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Night Clouds Tell Story

A NASA project to study the ionosphere using man-made nighttime clouds excited sky watchers in the mid-Atlantic and lower northeastern United States on Sunday night, June 27.

Four rockets were launched Sunday night and Monday morning from the NASA Wallops Flight Facility in Virginia.

Three of the rockets released trimethylaluminum, a substance in space that formed milky-white clouds, allowing scientists to monitor winds in the ionosphere, a high and poorly accessible layer of Earth's atmosphere.

Observers in North Carolina, Virginia, Maryland, Delaware, New Jersey, New York and Pennsylvania reported seeing the clouds that remained visible for up to 20 minutes after forming.

The clouds allow scientists to monitor the Earth's winds at the edge of space, said Dr. Gregory Earle from the University of Texas in Dallas, the lead researcher for the project.

"The clouds act as a tracer and allow researchers to view the winds at various altitudes over a period of time," Earle said.



The ionosphere is strongly affected by solar activity, such as solar flares and ultraviolet radiation. The state of the ionosphere affects such things as radio communications and Global Positioning System reception on Earth.

Earle said, "The data gathered from this project will aid in our understanding of the relationship between the winds and ionospheric activity."

The rockets were launched between 11:19 p.m., Sunday, June 29 and 3:07 a.m., Monday, June 30. All four rockets and experiment systems performed as planned.

NASA's Wallops Flight Facility and John F. Kennedy Space Center

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