

Status of the ALPS Experiment

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The ALPS Collaboration runs a Light Shining through a Wall (LSW) experiment to search for photon oscillations into Weakly Interacting Sub-eV Particles (WISPs) often predicted by extensions of the Standard Model. The experiment is set up around a superconducting HERA dipole magnet at the site of DESY.

1 Status of ALPS

At the workshop in Durham an intermediate status of the experiment was presented (see [1]). In early autumn 2009 the set-up was completed and the final data run was concluded in December 2009. ALPS has placed limits on the probability of photon-WISP-photon conversions of a few $\times 10^{-25}$. These limits result in today's most stringent laboratory constraints on the existence of low mass axion-like particles, hidden photons and minicharged particles.

As the results are already published, the reader is referred to the publication[2] for further information.

References

- [1] A. Lindner [ALPS collaboration], *talk presented at the 5th Patras-Axion-WIMP-WISP Workshop, Durham, UK, 13-17 July 2009*, <http://axion-wimp2009.desy.de>.
- [2] K. Ehret *et al.*, Phys. Lett. B **689**, 149 (2010) [arXiv:1004.1313 [hep-ex]].