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The genesis of tektites.

German, B.R. (1,2), (1) Institute of Physics, Donetsk, Ukraine, (2) Research scientist, Basler Landstr. 23-B, Freiburg, Germany, borisgerman@hotmail.com.

Despite the consensus, tektites did not originate during meteorite impacts due to their delicate shapes, sharp boundaries between different inclusions, and limits for the presence of round voids [1, 2]. The mechanism of 'vapour-condensation' can be excluded because of the presence of both rigid coesites and Fe-Ni particles in tektites [1, 3]. The theory asserts the melting of rigid bodies by impacts, but, probably, Muong Nong type of tektites did not melt [1]. Only four tektites fields were found on Earth. It contrasts to the random distribution of meteorites craters. Taking into account these apparent difficulties, we claim [4] that tektites could not be formed in impact events and are the result of explosive deep volcanism by both a magmatic partial melting and dense reological ignimbrites currents. The dense ignimbrite currents, by analogy with base surges, supple from a vertical basal cloud and move as solitary waves to a great distance [5, 6].

[1] O'Keefe, J. (1994) *Meteoritics* 29, 743. [2] Taylor, S. & Koeberl, C. (1994) *Meteoritics*, 29, 739. [3] Muttik, N. et al. (2008) *MPS* 43, 1827. [4] German, B, EPSC (2019) 13, EPSC-DPS2019, Abstract #1096. [5] Branney, M. & Kokelaar, P. (2002) *Geolog. Soc. Mem.*, 27. [6] German, B. (2019) ISBN 97839819526-05 (russ)/-12 (engl.), 164 p. +

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