

THE LARGEST STAR

IS IT CANOPUS?

Giant Sun Eighty Thousand
Times Brighter Than Our Sun
KEEL OF THE GREAT SHIP

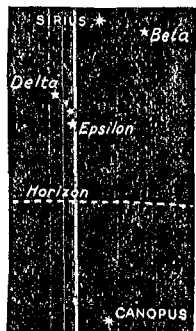
By the C.N. Astronomer

Which is the largest star? This interesting and doubtless often asked question is one obviously difficult to answer when the fact that some 2,000,000,000 stars are known to exist is taken into account.

The great majority of these stars are far beyond all possibility of trigonometrical measurement and so inferential calculations and other methods of estimating size and distance have to be employed.

There is, however, one star that stands out as far exceeding all others in magnitude and splendour, notwithstanding its remoteness. This is Canopus, a star that is some way to the south of Sirius, which was described in last week's C.N.

In the latitude of England Canopus is unfortunately some little distance below the horizon; but its position can be estimated when Sirius is due south, between 10 and 11 o'clock. Now if an imaginary line be drawn from Sirius straight down



The position of Canopus

to the horizon and continued for rather more than half as far again below the horizon than Sirius is above it then a star not quite so bright as Sirius, but much brighter than any other that is visible to us, will be found, and it will be Canopus.

Canopus is situated at the rear end of the keel of the Great Ship, Argo Navis, and below the stern; it is therefore also known to astronomers as Alpha Carinae, that is Alpha in the Keel. It is a star of a similar colour to Procyon, the bright first-magnitude star above Sirius and toward the left.

Canopus, however, radiates 16,000 times the light of Procyon and over 3000 times as much as Sirius, so were Canopus as near to us we would have such a superb star in the night sky as would turn it into something approaching day. It does not appear quite so bright as Sirius because it is so very much farther away, the light from Sirius taking but 8 years and 8 months to reach us while that from Canopus takes between 600 and 700 years.

Largest Sun Known

Canopus radiates about 80,000 times as much light as our Sun, whose surface temperature is about 6000 degrees Centigrade, whereas on an average that of Canopus is at about 7500 degrees.

Now Antares, the largest sun known whose disc has been measured by means of the interferometer, radiates but 3400 times as much light as our Sun and it has a diameter 450 times as great, and large enough to enclose the entire orbit of Mars.

So allowing for the fact that Antares radiates, area for area, much less light than Canopus, possessing a surface temperature of about 3200 degrees, we learn that it is possible Canopus is a giant sun with a circumference that would enclose the orbit of Jupiter, probably possessing a diameter approaching a thousand million miles or 1100 times the width of our Sun.

G. F. M.

GOOD YOUNG DAYS

The Cheapest Thing
In London

Here is a proud thing for Englishmen to tell those who say we neglect education: the Working Men's College in Camden Town is open at a fee of five shillings a year.

When the Prince of Wales visited it the other day he said it seemed to him that a man could learn anything and everything there. He thought it a fine thing that a thousand men had the energy and enterprise to spend their evenings in study after a hard day's work. It was a great example.

Let Mother Gummidge say what she likes; it is a better thing to have a democracy that studies history, art, and law than a democracy spending its leisure round the bullring or the cockpit, or in a drinking saloon. These are good young days—at least sometimes!

ANOTHER LANDMARK GOING

Soon there will be no Hotel Cecil. The almost historic banqueting halls, ballrooms, suites, and bedrooms will be changed into the uniformity of offices for the most wealthy of oil companies.

The change is a sign of the times. It symbolises the triumph of the motor-car. The Cecil was the first of the great London hotels with its thousand rooms.

Once the Hotel Cecil was the emblem of cosmopolitan junketing. Travelling Americans are said to have regarded it as their spiritual home.

Now the rising tide of petrol has submerged it. We can only hope that in the continual vanishing of London landmarks it is only change and not decay that all around we see.

FEWER YOUNG WORKERS

Owing to the great fall in the number of children born the number of young people available for employment will soon fall rapidly.

In 1933 the number of young people from 14 to 17 years will be 1,756,000, which is actually twenty per cent less than in 1927. By 1938 there will be a further decline, which will continue.

There are very wide differences of opinion as to the effect this will have on Britain's work, but there is no doubt whatever about the decline that is coming. Perhaps the predominant opinion is that a country containing fewer young workers will become a less energetic and less enterprising country.

C.N. QUESTION BOX

Questions must be asked on postcards: one question on each card, with name and address.

What is the Pronunciation of
Newfoundland?

New-fund-land.

What is Snuff?

A powder made from the leaves and stalks of tobacco, cut and ground up.

Who Was Seneca?

A Roman philosopher born about 4 B.C. He became Nero's tutor, and for a time influenced him for good. Later Nero tried to poison him, and when Seneca joined in a plot against the emperor he was sentenced to die by his own act. The death he chose was opening a vein.

Does a Snake Possess Visible Legs?

Some snakes possess evidence of their derivation from reptiles of a more ordinary type in vestiges of hind limbs. Pythons and boas, for instance, have small scale-like structures, and in the African python these form distinct claws. Similar vestiges of the past are found in the coral snake.

Why Do We Use the Same Maps if the Sea is Always Washing the Land Away?

While it is true that the coasts of the continents and countries are constantly changing owing to the sea washing away or adding to the cliffs and beaches, the difference is not enough to show on the small-scale maps in our atlases. On large-scale Ordnance Survey maps the differences can be seen from time to time.

A LIFE OF THE WEEK

The Spaniard Next to
Cervantes

On January 17, 1600, Calderon was born.

The greatest of Spanish poets, Pedro Calderon de la Barca, has been translated freely by capable English writers. He ranks next to Cervantes as a great Spanish writer.

In the opinion of one of his translators, Edward FitzGerald, the famous translator of Omar Khayyam, Calderon is "a wonderful fellow—one of the great men of the world!" German critics

have gone so far as to put him on the same plane as Homer, Dante, and Shakespeare. Though he does not fulfil that expectation, he is undoubtedly a man who deserves study.

Calderon was born at Madrid on January 17, 1600. His family was noble. First he studied under the Jesuits with the idea of being a priest. Then his thoughts turned to the law and he went to the University at Salamanca. But quite soon he was captured by the lure of play-writing, for Lope de Vega had fascinated everybody by his astonishing production of dramas. Calderon is said to have written a play when he was fourteen, and he had distinguished himself as a poet when he was twenty.

His Spanish biographer says that between 25 and 35 he served as a soldier in Italy and in Flanders. Undoubtedly he had soldierly leanings, for when he was forty he gained distinction as a cavalryman during the repression of a rebellion in Catalonia, and his services were acknowledged by a pension.

In Prison

But he cannot have been continuously away at the wars between 1625 and 1635, for in 1629 he was in prison in Spain for breaking into a nunnery in pursuit of a man who had stabbed his brother and then sought sanctuary. Besides, by 1635 he had gained such fame as a playwright that the Spanish king then made him master of the Court pageants, and two years later knighted him.

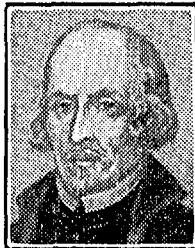
Calderon was now universally acknowledged as the successor of Lope de Vega as a dramatist and his superior as a poet; but his mind was ill at ease, and eventually (in 1651) he was ordained a priest. His clerical career was a success. He received a living in Madrid, became prebend at Toledo, and finally private chaplain to the King.

All this time, and later, he was writing all kinds of dramatic works with great rapidity. He did not come near the output of his predecessor, Lope de Vega, who is credited with nearly 2000 plays, but there are still in existence 118 dramas by Calderon and 72 autos.

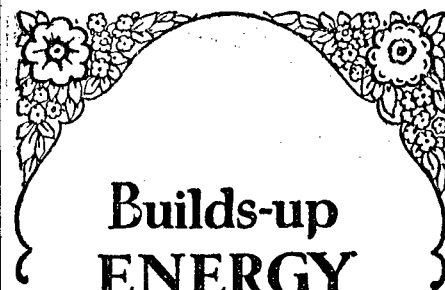
Church and Stage

It may seem strange that a priest should be writing plays to this extent, but the Spanish people in those days were as devoted to the stage as modern youth is to the cinema, and the autos were morality plays used at the festivals of the Church for religious purposes. Many of the other plays also had a religious bearing and were under religious patronage. They were closely watched for signs of heresy, and Calderon, priest though he was, once found himself summoned before the Inquisition to answer for one of them.

Calderon died on May 25, 1681, while he was writing an auto, and shortly after he had written his last drama to be acted at the marriage festivities of the Spanish Charles the Second. Notwithstanding his place at Court and all his toil, with his real distinction as a poet, he died poor, as had been the fate before him of Columbus and Cervantes, for Spain was a niggardly paymaster.



Calderon

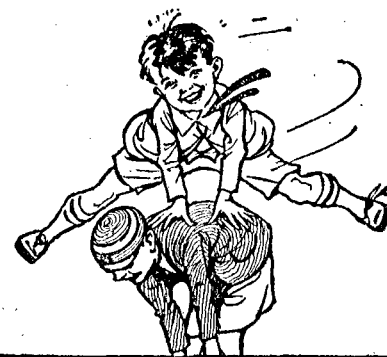


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and
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