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DELight: a Direct search Experiment for Light dark matter with superfluid helium

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To reach ultra-low detection thresholds necessary to probe unprecedentedly low Dark Matter masses, target material alternatives and novel detector designs are essential. One such target material is superfluid ⁴He which has the potential to probe so far uncharted light Dark Matter parameter space at sub-GeV masses. The new "Direct search Experiment for Light dark matter", DELight, will be using superfluid helium as active target, instrumented with magnetic micro-calorimeters. It is being designed to reach sensitivity to masses well below 100 MeV in Dark Matter-nucleus scattering interactions.

Summary

Author: THE DELIGHT COLLABORATION

Session Classification: Poster session leading into social dinner buffet