



Mode-cleaners

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AIC

LIGO-G000429-00-D



Input mode cleaner(s)

- Depends on choice of sensing scheme (*RF/DC*)
- better frequency reference would push in the direction of a 4km second mode cleaner
 - » potentially a much better frequency reference
 - » allows simple stepped-tuning SR control schemes (fine enough steps to be pseudo continuous, several Hz)
 - » needs a study of space in arms, probably very hard with 2 IFOs per site.
 - » main Schnupp modulation would be applied between the mode cleaners; a very wide selection of frequencies is allowed with 37kHz FSR.
 - » **But may not fit in vacuum envelope, if needed for 2 interferometers per site.**