

★ \* ○ • SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS

the Revolutions of the Celestial Orbs." About the same time he wrote a summary, which was circulated in manuscript, the "Commentariolus," and from which Pope Clement VII in Rome seems to have heard about it in 1533.

In the summer of 1539 there came to visit Copernicus a 25-year-old professor of mathematics from the University of Wittenberg. This was Georg Joachim of Rhaetia, better known as Rheticus. In October he wrote an account of the Copernican ideas to his friend Johann Schoner at Nuremberg, and this letter was published at Danzig in 1540 as the "Narratio Prima" ("First Narration"). It was the first published account of the epoch-making ideas of the Polish astronomer.

## Full Work Published

Its reception was favorable enough that Rheticus was able to persuade his master to allow publication of the full account. So Rheticus was entrusted with the manuscript, and he took it to Nuremberg with the idea of seeing it through the press. Unfortunately, however, Rheticus left in 1542, to accept a professorship at Leipzig, and Andreas Osiander, a Lutheran clergyman, was left in charge. Apparently, he was uneasy about the radical character of the ideas expressed, so he wrote an anonymous preface stating that this was not necessarily a true picture of the way things were, but merely another hypothesis for the convenience of astronomers.

In the spring of 1543 the book appeared, and a copy was dispatched to Frauenburg. It arrived on May 24, the day that Copernicus passed away. There is no more dramatic scene in the history of science than that of the dying astronomer, handed the first copy of the work over which he had labored so many years

and which, as he realized, boldly moved the earth from its place of honor, to become one of a whole family of planets revolving around the sun.

True, this was not the system we today know to be the true one. He still kept the planets moving in circles, and retained many of the smaller circles, or epicycles, which encumbered the Ptolemaic theory in order to explain the changing distances of the planets. But at least it paved the way by taking the main step. Despite opposition to his ideas by the Protestant as well as the Catholic Church, it gradually was accepted. Later astronomers added to it. Kepler showed that the planets moved not in circles, but ellipses. Galileo made observations with his first tiny telescopes which supported it. Newton formulated the laws under which the planets moved.

On this foundation our modern structure of astronomy has been erected. And that is why this month, in a warring world, men are pausing to pay tribute to the man who began it. And in so doing they also honor his native Poland, now crushed to earth under a tyrant's heel. But the culture that brought forth Copernicus cannot be crushed. In the words of the Polish national anthem:

"Poland shall again be free, victory is nearing!"

## Celestial Time Table for May

May EWT
4 early a.m. Meteors of eta Aquarid shower
seen in southeast.
5:43 a.m. New moon.
7 2:24 p.m. Moon passes Venus.
9 4:32 p.m. Moon passes Jupiter.
10 1:00 p.m. Moon farthest; distance, 251,300
miles.
12 5:52 a.m. Moon in first quarter.
19 5:13 p.m. Full moon.
22 10:00 a.m. Moon nearest; distance, 226,600
miles.
26 9:33 a.m. Moon in last quarter.
28 6:26 a.m. Moon passes Mars.
Subtract one hour for CWT, two hours for
MWT, and three for PWT.
Science News Letter, May 1, 1943

MEDICINE

## Jaundice May Occur Months After Transfusions

PHYSICIANS should be on the lookout for jaundice developing one to three months after blood or plasma transfusions, Dr. Paul B. Beeson, of Grady Hospital and Emory University School of Medicine, urges (Journal, American Medical Association, April 24).

Dr. Beeson reports seven such cases in which he believes the jaundice was probably caused by some substance in the blood or plasma used for transfusions. The condition is similar to cases of jaundice that have been reported following yellow fever vaccinations and use of convalescent serum in measles and mumps.

More such cases may be occurring without being recognized, Dr. Beeson suggests, because the long period between the transfusion and development of jaundice may mask the significance of the transfusion in causing the condition.

The only way to find whether jaundice is frequently occurring as a result of blood and plasma transfusions, Dr. Beeson states, is for physicians to make a concerted effort to recognize such cases. He suggests the following two practical measures for investigating the problem: "First, a careful record should be kept

"First, a careful record should be kept of the source of blood or plasma administered to each patient. Second, a small portion of blood or plasma should be set aside at the time a transfusion is given, so that, in the event of subsequent cases of hepatitis, some of the causative material will be available for study."

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