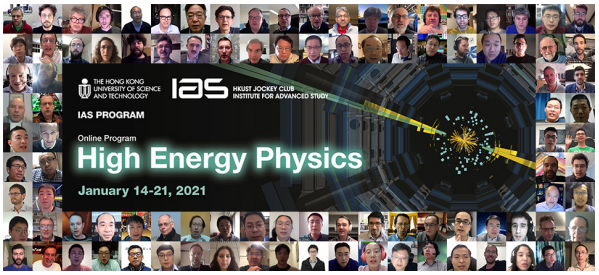

Contribution ID: **50** Type: **not specified**

Gravitational microlensing by dark matter subhalos and boson stars

Multiple microlensing surveys have been conducted to place limits on primordial black holes in nearby dark matter halos. We show that these existing limits on PBHs can be recasted to constrain dark matter lenses that are more spatially extended than PBHs. As two representative cases, we consider NFW subhalos and boson stars, which are predicted in many models such as axion miniclusters and axion stars. For the Subaru-HSC survey, we find visible deviations from PBHs limits when the lens size exceeds 0.1 solar radii, and the survey can probe NFW subhalos up to O(100) solar radii and boson stars up to O(1000) solar radii.

Scheduling Preferences

Prefer evening

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