

N.B. girl youngest ever to discover a supernova

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Kathryn Gray by her father's telescope.

Photograph by: Paul Gray, Photo Handout

Kathryn Aurora Gray is taking her new celebrity in stride after becoming the youngest person ever to discover a supernova.

The 10-year-old Fredericton girl's phone has been ringing off the hook ever since the Royal Astronomical Society of Canada announced her find Monday.

But the amateur astronomer knows — better than anybody, perhaps — that her discovery is fleeting.

"It's just a blowing-up of stars so eventually it will fade away," she said of the supernova in a telephone interview.

"I was very excited to find one," she added. "Especially this quick."

Kathryn made the discovery over the weekend under the supervision of her father Paul Gray and with help from family friend David Lane, longtime astronomy enthusiasts who were co-credited with the find.

According to the society, the trio spotted a magnitude 17 supernova in galaxy UGC 3378 in the constellation Camelopardalis, about 240 million light years away.

Supernovas are stellar explosions caused by the violent death of massive stars that are far bigger than the Earth's sun and emit a bright light that fades over several weeks.

Lane collected the images with a telescope in Halifax on New Year's Eve and sent them over to the Grays, who began examining them on Sunday using special computer software that allows users to lay new images on top of old ones and click between them to look for differences.

Kathryn said they quickly ruled out "noise" on the photograph and contacted a third party to take another photo in order to rule out a comet or asteroid.

"We sent the email off and then they made sure no one else had discovered it before and then they made an announcement," said the Grade 5 student, who hopes to one day be a teacher.

According to the society, the discovery was verified by Illinois-based amateur astronomer Brian Tieman and Arizona-based Canadian amateur astronomer Jack Newton before it was reported to the International Astronomical Union's Central Bureau for Astronomical Telegrams.

While this is Paul Gray's seventh supernova — he found his first in 1995 at age 22, making him the youngest person at that time to spot one — he had more or less abandoned his supernova-finding hobby to take up stellar photography.

But about a year ago, his daughter heard him telling his wife Susan about a 14-year-old girl in the United States who had found a supernova, making her the youngest at the time to do so.

Kathryn, he said, immediately "piped up at the dinner table" that she wanted to give it a try. Over the last few months, father and daughter had been practicing techniques for spotting supernovas using older images.

Noting this was her first crack at the real thing, Gray said her speedy discovery came as a big surprise.

"Everything in the sky as far as looking for these is pretty random, so you could go your whole life without finding one because you never get to them first or you just don't look in the right place," he said.

"Or you could be like Kathryn and the first time you sit down at the computer to check a bunch of pictures, 15 minutes into it with your fourth picture you're looking at a supernova.

"It's like she got struck by lightning," he added. "It's truly amazing. I'd like to get her to pick some lottery numbers for me."