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Optical control and readout system for ALPS II[1] AYMAN HALLAL, University of Florida, ANY LIGHT PARTICLE SEARCH (ALPS) COLLABORATION — ALPS II is a light shining through walls experiment which searches for axions and axion-like particles (ALPs). It utilizes two aligned optical cavities inside two 120 m long strings of HERA dipole magnets. The first cavity amplifies a laser field which produces a stream of ALPs while the second one, behind a light-tight wall, amplifies a regenerated field produced by the ALPs. The experiment requires to keep both cavities aligned and in resonance with each other to maximize the regenerated field amplitude. I will report on the length and alignment sensing and control scheme as well as the integrated signal sensing and veto scheme which is currently being installed and which will be used for the first upcoming science runs.

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