

Meteoroid explodes over Russia without warning

29 June 2018, by Kayla Zacharias

A meteoroid exploded over the city of Lipetsk in western Russia last week without warning, lighting up the summer sky with a bright flash. While some enjoyed the light show, others are worried that we didn't see it coming.

NASA is part of an [international effort](#) to detect objects that enter our atmosphere from space, but they generally only see larger objects. Meteoroids with a diameter of less than 20 feet or so are unlikely to cause any harm, so it isn't really necessary to keep an eye on them.

"We didn't see this one coming because it was just too small," said Jay Melosh, a professor of earth, atmospheric, and planetary sciences at Purdue. "The [meteoroid](#) that exploded over Chelyabinsk, Russia in 2013 and caused a lot of damage on the ground was around 60 feet wide. The one that exploded last week was only about 15 [feet](#)."

The danger from an incoming asteroid of this size isn't that it will crush buildings or people (although falling meteorites have occasionally done that), but the shock wave from the explosion, which can be comparable to a small nuclear explosion.

Meteoroids of this size are fairly common, plunging toward the Earth about once a year. Because an object of this size doesn't pose any real danger, this is more of an opportunity for collectors to pick up fallen pieces of debris, Melosh said. Although the meteoroid disintegrated before reaching Earth, some small pieces might be lying around the region near the explosion. Pieces of freshly-fallen rock can be valuable to both collectors and scientists and are often sought by meteoroid hunters along the projected path of such a fireball.

Provided by Purdue University

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