

Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Model independent probes of macroscopic dark matter with EUSO-SPB2 THOMAS PAUL, LUIS ANCHORDOQUI, CUNY-Lehman College, ANGELA OLINTO, University of Chicago — Macroscopic dark matter (or macro) provides a broad class of alternative candidates to particle dark matter. These candidates would transfer energy primarily through elastic scattering, and this linear energy deposition would produce observable signals if a macro were to traverse the atmosphere. We study the fluorescence emission produced by a macro passing through the atmosphere. We estimate the sensitivity of EUSO-SPB2 to constrain the two-dimensional parameter space (σ vs. M), where M is the macro mass and σ its cross sectional area.

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Date submitted: 07 Jan 2021

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