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Cosmology on the Beach: a formal analogy

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We report a formal analogy between cosmology and earth science. The history of a closed universe is analogous to an equilibrium beach profile (i.e., the depth of the water as one recedes from a beach moving seaward). A beach profile reaches equilibrium in summer and in winter and is described by a variational principle that minimizes energy dissipation. The oceanography side of the analogy gains much needed information from the cosmology side.

[Based on V. Faraoni, Phys. Rev. Research 1, 033002.]

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