

Abstract Submitted
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ALPS II Sensing and Control Scheme¹ KATHY WIECH, University of Florida, ALPS COLLABORATION — One method employed by Any Light Particle Search II (ALPS II) to search for axion-like particles is a heterodyne sensing scheme (HET). HET is capable of detecting extremely weak photon fields by measuring an interference beat note. This beat note is generated by optically mixing the weak regenerated photon field with a significantly stronger local oscillator field at a known off-set frequency. This sensing scheme is integrated into the overall sensing and control scheme which controls the frequencies of the lasers and the lengths of the cavities as well as all alignment degrees of freedom. This ALPS II sensing and control system will be presented and discussed.

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Kathy Wiech
University of Florida

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