

Researchers seeking fragments of fireball in Ontario

July 25 2019, by Jeff Renaud



Screenshot. Credit: University of Western Ontario

Researchers are seeking the public's help in locating fragments of a fireball that shone as bright as the full moon observed by Western's All-Sky Camera Network across at 2:44 a.m. ET this morning.

Western's Physics and Astronomy Department runs an all-sky camera

network in collaboration with NASA's Meteoroid Environment Office at the Marshall Space Flight Center. The network constantly monitors the sky for meteors.

Initial analysis of the video data by Steven Ehlert at the NASA Meteoroid Environment Office suggests the recent [meteorite](#) fragments are likely to have fallen to the ground near Bancroft, Ont.

Astronomy professor Peter Brown confirmed that 10 all-sky cameras of Western's Southern Ontario Meteor Network (SOMN) recorded a bright [fireball](#) over western Ontario this morning. Cameras as far away as Montreal recorded the event.

"This fireball likely dropped a small number of meteorites in the Bancroft area, specifically near the small town of Cardiff. We suspect meteorites made it to the ground because the fireball ended very low in the atmosphere just to the west of Bancroft and slowed down significantly. This is a good indicator that material survived," Brown said.

This event is important to researchers as video data of the fireball's passage through the atmosphere provides valuable insight into where the rock originated in our solar system.

Preliminary results indicate that the fireball first became visible just south of Oshawa over Lake Ontario at an altitude of 93 km. It traveled over Clarington and passed just west of Peterborough before extinguishing just west of Bancroft. The fireball rivaled the [full moon](#) in brightness and had a number of bright flares near the end of its flight. The meteoroid was roughly the size of a small beachball (approx. 30cm in diameter) and likely dropped a small number of meteorite fragments in the tens to hundreds of grams size-range on the ground.

Brown and his collaborators at Western and the Royal Ontario Museum are interested in connecting with people from the area of the potential fall, who may have heard anything unusual, or who may have found possible meteorites.

"Meteorites are of great interest to researchers as studying them helps us to understand the formation and evolution of the solar system," Brown said.

Meteorites can be recognized by their dark, often scalloped exterior. Usually they will be denser than a 'normal' rock and will often be attracted to a magnet due to their metal content. Meteorites are not dangerous. 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.

Provided by University of Western Ontario

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