

is considerably cooler than the sun, a given area of its surface sends out far less light than the same solar area. To make it so bright, therefore, there must be a lot more surface: i.e., it must be many times bigger than the sun. This has been confirmed with an instrument called the stellar interferometer, attached to the 100-inch telescope of the Mt. Wilson Observatory in California.

Antares is so huge, in fact, that if the sun were at its center there would still be room inside its globe for Mercury, Venus and the earth to revolve around it in their customary orbits.

Although stars vary enormously in brightness and in diameter, their variation in mass is far less. So to have approximately the same amount of matter spread over so large a volume, the density of Antares and similar stars, which are called "red giants," is very low.

Celestial Timetable for August

| AUG. | EDT | |
|------|------------|---------------------------------------|
| 2 | 5:00 a.m. | Moon passes south of Mars |
| 4 | 1:48 a.m. | Moon in first quarter |
| 8 | noon | Mars passes north of Spica |
| 10 | 4:00 p.m. | Moon farthest, distance 252,400 miles |
| 12 | 4:23 p.m. | Full moon |
| 14 | 6:00 a.m. | Moon passes south of Saturn |
| 15 | 3:00 p.m. | Mercury between earth and sun |
| 19 | 11:51 p.m. | Moon in last quarter |
| 22 | 3:00 a.m. | Moon passes north of Jupiter |
| 25 | 3:00 p.m. | Moon nearest, distance 223,100 miles |
| 26 | 2:51 p.m. | New moon |
| 29 | 2:00 a.m. | Moon passes north of Venus |
| 30 | 11:00 p.m. | Moon passes north of Mars |

Subtract one hour for CDT, two hours for MDT, and three hours for PDT.

• Science News Letter, 88:58 July 24, 1965

EDUCATION

More Science by Doing Stressed in Britain

➤ SCIENCE EDUCATION in Great Britain is being revamped to give students an earlier crack at experimentation and practical inquiry.

In an effort to stimulate the student's imagination, the Nuffield Foundation, an independent charitable organization, has undertaken a thorough revision of the science curricula and teaching methods.

For the past three years, the organization has been developing a system that will bring continuing change to British scientific education. Aimed primarily at secondary schools, the Nuffield project plans to thoroughly cover the fields of chemistry, physics and biology.

A editorial in Endeavour, 24:565, 1965, points out that the Foundation is also considering "the possibility of introducing some science into primary school teaching."

Because of the "repercussions on scientific education generally," pre-university and university programs are also being evaluated.

As part of the revised secondary school science program, Foundation officials collaborating with school administrators are testing new items of apparatus films and books.

• Science News Letter, 88:59 July 24, 1965

ASTROPHYSICS

Decay May Split Comets, Not Nearness to Sun

➤ DISINTEGRATION of comets, long thought to be the result of nearness to the sun or other planets, may actually be caused by internal decay.

Two astronomers advanced the theory that decay of radioactive material at the comet's core may so weaken the body's structure as to break it apart when the comet hits warmer regions near the planets after a cold ride through outer solar systems beyond. This theory was advanced by Dr. Fred L. Whipple and Robert Stefani, Smithsonian Astrophysical and Harvard College Observatories, in Cambridge, Mass. to the 13th International Astrophysical Symposium in Leige, Belgium.

• Science News Letter, 88:59 July 24, 1965

ASTRONOMY

40-Inch Telescope to Be Built in Wisconsin

➤ A 40-INCH reflecting telescope for astronomical research will be constructed by the University of Chicago at Yerkes Observatory on the shores of Lake Geneva in Williams Bay, Wis.

The National Science Foundation has awarded the university \$176,000 for construction of the new telescope. The announcement was made by Dr. W. Albert Hiltner, director of the Yerkes Observatory, and William W. Morgan, chairman of the department of astronomy.

The university also operates a 40-inch refractor telescope—the largest of its kind in the world—and several smaller research instruments at Yerkes. Research requiring greater telescopic power is carried out by members of the department of astronomy either at the McDonald Observatory, used under contract with the University of Texas, or at the Kitt Peak National Observatory near Tucson, Ariz.

"Because of technical improvements, we will be able to obtain results with the new 40-inch telescope which will be comparable with those which could be obtained only with much larger instruments a few years ago," Dr. Morgan said.

• Science News Letter, 88:59 July 24, 1965

GEOLOGY

Remains of Inland Sea Discovered in Australia

➤ OIL DRILLERS have discovered the remains of an inland sea similar to the Dead Sea in the Blackall district of central-western Queensland, Australia.

Geologists estimate that the sea, now a big underground salt bed, existed between 300 million and 400 million years ago.

As yet, the contents of the salt bed and their potential value have not been assessed in any detail, but in other parts of the world salt beds have carried valuable deposits of potash, boron and magnesium salts.

The remains of the sea were encountered by drillers in the American Overseas Petroleum Ltd. (Amoseas) Boree No. 1 well, 24 miles southeast of Blackall.

• Science News Letter, 88:59 July 24, 1965

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