

Space Weather Group conducts first high-altitude balloon measurements

A small group of **Millersville Meteorology** majors known as the *Space Weather Group* conducted a maiden launch of a balloon carrying a payload of instruments



Figure 1: Preparing to launch a high altitude balloon to measure high energy solar radiation.

for measuring X-rays, Gamma (γ) rays, and ultraviolet (UV) rays, and a radiosonde for measuring air temperature, pressure, relative humidity, and wind speed and direction. The balloon with its payload reached an altitude of 31,460 meters (103,000 ft.) before bursting and landing in central New Jersey 103 miles from Millersville. This launch was the first in a series of tests that the Space Weather Group will be conducting in preparation for the 21 August 2017 solar eclipse that will trace an advantageous path of totality from Oregon to South Carolina. The students are earning a B.S. in meteorology and an academic minor in *Heliophysics and Space Weather*. They will

be attending the 2017 Space Weather Workshop in Boulder, CO in May where they will be presenting a poster on the lessons learned from this launch and the experimental design for the solar eclipse.



Figure 2: Students recover the payload in central New Jersey, 103 miles from the launch site, using a satellite tracking device. (Left to right: Timothy Keebler, Brittany Yancey, Jennifer Moore, Samuel Reams (back), and Noah Stitely.