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Supplement to an Astronomical Theory of Tektites*

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1. *Composition.*—The composition of the parent magma is not well known, but the silica content of some magmatic ores rises to 93% to 96% and the alumina content (second in tektites) rises to 60%.

The difference between tektites and natural terrestrial glasses has been frequently emphasized, but the greater difference between tektites and meteorites has not been equally stressed. The following comparison indicates these relationships.†

MATERIAL	EARTH	TEKTITES	METEORITES
SiO_2	59.12%	70% - 80%	14% - 31%
Al_2O_3	15.34	12 - 15	1 - 2.3
MgO	3.49	Small - 2.6	7.9 - 19.0
FeO	Small	2.6 - 5.4	4.5 - 11.0
Fe_2O_3	3.08	0.37 - 1.07	<0.75
K_2O	3.13	2.5 - 2.8	0.05 - 0.13
Na_2O	3.84	Small - 2.5	0.27 - 0.66
CaO	5.08	0.26 - 2.46	0.67 - 1.50

2. *Motion.*—The periods of orbits need not be restricted to one day. Eccentric orbits with perigee near the point of rupture would bring the swarms periodically to lower heights. Periods might be even less than one day, like that of the inner satellite of Mars, which would accord better with lower heights.

3. *Distribution.*—The proximity of the great tektite falls to the deepest trenches of the Pacific is of special interest. Four trenches with depths exceeding 9,000 meters are located in a zone near by and parallel with the great belt of tektites including Indo-China, the Philippine Islands, Malaysia, the East Indies, and Australia. The deepest trench, 10,500 meters, lies just east of the Philippines. Others are near Guam, New Guinea, and Tonga. The real significance of these trenches is not clear, but they constitute certainly a center of great tectonic disturbances. The depths extend evidently to the basaltic layer of the earth's crust.

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†The mean value for volcanic rocks, characteristic values for tektites, and mean values for meteoritic accretion by Fletcher G. Watson, Jr., are compared, using elements of greatest abundance.