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Amisadas: Hypothetical Venusian Fauna at the Venera-14 Landing Site

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Abstract

Among hypothetical fauna entities of Venus, which are presented in our previous papers certain unusual findings having similar structure were found in different areas of the planet. These objects were called “Hespies”. Their unusual shape attracted attention and was repeated on various panoramas taken by landers’ cameras. The present study deals with another object repeated on successive panoramas for which a nickname “Amisadas” is proposed. At a cursory examination, when seen from above, its body is fish-shaped and has the size of 12-15 cm. Despite the VENERA-13 and VENERA -14 landing sites separated by a distance of 900 km from each other, Amisadas are found in both places. In this paper, we analyze panoramas of both landers. In the course of this study novel unusual objects were found. By virtue of a close position of the objects to the TV-camera lens, low noise intrinsic to VENERA-14 images and sufficient number of the panoramas, detailed images of Amisadas were obtained. Information related to methods of the raw-image processing is also presented. The attention is paid to the method of search for hypothetical living forms on the planet Venus.

Keywords: Planet venus; Space vehicles instruments; Planet’s surface; Astrobiology

Introduction

For thousands of years, humanity has wondered whether there is life outside the Earth. Recently, a series of studies was devoted to strange entities in images that were returned from the surface of the planet Venus by the VENERA landers, 39 (for VENERA-9, 10) and 32 years ago (for VENERA-13, 14). Experiments in television photography [1,2] instrumented by the landers VENERA yielded many panoramas (or their fragments) of the Venus surface at the landing sites. Thus the method was the same that is used for a contemporary search of hypothetical martian life. The images were re-processed using modern processing techniques. There are entities that one can consider to be signs of hypothetical life on Venus, regardless of how crazy this assumption sounds. Along with unfamiliar forms, some of the found objects are closely reminiscent of the forms of some of Earth’s living organisms. e.g., the term might be referred to as a ‘Bear Cub’ [3], found in a VENERA-9 panorama (Figure 1). The resolution in the panorama was 21’, and for that reason, despite the Bear Cub’s close position, the identifiability of finer details is limited. The similarity phenomenon is called terramorphism.

The pictures revealed a dozen previously undetected strange objects that can attest to the fact that Venus does possess hypothetical life. Materials shown in this paper demonstrate experimental results that involve re-processing of the original panoramas, without any retouching or corrections. For the moment, it is impossible to prove that the objects are alive in fact because they cannot be touched. However, the opposite is true also, that nobody can place errors into the processing of the images. Instead, critical arguments boil down to the famous humorous statement of A.P. Chekhov, in his ‘Letter to my neighbor-scientist’: "this cannot be, because it never can be." Subconsciously, all positions of critics have been based on variations of the statement: only the Earth’s conditions are suitable for life. “We are the best and all our physical conditions are the best too”. Based on this idea, limited “habitable zones” are drawn in schemes of extrasolar planet systems and are under the study of theoreticians. No other possibilities are considered.

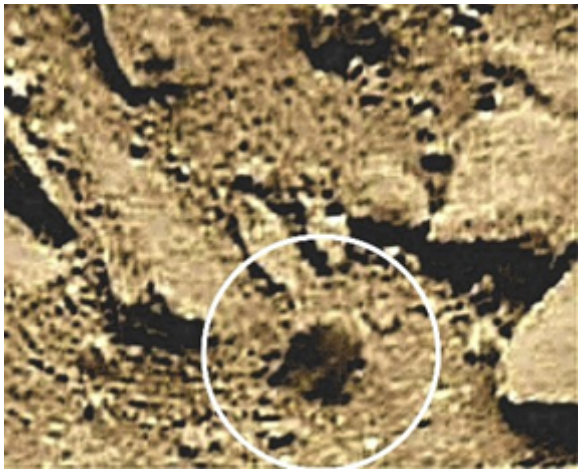

Figure 1: Panorama fragment obtained as a result of the VENERA-9 mission upon additional data processing. In the forefront, there is a small object seen from above, similar to a bear-cub by its shape. By its soft contours, the object is distinguished from the sharp stone edges. To the left beyond the object, over the ground, there propagate long furrows that terminate under the Bear-Cub. Apparently, these tracks indicate the preceding motion of the object [4,6].

During the 39 and 32 years that passed since the time of TV experiments employing VENERA landers (1975 and 1982), no similar experiments or missions to Venus have been performed by any space

agency. In connection with the renewed interest in what was occurring during the experiment and to the discovery of manifestations of possible life revealed on some of the pictures, the panoramas were re-examined. A train of papers [4-6] published in 2012 presented some data on the hypothetical Venus fauna and flora that survives under physical settings that are radically different from the Earth's.

The existence of life on Venus, at first glance, sounds absurdly. Physical conditions on Venus are incompatible with terrestrial life at all. It may be reminded that the Venusian atmosphere almost entirely is composed of carbon dioxide and cloud layers located highly in atmosphere consist of micron-size droplets of concentrated sulfuric acid. Surface temperature of Venus is 735 K (462°C), and pressure is 9.2 MPa. In many sites, the planet surface is similar to solidified lava. The daytime illumination attains 5-10 klx and higher; blue light is absorbed by the atmosphere, and the sky tint is yellowish.

The Sun disk usually is not seen through permanently presenting clouds. The duration of both the day and the night is 58.4 Earth days. A typical Venusian landscape is a waterless red-hot stony or loose surface, mountains, and, sometimes, volcanoes. A hypothetical waterless Venusian life, if it does exist, has to use biophysical mechanisms of metabolism and photosynthesis, which are distinguished from those of the Earth's life.

Panoramic images of the Venusian surface were returned in the course of the Soviet VENERA missions in 1975 and 1982. In total, 41 images or their fragments were transmitted by the landers' cameras. Up to now, 10 or 11 unusual objects were found, analyzed, and discussed in relevant publications. The re-processing of the images made it possible to detect novel unusual objects that could be signs of hypothetical life on the Venus planet. Compared to the VENERA-13 landing site [4-6], the analyzed VENERA-14 panoramas represent geological provinces of another type. Object found on panoramas of VENERA-14 were originally referred to as "hespy" [7] (similarly to the case of the VENERA-13 landing site). However, described here unusually shaped objects, apparently, represent another hypothetical group of Venusian flora. Similarly to [4-6] and for convenience of description, the specific nickname "Amisadas" was proposed for this group of objects (an abbreviation from the name of ancient Babylonian king Ammizaduqa in Mesopotamia (XVI century BC). His astronomers used clay tablets in which apparitions of Venus were recorded. It should be noted that the processing of primary images to the level required to search for hypothetical forms of Venusian fauna and flora, as well as search in itself, are difficult and time consuming tasks. This is the fact that can explain, why the systematic study that began four years ago, in 2009, has resulted so far in 11 or 12 findings only of hypothetical objects. Up to now, the analysis is not completed yet; approximately a half of available images were studied. The Amisadas are related to most recent results. Entities found in the present study strongly diverse in their shape so that, as a rule, to classify them to certain groups is impossible. Most easily is detection of terramorphic objects, like a Bear-cub [3], Figure 1, an Owl [6], a Mushroom [5] and a Scorpion [8].

Nevertheless, even in these cases, it took long time (sometimes few months) to recognize an object presented in an insufficiently clear image. Certain kind of support occurred from the atlas of Earth's living forms. However, many objects that strongly differed from surrounding background are unusual so that there was nothing to compare. Of course, the possibility of artifacts associated with the interference of noise cannot be excluded, especially when images are noisy. In these cases, a very thorough analysis was required. An example is an object called Disk [4], which was detected in the BW-6 panorama transmitted to the Earth on the 87^{th}-100^{th} min upon landing the VENERA-13 module. Panoramas of VENERA landers were studied for many years by both Russian and foreign researchers. However, the Amisadas are described for the first time. Therefore, the natural question arises, why no entities, even terramorphic were found previously? This fact can be explained by two reasons. The first one is that nobody was looking for them, although the earliest publication about it (by the author) is dated by 1978 [9]. The second, more important reason is the necessity to develop novel processing methods that did not exist previously and the processing is very labour assuming. Therefore, in the present paper, we make an attempt to describe the method of search for detection and processing of terramorphic objects, namely of Amisadas. It is more difficult to explain, why a certain object could attract attention and be found out. Apparently, this is associated with individual features of the image perception for different persons. These properties are sharpened, e.g., at talent professional photographers of nature, who are capable to notice and fix unusual images or compositions ignored by other people.

Obtaining and Processing of Experimental Data

Images published soon after the completion of the VENERA missions were obtained on the basis of single or combined black-and-white or color-divided panoramas. As was reported, there are many primary raw images not studied yet. Detailed information on TV experiments on the VENERA-13 and VENERA-14 landers was published in [1-6] and is not repeated here. Different from cameras 1 of the VENERA-13 and VENERA -14 landers, the cameras 2 transmitted a full black-and-white image and then in turn, colored fragments of right and left parts of the panoramas, 14 fragments taken by each camera.

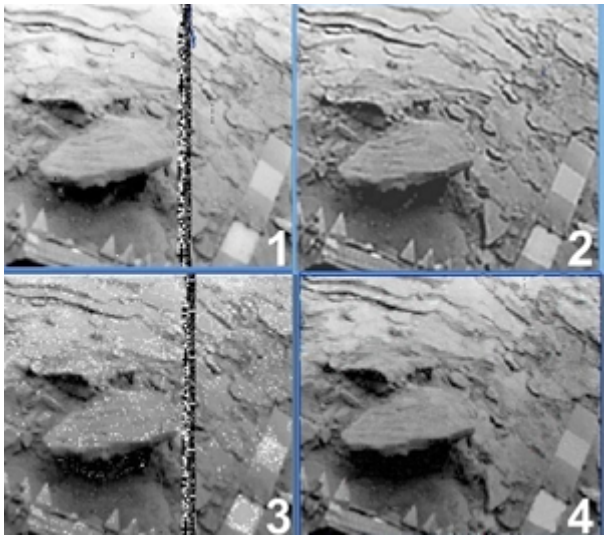

Figure 2: Illustration of primary-processing methods for selected fragments of Venusian surface panoramas: (1) and (3) are initial images at the VENERA-14 landing point (camera 1); (2) and (4) correspond to the eliminated insets and partly eliminated noise.

They consist 4 consecutive series of repeated groups of images numbered as 1, 6, 9, and 13. According to the arrangement and positions of noises and defects, series 6 could be a re-transmitted series 1, and series 13- a retransmitted series 9, although they have certain differences. Each series includes a number of panorams. On the most successful images, noise is low, which allows using efficient processing methods and combining different images. As a result, the images quality was improved noticeably. Figure 2 show an example of primary processing steps of most successful panoramas for series 1/6 and 9/13 in which identified fragments were selected.

Images 1 and 4, respectively, correspond to original fragments with a very low (1) and middle (3) noise levels. The vertical band is a telemetry data inserted from other devices. In images 2 and 4, inserts are replaced by sections taken from other panoramas of the same series and noise interferences are removed. The fragments obtained admit further significant improvement of sharpness and clarification of fine details. To this end, four methods were employed: application of an un sharp-mask and the functional-sharpness methods; use of the correlative-stacking operation; and an improvement of the sharpness by consistent application of the "blur-sharpening" operation of standard WORD and WINDOWS software. All these approaches are known sufficiently well and a significant number of relevant codes are proposed for each of them.

Amisades

Results of the above operations (and of other less significant ones) are presented in Figure 3 for series 1/6 (on the left) and for the series 9/13 (on the right). The improved clarity of images made it possible to detect objects not recognized previously. The layered structure of the surface with numerous cracks is clearly seen. The color-control panel (on the right) provides the scale size with each its field being a square of 10 x 10 cm^2. The distance between the teeth on the landing buffer is 5 cm. Thus, the size of the large stone in the foreground is about 50 cm.

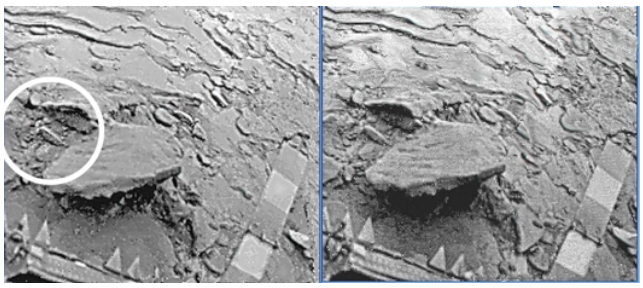

Figure 3: Advanced methods of processing Venusian surface panoramas improve their sharpness and make it possible to identify objects missed previously. On the left: processed image of the VENERA-14 panorama fragment (camera 1, series 1/6); on the right: the same fragment on panoramas of series 9/13.

The Amisadas object is located on the left to a large stone, in a small alcove at the left edge of the picture and is positioned favorably being close to the camera lens, at a distance of 1.2 m. The Amisadas is seen at an angle of about 60° to the horizon and represents an elongated bulky body, 12 cm long, resembling a fish if observed from above. Its frontal part (on the left) terminates by a regular structure. As a result of the first attempt to clarify the Amisada's structure, the image shown in Figure 3 was obtained. The first Amisadas position is marked by white ring.

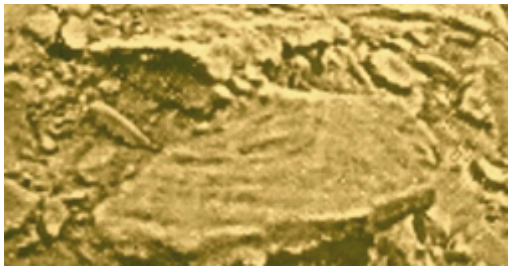

Figure 4: Amisada: a supposed entity of Venusian fauna. The size of the object is about 12 cm. The left side of the amisada is surrounded by a structure resembling a tilted semi-circle consisting of individual non-resolved elements.

The regular structure of the Amisadas "head" (left part) consists of isolated unresolved elements forming a round crown-like semi-circle salient, at 2-3 cm from the Amisadas body. At the right, the Amisadas is terminated by a short narrow appendage similar to the hespy's tail [7]. Of interest is the lower part of the Amisadas. Combining parts of images obtained independently and presented in Figure 3, one arrives at the more detailed view of the fragment (Figure 4), where geometry is corrected in part. According to the image, the Amisadas rests on the projecting parts of its body, their number at this side can attain 3 or 5. The apparent inclined position of the body in Figure 3 is explained by geometry of the image, namely, by the 50° tilt of the camera axis. In Figure 4 under the object a deep shadow is seen, which indicates the volume character of this object.

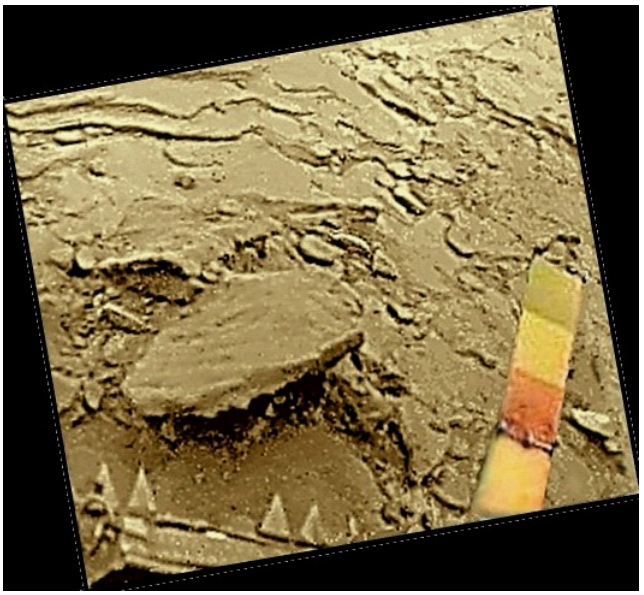

Figure 5: The high sharpness image stacked of two parts of Figure 3.

The detailed analysis of Figure 3 allows to find the second Amisadas located roughly twice as far as the first one, using its crown serving as an attribute intrinsic to Amisadas. The second Amisadas is arc-shaped

and is seen also in Figure 3. Positions of both Amisadas are shown in Figures 5 and 6, in which they are marked by white circles 1 and 2. Apparently, Amisadas 2 is a bit larger than the first one. Both have approximately opposite orientation. It was found by animation methods that for the observation time, the Amisadas-1 displaced a bit and inclination of its "crown" changed. The number of high-resolved BW-images is insufficient for a more detailed conclusion; as for the color-divided panoramas they included only the right part of the Amisadas 1. In any case, estimates given in [3,6] for the maximum movement velocity characteristic for Venusian fauna, namely, about 1 mm/s, is not exceeded here. Figures 3 and 4 show that both Amisadas are located in small depressions.

Regular and similar shapes of the Amisadas and their mutual proximity underline their reality. In Figures 6 and 7, views of Amisadas 1 and 2 are compared at their positions given in Figures 3 and 5. Due to the larger distance to Amisadas 2, its details are less distinguishable, its tail and spots on the body are only seen. The lower part of the Amisadas 2 is not completely visible but the similarity of images for both Amisadas seems evident. The crown actually belongs to these objects and extends their length up to 15 cm. For Amisadas 2, its total length attains about 15-16 cm.

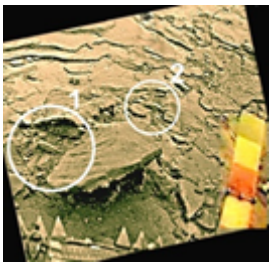

Figure 6: Positions of amisadas 1 and 2.

Two more distant hypothetical Amisadas are noticed hypothetically at other parts of the VENERA-14 panoramas. But the most interesting is a spotty Amisadas, placed at the very lander.

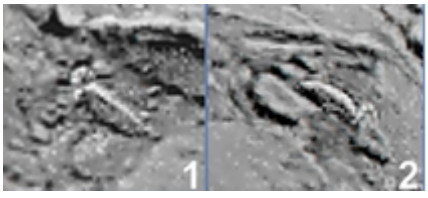

Figure 7: Comparison of shapes for amisadas 1 and 2. The "crown" formed by individual elements is not of arandom nature and relates to amisadas in themselves.

Spotty Amisadas

The most interesting object is a spotty Amisadas that has been found at the central part of the VENERA-14 panorama, left side of fields shown in Figures 3 and 6. Amisadas is located just at the landing buffer and is marked by the white circle in Figure 7. This object is closest to the lens of camera 1, being observed from above at an angle of about 80° to the horizon. The distance between spotty Amisadas and Amisadas 1 attains approximately 0.4 m. In contrast to previous Figures, spotty Amisadas is, apparently, seen in motion. Seemingly, It is climbing up or creeping on a 5-8 cm stone. The upper part of Amisadas is located on the flat surface of the stone, and the lower part envelops a ledge. Of course, it cannot be excluded that spotty Amisadas does not go up but comes down from the stone. The crown that is clearly visible at the Amisadas 1, was found only in the course of further processing of original images of the Amisadas. Its crown is scarcely seen and manifests itself by an additional processing of initial images both as a semi-circular shadow at the upper part of the Amisadas and several hardly distinguished points above it. Therefore, if the crown is considered as a signature of the Amisadas's head part, it is actually climbing up onto a stone. Since each image line takes 0.78 s, blurring of the crown image could be caused by the wind above the stone surface (in contrary, the Amisadas 1 and 2 were positioned in depressions).

Two small protrusions at both sides of the Amisadas head could be' its forelimbs. In general, it resembles actually a lizard climbing up to a rock, which again indicates the surprising terramorphism of Venusian fauna. Spots on the Amisadas body in Figure 7 are more distinctive than in Figures 3 and 4. An oblong spot is seen on the head, dark spanning bands are visible at its central (at the bend) and lower parts. The length of the Amisadas is about 10-12 cm (excluding the crown). Animation of 6 subsequent frames for spotty Amisadas has made it possible to detect a small displacement of light and dark parts of its "head". Three of these frames are shown in Figure 7. The upper part of the Amisadas in size and motions resembles a semi bent finger. For 1.5 hours, the head gradually shifted first for 2 and then for 2 or 3 image pixels to opposite sides. At a distance of about 85 cm from the camera lens and for a resolution of 11', the displacement corresponds to 1.1 to1.3 cm. In this case, the speed of the motion is significantly lower than that determined in [3]. It is closer to 1 mm/min, rather than 1 mm/s. This value seems to be housekeeping action (looking for food?) of the spotty Amisadas, rather than its speed of motion that any case, is very slow.

Thus, at least three Amisadas were found at the VENERA-14 landing site. Classification of Amisadas as forms of hespies, which had been proposed in [7] for panoramas of VENERA-14, likely, were wrong. The body of a hespies is flattened and twice as long as that of an Amisadas. The Amisadas body is thicker and flexible, as can be seen from Figure 7. Apparently, these were Amisadas but not hespies that had been shown in [7].

Amisadas on Venera-13 Panoramas

Amisadas were also found in VENERA-13 panoramas. The object shown in Figure 1 was too far from the camera so that the resolution of the image was insufficient to recognize fine details. The shape of the object was reconstructed by the more rigorous processing using all available images repeated in successive panoramas. The above-listed processing methods were applied. A small shift of successive images within a single pixel results in an additional improvement of the resolution.

Of course, the image cannot be better than that contained in original images. Figure 1 illustrates the step-by-step improvement of images obtained. Frame 1 with an arrow corresponds to the processed version of Figure 1. Further, the same fragments but taken from other panoramas [2-4] were involved in the processing. The methods

employed improve significantly the quality of images, which is demonstrated by final image in Figure 2.

Thus, one may assume that the elongated body shown in Figure 2 actually is an Amisadas rather than a hespy. However, due to the large distance of the object from the camera lens, the resolution is insufficient for detection of fine details such as crown, spots, and other characteristic features of the object, which are more confidently traced on VENERA-14 panoramas (Figures 3-7).

Conclusion

In this paper details are thoroughly described of the procedures of search for, identification, and image processing for terramorphic objects called Amisadas, found on panoramas of the VENERA -14 lander. The most difficult task is to explain a way, by which objects attract attention of a researcher and how they can be found. The Amisadas when viewed from above, are well-distinguished fish-shaped bodies, however, supplied by limbs of support (and, probably, of motion) similar to that of reptiles. The structure and purpose of the Amisadas body part, resembling a crown, is not clear. The crown consisting of isolated elements forms the forward (or back) part of the Amisadas. A limited fragment of the panorama, presented in the text, contains images of three Amisadas. Probably analogous objects were found on panoramas of VENERA-13, landed at a distance of 900 km from the landing site of VENERA-14.

The VENERA missions were intended to provide a common understanding of the planet's surface and atmosphere. But the results obtained are revolutionary. We need an urgent implementation of a new mission, to explore the surface of Venus for a hypothetical existance of fauna and flora. The mission should be special and much more complicated than the VENERA missions. Nevertheless, the progress of technical equipment is adequate for it.

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