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Any Light Particle Search (ALPS)[1] AARON SPECTOR, Univ Hamburg, ANY LIGHT PARTICLE SEARCH (ALPS) COLLABORATION — High power laser fields enabled by technologies developed for ground-based gravitational-wave observatories open up new opportunities for fundamental physics studies. One of these options is the search for axions and axion-like particles in a pure laboratory experiment. The axion is a solution to the strong CP-problem and a potential dark matter candidate. The axion has also been proposed as an additional channel to cool stars as well as a potential explanation for the TeV transparency problem. The German-US ALPS collaboration is setting up a light-shining-through-walls (LSW) experiment at DESY. LSW experiments are based on the simple idea that a high power laser field traversing a static magnetic field will transform partly into a relativistic axion field. This axion field will travel through an opaque wall into a second static magnetic field region where it turns partly back into an electromagnetic wave field with the same frequency as the laser. The ALPS collaboration is working towards a large scale LSW experiment at DESY in Hamburg, Germany. I will report on the status of the ALPS experiment.

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