

Abstract Submitted
for the NMC16 Meeting of
The American Physical Society

High Altitude DC Electric Field Measurements Using Balloons¹

CHRISTOPHER BIAS, University of Houston, Houston, TX — Electric fields can be used to provide explanations for various phenomena such as upper atmospheric lightning and aurora. Latex balloons will be used to fly a Langmuir double probe in Houston, Texas, and possibly in Fairbanks, Alaska. Special attention will be paid to orientation as to measure the correct component of E depending on the flight location and expected observable phenomena. The probes will be coated in an Aquadag mixture and held 6 ft from the central payload by carbon fiber tubes. This will be a continuation of the Undergraduate Student Instrumentation Project (USIP): Project Ultralight, in which scientific balloons were flown with the expectation of improving old instruments, testing current methods, and producing new technologies while keeping mass costs under 6 kg.

¹National Aeronautics and Space Administration

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Date submitted: 07 Sep 2016

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