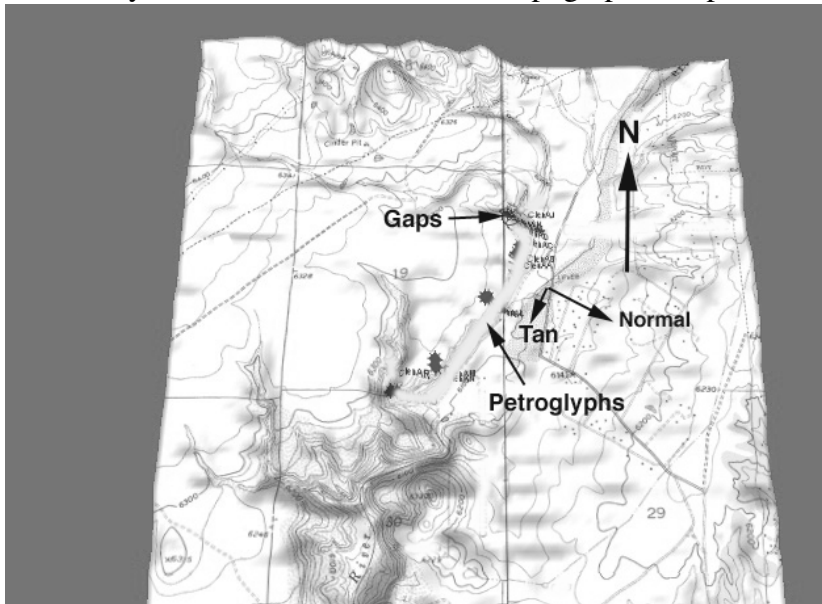


Orientation of Intense Z-Pinch Instabilities from an Intense Aurora as Recorded in Antiquity: Western USA

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Based on the compilation and analysis of the order of 100,000 digitally logged petroglyphs, we have identified several dozen general categories of instabilities generally associated with sub-gigaampere Z-pinches as might occur in a very intense aurora². But if prehistory man recorded an aurora in the sky, then petroglyphs must possess a preferred orientation overall. An initial study of the GPS database above shows a definite orientation to the Earth's south seeking pole in the Western USA. The figure below is typical of all sites, either thousands of glyphs or a single glyph. Generally all have a either a westerly or easterly normal and a preferred southerly tangent. While a substantial number also have northerly components, cliffs and slabs that lack a west-south-east view of the horizon are void of glyphs. Voids occur along the mile-long cliff of 5,000 glyphs where the cliff turns away from south as shown in the topographic map below.



The second figure shows the 'mushroom' column instability on a horizontal rock closely matching those in experiments. The south compass needle is shown at the bottom of the figure.



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² A. L. Peratt, 'Characteristics for the occurrence of a high-current Z-pinch aurora as recorded in antiquity', *Trans. Plasma Sci.* V.31, N.6, 2003.

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