

Reexamining the potential to classify lava flows from the fractality of their margins

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Introduction

The Supporting Information includes two figures and two datasets. The figures are provided to clarify points from the main paper. One dataset is the Python code used to perform fractal analysis in the present study. The other dataset is a set of four shapefiles containing all 15 margin intervals analyzed in the present study and the synthetic geometries that appear in Figure 2 of the main text.

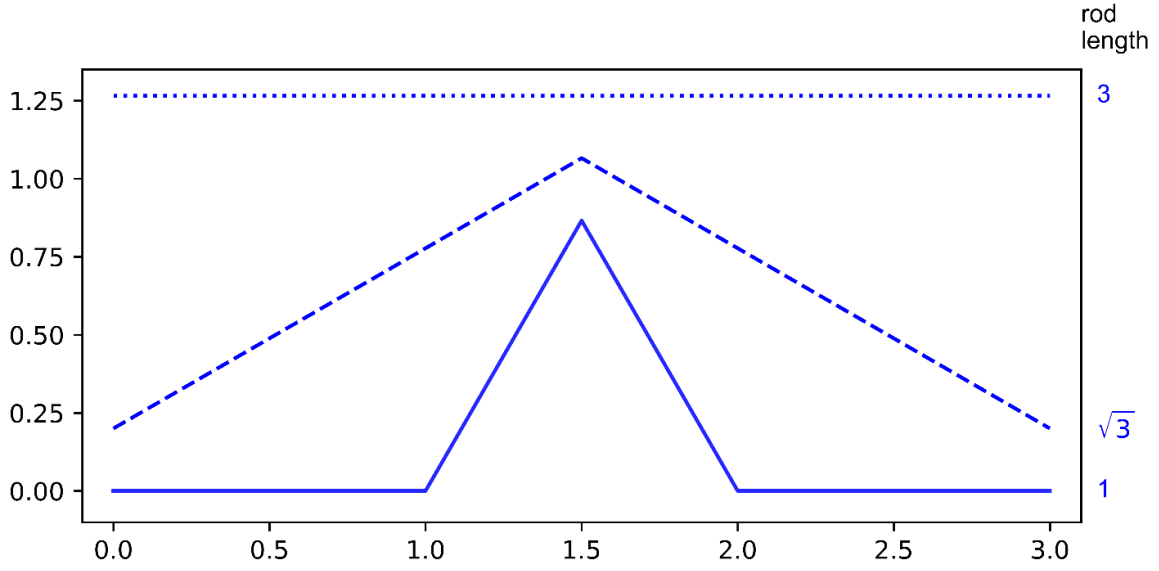


Figure S1. Rod-stepping of motif A (Figure 2a of the main text). The geometries Classic and Random (Figure 2b) are built from motif A (solid line) and its flipped counterpart motif A' (Figure 2a). The fractal scale-spectra for Classic and Random have a $\sqrt{3}$ periodicity (Figure 2c). This periodicity arises from the three modes in which motif A (and motif A') can be spanned by rods of different lengths in the divider method (section 3.2.2 of the main text). In their purest forms, the rod length of each mode (solid, dashed, and dotted lines) differs by a factor of $\sqrt{3}$.

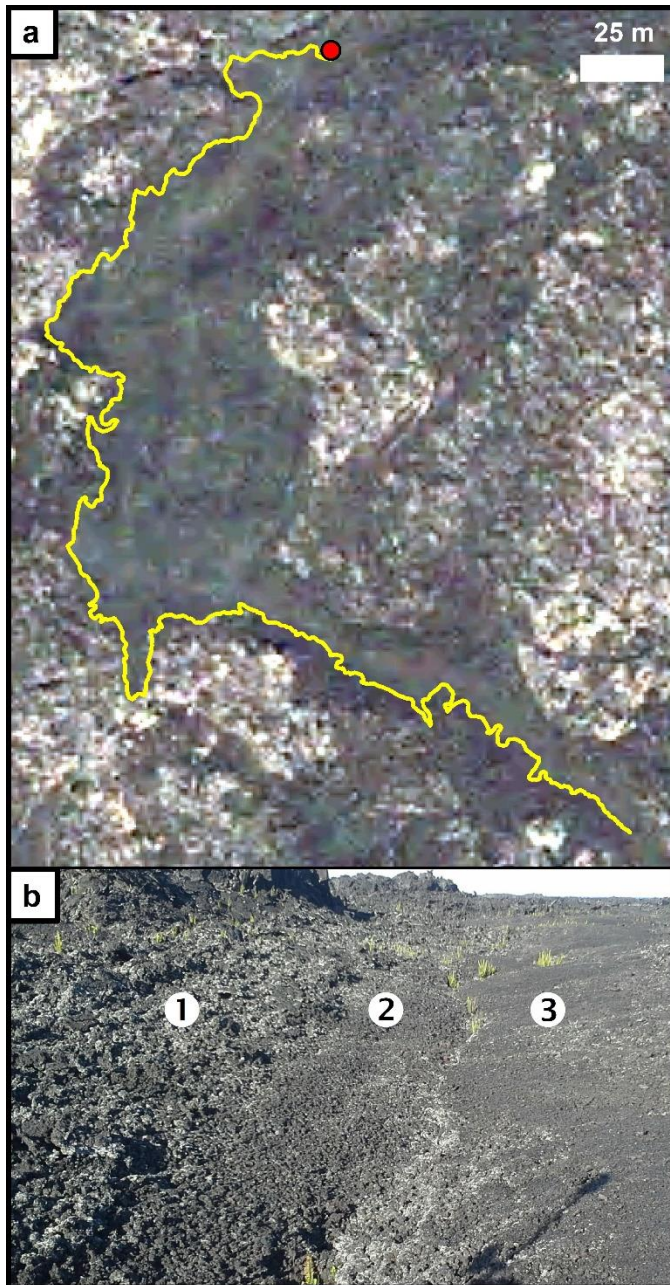


Figure S2. Primary toothpaste lava margin interval HAW-13a and context. (a) HAW-13a (yellow) on same background as Figure 1c (0.6 m/pixel). North end of HAW-13a (red dot) is location of (b). North is up. (b) Examples of (1) fragmented toothpaste slabs and rubble, (2) a spreading zone, and (3) primary toothpaste lava. View looks east and is not included in HAW-13a.