

Light radiation has been found to cause displacement of a drop under conditions which prevented a heated body from producing any reaction. The question remains open whether some portion of light energy had been converted into heat.

Energy given out by an electrified body causes motion of a drop.

It seems probable that those who are interested, and who have facilities for strictly eliminating given forces, will find that all forms of radiation are effective in causing displacement of a drop.

Experiments have been made and repeated numerous times with flasks in lines and in groups. The motions of drops in flasks in groups are suggestive of speculations which it would be premature to present seriously.

All the work has been done with alcohol-water solutions. The reason was that other solutions were tried, but observations were embarrassed by secondary phenomena which could be excluded only by using a fairly constant liquid solution.

It may be mentioned that some experiments were made with an oil drop suspended between a water surface and a petrol surface; the results were quite indefinite, but they seemed to indicate a possibly interesting line of investigation.

The proportions of alcohol to water respectively 1:4 give satisfactory results with the oils named; exact density is not important, but homogeneity of solution is essential. A liquid surface about 10 cm. in diameter with an oil drop about 15 mm. diameter is convenient for observation.

The working hypothesis has been that a liquid surface is, in effect, a neutral gravitational plane where abnormal displacements may be caused by infinitesimal forces.

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Oct. 28.

I THINK probably no unusual forces are involved in the motions of oil drops floating on water-alcohol solutions described by Mr. Jacob. A liquid surface, unless of enormous extent, is not a plane; the influence of the curvature at the walls extends several centimetres to the interior of the surface. It is probable that the curvature of a liquid surface in a vessel ten centimetres diameter, or even larger, would be sufficient to cause a floating drop to seek the central position, that is the lowest, by simple gravitational forces; it would move downhill. The curvature in the central part of such a surface would be so small, that very minute forces would suffice to displace the drop from a strictly central position. In the presence of minute, but permanent convection currents caused by differences of temperature in the different parts of the vessel, the position of rest might be some distance from the centre, the natural tendency of the drop to move to the lowest point being balanced by a steady convection current. It is possible that the effect of the electric field in moving the drops is due to a charge on the surface of the drop; but the equilibrium is so easily disturbed that it seems possible that all the phenomena may be due to convection currents, balanced against a minute gravitational restoring force.

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Abnormal Winds in Cordoba

FOR some months past—since about June to the best of my recollection—we have had an abnormal amount of wind from the east and south-east. In fact it could be said that such were and are still the prevailing winds.

Ordinarily the winds in Cordoba are from two opposite directions—north to north-east, warm, dry winds, accompanied by clear skies which usually occur the greater part of the time; and cold, strong winds from the south to south-west which follow the passing of a 'low' to the north, for a few hours or a day, seldom longer, often cloudy and with rain. The nights on the pampa are with few exceptions calm. The few exceptions are when a 'low' is passing and not always then. At altitudes above 1,500 metres there are usually high winds at night.

West winds are practically unknown and winds from the eastern quadrant almost as rare, in normal times. For those reasons the large amount of east and south-east winds during the past winter is outstanding and undoubtedly significant.

What is the cause of these deflections? It appears to be suggestive that they are of the kind that might be expected if influenced by the volcanic eruptions in the Andes. The centre of these eruptions is in a latitude slightly south of Cordoba, so that the south-east winds would be blowing counter-clockwise about that region of eruption as about a cyclonic area—a high temperature 'low'.

These south-east winds observed here are surface winds, of course, and I have no means of knowing whether the winds in other regions conform to such a possibility or not, or whether the winds at higher altitudes have been affected also.

These east to south-east winds have been accompanied by unusual cloudiness and humidity, and just recently by heavy precipitation in the region to the east, traversed by these winds from the Atlantic, inundating thousands of hectares and destroying the crops. Whether or not the volcanic eruptions have anything to do with the abnormal direction of these winds will require a study of extensive data. If such is not the cause there is some other. From time to time news comes of outbursts from the volcanoes in the Descabezada region. I do not know if they are in continuous eruption, but from the presence of volcanic ash in the air almost continuously during the winter, it seems probable that such has been the case.

The object of this note is to direct attention to a matter which appears to be worth investigating.

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Cordoba.
Oct. 18.

The Hon. Mrs. Huia Onslow

IT has been decided to prepare a memoir of the late Hon. Mrs. Huia Onslow, better known to the scientific world as Muriel Wheldale Onslow, whose obituary notice appeared in NATURE of June 11, 1932. I shall be very grateful if those who have letters in their possession written to them by Mrs. Onslow would kindly lend them to me for this purpose. They should be addressed to me and will be carefully preserved and returned to their owners.

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