

turns out that there are two groups of Cepheids, corresponding to the two great classes, or "populations," of stars in general. The cluster stars, and some of the others, fit in with the old figures, but the rest, including those in the Andromeda galaxy used for determination of distance, are four times as bright for the same period of variation.

This means that they are twice as far away as we used to think, for if you move a light to double the distance, it looks a quarter as bright as it did before.

Many other findings also fit in better with the revised distances. For instance, in order to cover the angle in the sky which it is observed to cover, the Andromeda galaxy must be twice as big as formerly supposed, if it is twice as far away. This makes it about the same size as our galaxy. Previously it seemed much smaller, and this bothered astronomers who did not like to think that ours was in any way exceptional.

So, although they have had to alter some of their accepted theories, astronomers welcome the new data. This is the way science advances; step by step, as we acquire new knowledge, we approach closer and closer to the truth.

### Celestial Time Table for October

Oct.	EST	
4	1:00 a.m.	Venus passes Mars.
5	8:13 a.m.	Moon passes Mars.
	10:04 a.m.	Moon passes Venus.
6	1:38 a.m.	Algol (variable star in Perseus) at minimum.
	1:00 p.m.	Moon farthest distance 252,600 miles.
7	7:40 p.m.	New moon.
8	10:26 p.m.	Algol at minimum.
11	7:15 p.m.	Algol at minimum.
15	4:44 p.m.	Moon in first quarter.
21	11:00 a.m.	Moon nearest, distance 222,600 miles.
22	early a.m.	Meteors visible radiating from constellation of Orion.
	7:56 a.m.	Full moon (Hunter's moon).
23	11:00 a.m.	Mercury farthest east of sun.
	4:00 p.m.	Saturn in line with sun.
26	6:56 a.m.	Moon passes Jupiter.
29	12:08 a.m.	Algol at minimum.
	8:09 a.m.	Moon in last quarter.
31	8:57 p.m.	Algol at minimum.

Subtract one hour for CST, two hours for MST, and three for PST.

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# Books of the Week

For the editorial information of our readers, books received for review since last week's issue are listed. For convenient purchase of any U. S. book in print, send a remittance to cover retail price (postage will be paid) to Book Department, Science Service, 1719 N Street, N. W., Washington 6, D. C. Request free publications direct from publisher, not from Science Service.

**AFRICAN LANGUAGES AND ENGLISH IN EDUCATION:** A Report of a Meeting of Experts on the Use in Education of African Languages in Relation to English, Where English is the Accepted Second Language, Held at Jos, Nigeria, November 1952—*UNESCO's Education Clearing House*, 91 p., paper, limited number of copies free upon request to publisher, 19, Avenue Kleber, Paris 16<sup>e</sup>, France.

**AMAZON TOWN:** A Study of Man in the Tropics—Charles Wagley—*Macmillan*, 305 p., illus., \$5.00. The readable story of small town life along the colorful Amazon River, based on data collected while the author made a survey for UNESCO's International Hylean Amazon Institute.

**BAILEY'S TEXTBOOK OF HISTOLOGY**—Revised by Philip E. Smith, Wilfred M. Copenhaver, and Dorothy D. Johnson—*Williams and Wilkins*, 13th ed., 775 p., illus., \$9.00. A text primarily for first year students in medicine and dentistry.

**A BRIEF COURSE IN SEMIMICRO QUALITATIVE ANALYSIS**—William E. Caldwell and G. Brooks King—*American Book*, 163 p., paper, \$2.10. An introductory course; only the more common cations and acid radicals are included.

**CALIFORNIA JOURNAL OF MINES AND GEOLOGY**, Vol. 49, No. 3—*California Division of Mines*, 74 p., illus., paper, \$1.00. This issue includes an article on the flotative properties of titanium minerals in oleate solutions.

**CHROMITE DEPOSITS IN THE NORTHERN SIERRA NEVADA, CALIFORNIA**—Garn A. Rynearson—*California Division of Mines*, 150 p., illus., paper, \$2.00.

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**THE CONSUMER'S GUIDE TO BETTER BUYING**—Sidney Margolius—*New American Library*, 224 p., paper, 35 cents. A new and revised edition of the author's "How to Buy More for Your Money." Advice on purchasing commonly used articles.

**EARTH SCIENCE: The World We Live In**—Samuel N. Namowitz and Donald B. Stone—*Van Nostrand*, 438 p., illus., \$3.96. A generously illustrated high school text on man's physical environment.

**EVERGLADES NATURAL HISTORY: Volume 1, Number 1**—Joseph C. Moore, Ed.—*Everglades Natural History Association*, 38 p., illus., paper, \$2.00 per year. Interesting articles about the animals and plants of our youngest national park, where tropical plants meet their temperate neighbors. The editor is park biologist.

**THE EXTERNAL MORPHOLOGY OF THE DRAGONFLY ONYCHOGOMPHUS ARDENS NEEDHAM**—Hsiu-Fu Chao—*Smithsonian, Miscellaneous Collections*, Vol. 122, No. 6, 56 p., illus., paper, 60 cents. Intended to apply the knowledge of the most recent morphological interpretations and to serve as a foundation for future taxonomic studies.

**FARWELLIANA: An Account of the Life and Botanical Work of Oliver Atkins Farwell, 1867-1944**—Rogers McVaugh, Stanley A. Cain and Dale J. Hagenah—*Cranbrook Institute of Science, Bulletin No. 34*, 101 p., illus., paper, 75 cents. The contributions of a scientist who was botanist for a Detroit pharmaceutical house for 41 years.

**INSECTS CLOSE UP: A Pictorial Guide for the Photographer and Collector** Featuring 125 Photographs and Drawings—Edward S. Ross—*University of California Press*, 80 p., illus., paper, \$1.50. The photographer will get ideas for nature photography from the remarkable pictures in this small book; the student of nature will delight in their portrayal of insect life.

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