

Flow dynamics of solid planetary surfaces

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Abstract

Similarity of superslow geodynamics and classical fluid dynamics (including supersonic dynamics) is demonstrated.

1. Introduction

Similarity of superslow geodynamics and classical pictures of fluid dynamics [1] (including classical subsonic and supersonic dynamics) is demonstrated [2, 3]. One could speak on convex up flows (continents, mountains) and convex down flows (bottoms of rivers, seas, oceans). Supersonic dynamics corresponds to moving ends of shock waves. Kelvin-Helmholtz instability [3, Fig. 13-15], Karman vortex streets, planetary flow eigenvalues, etc. are elements of new advanced comparative planetology over the new basis.

References

[1] Van Dyke, M.: *An album of fluid motion*, Stanford, The Parabolic Press, 1982.

[2] Bratkov, Yu. N.: *Geological flows*, arXiv: 0811.3136, 20 Nov 2008.
<http://arxiv.org/abs/0811.3136>

[3] Bratkov, Yu. N.: *Flow dynamics of the Moon*, arXiv: 1004.0450, 03 Apr 2010.
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