

7th Einstein Telescope Symposium: 'the first joint ET-LIGO 3G meeting'



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Length sensing and control for Einstein Telescope Low Frequency

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Content :

In this poster we describe a feasible length sensing and control scheme for the low frequency interferometers of the Einstein Telescope (ET-LF) along with the techniques used to optimise several optical parameters, including the length of the recycling cavities and the modulation frequencies, using two numerical interferometer simulation packages:

Optickle and Finesse. The investigations have suggested the use of certain combinations of sidebands to obtain independent information about the different degrees of freedom. We have also looked at various combinations of phase and amplitude modulated sidebands to obtain a diagonal sensing matrix.

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