

Abstract Submitted
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Preliminary Results From the pGAPS Test Flight S.A. ISAAC MOGNET, UCLA Department of Physics and Astronomy, GAPS COLLABORATION — The General Anti-Particle Spectrometer (GAPS) experiment is a proposed dark matter indirect-detection experiment intended to fly on an Antarctic balloon later this decade. A number of theoretical WIMP dark matter candidates are predicted to produce enhancements in the flux of anti-matter particles in Galactic cosmic rays. Searches for excesses in the anti-proton and positron spectra are ongoing but are difficult to interpret because of large backgrounds from secondary production. GAPS will instead look for low-energy cosmic ray anti-deuterons with a much smaller expected background. In June of 2012 a prototype GAPS experiment (pGAPS) was flown from Hokkaido, Japan to validate the crucial components and techniques needed to build and operate a full-scale GAPS experiment. The flight lasted for 8 hours (over 3 hours at float altitude), with over 1 million cosmic ray triggers recorded. Preliminary analysis of the performance of the different detector systems will be presented as well as the status of preparations for a full-scale GAPS science payload.

S. A. Isaac Mognet
UCLA Department of Physics and Astronomy

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