A Stellar Explosion In The Big Dipper's Handle

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Weekend Edition Saturday

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Host Scott Simon talks with Dr. Peter Nugent of the University of California, Berkeley, about the biggest, brightest supernova in a generation and how people can see it from their backyards this week.

SCOTT SIMON, host: The Big Dipper has a shiny new sequin on its handle, it's a supernova, the magnificent last hurrah of a star. This weekend is a rare opportunity for amateurs to see a supernova from Earth. People all over the country will be able to catch a glimpse of the fireball from their backyards, as it reaches peak brightness over the next few nights.

Peter Nugent is an astronomer at Lawrence Berkeley National Laboratory in California, joins us from a studio there.

Dr. Nugent, thanks for being with us.

Dr. PETER NUGENT: Thank you very much for having me, Scott.

SIMON: How often does this happen?

NUGENT: So, in a galaxy like the Milky Way, about once every 100 years we can expect one of these supernova.

SIMON: How bright is it going to be?

NUGENT: So this supernova will reach what we in astronomy call Tenth Magnitude, and that's about a hundred times fainter than a human eye can see unaided in the dark sky, but easily reachable with a very small telescope.

SIMON: And, if we have such a telescope, how do we find it?

NUGENT: So the easiest way to find it is to look for the Big Dipper, head to the last two stars on the handle of the Big Dipper, and make an equilateral triangle out of those two stars - with a point heading north. And the host galaxy for the supernova, the Pinwheel Galaxy, is located right at the other end of that triangle.

SIMON: So we can't miss it?

NUGENT: Well, it's probably best to get a star map out just to make sure you're in the neighborhood. But the Pinwheel Galaxy is pretty easy to see. It's about three-quarters the size of the full Moon, and it'll look like a nice fuzzy patch in a small six-inch telescope.

SIMON: And how far away is it from us?

NUGENT: Our best measurement to date places it at about 21 million light-years away.

SIMON: Is it true that the light were going to be seen is from a star that has already burned out?

NUGENT: Already dead and gone. If we were sitting in the Pinwheel Galaxy now, there would be nothing left of this supernova. Everything would - that came from the explosion spread out everywhere.

SIMON: There's something very poignant about that.

NUGENT: Yeah, that were actually looking at something that's already dead and gone and vanished. But we get to watch it 21 million light-years away and 21 million years later.

SIMON: And how long will this light show last?

NUGENT: That's the incredible part. This supernova will reach peak brightness next Thursday, September 8th. And will be visible in small telescopes for the next year. And then by then, you'll start to need about a one meter telescope - professional class telescope - to follow it up. But then even the Hubble space telescope will still be able to view it for two to three more years after that. So this is one that's going to be studied for many, many years.

SIMON: Dr. Nugent, thanks so much.

NUGENT: Thank you very much for having me.

SIMON: Peter Nugent, an astronomer at Lawrence Berkeley National Labs, speaking to us from Berkeley.

This is NPR News.