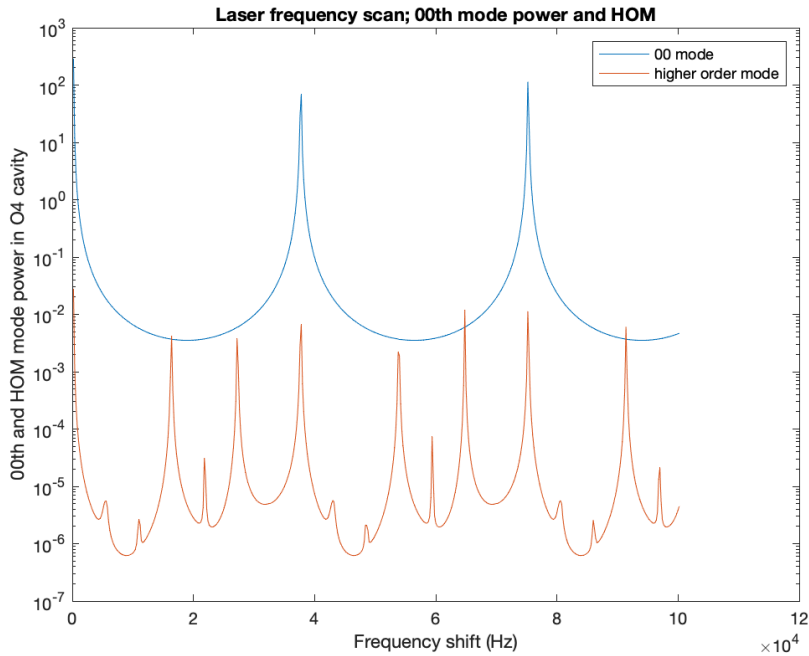
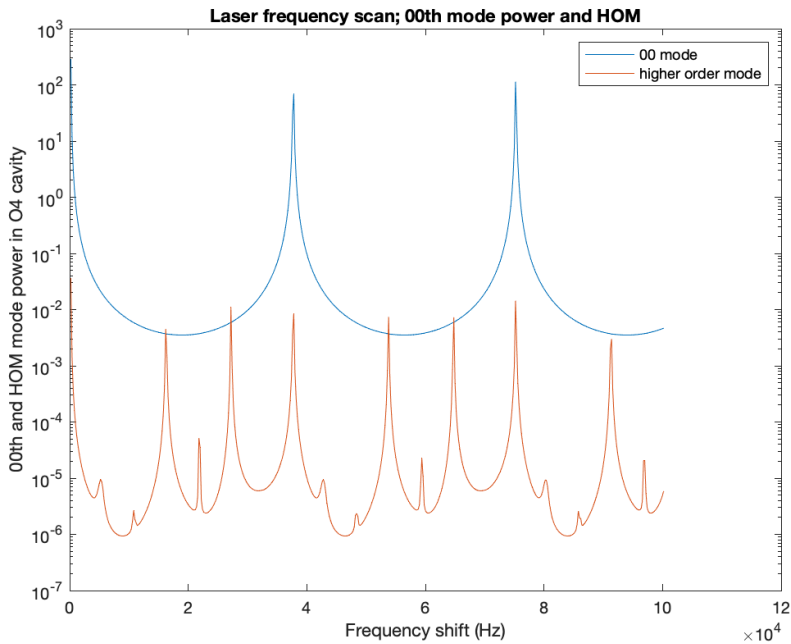


Compared mirrors for O4 with O5. The difference is mostly for ETMS and since O4 LLO uses ETM07 and ETM08 while O5 potentially uses ETM07, 08, and 12, graphs or scans with ETM07, 08, and 12 are shown.

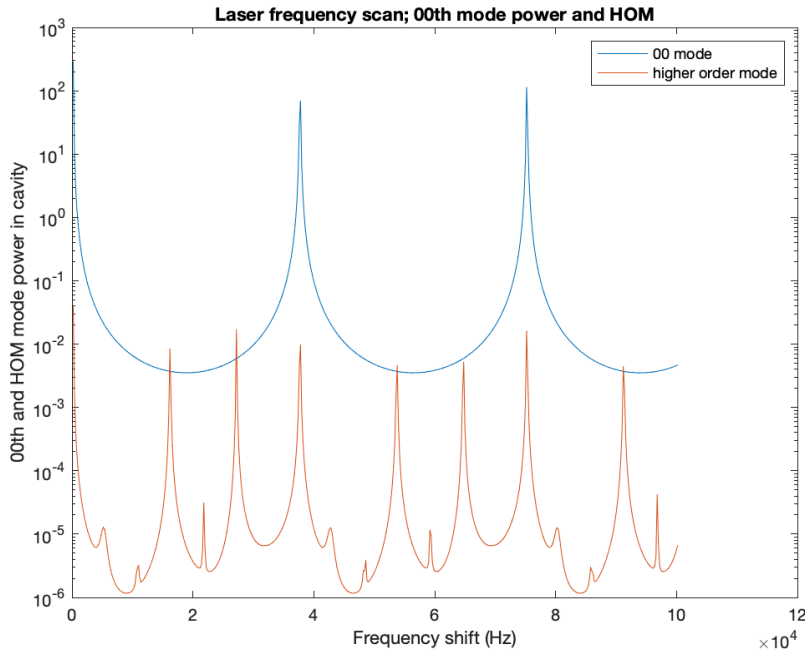
ETM07:



ETM08:



ETM12:



Breakdowns of 0-10 order mode using these mirrors:

ETM07:

<https://docs.google.com/presentation/d/1vV39MfnBv8KZNMuvdxBRWhwLiPCSidXR--Ss916JNjA/edit?usp=sharing>

ETM08

[https://docs.google.com/presentation/d/1HmZAO3CLYqE9ZXke-qBthjsCuoLMmelZQwNiQ\\_wD4aU/edit?usp=sharing](https://docs.google.com/presentation/d/1HmZAO3CLYqE9ZXke-qBthjsCuoLMmelZQwNiQ_wD4aU/edit?usp=sharing)

ETM12

[https://docs.google.com/presentation/d/1AkXhvXmoUj7fhaEU\\_A9Lgmh09a6DO6nxZkBeBjM0KNQ/edit?usp=sharing](https://docs.google.com/presentation/d/1AkXhvXmoUj7fhaEU_A9Lgmh09a6DO6nxZkBeBjM0KNQ/edit?usp=sharing)

In conclusion, the mirror for O4 and O5 isn't very different, the only potential mirror O5 uses that is different from O4, ETM12, exhibits similar patterns with other mirrors and it just seemed to have slightly different distribution for high order modes.

### Coupled Cavity

Arm scans assuming only the length between ITM and ETM is changed

