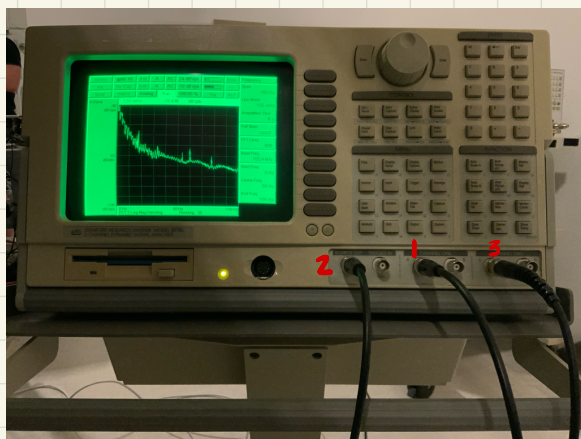


Digital vs. Analog DARM PSD comparisons

(3/15/2024)

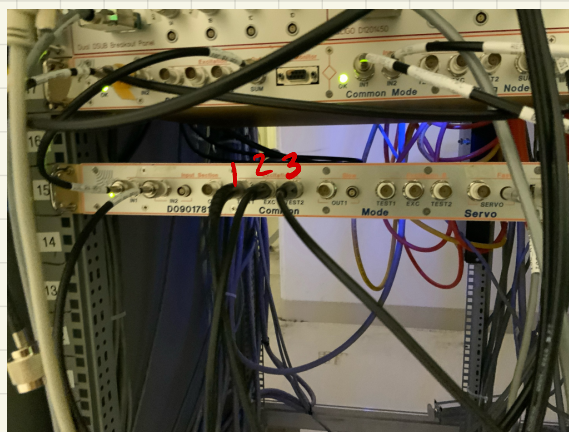
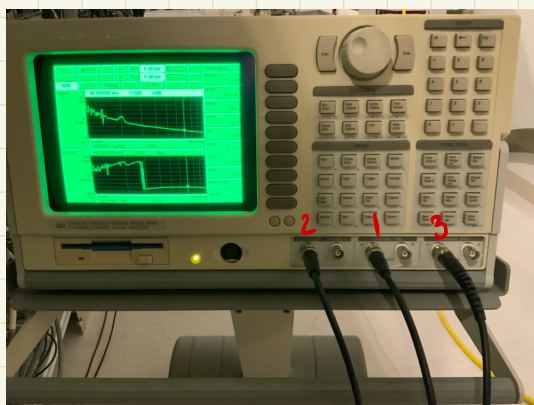
- ❑ Analog was taken from SR785 at PSL rack
- ❑ Digital DARM is calibrated and written to nds HI: OMC-PI-DCPD-64KHZ-AHF-DQ
↳ is digital calibrated into meters?

❑ Measurements: **IMC OLG (3/15/24 - 15:17 PST)**
Transfer Function



Excitation Amp: ~~3 mV~~, ~~30 mV~~, 100 mV ✓ Spon: 10 kHz - 102 kHz
Excitation Channel: IMC Mode Servo - Common Path excitation A
* closed 15:41 PST *

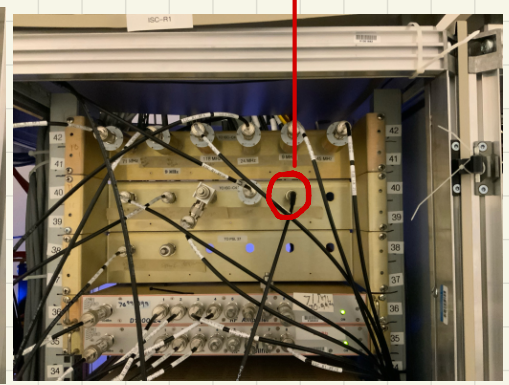
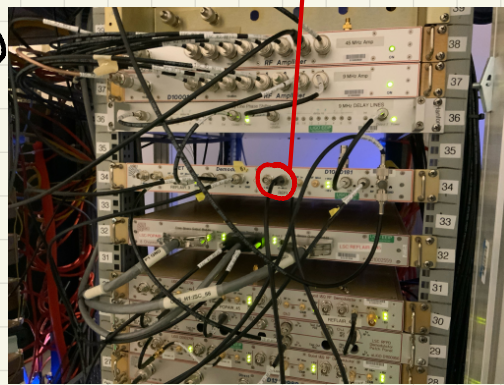
CARM measurement: (15:43 PST)



Excitation Amp: ~~3 mV~~, ~~30 mV~~, 100 mV ✓ Spon: 10 kHz - 102 kHz
Excitation Channel: Common Mode Servo - Common Path excitation A
* closed 15:47 PST *

Reference PSDs

- Got PSDs (16:00 PST)
- Displayed on SR785 for reference to broadband HF injection to CARM



* Injecting 16:17 PST to CARM *

Excitation Amp: 600 mV
Span: 50 kHz to 100 kHz

* Closed at 16:36 PST *

CARM to DARM : Span 1 kHz - 52 kHz : Exc Amp: 300 mV

Injection: IFO common mode servo exc A: start: 17:54 PST
end: 18:00 PST

10000 Averages

Reference PSDs no exc: RefL9-I, OMC-DCPD

Data Taken

OMC/REFL9 coherence
carm to darm tf-s
REFL9 psd
OMC psd
OMC-REFL CSD

1 mV : no change
100 mV : refl changing slightly
300 mV : DARM changing 7-10e-18

17:55 PST
17:56 PST
17:58 PST

Measurement:

OMC-DCPD
exc-back to itself

Span: 1 kHz - 52 kHz

Start: 18:13 PST
end: 18:16 PST

Exc: 100 mV
300 mV

Data Taken

OMC/exc coherence
OMC/exc TF
OMC 2 psd

No reference psds

Args: 10000

Measurement: Loop suppression to CARM

Exc: 300 mV

span: 1 kHz - 52 kHz

start: 18:24 PST
end: 18:32 PST

Avg: 1000

Exc channel: test 2, test 1