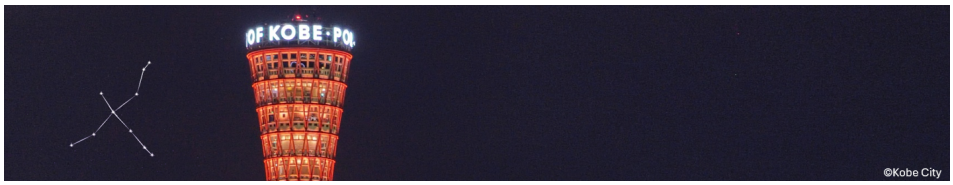

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Detecting Migdal signals in liquid xenon

Wednesday, 25 February 2026 15:20 (25 minutes)

The Migdal effect predicts the possible deposition of electron recoil energy in neutral particle-induced nuclear recoil interactions. This effect can lead to substantial gain of sensitivity to low-mass dark matter interactions in xenon-based dark matter experiments. A direct measurement of this effect in liquid xenon is highly desired to confirm its applicability to direct search experiments. This talk will cover the signal generation of composite Migdal interactions in liquid xenon, the past measurement efforts using neutron interactions and our future measurement plans.

Presenter: Dr XU, Jingke (Lawrence Livermore National Laboratory, USA)

Session Classification: Migdal search