

# Rocket launches from Poker Flat Research Range

February 27 2012

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On Saturday, Feb. 18 at 8:41 p.m. Alaska time, scientists launched a NASA sounding rocket from Poker Flat Research Range into a brilliant aurora display. The rocket mission, designed to gather information on space weather conditions that affect satellite communications, was a success.

"It was a terrific aurora, the rocket worked great, the instruments worked great and the supporting radar (at Poker Flat) worked wonderfully," said Steve Powell of Cornell University, the principal investigator for the launch. "We achieved all of our objectives. We're ecstatic over the results and our graduate students can't wait to sink their teeth into the data."

After monitoring satellites earlier Saturday that showed an abundance of charged particles coming from the sun and streaming toward Earth's magnetic field, members of the rocket team, which included University of Alaska Fairbanks researchers and personnel from NASA's Wallops Flight Facility in Virginia, were prepared for a night of vigorous aurora. With clear skies at Poker Flat and also at the villages of Fort Yukon and Venetie, where they had narrow-field cameras aimed toward the sky, the scientists opened their [launch window](#) at 8 p.m. They watched the aurora dance directly overhead at Poker Flat, waited until the aurora was perfect over Fort Yukon and then launched the two-stage rocket.

In the 10 minutes, 25 seconds it took for the rocket to arc to a high point 200 miles above Venetie to the payload's landing in northern Alaska, a

complicated array of antennas deployed, and the rocket both gathered and then transmitted an immense amount of information back to Poker Flat.

"We got a CD of data in our pockets the same night," Powell said. Graduate students at Cornell University, the University of New Hampshire, Dartmouth College and the University of Oslo will use the data as part of their doctoral studies. Their goal is to better model Earth's [upper atmosphere](#) and discover more about how space weather affects satellite communications we use every day.

The launch is the first and final one from Poker Flat Research Range this spring. Technicians from the range are today searching for the two [rocket](#) motors used to propel the mission. A few days after its launch, Powell was at Poker Flat marveling how the launch went.

"So many things have to come together to have a mission success, and we had them all Saturday night."

Poker Flat Research Range is the largest land-based [sounding rocket](#) range in the world and is located 30 miles north of Fairbanks on the Steese Highway. The UAF Geophysical Institute operates the range under contract to NASA. More than 300 major scientific sounding rockets have launched from the facility since it was founded in 1969.

Provided by University of Alaska Fairbanks

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