

Return to the Moon (02)
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Russian FederationINTERPLANETARY COMPARISONS REQUIRE SOME REVISION OF STEADY NOTIONS AND
MOVE ON PLANETARY SCIENCE**Abstract**

Recent observations shown striking similarities between two “enigmatic” tectonic features on two cosmic bodies: Earth and Moon. An outstanding terrestrial tectonic feature – the Indian geoid minimum and the lunar large South Pole-Aitken Basin appeared to have many similar basic characteristics. They have similar relative sizes, occupy similar tectonic positions in frames of wave structures of the both bodies, are built by dense mantles and represent two deepest geoid minima on respective bodies. To these decisive factors one ought to add some similarity of their inner structures. Thus, very characteristic pointed sectoral projection of the Hindustan peninsula has an analogy in the SPA Basin in form of pointed relatively less dense projection in limits of the round geoid anomaly. To the west and east of the projection the geoid anomaly increases, as well as on a spacious territory to the south. Such internal structure corresponds to the subsided crust blocks around the Hindustan: the Arabian Sea, Bengal Bay and Indian Ocean. Such analogy is explained by an interference of lithosphere waves making a tectonic pattern of both planetary bodies. On both bodies there are solitary unique planetary scale objects origin of which puzzles scientists. Geophysicists know about existence of an unique depression in the geoid form on the Indian Ocean deep –112 m but its origin is mysterious. According to prevailing since some time the plate tectonics the basin of the Indian Ocean was formed as a result of moving apart crust blocks around a triple junction of the middle-ocean ridges. Such interpretation of the present tectonics contradicts to a real disposition of different ages planetary geologic blocks around the Indian minimum and does not explain its profound nature. Lunar Basins and Marea are traditionally considered as traces of impacts of giant cosmic bodies during an earlier bombardment (3 to 4 b. y. ago). The South Polar-Aitken Basin is the largest impact basin in the Solar system; its depth is about 8 km. However, serious difficulties recently arise in concordance of their supposed ages with ages of “impact” breccias and relations between them. The comparative wave planetology (Kochemasov, 1992-2011) resolves this obvious contradiction. Both considered planetary structures are analogies in the wave structure of their bodies. They are deeply subsided sectors (R-structures) on their respective uplifted continental highland segments-hemispheres (2R-structures). To the east of both sectors occur two analogous multi-ring structures: Orientale Basin and the Malay Archipelago.