

Red Crucifix sighting in 774 may have been supernova

30 June 2012, by Nancy Owano

(Phys.org) -- A supernova may have actually been the mysterious "Red Crucifix" in the sky that is cited in the Anglo Saxon Chronicle for the year 774. New correspondence between a university student and *Nature* carries interesting observations that astronomers could be looking at a previously unrecognized supernova. Historical texts like the Anglo-Saxon Chronicle have made reference to astronomical events before and a sighting in 774 told of a red crucifix in the sky in Britain during evening hours. Some say the sighting could have been what was the result of a supernova explosion.

The student making the discovery, Jonathon Allen, a biochemistry major at the University of California, Santa Cruz, simply went to the Internet looking for answers after listening to a *Nature* podcast about a team of researchers in Japan who found an odd spike in carbon-14 levels in tree rings. Earth is believed to have been hit by a mystery blast of [cosmic rays](#), and a relic of the powerful event was found in the Japanese cedar trees. An analysis of two such ancient trees found a surge in carbon-14, a [carbon isotope](#) that derives from [cosmic radiation](#).

A supernova explodes at the end of its life in a jumble of [gamma radiation](#) and burns brightly for a few years before cooling and glowing for centuries. The puzzler in thinking this was a supernova was that any supernova should have been visible; there was no known record of the event around 774 or 775, the year that was indicated by the [tree rings](#).

A PhysOrg report earlier this month on the Japanese researchers [discovery](#) noted that "There is no documented record in the northern hemisphere of a supernova at around 775." The report notes that recent surveys of cosmic radiation show that, at this time, there were the remains of two nearby supernovae called Cassiopeia A and Vela Jr, but they were probably too far away or not powerful enough to be responsible for the

carbon-14 burst on Earth.

According to the cedar-tree researchers, "With our present knowledge, we cannot specify the cause of this event..

Still curious, Allen said, "I just did a quick Google search," although knowing any investigation would be limited to religious texts and chronicles. A look at eighth century entries led him to the Anglo-Saxon Chronicle, accessed on an online library site hosted by Yale.

Scrolling down to the year 774, Allen found a reference to a "red crucifix" that appeared in the heavens after sunset.

A.D. 774. This year the Northumbrians banished their king, Alred, from York at Easter-tide; and chose Ethelred, the son of Mull, for their lord, who reigned four winters. This year also appeared in the heavens a red crucifix, after sunset; the Mercians and the men of Kent fought at Otford; and wonderful serpents were seen in the land of the South-Saxons.

He knew he was on to some sort of "stellar event," as he phrased it, and there was correspondence between Allen and *Nature*. Astronomers are not ruling out a [supernova](#). The color of the so-called crucifix might indicate that the source was behind a dust cloud dense enough to scatter all but a small amount of red light.

The *Nature* news report of Allen's correspondence also quoted observations from astronomer Geza Gyuk of the Adler Planetarium in Chicago. Gyuk, who has used the Anglo-Saxon Chronicle to investigate past astronomical events, said that Allen might be on to something. Gyuk said the wording suggests the object was in the western skies shortly after sunset, which would mean that it would have moved behind the Sun where it could not be seen as Earth orbited the Sun. Add to that

the dimness of the new star from dust, and, said Gyuk, it would go a long way to explain why no one else would have seen or recorded the event.

More information:

[www.nature.com/nature/journal/ ...](http://www.nature.com/nature/journal/...)

ull/nature11123.html

avalon.law.yale.edu/medieval/ang08.asp

© 2012 Phys.Org

APA citation: Red Crucifix sighting in 774 may have been supernova (2012, June 30) retrieved 15 January 2021 from <https://phys.org/news/2012-06-red-crucifix-sighting-supernova.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.