

Grand Bend fireball may have dropped meteorites

January 29 2018



Credit: University of Western Ontario

Nothing lights up the night – or sparks the interest of researchers – quite like a meteor sighting.

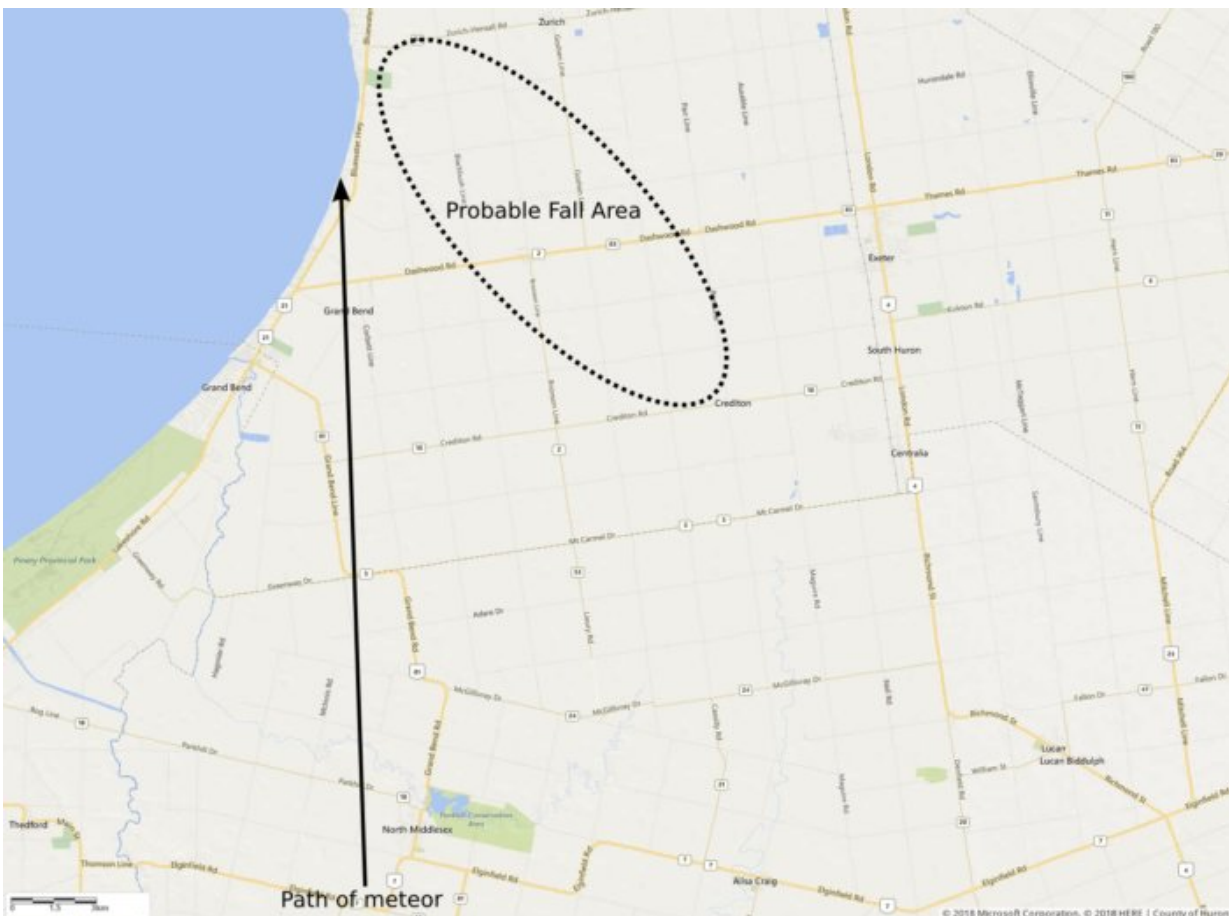
At 7:23 p.m. Wednesday, a network of Western-operated cameras captured a fireball jetting across southern Ontario. Analysis of the video data suggests that fragments of the meteor likely made it to the ground between the communities of Saint Joseph and Crediton, Ontario.

The Department of Physics and Astronomy-run camera network constantly monitors the sky for meteors. Western professor Peter Brown, a leading expert in the study of meteors, confirmed the event was a

meteor as [12 of the all-sky cameras from Western's Southern Ontario Meteor Network \(SOMN\) recorded the fireball over western Ontario.](#)

"This fireball was particularly significant because it ended very low in the atmosphere just to the north of Grand Bend, a good indicator material survived. In fact, it was still producing light at 24 kilometres altitude," Brown said. "The only deeper penetrating fireball we have ever detected was the Grimsby [meteorite](#)-producing fireball of Sept. 25, 2009."

According to Brown, other factors, which strongly favour survival of meteorites, are the very low-entry speed (only 13 km/s) and the steep entry angle (about 27 degrees from the vertical). These factors strongly suggest small meteorites made it to the ground.



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"This event is very important because we have good quality [video data](#) of its passage through the atmosphere and hence know where the rock comes from in our solar system," Brown said. "Meteorites are also of great interest to scientists like me as studying them helps us to better understand the formation and evolution of the solar system,"

Preliminary results indicate that the [fireball](#) first became visible at an altitude of 75 kilometres and travelled almost due north. The initial mass is believed to be several kilograms, leaving approximately tens to hundreds of grams of material on the ground.

Brown and the rest of the Western Meteor Physics Group are interested in speaking with anyone in the area of the potential fall, who may have heard or seen anything unusual, or who may have found possible meteorites.

Meteorites can be recognized by their dark, often scalloped, exterior. Usually they are denser than a 'normal' rock and will often be attracted to a magnet due to their metal content. Meteorites are not dangerous, but if recovered, it is best to place them in a clean plastic bag or wrap them in aluminum foil. They should also be handled as little as possible to help preserve their scientific value.

In Canada, meteorites belong to the owner of the land upon which they are found. If individuals plan to search, they should always obtain permission of the land-owner before venturing onto private land.

More information: If you have any questions, observations, or have found a suspicious rock from this event, please contact Michael Mazur from the Western Meteor Physics Group at mmazur5@uwo.ca or 250-551-6426.

Provided by University of Western Ontario

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