Deviations like those observed on Fig. 1 are not surprising, since the conditions of validity of the theory are not rigorously fulfilled (the internal viscosity of polyisoprene is a little too high), and since the theory becomes insufficient when G approaches infinity.

Thus the theory explains a large number of facts, and is well suited to describe many essential features in non-infinitely small gradients. It is hoped that new possibilities of the hydrodynamic methods will follow ; it is already possible to obtain the parameter B, and therefore the internal viscosity of the molecule, from one single $[\eta]$ versus G curve.

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A Survey of Terrestrial Craters

The domination of the Moon's surface by circular crater-like features raises the question as to whether this is a phenomenon peculiar to the Moon or whether it has significance for the solar system as a whole, including the Earth. The latter view has been urged by Baldwin[1] and others[2,3], who conclude that the lunar craters are due to meteorite impact and that the Earth has suffered a similar bombardment of which known meteorite craters are the residual evidence.

Baldwin's correlations are on the whole rather convincing, but the data on terrestrial meteorite craters available at the time his work was done were statistically less impressive than might be desired. Although widely distributed over the Earth, specimens being found in Europe, Asia, Africa, Australia and North and South America, only 17 craters or clusters of craters were known prior to 1950. While some of the clusters contained many pits, they were for the most part small, and only ten individual craters were known to be more than 100 metres (330 ft.) in diameter, the limit of size which can be observed on the Moon (Kuiper, G. P., private communication). In addition, all these craters belong to a recent geological epoch, whereas there is evidence pointing to a wide distribution of ages among lunar features.

Discoveries made during the past seven years have provided appreciable extensions to the data in the directions of numbers, diameters and ages of craters. These include the Chubb or New Quebec Crater, 3·4 km. diameter (Recent)[4], the Talemzane Crater, 1·8 km. diameter (Late Pliocene or early Quaternary)[5], the Brent Crater, 3·7 km. diameter (Early Paleozoic)[6], the Holleford Crater, 2·4 km. diameter (Early Paleozoic)[7] and the crater at Deep Bay, Saskatchewan, diameter 13·7 km. (Late Mesozoic)[8]. In addition, two large circular arcs have been noted in Canada, the Belcher Islands arc in Hudson Bay, 400 km. diameter, and the arc containing Prince Edward Island and outlined by the neighbouring coasts of Nova Scotia and New Brunswick[9], 300 km. diameter, both of which may be due to meteorite impact.

Most of the more recent crater discoveries have been made as a result of systematic studies of aerial photographs, and it seems reasonably certain that some of the most interesting objects would have remained in obscurity for a long time if these photographs had not been available. It is the purpose of this communication to suggest that the wide aerial photographic coverage which now exists throughout the world represents an opportunity to make what could be a decisive contribution to this branch of astronomical and geophysical science. The equipment necessary for studying aerial photographs is very modest, and a determined worker can cover a relatively large area of country in a short time. If systematic searches could be initiated in many countries, it would be reasonable to expect a trend to emerge which would go far to settle the still unsolved problem of the relationship between terrestrial meteorite craters and the astonishing array of circular objects covering the surface of the Moon.

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Etch Figures on Sodium Chloride Crystals

GYULAI and his co-workers have for some years been investigating the properties of alkali halide crystals. In the course of etching sodium chloride and rock salt crystals I have made some observations which may throw light on the dislocations supposed to exist in real crystals.

Cleaved crystals of sodium chloride were etched in alcohol mixed with a small quantity of formaldehyde. After etching for a few minutes, that part of the sample which was in contact with the container revealed etch-figures, shown in Figs. 1 and 2. The examination and photography of these samples was carried out in transmitted light, with an 'L-Stative' Zeiss microscope. The etch-figures are most instructive. The growth layers, and the lamellar structure of the crystals show up clearly. On the single growth steps right- and left-handed spirals and their various combinations have become visible. The single spirals are squares with rounded corners, their orientation corresponding with the cubic edges of the crystal. The direction of observation was (001).

The photomicrographs give a detailed picture of the etched (001) plane. The etch-figures are similar to those obtained by A. R. Verma[1] on silicon carbide. Voltava and Amelinckx[2] obtained spiral figures on the surfaces of sodium chloride crystals by thermal etching. The spirals and their combinations obtained by the use of etching reagents are, however, clearer,