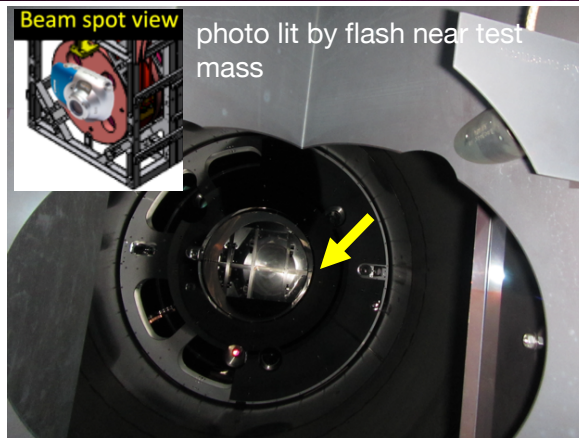
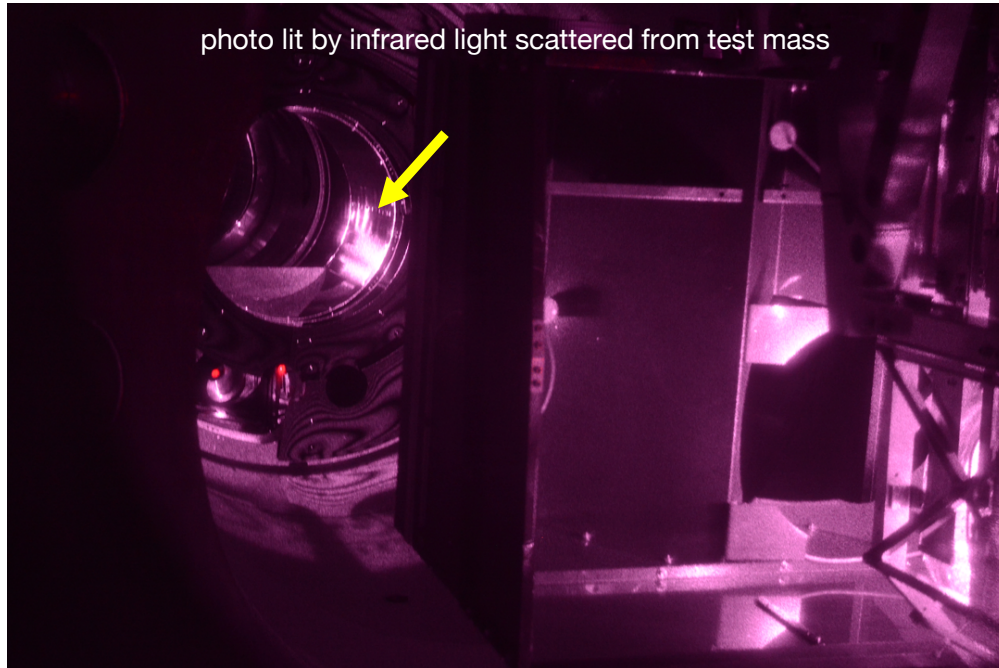


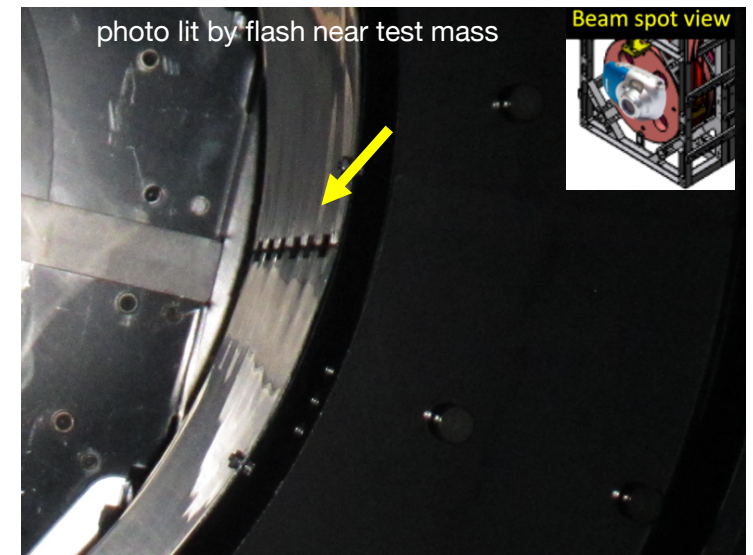
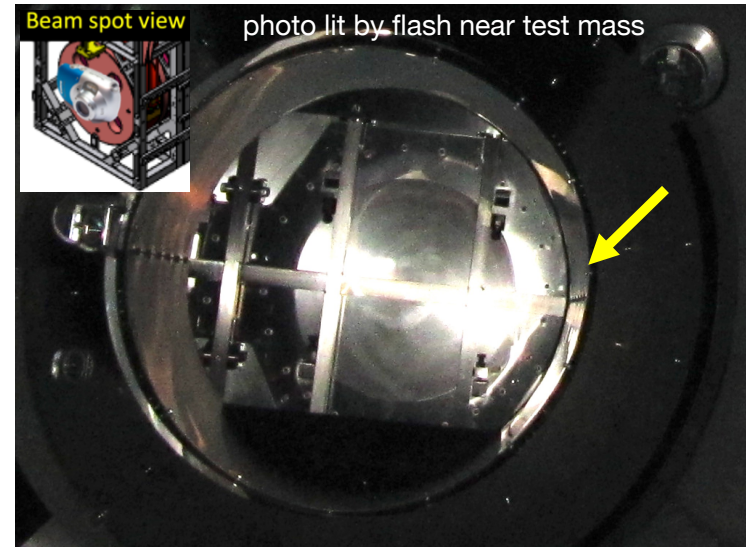
## Cryo-baffle barrel may be the source of >1Hz coupling at EY

The side of the barrel is brightly lit and can be "seen" from the test mass (yellow arrows). Also, it flashes during impulse injections :

<https://youtu.be/ZSNVuvWRpIO>



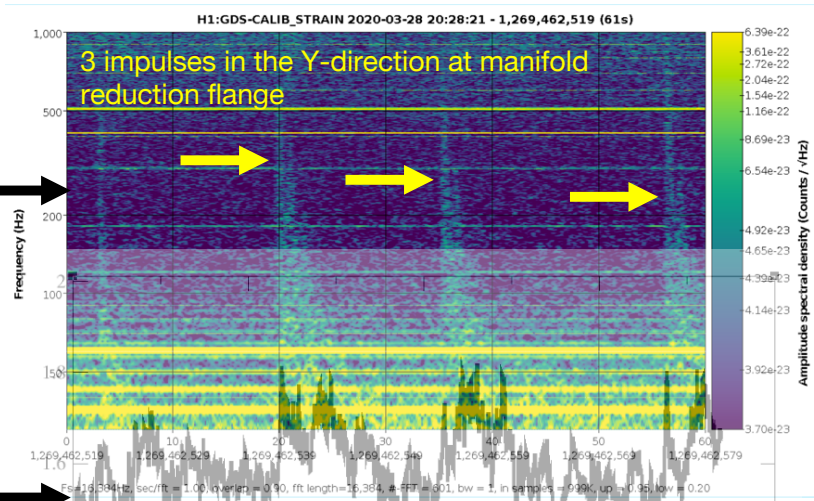
From the point of view of ETMY, you can see the lit part of the barrel even with version one of the P-Cal baffle



**Can we extend the P-cal baffle to cover the barrel without clipping problems? We should at least plan to damp the barrel better.**

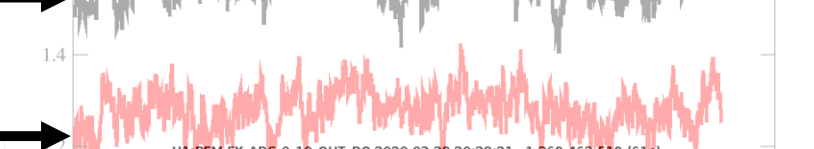
**Modulation of light from cryo-baffle barrel in movies correlates with impulse injections and persists for a similar length of time as the signal in DARM (longer than the signal in enclosure accelerometers). This is consistent with the barrel being a source of DARM noise.**

Spectrogram showing impulses in DARM.....

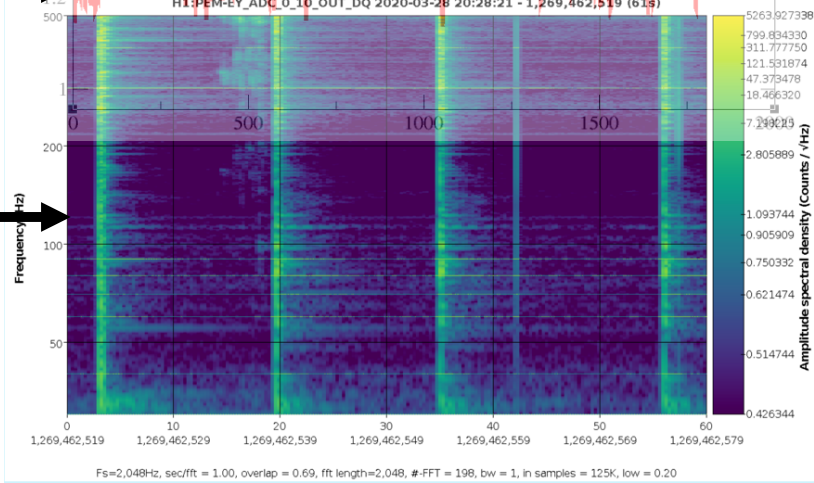


Time series of pixel standard deviations in synchronized movie:

**Barrel of Cryobaffle;** notice that greater modulation of light from the barrel (larger standard deviations) persists for a long time (though I couldn't get a Q measurement), similar to the persistence in DARM but longer than the accelerometer below.....



**Control region – ACB,** controls for camera movement etc. The standard deviation does not increase greatly with impulses.....



Spectrogram of enclosure wall accelerometer showing impulses.....