

# Intensity Noise Measurement of the 400 mW SRM CO<sub>2</sub> Laser

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January 24, 2018

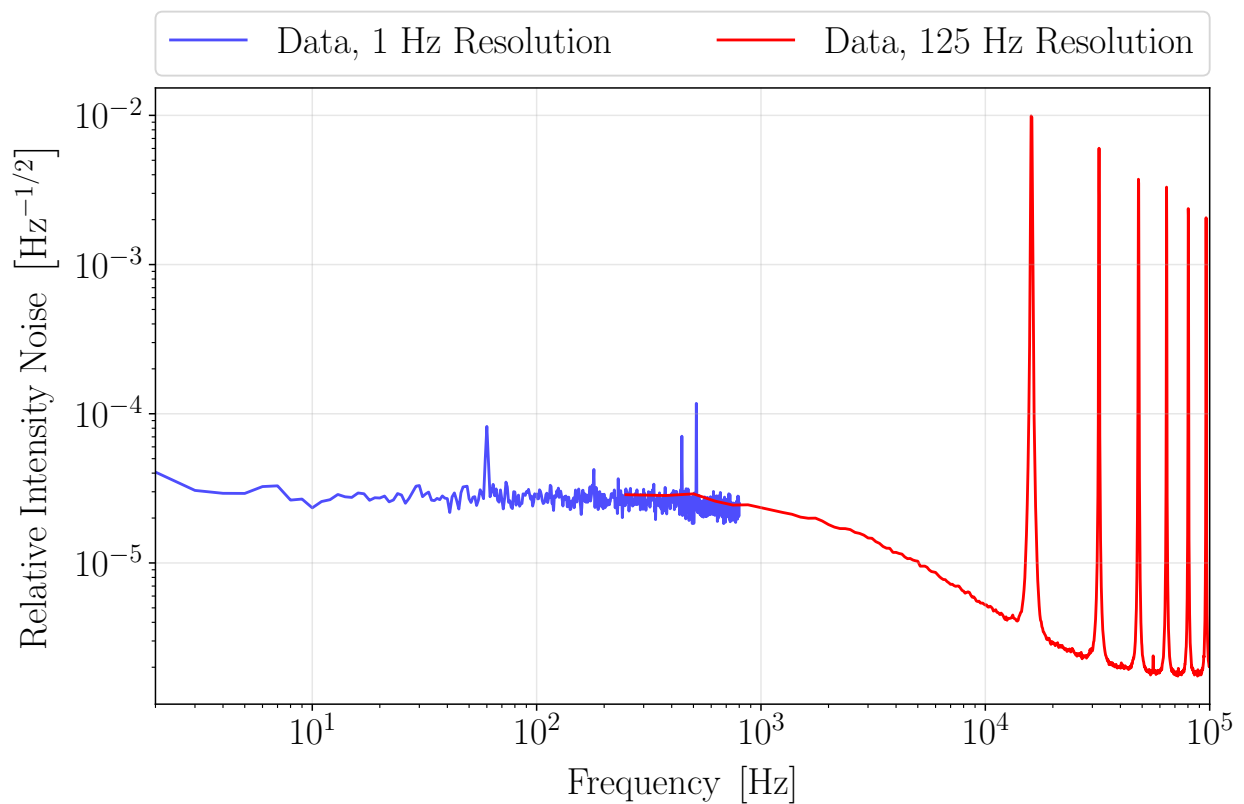


Figure 1: Relative intensity noise (RIN) measurements of the 10.2  $\mu\text{m}$  adjustable-power Access Laser Company RF4 CO<sub>2</sub> laser. The measurement is performed at a laser output power of  $\sim 50$  mW, which is attenuated to 10 mW and focused onto a TCS CO2P broadband photoreceiver.

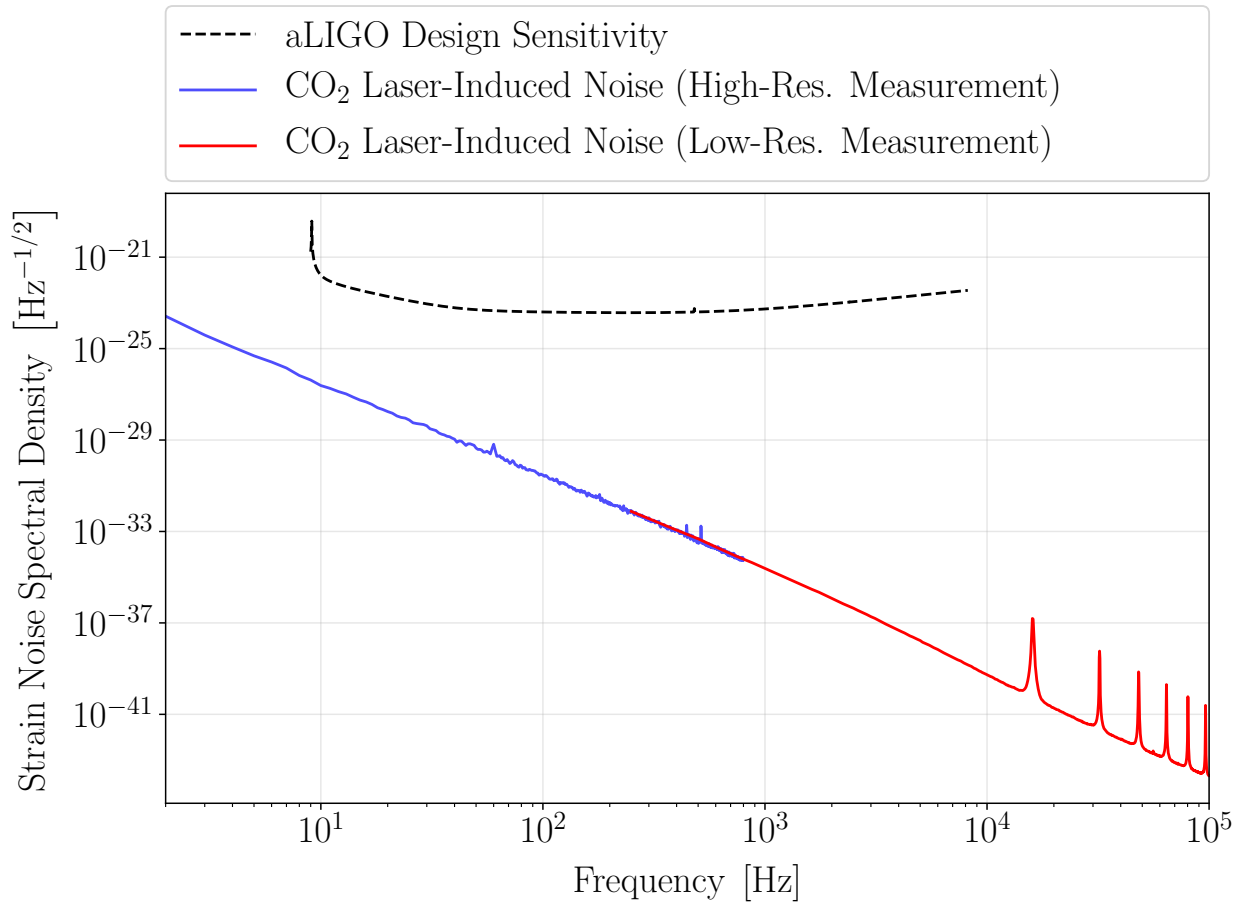


Figure 2: DARM coupling of the CO<sub>2</sub> laser intensity noise via radiation-pressure-induced displacements of the SRM. The measured SRM-to-DARM displacement coupling is reported in p. 49 of the E. Hall thesis. The above assumes a 0° detuning of the signal recycling cavity.