

VISUALIZATION OF THE PIONEER-VENUS RADAR DATA FOR ISHTAR TERRA AND BETA REGIO. D.G.Stankevich<sup>1</sup>, Yu.V.Kornienko<sup>1</sup>, Yu. G.Shkuratov<sup>2</sup>, A.T.Basilevsky<sup>3</sup>: 1 - Institute of Radiophysics and Electronics, Ukrainian SSR Acad.of Sci., Kharkov; 2 - Kharkov State University; 3 - V.I.Vernadsky Institute of Geochem.and Analyt.Chem., USSR Acad.of Sci., Moscow.

Television panoramas of Venus surface give an important information on the nature of the planet (e.g.(1,2)). However these panoramas show us only small parts of the surface and should be supplemented by data on structure of the surface in regional and global scale. Large volume of such data was recently obtained by the on-board radar of Pioneer-Venus orbiter (3,4) and several radar maps of Venus surface were transferred by NASA USA to USSR Acad.of Sci. for independent analysis. This work contains the results of visualization of the radar altimetry data in the form of images imitating of the high-altitude photographs of Venus surface using the digital image processing system developed in the Institute of Radiophysics and Electronics of the Ukrainian Acad.of Sci.

Two regions were under study: Beta Regio and Ishtar Terra with surroundings. Simulation of optical images of the surfaces was made assuming that surface is illuminated by a light beam inclined 1/140 rad over horizon and scatters the light according to Lambert law. The results are represented in the axonometric projection (see Fig.1 and 2). For more effective perception of the images the stereopairs were made in the form of two axonometric projection images with slightly different orientation. Vertical exaggeration x100 is inherent to the images.

On the images of Beta Regio with surrounding three types of the terrain described earlier by (3) can be seen: rolling plains (1) with ponds of lowlands (2) and Beta and Phoebe highlands (4) Angularity of outlines of the Beta highland and presence of graben-like lineaments indicate on important role of tectonics in formation of this mountain construct which was considered in (3,4) as a giant shield volcano.

On the images of Ishtar Terra a tectonic nature of this construct is prominent. Lakshmi Planum in the western part of Ishtar Terra in its featureless topography is very similar to the adjacent Sedna Planitia and can be probably an uplifted block of the lowland plain. Mountain massif Maxwell placed in the central part of Ishtar Terra in its topography and probably in character of the relief-forming processes is clearly different from the terrain westward and eastward from Maxwell. More than three preferable orientations of scarps within the Ishtar Terra indicate on complex geologic history of the terrain.

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