A light approach to Dark Matter: the DELight experiment

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As most traditional dark matter searches focus on heavy WIMPs, setting strong constraints, the sub-GeV mass range remains largely unexplored. The DELight (Direct search Experiment for Light dark matter) experiment targets light dark matter using superfluid helium-4, a low-mass, ultra-pure, and scalable medium, paired with large area magnetic microcalorimeters operating at 20 mK. With an expected energy threshold of few tens of eV and multi-signal channels allowing for recoil type discrimination, DELight aims to probe new parameter space below 100 MeV/c^2.