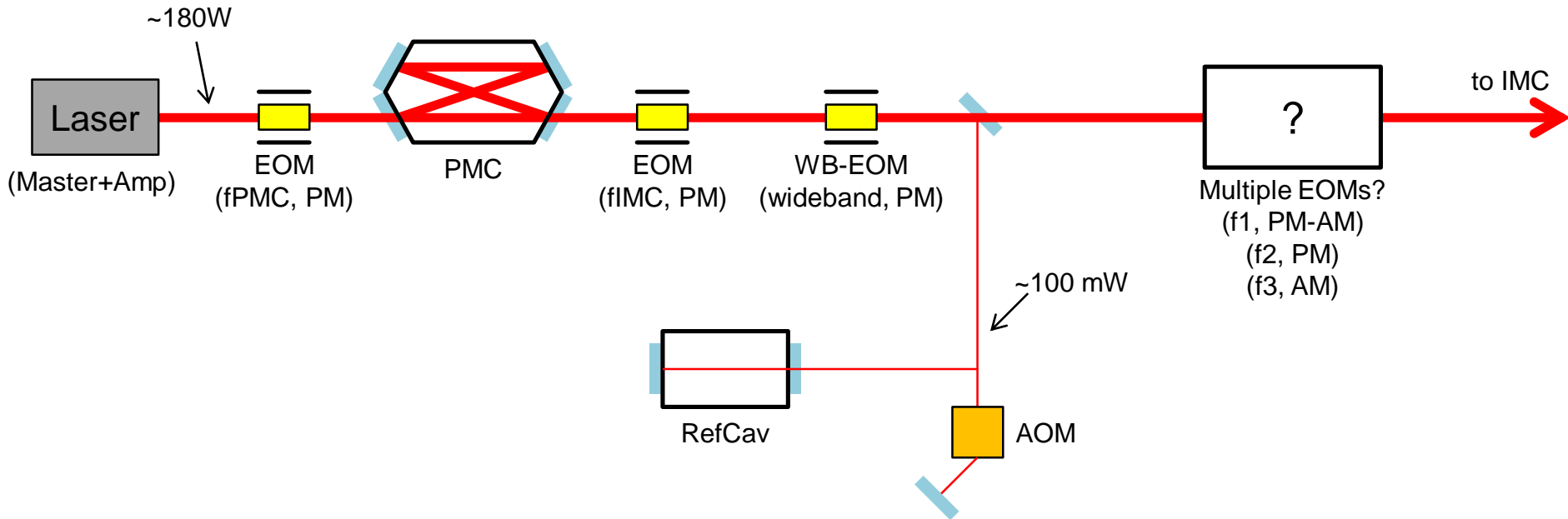


bKAGRA PSL EOM Layout



- Modulation frequencies and requirements for modulations

JGW/wiki/MIFIOOInterfaces

- Abbreviations

EOM: electro-optic modulator

PM: phase modulation

AM: amplitude modulation

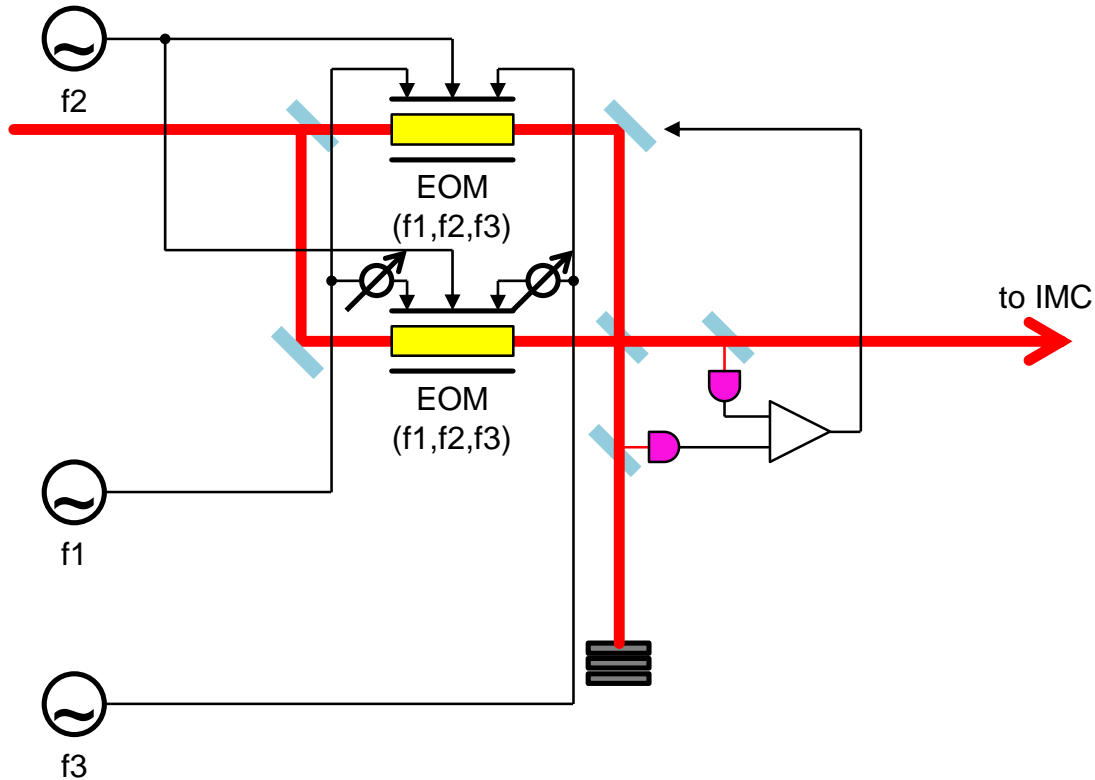
WB: wideband

Requirements for f1, f2, f3

- f1 PM and AM (ratio should be adjusted with respect to detuning)
- f2 PM only
- f3 AM only (turned off once the IFO is locked)
- Series modulation is OK
- Detailed requirements are summarized in JGWwiki/MIFIOOInterfaces

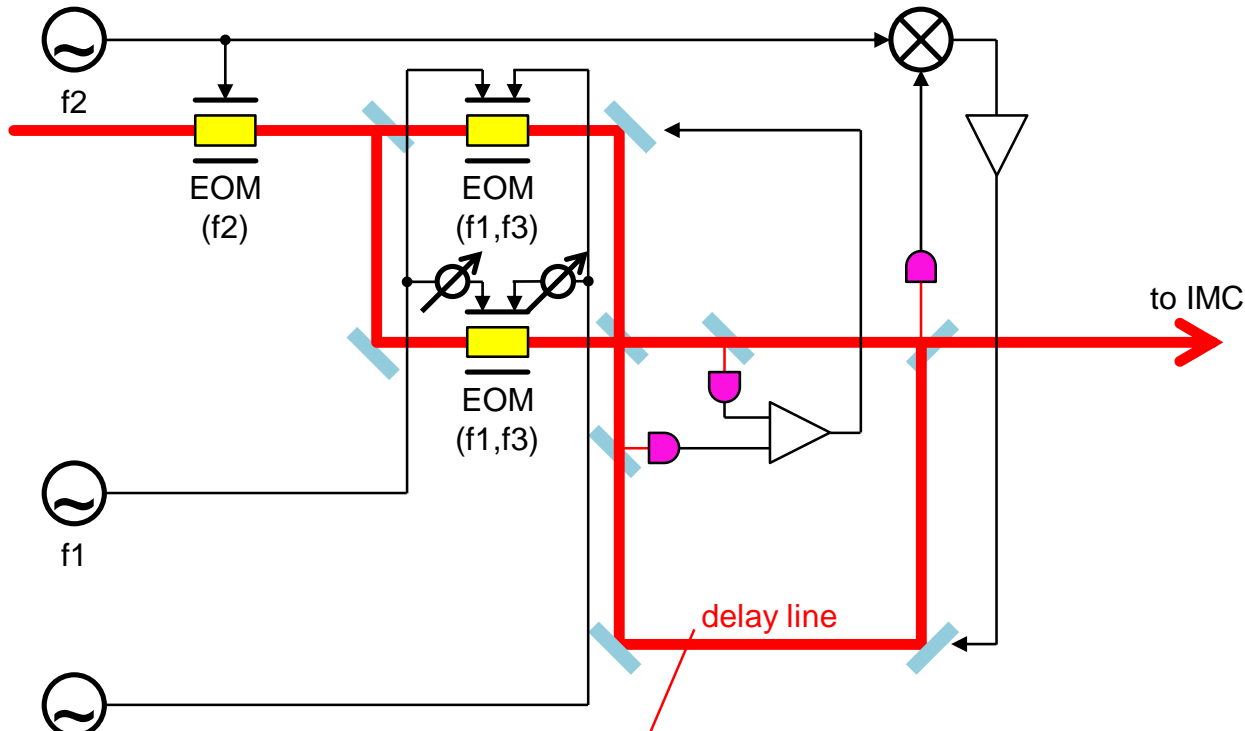
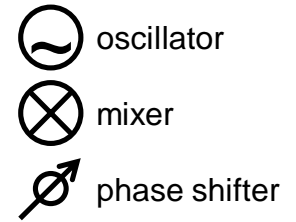
Layout 1

- Simple but lose half the power



Layout 3

- Simpler, but loses some f3 AM



f1 = 16.880962 MHz
→ $17.76 \cdot 1/2 = 8.88 \text{ m}$

→ **2.66 m**

(see [JGW-T1706748](#))

Layout 3.5



- Possible configuration for bKAGRA Phase 1?

