

Abstract Submitted
for the NMC16 Meeting of
The American Physical Society

Gas Analysis using Auroral Spectroscopy MICHEL MEDELLIN, GEORGE THOMAS, MARC ALOZIE, University of Houston — The Undergraduate Student Instrumentation Project (USIP) at the University of Houston is sending an Auroral Spectroscopy team to Alaska in March 2017. The team has designed a balloon-borne payload that contains a spectroscope connected to a Newtonian telescope to analyze the light gathered from the aurora. The light gathered will be lead through a set of 1 inch lenses towards a 1200 grooves/mm grating. A SONY Alpha A6000 camera is at a specific angle so that the grating will separate the light into its visible component wavelengths. Once the pictures are retrieved from the camera, they will be analyzed through MATLAB. Uisng the Boltzmann factor and the Saha equation, the team will analyze the gathered spectral line data to determine the temperature of excited gasses.

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Date submitted: 07 Sep 2016

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