

Do You Know?

Most green plants retain their carotene, from which the body makes vitamin A, hidden in their leaves, but some transfer part of it to their roots which become yellow vegetables such as carrots.

Worsted and woollens differ in the type of wool fibers used; worsteds are made from tops, the longer fibers combed out of new, or virgin wool, while woollens are made from whole wool or the short fibers.

The dark spaces in the Milky Way, once referred to as coal sacks, are now known to be vast clouds of cosmic matter, dust and gas, cutting off our view of star masses beyond them.

Rice growing in the Orient depends largely on hand labor; in the United States rice is seeded from airplanes flying over the rice fields, harvested by the combine-drier method, and handled by machinery.



Photo courtesy Haverford College

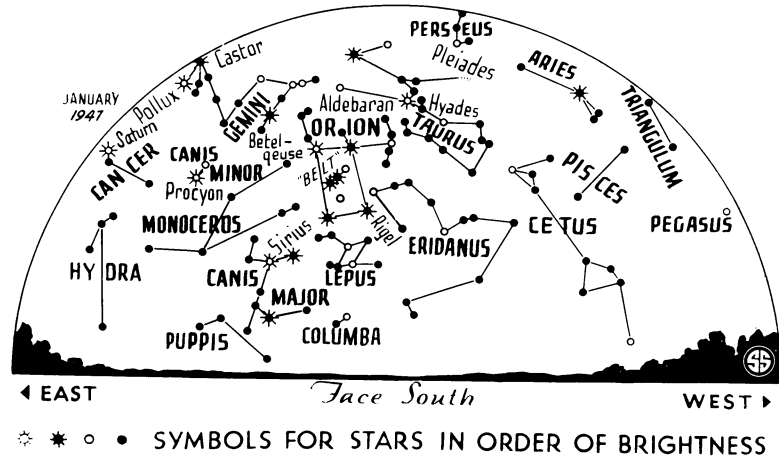
RESISTANCE BOXES FOR STUDENT USE

L&N instruments like those shown above take long and hard use by physics students in their experiments. The resistance boxes are made in 2-, 3- and 4-dial instruments with enclosed switches, and can be used in d-c or low-frequency a-c measurements. D-C resistant change from zero setting, measured across binding posts, equals readings $\pm(0.1\% + 0.01 \text{ ohm})$.

The Adjustable Mica Capacitor has a total capacitance of $1 \mu\text{f}$ in 5 sections: 0.5, 0.2, 0.2, 0.05, 0.05 μf . Limit of error is $\pm 0.25\%$.

Further information on request.

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the planet is hidden at 8:11 a.m., EST, and it comes out again at 9:02.

Farther west the occultation occurs a little sooner, and with the time being earlier conditions are better. For a point in central Illinois, near Quincy, the planet is occulted at 6:02 a.m., CST, before sunrise, and returns to view at 7:44. In the far west it is still better. For the fourth point for which the Naval Observatory makes predictions, a spot in southern California near Bakersfield, the occultation begins at 3:57 a.m., PST, and ends at 4:51, so it will be entirely in the dark.

Celestial Time Table for January

| Jan. | EST | |
|------|------------|-------------------------------------|
| 3 | 9:00 a.m. | Earth nearest sun, 91,468,000 miles |
| 6 | 3:00 a.m. | Mars behind sun |
| | 9:00 a.m. | Moon nearest, 222,000 miles |
| | 11:47 p.m. | Full moon |
| 8 | 7:18 a.m. | Moon passes Saturn |
| 13 | 9:56 p.m. | Moon in last quarter |
| 16 | 8:25 a.m. | Moon passes (and occults) Saturn |
| 17 | 10:04 p.m. | Moon passes Venus |
| 18 | midnight | Moon farthest, 252,300 miles |
| 22 | 3:34 a.m. | New moon |
| 23 | 4:00 a.m. | Mercury behind sun |
| 26 | 1:00 a.m. | Saturn nearest, 754,984,000 miles |
| 27 | 10:00 p.m. | Venus farthest west of sun |
| 29 | 7:07 p.m. | Moon in first quarter |

Subtract one hour for CST, two hours for MST, and three for PST.
 Science News Letter, December 28, 1946

NUCLEAR PHYSICS

World Union Hastened

WORLD UNION has been made more likely because of the advent of atomic power, declares Dr. Vannevar Bush in his annual report as president of the Carnegie Institution of Washington. Admitting that many persons see such a union as a "Roman peace" imposed by the atomic-armed strongest nation on all the rest, he points out that "there is a large and salutary endeavor for a better result—effort for a voluntary joining of states under some scheme of guarantees that will protect minorities.

Nor does he overlook the possibility that a world ethically unready for the yielding of such power may destroy itself before a satisfactory union can be effected. But, he adds, "it is doubtful whether civilization will commit suicide knowing it is doing so, and because of science the race between the power of weapons and the power of understanding is not altogether one-sided."

Popular recognition of the tremendous power of science, intensified by its war-

time accomplishments, will bring about strong material support of research in the near future, Dr. Bush is confident. He sees, however, some hazards that must be guarded against. Among them are a too-urgent demand for immediate application, possibility of dictation to science by laymen, over-emphasis on military aspects, and indifference to or ignorance of the cultural and philosophical significance of science.

So far as the Carnegie Institution is concerned, he pledges, "It should and will firmly support fundamental science if there should be a tendency toward the over-applied . . . It will most decidedly emphasize that the pursuit of science for its cultural value remains a thing worthy of men's best effort."

Science News Letter, December 28, 1946

After a careful study a statistician estimates that this year four out of every five tourists travel by highway.

