

That is why the greatest brilliance comes when it is a crescent, and not, as with the moon, when it is full.

Venus' diameter is 7580 miles, compared with the earth's 7918, so they are nearly the same size.

Because it is nearer the sun, Venus is warmer than the earth, but probably not too hot for life, like Mercury, where lead would melt on the sunlit surface. However, we know very little about the surface of Venus, since we never see it.

Venus is continually covered with clouds, and that is what makes it so very bright, because the tops of these clouds reflect a much greater percentage of light than would a surface of soil or rock, or even of vegetation.

What is below these clouds, we do not know. However, there is a thin atmosphere above them. This contains a considerable proportion of carbon dioxide, but no oxygen. Because carbon dioxide is heavier than oxygen, it is probably even more plentiful below the clouds. Plants have the power of absorbing carbon dioxide, and liberating oxygen, so the lack of the latter element makes it seem that there can be no plant life on the surface of Venus. And without plant life, there could probably be no animal life either. Therefore, like all the planets except earth, Venus seems unlikely to have life upon it.

No Landmarks Visible

Its visible surface only one of clouds, Venus has no permanent markings, and thus we have no way of telling how long it takes to rotate, that is, to find the length of the planet's "day." If it turned as fast as once in several of our days, we could detect such a motion by the spectroscope. On the other hand, if it were so slow that it always kept the same face to the sun, as Mercury does, then one side would be very cold, the other very

hot. Another instrument, the thermocouple, shows that all around the planet, on the daytime as well as the nighttime side, the temperature is the same. Thus it is believed to turn slowly, perhaps about once every thirty days.

Celestial Time Table for May

Thursday, May 2, 6:00 p.m., Moon farthest—251,900 miles away. **Tuesday, May 7, 7:07 a.m.**, New moon. **Friday, May 10, 7:46 a.m.**, Moon passes Mars; 10:52 p.m., Moon passes Venus. **Tuesday, May 14, 3:51 p.m.**, Moon in first quarter. **Saturday, May 18, 2:00 p.m.**, Moon nearest—226,700 miles away. **Monday, May 20, 11:00 a.m.**, Venus greatest brilliancy—magnitude 4.2. **Tuesday, May 21, 8:33 a.m.**, Full moon. **Tuesday, May 28, 7:40 p.m.**, Last quarter of moon. **Thursday, May 30, 12:00 noon**, Moon farthest—251,300 miles away.

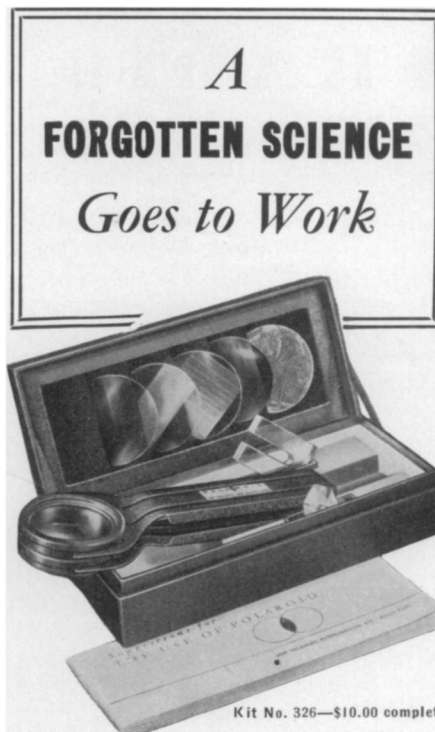
Eastern standard time throughout.

Science News Letter, April 27, 1940

PHYSICS

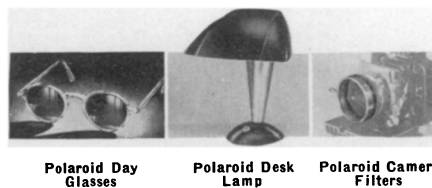
The Queen Elizabeth Wore A "De-Gaussing Girdle"

News that the British are using a new and secret type of mine in their reported 60,000 square miles of mine fields off the German, Netherlands and Norwegian coasts may mean that British scientists have played a major role in offensive mine warfare, just as they helped to conquer the menace of the magnetic mines, sprung on the Allies by Germany a few months ago. In the case of the magnetic mines, British specialists in magnetism left their regular scientific investigations in order to develop protection for ships against the magnetic mines. The nature of this protection became known when the Queen Elizabeth arrived at New York with a "girdle" around her hull. The girdle, supplied with electric current of the necessary strength and characteristics, sets




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● RADIO

Dr. Sydney H. Ball, consulting mining geologist will discuss the use of diamonds in industry as guest scientist on "Adventures in Science" with Watson Davis, director of Science Service, over the coast to coast network of the Columbia Broadcasting System, Thursday, May 2, 4:15 p.m., EDST, 3:15 EST, 2:15 CST, 1:15 MST, 12:15 PST.

Listen in on your local station. Listen in each Thursday.

up a magnetic field which in association with the steel hull and other magnetic material of the ship is such that magnetic mines laid at sea are not set off by the passage over them of a vessel so equipped. The expressive name applied to this protective device is "de-gaussing girdle." It is named after the unit of magnetic flux density. This honors a great German scientist, Carl Friedrich Gauss (1777-1855), known as the "prince of mathematicians," who in addition to being responsible for the theory of probability (not without its application to mining operations!) did fundamental work in electro-dynamics.

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MEDICINE

Report Cancer in Mice Cured with Yeast Extract

Bacterial Factors Present in the Yeast May Account For Effect of Treatment, But Action Is Not Clear

CURE of spontaneous breast cancer in eight out of 33 mice following injections of yeast extract is announced by Drs. R. Lewisohn, C. Leuchtenberger, R. Leuchtenberger and D. Laszlo, of Mt. Sinai Hospital, New York, in a report to the Society for Experimental Biology and Medicine. (*Proceedings*, March.)

The cancers in the eight mice disappeared and have not so far recurred. In 10 other mice treated with yeast extract the cancers were reduced in size. In the other 15 no change in the tumors was noted or they had even increased in size when treatment was discontinued or the animal died.

Effect of treatment of cancer with yeast in powder form or in pills, instead

of by injection into the veins or under the skin, will be reported later, the scientists state.

Bacterial factors which may have been present in the yeast might have accounted for the effect of the treatment on the cancers, although the exact factors responsible for the action of the yeast extract are said to be "entirely unclear."

Complete retrogression of transplanted cancers in 60% of mice and in 30% of spontaneous tumors treated with concentrated spleen extract has previously been reported by these same scientists. The cancers in the yeast-treated mice, however, were not transplanted but arose spontaneously.

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MEDICINE

Warn Against Cancer Danger From Sex Hormone Treatment

New York Physicians Are Alarmed By Their Experiences With Therapy Widely-Used for Variety of Disorders

WARNING of the danger of cancer from the now widely used female sex hormone treatment is issued by two New York physicians and by the editor of the *Journal of the American Medical Association* (April 20).

A case of breast cancer developing in a woman who was given a female sex hormone preparation for two years and three months is reported by Drs. Hugh Auchincloss and Cushman D. Haagen, of Columbia University College of Physicians and Surgeons and Presbyterian Hospital. The New York doctors say they cannot be sure the sex hormone treatment caused the cancer, but they "are nevertheless sufficiently alarmed by our own experiences to warn against the needless and excessive administration of estrogenic substances (female sex hormones) so prevalent today."

They list some 18 conditions for which these substances are now used, including

female disorders, sterility, high blood pressure, migraine, hemophilia, senile deafness, atrophic rhinitis and acne.

"Until more is known about the effect of these substances," they conclude their report on sex hormone treatment and cancer, "we believe their use should be avoided: 1. In large or prolonged doses; 2. When there is a family history of breast cancer; 3. Without initial and repeated clinical examination of both breasts; 4. In patients with chronic mastitis, carcinoma or any form of breast neoplasm, either before or after surgical or radiation treatment."

Repeating the warning about the use of female sex hormone treatments because of the danger of cancer, the editor of the journal calls attention to another report, from England, of three cases of cancer of the womb developing among 43 patients treated with female sex hormone.

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