DIFFERENT TOPOGRAPHY AND COMPOSITION OF EARTH- AND MARS-TYPE SURFACES,

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Introduction: Higher lands of solid rocks are considered to be similar formations and compositions in the Solar System (including Earth and Mars). This is mainly because higher lands are formed by plate-tectonics of plate movement studied on water-Earth. If there are no plate-tectonics on other waterless planets (including Mars), higher lands would show different location and shape compared with water planet Earth. Compositions (including carbon) would be shown also different concentration process on the these surfaces.

The main purpose of the present paper is to elucidate different topography and composition of water-Earth and waterless-Mars from the global system.

Earth topography with global water system: Global water system on planet Earth shows recent plate-tectonics probably triggered by extraterrestrial impacts on ocean site which are easily disappeared from original crater-structure and remained rocks for long activity of the water planet. In fact, Figure 1 shows completely different locations and sizes of present Earth, which suggests that Earth's higher topography has been formed by successive movements by many sea-floor plates probably induced by Earth's rotation (called as tidal force) with many ocean impact processes. Therefore, random direction and size of higher lands are characteristic for active water-Earth finally as shown in Fig.1.

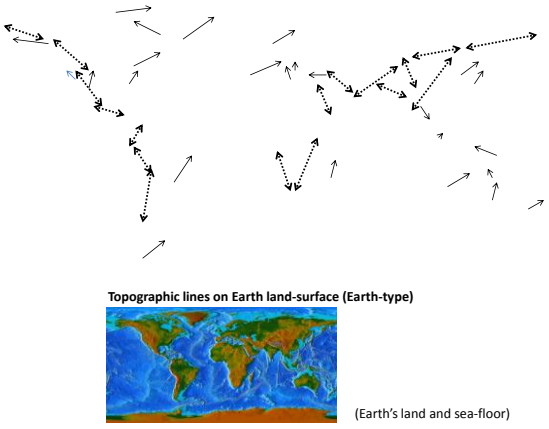

Fig.1. Topography of high lands of Earth, which are obtained from Earth's geographical map. The present data show that random direction and size of higher lands are characteristic for active water-Earth [1-2].

Mars topography with global waterless system: Global waterless system on planet Mars shows high lands and lower floor probably triggered by volcanic activity induced by Mars rotation (called as Mars tidal force) found near the Equator site.. In fact, Figure 2 shows higher lands near the Equator of present Mars, which suggests that Martian higher topography has been formed by solid-rich movements by many "local fluid" contribution probably induced by Martian tidal force with many Martian volcanic activity to be formed as Martian cold atmosphere finally. Therefore, high lands for rotational and longitude-like direction near the Equator are characteristic for "global waterless-Mars" finally as shown in Fig.2.

Compositional differences of Earth and Mars: Volatiles-elements has significant memory and role for active planets. In fact carbon-bearing compounds which as only one volatile element with stable at higher temperature and pressure environments. Carbon concentration can be found at shock-wave sites of meteoritic impacts, quakes and volcanic eruptions. Global water planet Earth form many sedimentary rocks on the ocean floor-bottom. Waterless Mars in global system shows carbon-concentration sites at impact crater process, which probably global distribution on global and many impact process on long history on Mars. Life formation and activity on Mars are dependent on Martian fluids distribution, whereas primordial rocks on Mars will be shown the details of Martian carbon.

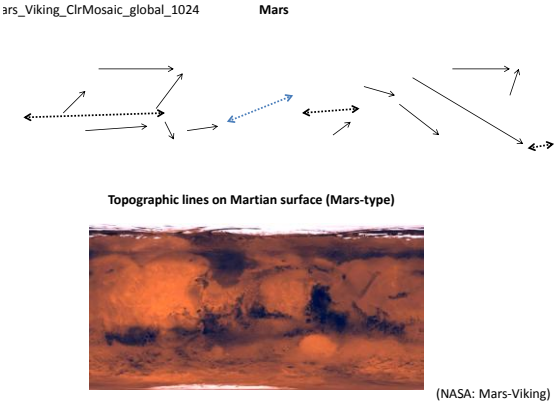

Fig.2. Topography of high lands of Mars. The present data show that random direction and size of higher lands are characteristic for global waterless-Mars [1-3].

References: [1] Miura Y. (2012) *LPSCXXXXIII* Abstract #2920. [2] Miura Y., Fukuyama S. (1999) *Journal. Materials Proc. Tech.* (Elsevier), 85, 192-193. [3] Miura Y. (2016) Submitted.