

Abstract Submitted
for the APR21 Meeting of
The American Physical Society

ALPS II Status¹ MICHAEL HARTMAN, DESY, ALPS COLLABORATION — The Any Light Particle Search II (ALPS II) is a light shining through a wall (LSW) experiment to search for axion-like particles. These particles are good candidates for explaining a part of the Universe’s dark matter composition as well as other physical mysteries such as photon propagation through the Universe and larger than expected stellar cooling rates. ALPS II just entered the optics installation and commissioning phase. It will use two 106 m long magnet strings, a 70 W source laser, and two high-finesse optical cavities separated by an opaque ‘wall’. This set-up will first generate axions in one string, and then, behind the wall, turn a minute fraction of them back into photons. The regeneration rate of ALPS II will surpass the regeneration rate of earlier LSW experiments by 12 orders of magnitude, improving the sensitivity to the coupling constant between axions and two photons by three orders of magnitude. I will report on the status of the experiment.

¹We acknowledge the support received from the National Science Foundation (Grant No. PHY-1802006) and the Heising-Simons Foundation (Grant No. 2015-154 and 2020-1841).

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Date submitted: 08 Jan 2021

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