

Abstract Submitted  
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**A Search for KK Axions with DRIFT detectors using**<sup>1</sup> JOHANNA TURK<sup>2</sup>, University of New Mexico, DRIFT COLLABORATION<sup>3</sup> — Theoretical models with Kaluza-Klein (KK) axions predict that they will be produced in the solar core, with some fraction becoming trapped in gravitational orbits around the Sun. The mass range of gravitationally trapped KK axions is typically between 2 and 12 keV and they are unstable with long lifetimes, in principle allowing them to be directly detected by decay to 2 photons. We explore the potential for observation of KK axions by gaseous detectors using data collected with the Directional Recoil Identification From Tracks (DRIFT) negative ion TPC operating in the Boulby Mine.

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<sup>2</sup>for the DRIFT Collaboration

<sup>3</sup>Directional Recoil Identification From Tracks

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