

Supernova observed from Kavalur observatory

BANGALORE, Feb. 27.

A supernova, an awesome explosion of a star, which occurred 186,000 years ago, was sighted by scientists at the Kavalur observatory of the Indian Institute of Astrophysics (IIA) last night. The explosion was closer to earth than any observed in centuries, Australian astronomers said on Wednesday (as reported yesterday).

This supernova is significant in that this is the first time it is known to have occurred in the Large Magellanic cloud, a satellite stellar system of the Milky Way.

The rare celestial phenomenon occurs when a massive star reaches the end of its life, gets hotter and hotter and throws out its outer shell in a gigantic explosion.

Prof. J. C. Bhattacharyya, Director of the Institute, told UNI here today that observations with the Vainu Bappu telescope at Kavalur showed that the star belonged to a class of supernovae which throw out matter into the surroundings very energetically. Since it occurred 186,000 light years away its debris could never enter the solar system to endanger it.

Prof. Bhattacharyya said it was rare to find a supernova at distances close enough to make them appear bright enough to detect with the naked eye. The last supernova to be visible to the eye was in 1604 which was studied by the famous German astronomer, Johannes Kepler. Similar ones were also seen in 1572 and 1054. The remnants of the supernova of 1054 comprise the well-known crab nebula.

He said that following reports that Australian astronomers had sighted it on February 24, the instruments in Kavalur were used and the supernova was observed in a magnitude of three last night. It was brightening at the rate of one magnitude a day.

He said while it was 2-1/2 degrees above the horizon when observed from Kavalur observatory, it would be overhead when observed from Australia.

Prof. Bhattacharyya said the "death" of the star was in theory a 15-day phenomenon. What was observed last night was probably the fourth or the fifth day of the phenomenon.

"Supernova stars are not very long living stars," he explained. "They are spendthrift and burn out their nuclear materials very fast." Answering a question, he said the average life of a star was a few million years. In contrast, the sun had existed for 4,500 million years. --UNI