

SPACE WEATHER BUOY RECOVERED:

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It only *looks* like a lunchbox. Pictured below is a Space Weather Buoy--an insulated capsule containing a cosmic ray detector, video cameras, GPS trackers, and other sensors. On Sept. 28th, it flew 115,000 feet above Earth's surface to check radiation levels in the stratosphere. This picture was taken at the apex of the flight:



In collaboration with Spaceweather.com, the students of [Earth to Sky Calculus](#) have been launching these buoys on a regular basis to study the effect of solar activity on Earth's upper atmosphere. Their latest flight has a sharply defined purpose: to find out if stratospheric radiation is rebounding from a "Forbush Decrease" earlier this month.

The story begins on Sept. 12th when a CME hit Earth head-on, sparking the strongest geomagnetic storm of the year. The students launched a Space Weather Buoy into the storm, expecting to measure an increase in energetic particles. Instead of more, however, [they measured less](#). The CME swept away many of the cosmic rays around Earth and, as a result, radiation levels in the stratosphere dropped. This counterintuitive effect is called a "Forbush Decrease" after the 20th century physicist Scott Forbush who first described it.

Now that the CME is long gone, cosmic radiation levels around Earth should be returning to normal. But are they? The answer lies inside the payload, which a team recovered yesterday from a remote landing site in Death Valley National Park. Stay tuned.

Note: The students wish to thank [Sander Geophysics](#) for sponsoring this flight. (Note their logo in the upper right corner of the payload.) Their generous contribution of \$500 paid for the helium and other supplies necessary to get this research off the ground.