



# NASA Heliophysics 2017 Poker Flat Sounding Rocket Campaign Ends Successfully in Alaska



The latest three sounding rockets from the Poker Flat Sounding Rocket Campaign successfully launched in the early morning hours of 2 March. Two launched within 90 seconds of one another!

**Polar Night Nitric Oxide (PolarNOx) Mission:** *The processes associated with aurora create nitric oxide, but in the polar night there is no significant process for destroying the nitric oxide. We believe it builds up to large concentrations. The purpose of our rocket is to measure the abundance and altitude of peak abundance for the nitric oxide.*

– PI, Scott Bailey, Virginia Tech



**Ionospheric Structuring: In Situ and Ground based Low Altitude Studies Mission**

**(ISINGLASS):** *The visible light produced in the atmosphere as aurora is the last step of a chain of processes connecting the solar wind to the atmosphere. We are seeking to understand what structure in these visible signatures can tell us about the electrodynamics of processes higher up.*

– PI, Kristina Lynch, Dartmouth College

**Neutral Jets in Auroral Arcs Mission (Jets):** *Energy comes down into the upper atmosphere and creates the beautiful aurora but it also heats the upper atmosphere, sets it in motion, and drives a lot of physical processes that you can't see with your eye. We're going to measure some of these processes with the Jets mission to better understand these interactions.*

– PI, Rob Pfaff, NASA GSFC

A panel discussing the Poker Flat campaign missions studying aurora, sounding rocket technology and Alaskan Native cultural connections to aurora was held in Utqiagvik, Alaska on 10 February 2017. This event, which connected NASA with students and educators from all over the Arctic, was part of an effort to build the STEM-pipeline between Arctic students with Arctic science.