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Room:Convention Hall

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Textural characterisation of Volcanic Debris Avalanche Deposit matrix through field and SEM study

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Volcanic Debris Avalanches (VDA) constitute a major hazard in volcanic areas, especially as it can travel long run-out distance unlike non-volcanic landslide. To understand mechanisms of emplacement of VDAs is thus essential in view of hazard mitigation.

Until now, scientist community tend to agree on the importance of the matrix in VDAs transport. However, it stays unclear how matrix form and in which manner it helps VDAs transport. Internal deformation, stresses repartition, and how the matrix acts to allow such long distance of transport remain obscure. Similarly, does the matrix behave as laminar or turbulent flow or is it a combination of both processes?

To answer those fundamental questions, we propose to use field and SEM data. Outcrop and micro-scale structures such as striation, tension gashes, hackle fractures etc can give some insights onto matrix formation and role in VDAs emplacement.

Keywords: Volcanic Debris Avalanches, Matrix, Structural characteristics, Emplacement mechanisms