ASTRONOMY

'50 Astronomy Highlights

The flare-up of Proxima Centauri, the fifth star known to have such flares has been found to flare 50 times in the last quarter of a century.

➤ THE TOP ten astronomical highlights for the year 1950 have just been picked by Dr. Harlow Shapley, director of Harvard College Observatory:

1. Discovery that Proxima Centauri, star nearest to the earth, from time to time shoots out such terrific geysers of flaming gases from its surface that within a few minutes its brightness is doubled, then in less than a half hour its total light returns to normal. Fifty such flare-ups within the past 25 years have been caught on plates at Harvard College Observatory. This brings to five the number of stars known to have flares similar to those on our sun.

2. Plans for the world's highest astronomical observatory, to be so high the building will be pressurized and observers will live 5,000 feet nearer sea level. To be built under the auspices of the Indian Government, this observatory will be in the Himalayas, three miles above sea level.

3. Correction of the distance from the earth to the sun, and of the earth's path through space as well as more accurate calculation of the mass of the planets Mars, Venus, Mercury and earth-moon. These values were made possible through use of a new, more accurate path for the asteroid Eros, the orbit of which Dr. Eugene Rabe of Cincinnati Observatory obtained by analyzing observations of the past 30 years with a punch-card machine.

4. Finding of the Chubb meteor crater, larger than any previously known, in Quebec, Canada. Only partially explored, this crater's diameter is two and a half miles, or over three times as great as that of the meteor crater in Arizona.

5. Increasing to 50 the number of radio stars known to broadcast the static picked up here on earth with microwave instruments. Credit for this goes chiefly to British and Australian observers.

6. Successful photographs with the new two-mirror, Schmidt-type astronomical telescope at the Mills Observatory in Dundee, Scotland. This telescope, property of St. Andrews University, is the first of its type to go into operation.

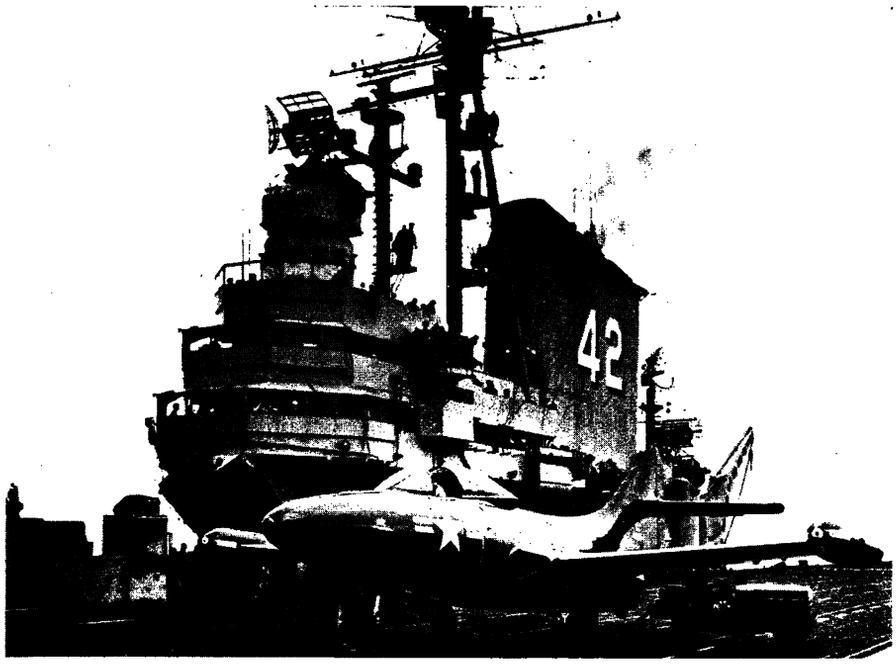
7. Accurate measuring of Pluto, most distant of the planets, placing it as the second smallest planet and only 3,550 miles across. Dr. Gerald P. Kuiper of the University of Chicago's Yerkes Observatory took the all-important photographs with the 200-inch telescope while a guest of Palomar Observatory.

8. Determination with highest accuracy of the colors and luminosity of near-by stars by Dr. Olin J. Eggen of Lick Observatory. This work is highly significant in the study of the evolution of stars.

9. Great smog, caused by forest fires in Alberta, Canada, giving the sun a blue hue in Canada and here in the United States interfering with observations of a total lunar eclipse.

10. Hundredth anniversary of the first astronomical photograph, picture of the bright star Vega made with Harvard's 15-inch reflector with daguerreotype process.

Science News Letter, October 28, 1950



***TRICYCLE JEEP**—The tricycle-geared jeep is nimble as a cat, turning in a circle which has a 7-foot radius. Used to energize jet aircraft and military planes, it is also valuable for towing disabled planes out of the line of flight traffic.*

AERONAUTICS

Jeep Carries Generator To Start Jet Engines

➤ THE PROBLEM of starting the engines of jet-propelled airplanes on naval carrier vessels is solved with the development of a three-wheel, low-down "jeep" which carries an electric generator for starting the engines.

Jet-propelled planes, for the most part, are dependent on an outside source of electric power to start the engines. Storage batteries, such as are used in automobiles, are unsatisfactory because of the weight that would be required. Several types of self-contained self-starters have been proposed and some developed. But outside power is still used in most cases.

This special automobile, developed in Philadelphia by O. E. Szekely and Associates, is based on the Willys-Overland jeep. Being a three-wheel affair, it can turn a right angle corner and circle about in a very small space. Being only 36 inches high, it can pass with ease under the wings of planes on carrier flight decks.

Science News Letter, October 28, 1950

INVENTION

Sugar Made without Molasses By-Product

➤ MANUFACTURING white sugar without molasses as a by-product is promised by a process for which John Paul Bartz, Fort Lauderdale, Fla., was awarded patent 2,526,111. The sugar may be made from juices of sugar cane, sugar beets and citrus fruits. The product is claimed to have superior sweetening and improved nutritional properties as well as reduced fattening qualities.

The process is complicated from the layman's standpoint, but it includes the treatment of sugar-bearing fluids and juices by chemical and ion exchange methods. These remove salts present in the liquids and the excess of undesirable gums, pectins, dextrins and proteins. Coloring matter is removed by activated charcoal or bone char. The aqueous sugar solution is then concentrated into crystalline or powdered sugar or into liquid sugar.

Science News Letter, October 28, 1950