can average many samples and reduce measurement frequency.
- Also: look at cleaning up beam!