AUSTRALITES.

SIR,—With reference to the article on Australites by E. J. Dunn in the March number, I should like to point out that the origin of Australite-bubbles may very well be in accordance with the hypothesis of the meteoric origin of these bodies, if interpreted in that light. It is generally assumed that the material of shooting-stars consists of small particles of highly combustible metals, as magnesium, aluminium, calcium, and potassium. According to the suggestion first made by H. Michel the tektites are derived from the silica content of very large bodies of the same kind. Such a body would instantly take fire when entering the atmosphere and its content of silica may burst into millions of drops of molten glass. The heat produced by the oxidizing metal may be much greater than that produced by friction in the air. This accounts for the thorough melting of the glass and its high fluidity. It is to be expected that a liquid of so high a surface-tension as very mobile molten glass blown into the air could easily shape itself as bubbles. This can be illustrated by quite a simple experiment; take about a glassful of soapy water—another liquid with high surface-tension—pour it out of the window with a rapid upward jerk and a part of the liquid will be seen to form into bubbles that float in the air. The glass of other kinds of tektites, such as Moldavites and the occurrences of Indo-China and of the Philippines, was of a more viscous consistency and could not assume the form of rotatory figures like the buttons and dumb-bells of the Australites. It took the shape of torn-out lumps and flat cakes similar to some volcanic ejectamenta. Later on they were broken into angular pieces and corroded on the surface.

Presumably meteorites of light metals are more frequent than is suspected. But if they are not bigger than the shooting stars their possible content of silica can only be very small and must evaporate or be blown to dust. Only an exceedingly great original quantity of silica in connection with a very large celestial body could remain sufficiently consistent to shape into individual forms. This explains why tektites in the different regions always occur in enormous quantities. It seems unlikely that single and isolated tektites can come into existence at all.

A common origin of tektites and the iron- and stone-meteorites can be inferred conclusively in spite of their entirely different chemical and physical characters.[1]

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[1] *Die Naturwissenschaften*, Berlin, 21 Jhrg., 1933, p. 857.