

Experiments and Modeling

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Shot Noise

- **Gravitational Wave sensitivity: MZ and asymmetry scheme identical to within about 5% for reasonable values of parameters such as loss and contrast defect.**
Note: one possible exception revealed by recent modeling.
- **Michelson Near Mirror difference signal: No strong argument here for choice of auxiliary sensing scheme.**
Shot noise level not well established; importance of this noise depends on loop shape and ability to subtract noise out of Gravitational Wave signal.
- **shot noise in remaining two degrees of freedom to be sufficiently low to be unimportant**

Low- and High-Frequency Response

Asymmetry Scheme

- **Low frequency: simple computer model verified in coupled-cavity experiment and by comparison to analytic calculations, and partially tested (one input-output pair) in full interferometer.**
- **High frequency: no experimental tests. Computer model agrees accurately with low frequency model and qualitatively with analytic calculation.**

Mach-Zehnder / FSSC Scheme

→ J. Giaime continues...