

ASTRONOMY

Great Stellar Catastrophe Found in Photographic Plates

Supernova Found On Picture Taken in December, 1937; Explosion Actually Happened Millions of Years Ago

A GIGANTIC exploding star or supernova, the greatest cosmic catastrophe known, has been discovered on photographic plates of the Harvard Observatory by Miss Rebecca Jones, of the Observatory staff. These stupendous phenomena are quite rare heavenly spectacles, only about 30 having been found previously.

This is the second supernova ever found on Harvard plates, Miss Constance Boyd of the Observatory staff having found the first just a year ago. The new supernova was found on a plate taken Dec. 9, 1937, with the 16-inch Metcalf telescope at Harvard's Oak Ridge station in a routine search for far off island universes.

At that time it was of the 16th magnitude, well beyond range of the naked eye.

True to the habits of supernova, it flared quickly, probably reaching a magnitude of 13.5 or brighter within two or three days. It was last photographed on a plate exposed March 6, 1937.

Actually, the explosion happened millions of years ago as it takes light that long to reach us.

The supernova, associated with a spiral nebula just below the pointers of the Big Dipper, is technically a "dead" body, that is, it cannot be photographed now since it has faded beyond range of modern instruments and all knowledge of it must come from a study of plates on which it accidentally appeared.

Its position is right ascension 10 hours, 22.2 minutes, declination plus 41 degrees, 55 minutes and the associated nebula is new general catalogue 3184.

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four degrees below its normal temperature of 98.6 degrees Fahrenheit.

Of the many scientists whose interest was aroused by reports of this use of frozen sleep, Dr. Parker is apparently the first to go on record with a practical suggestion for its use in fields other than cancer treatment.

The Harvard method of inducing frozen sleep, as Dr. Parker describes it, is similar to that used by the Philadelphia doctors on cancer patients. At Harvard the fishes or reptiles are immersed for 10 to 15 minutes in water and cracked ice or cracked ice alone. They are then laid on cracked ice for the operation.

The Philadelphia doctors put their patients in a room cooled to about 50 degrees Fahrenheit, used an air-conditioning unit to keep the body temperature below 95 degrees Fahrenheit, and surrounded the patients with ice bags and coils in which ice water circulates. The patients were kept in this frozen sleep for several days. Before turning on the cold, however, the patients were put to sleep with sleeping medicines.

The animals at Harvard, Dr. Parker says, recover quickly and satisfactorily from their frozen sleep at the ordinary temperature of the laboratory and "the animals so treated may be almost at once tested in a particular way without waiting for the gradual disappearance from their systems of an anesthetizing drug."

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MEDICINE

Frozen Sleep May Replace Ether and Other Anesthetics

Artificial Hibernation Tried Successfully For Surgery on Animals at Harvard; Recovery Is Rapid

FROZEN SLEEP may replace ether as anesthetic for surgical operations of the future. Instead of putting a smelly mask over the patient's face and telling him to "breathe deep" the surgeon of tomorrow may gently chill his patient to insensibility before getting to work with scalpel and needles. After the operation is over, the patient will be warmed back to consciousness without any unpleasant anesthetic after-effects.

Scientific evidence that this picture of future surgical operations is a distinct possibility appears in a report from Dr. G. H. Parker, Harvard University emeritus professor of zoology. (*Science*, July 21) Frozen sleep has long been used in the Harvard laboratories for operations, even extensive ones, on fishes, amphibians and reptiles, Dr. Parker tells fellow scientists.

Use of the same method of inducing unconsciousness before operations on humans is suggested, Dr. Parker says, by "press reports of a kind of cold hibernation induced in human beings by a slight lowering of their bodily temperatures."

This refers to the use of cold hibernation in treatment of inoperable cancer reported by Drs. Temple Fay and Lawrence W. Smith, of Temple University, Philadelphia, to the American Association for Cancer Research and the American Medical Association in April and May of this year. Without advocating the method as a cancer cure, but only as an aid in treatment, the Philadelphia physicians aroused the interest of fellow scientists by their achievement of safe hibernation in humans through refrigeration methods which cooled the body three to

MEDICINE

New Cause of Backache Discovered In Ligaments

A NEW cause of backache has been discovered by Dr. H. B. Macey of the Mayo Clinic. Changes in certain ligaments of the spine, Dr. Macey believes, cause the localized, persistent pain which does not get better with usual methods of treatment for backache.

Operation at which the affected ligaments are removed relieves the pain immediately, Dr. Macey reports. One 29-year-old woman who had had backache for five years following the birth of a child was leading a perfectly normal active life without any return of the pain three months after the operation.

Dr. Macey says the condition has not, so far as he knows, been described before. He expects to report further on this apparently new cause of backache and its relief after more time has elapsed in which to observe the patients who have had the operation.

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