



**Tuesday**

**March 5**

**4:00 P.M.**

**Rm 118 NSH**

## The soft frontier in dark matter direct detection

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Searches for high energy signatures from beyond the standard model physics have advanced greatly, but a lot of ground remains to be covered for soft, low energy signals. In the context of dark matter direct detection, future single-phonon detectors will be sensitive to dark matter with a mass as low as roughly 10 keV. In this regime, the conventional nuclear recoil picture no longer applies and new theoretical tools are needed to correctly calculate the scattering rate. I will discuss the prospects for detector concepts based on superfluid helium and polar material targets, where in the latter case we find a large daily modulation of the scattering rate.