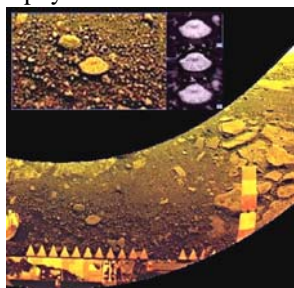


Possible life detected on the planet Venus' surface

L.V.Ksanfomality, A.S.Selivanov, Yu.M.Gektin

Space Research Institute, Moscow, Russia leksanf@gmail.com / Fax +74953331248

The position of the hypothetical habitability zone in extrasolar planetary system was considered by many authors. Approximately 1/4 of exoplanets orbit their stars at very low orbits, which leads to high temperatures of their surface (if any), up to 800 K or more. Some of them should have the physical conditions close to those of Venus. Is there any possibility that the life forms can exist at quite different environment than "normal", Earth-like physical conditions?

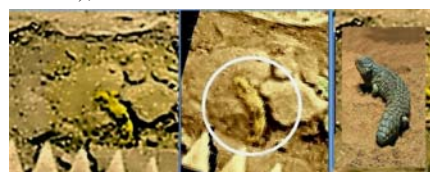


Namely the planet Venus could be the natural laboratory for studies of this type, having the dense, hot (735 K) oxygenless CO₂ - atmosphere and high, 9.2 MPa, pressure at the surface. It should be recalled that the only existing data of actual close in TV-observations of Venus' surface are the results of a series of missions of the Russian VENERA landers which took place the 1970s and 80s, working in the atmosphere and on the surface of Venus. No other results of this kind were obtained since. A re-examination of images of venusian surface obtained from the VENERA landers has been undertaken using a modern processing technique, with a view to detect any possible signs of life under the specific conditions on Venus.

This speculative identification rests on two characteristics of these features: (a) their somewhat suggestive morphology and (b) their temporal appearance and behavior (present, than absent on subsequent images of

the same area; or changing appearances). The re-examination has identified previously unreported features [1-4] that may correspond to hypothetical life forms on Venus' surface. Two of them, 'mushroom' (1) and 'amisada' similar to the Australian shingleback lizard in shape and size (2) are shown here.

Analysis and comparison of the contents the sequence of panoramas of the venusian surface obtained in the course of the TV-experiments on the VENERA landers (1975-82), allowed the authors to detect some



interesting objects displayed on the panoramas. Following the change in their appearance on the sequence of images allowed a suggestion that such changes may be related to the possible habitability of the planet. Some of the objects found were described in about 20 papers of L.Ksanfomality (2012-14). There are also found and listed in the report images of objects with special morphology resembling the shape of some terrestrial fauna. In the absence of new landing missions to Venus, the same study was carried out on the other remaining panoramas. There is a reason to believe that in the panoramas few class of unusual objects has been found, which will be shown in the report.

References:

- [1] Ksanfomality L.V. 2013 Doklady Physics. **58** (5), 204
- [2] Ksanfomality L.V. 2013 Doklady Physics. **58** (11), 514
- [3] Ksanfomality L.V. 2013 International Journal of Astronomy and Astrophysics, 3, 57-79.
- [4] Ksanfomality L.V. 2014 International Journal of Astronomy and Astrophysics, 4, 29-38.