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Transition-Edge Sensor: A new detector for the ALPS experiment

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The ALPS (Any Light Particle Search) experiment, located at DESY, goes in its second phase. To increase the sensitivity the experiment will be bigger and fancier: more laser power, a regeneration cavity and longer cavities. Besides of that improvements the collaboration is also looking for a new, more sensitive detector. Because of the intrinsic noise of the CCD – the present detector of ALPS – now studies have started to build up an cryogenic single infrared photon detector. For that we use a Transition-Edge Sensor (TES), which is working at a superconducting transition in a Milli Kelvin range. In this talk the principle of such a detector is explained and the application to ALPS and an overview of the recent work is given.

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