

Abstract Submitted
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The Any Light Particle Search (ALPS) II experiment¹ GIUSEPPE MESSINEO, University of Florida, ALPS COLLABORATION — ALPS II is a second generation light shining through a wall (LSW) experiment that will search for axion-like particles (ALPs) as well as other low mass weakly interacting particles and hidden sector photons. A high power laser beam is sent through a magnetic field region where, due to a process known as Sikivie effect, a small fraction of the photons convert into ALPs. An optical barrier prevents photons from reaching a second magnetic region where a small fraction of the ALPs reconvert back to photons and are detected as light shining through a wall. ALPS II is the first large scale LSW experiment being built and it will use two mode matched optical cavities in a resonant regeneration scheme to increase the expected signal by many orders of magnitude with respect to previous experiments. ALPS II is currently being installed at DESY Hamburg (Germany) and will make use of some of the existing infrastructure used in the HERA accelerator, such as tunnels, cryogenics and two 120 m long strings of modified HERA superconducting dipole magnets. In this talk I will provide the current status of the experiment, its schedule as well as a brief discussion of the technological challenges involved.

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