



reaches the lunar surface that its brightness is not greatly reduced.

In Washington, the moon rises on the second at 6:55 p.m., which is after the moon has started into the shadow, but before totality. In the Rocky Mountains, and along the Pacific Coast, the moon rises after the total phase is over, but the final partial stages will be visible. In San Francisco, for instance, moonrise is at 7:04 p.m., PWT, while the moon does not completely withdraw from the shadow until 7:12 p.m., PWT. In Alaska and northwestern Canada, moonrise comes after this, and there will be no view of the eclipse.

**Celestial Time Table for March**

Monday, March 2, 8:20 p.m., Full moon; total lunar eclipse. Thursday, March 5, 12:00 p.m., Algol at minimum. Saturday, March 7, 8:00 p.m., Mercury farthest west of sun.

Sunday, March 8, 7:00 a.m., Moon nearest; distance, 229,700 miles; 8:49 p.m., Algol at minimum. Monday, March 9, 3:00 a.m., Venus at greatest brilliancy; 6:00 p.m., Moon in last quarter. Wednesday, March 11, 5:38 p.m., Algol at minimum. Friday, March 13, 11:22 a.m., Moon passes Venus. Saturday, March 14, 6:15 p.m., Moon passes Mercury. Monday, March 16, 7:50 p.m., New moon, partial eclipse of sun. Thursday, March 19, 2:00 p.m., Neptune nearest, distance 2,217,000,000 miles. Saturday, March 21, 2:11 a.m., sun crosses equator, spring commences; 11:28 a.m., Moon passes Saturn. Sunday, March 22, 4:26 p.m., Moon passes Mars; (Ab't 11 p.m.) Moon occults Aldebaran. Monday, March 23, 4:29 a.m., Moon passes Jupiter; 6:00 a.m., Moon farthest, distance 251,400 miles. Tuesday, March 24, 8:01 p.m., Moon in first quarter. Thursday, March 26, 1:45 a.m., Algol at minimum. Saturday, March 28, 10:34 p.m., Algol at minimum. Tuesday, March 31, 7:23 p.m., Algol at minimum.

Eastern War Time throughout. Subtract one hour for CWT, two hours for MWT, and three for PWT.

*Science News Letter, February 28, 1942*

eclipsed the smaller. The ring was found to be composed of glowing bases of hydrogen, magnesium, calcium, and iron.

"Observations are difficult on account of the faintness of the stars," Mr. Joy stated, "but it seems probable that by taking photographic exposures properly timed both the distribution of the chemical elements as well as the light intensity in the ring may be determined."

What was supposed to be an old "new" star or nova that had been abandoned for lack of interest by astronomers for nearly twenty years, has turned out to be actually a variable star of a type previously unknown. The discovery was also revealed by Mr. Joy in his report to the Astronomical Society of the Pacific.

Mr. Joy said that the star was put on the program of the 100-inch reflector because in the past it had shown sudden changes in brightness which indicated it might prove to be a recurring nova. But when the telescope was pointed at the object two so-called red dwarf stars were found there instead. Later Dr. A. van Maanen, also of the Mount Wilson Observatory, secured photographs which confirmed the identification. What was still more surprising was the detection of bright clouds of hydrogen and calcium gas in the atmospheres of stars of such low temperature.

"Further observations will be needed to determine whether the observed variations in light pertain to both stars of the pair," Mr. Joy stated. "These observations indicate that certain small low-temperature stars show changes in brightness not fully recognized before."

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Our prehistoric American forefathers used window seats and built-in furniture much as modern architects do.

One hundred pounds of iron will weigh 143 pounds when it has completely rusted, due to its having taken up oxygen from the air.

ASTRONOMY

# Strange Ringed Star Found Resembling Gigantic Saturn

## Intensely Hot Star Is Surrounded by Luminous Ring Four Times the Diameter of Our Sun; One of Twins

DISCOVERY of an intensely hot star surrounded by a luminous ring of gas four times the diameter of our sun was announced by A. H. Joy of the Mount Wilson Observatory from results obtained with the 100-inch reflector.

Viewed from a distance of a billion miles, the star would resemble the planet Saturn as seen through a small telescope. The ring is revolving around the star at a speed of 800,000 miles per hour,

completing a revolution every 14 hours.

The star is one member of the double star system RW Tauri. The other member is about twice as large with a surface temperature of 11,000 degrees Fahrenheit, or nearly the same as our sun. The large star revolves around its ringed companion once in 66 hours. Evidence for the existence of the ring was obtained from a study of the light variations of the system when the larger star

### ● RADIO

Saturday, March 7, 1:30 p.m., EWT

On "Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Major Sam Seeley, of the Procurement and Assignment Service, will tell how the nation's supply of physicians, dentists, and veterinarians will be allocated.

Tuesday, March 3, 7:30 p.m., EWT

Science Clubs of America programs over WRUL, Boston, on 6.04 and 11.73 megacycles.

One in a series of regular periods over this short wave station to serve science clubs, particularly in high schools, throughout the Americas. Have your science group listen in at this time.

