

Abstract Submitted  
for the APR17 Meeting of  
The American Physical Society

**EUSO-SPB and the future of Space observations of UHECRs**

ANGELA OLINTO, Univ of Chicago — Space Missions will be key in the future of studies of ultra-high energy cosmic rays (UHECRs), particles that reach  $10^{20}$  eV. We will discuss the progress by an international collaboration, named JEM-EUSO for Extreme Universe Space Observatory (EUSO) at the Japanese Experiment Module of the International Space Station (ISS). The collaboration built a 1 meter refractor to be flown on a NASA super pressure balloon (SPB), named EUSO-SPB. EUSO-SPB is scheduled to fly in the Spring of 2017 in the NASA SPB campaign out of Wanaka, New Zealand. It will detect for the first time fluorescence from above the UHECR showers. A smaller payload named mini-EUSO is being built for deployment to the ISS in the Fall 2017. Mini-EUSO will study the UV backgrounds relevant for UHECR observations from the ISS altitude. Plans for exploring direct Cherenkov from ultra-high energy neutrinos are also being pursued by the collaboration including the Cherenkov from Astrophysical Neutrinos Telescope (CHANT) project.

Angela Olinto  
Univ of Chicago

Date submitted: 30 Sep 2016

Electronic form version 1.4