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Characterization of impact-related melt breccias from the Araguainha impact structure, Brazil.

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A controversial debate has been lead about the classification and genesis of pseudotachylitic breccias in the central uplifts of large impact structures, especially in the Vredefort Dome. Melt breccias are known from the granitic core of the central uplift of the Araguainha impact structure, and have been distinguished into impact melt rock (IM), from alleged remnants of a coherent impact melt body, and pseudotachylitic breccia (PTB) [1,2]. A large number of samples of Araguainha melt breccias – including some from the collection of the late W. v. Engelhardt - have been analyzed to define distinctive petrographic and geochemical recognition criteria for IM and PTB.

[1] von Engelhardt, W. et al. (1992) Meteoritics 27, 442–457. [2] Machado, R. et al. (2009) Geochim. Cosmochim. Acta 73, 7183–7201.

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