

ASTRONOMY

New Star Bursts Forth Near Constellation of Hercules

Nova Signaling Stellar Catastrophe Discovered By British Meteor Observer; Visible to Naked Eye

A GREAT stellar catastrophe has just occurred, producing a new star easily visible to the naked eye in the constellation of Hercules. It can be seen from America in the early evening northwestern sky below the bright star Vega. Of the second magnitude in brilliance, there are only 40 brighter stars in the whole heavens.

The nova was discovered by John P. M. Prentice, British meteor observer. The discovery was confirmed by Dr. Harold Spencer-Jones, head of the British Royal Observatory at Greenwich, who found a bright band spectrum in the light from the new star.

Already brightly visible (third magnitude) to the unaided eye when discovered, "Nova Herculis 1934" surprised astronomers by increasing in brilliance until it was second magnitude (Dec. 18), brighter than Polaris.

The explosive outburst increased the brightness of the star more than 100,000 times in less than a month as earlier Harvard plates show a 15th magnitude star in the position of the nova.

The nova may prove to be "the most important stellar outburst ever witnessed because of the powerful equipment now available at American observatories for spectrographic analysis," Dr. Harlow Shapley of Harvard commented.

The spectrum at Harvard and at Flagstaff closely resembled the spectrum of the famous supergiant star Alpha Cygni with the addition of bright lines of hydrogen and iron. The enormous velocities in the exploding atmosphere are indicated by these spectrum lines.

The finding of this nova signals a gigantic outburst which if it had occurred to the sun would have immediately wiped out the earth and other planets. While the flashing of the star to sudden brilliance has just come to earth, the light has been traveling through space probably for some thousands of years.

A nova is not a new star in the sense that it is suddenly created out of nothing, but it is a faint star that suddenly becomes bright. After a short life but

a brilliant one a nova usually fades again into insignificance.

Was the Star of Bethlehem which the Wise Men followed 1934 years ago an erupting "nova" type star like that just discovered in England?

Science, of course, will never know, but the possibility exists that when the Wise Men were attracted to Bethlehem by the strange new star they saw in their western sky they were following a path leading toward the same kind of stellar happening which has just occurred.

Like the Star of Bethlehem the new star in the sky today is visible in the west. To see it, look in the northwest heavens just after sunset and find Vega, second brightest of all stars visible to the eye. Just below and to the right of Vega is the new star. It is as bright as any star seen in the Big Dipper.

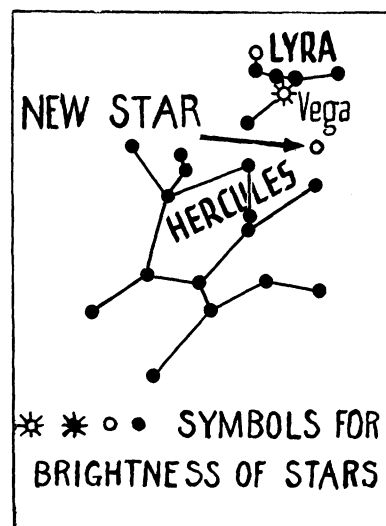
Many explanations have been given for the cause of the Biblical Star of Bethlehem. Halley's comet, which made one of its periodic visits to the vicinity of the earth in 12 B.C., is suggested, but astronomers feel it came too early.

The famous astronomer Kepler suggested the close juxtaposition of the planets Jupiter and Saturn which appeared almost together in 7 B.C. With the present knowledge of erupting stars the most plausible explanation is that the "Star" was really a new, or "nova," which flared up to great brilliance after centuries of commonplace obscurity.

Telescopes and spectrographs at the leading observatories of the world are concentrated on Nova Herculis. Harvard as collecting center for American astronomical information has received observations from several American observatories.

At the Oakridge station of the Harvard Observatory, for instance, the star is under observation in the northwest after sunset and in the northeast just before sunrise with photometric, spectroscopic and photoelectric apparatus. At Cambridge it is being observed, visually, photographically and spectroscopically.

Science News Letter, December 22, 1934



NEW STAR IN THE NORTHWEST

AGRICULTURE

Research is Biggest Job Of Agriculture Department

VIGOROUS support for a program of fundamental scientific research features Secretary Wallace's annual report to President Roosevelt, just made public. In normal times it enables farmers, stockmen and foresters to get the best returns from the land with the least outlay in money and labor. And in the present period of emergency a number of hitherto undermanned research projects have been enabled to go ahead by turning on them the efforts of unemployed men and women.

"Research is the Department's biggest job; indeed, research is the foundation of everything it does," Secretary Wallace declares. "It could not help farmers to plan their production, to reduce their costs, to fight the diseases and pests that attack animals and plants, to produce better crops and livestock, and to market their products efficiently, without first studying how these things may be done."

The frequently-offered criticism, that research increases crops just when the Department is trying to reduce surpluses, the Secretary combats as a fallacy. By discarding the benefits of science, crops could be reduced, he admits, but it would be at the cost of wasted labor and exhausted land resources. The right method of control, he insists, is first to reduce unit costs of production, and then adjust the number of units produced to the capacity of the market to absorb them.

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