

Atmosphere Found To Swell, Contract In Response To Sun

Washington - (UPI) - The earth's high atmosphere swells and contracts in response to the changing moods of the sun.

This is reported in a statement by the Smithsonian Astrophysical Observatory on its studies of satellite orbits.

Unexpected irregularities in the path of Vanguard I,

launched March 17, 1958, led to discovery of the pulse-like behavior of the upper atmosphere.

Scientists attribute the fluctuations to changes in the rate at which the temperamental sun emits ultraviolet radiation and charged particles. Variations in such emissions affect the temperature and density of the atmosphere at great heights.

Long-period swelling and contracting of the atmosphere was linked to fluctuations in solar ultraviolet radiation. Short-term changes were associated with ejection of particles from the sun.

Night-Side Contracts

The observatory also found a correspondence between the atmosphere's conduct and the sun's rotational period of 27 days. Moreover, the report said, "as the earth rotates the atmosphere of the night-side, not directly subjected to solar radiation, cools and contracts."

The sun is a fairly stable star. But it is by no means quiescent. From time to time giant eruptions, called flares, hurl vast numbers of particles into space.

Some authorities believe this and other kinds of solar activity may have a profoundly disturbing effect upon the earth's weather.

Not Enough Known

Weather bureau scientists, however, say that if there is such an effect, not enough is yet known about it to help forecasting.

The Smithsonian Observatory did not express an opinion on what influence if any is exerted on the weather by the sun-induced pulsations in the high atmosphere.

"All the details of the relationship," it said, "are not yet clear."

Measles Vaccine Long Way Off, Scientist Says

Washington - (Science Service) - There is discouraging news for America's youngsters today.

They will continue to be subjected to the discomforts of one of childhood's most common infectious diseases, measles. This gloomy forecast is based on a statement by a Buffalo virologist that a measles vaccine is not expected to be developed in the near future.

Scientists are still a long way from such a protective vaccine. Dr. David T. Karzon of the department of bacteriology and immunology at the University of Buffalo School of Medicine, told Science Service.

Distemper Antibodies

Commenting on research with the measles viruses, Dr. Karzon explained that there is some relationship between them and the viruses that cause distemper in dogs. It has been established that children that develop measles develop antibodies against both measles and distemper, he told an audience at Philadelphia's University of Pennsylvania. Scientists believe the viruses are only distantly related, however, because this double action does not occur in all species of animals.

Puppies immunized with measles viruses are capable of challenging very active distemper viruses although the puppies do not exhibit abundant distemper antibodies as a result of the measles infection. This unexpected reaction remains a puzzle, he said.

May Not Be Dangerous

When asked if a distemper vaccine could produce the reverse effect, that is, stimulate the development of antibodies against measles viruses, the virologist replied that he did not know. For one thing, he explained, distemper may or may not be dangerous in man. As far as is now known, man does not contract distemper, but there is no positive proof that distemper viruses injected into man for the purposes of producing antibodies would not affect humans.

Distemper and measles have similar symptoms which include fever, "runny nose," fatigue and discomfort. As a childhood disease, measles is relatively harmless if it runs its normal course. Possible complications include brain fever or encephalitis, however. In conclusion, Dr. Karzon noted that puppies immunized with infectious measles viruses do not develop chincinal symptoms of the disease.

Rotation Affects Growth of Plants

London - (Science Service) - The health of your potted plants may depend on the direction in which you rotate them.


A New Zealand researcher took several types of plants under fixed conditions of light, temperature and humidity and turned them continuously about a vertical axis at the rate of one revolution a day.

He found that the plants used - cyclamen (member of the primrose family), scarlet runner beans, and oats - were sensitive to the direction of rotation. Clockwise rotation, when viewed from above, inhibited growth while counterclockwise rotation stimulated it.

These findings are reported in the British scientific journal Nature by Dr. R. L. Jones of the department of scientific and industrial research, Dominion Physical Laboratory, Lower Hutt, New Zealand, in hopes that they may be useful background to a study of the twining of plants.

FRENCH EXECUTE REBEL

Algiers - (UPI) - Algerian rebel Harir Djelloul Ben Mohamed was executed Tuesday by a French firing squad for the murder of a forest ranger last September.



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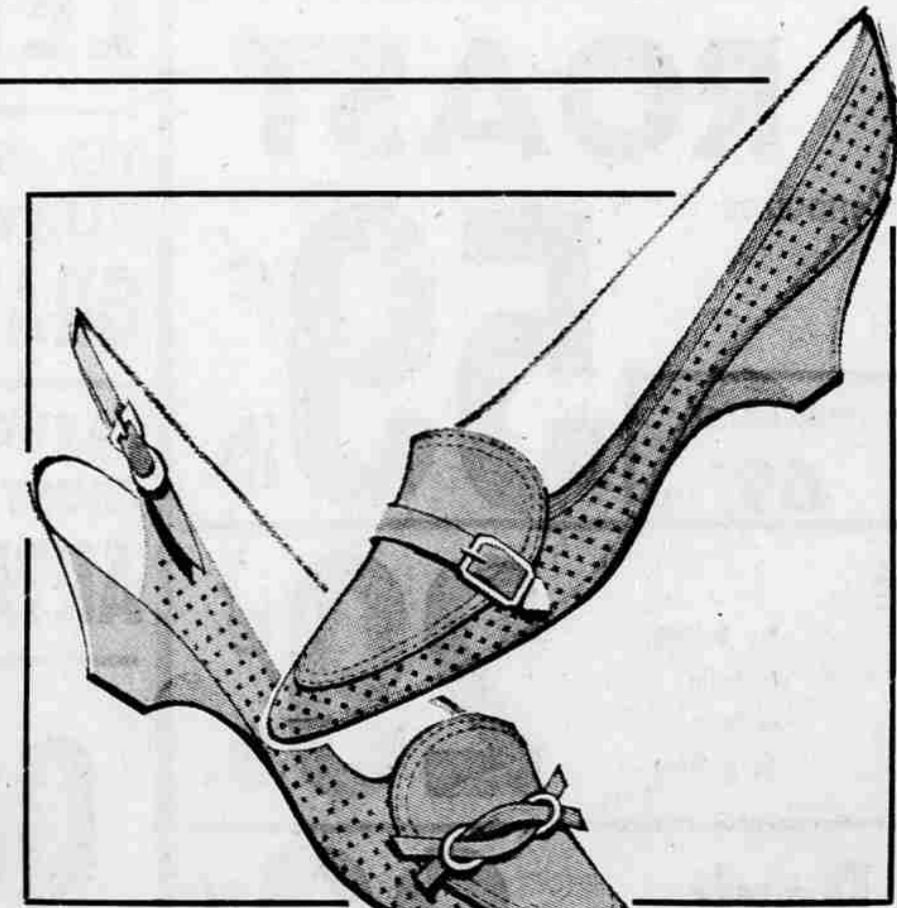
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