

Abstract Submitted
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Self-Similarity Skeletal Structures of the Ocean (Observations, Hypotheses, Interpretation, Sequels) V.A. RANTSEV-KARTINOV, INF RRC “Kurchatov Institute,” Moscow, 123182, Russia — An analysis of databases of photographic images of ocean’s surface, taken from various altitudes and for various types of rough ocean surface, revealed the presence of an ocean’s skeletal structures (OSS) [1], which exhibit a tendency toward self-similarity of structuring at various length scales. The topology of OSS appears to be identical to skeletal structures which have been formerly found in a wide range of length scales, media and for various phenomena [2]. The analysis of a database of hurricanes routes in Atlantic and Pacific Ocean, more than for the centenary period has led the author to promotion of some hypotheses on the OSS formation and theoretical interpretation of this phenomenon. The capillary model (CM) of the OSS formation is offered. It is shown, the forces of surface tension and the capillary phenomena are enough to explain a durability and buoyancy of a separate blocks of the OSS and to calculate these basic parameters. Some consequences of these fractal structures of ocean and an opportunity of their practical use are considered basing on the suggested CM of the OSS.

[1] V.A.Rantsev-Kartinov, Phys. Lett. A., vol. 334/2-3, p. 234, (2004);

[2] A.B.Kukushkin, V.A.Rantsev-Kartinov., (a) Phys. Lett. A, 306, p.175, (2002,);
(b) In: Advances in Plasma Phys. Research, 2002, Vol. 2 (Ed. F. Gerard, Nova Science

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