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**RF jitter modulation alignment sensing for interferometric gravitational wave detectors.** P. FULDA, D. VOSS, L. ORTEGA, N. FOSTER, G. MUELLER, D. B. TANNER, University of Florida — Correct alignment of the optics is crucial for optimizing the sensitivity of interferometric gravitational wave detectors. Alignment sensing and control is therefore an important subsystem in these instruments. With many degrees of freedom to sense and control, however, the problem of generating well separated alignment error signals is a challenging one. We will present an alternative method for generating interferometric alignment control signals that takes advantage of the high-frequency alignment dither that can be achieved with electro-optic beam deflectors. This method may be useful in conjunction with currently implemented methods to simplify the alignment sensing and control scheme in Advanced LIGO.

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