

ST-PR-LPS-10800

FROM HYPOTHESES TOWARD THE TRUTH

Weekly Journal "NEDELYA"
Moscow, 12 January 1969

Comments by Prof. V. Prokof'yev

Radar measurements of Venus have shown that the planet rotates very slowly around its axis. The rotation period constitutes about 250 terrestrial days. However, accurate spectroscopic investigations of Venus' cloud cover, alongside with observations of the shift of certain dark spots in that cloud cover yielded a rotation period of some 4 to 5 terrestrial days.

What, therefore, do we obtain? The planet, as a solid body, rotates very slowly, while the cloud cover (the upper part of the atmosphere) rotates 50 to 60 times faster. If this is so, we may conclude that in this planet's atmosphere hurricane winds, of 100 m/sec constantly prevail at that cloud level.

It is already well known at present that the main component of Venus' atmosphere is carbon dioxide. Water vapors constitute approximately one half of a percent, oxygen is present in amounts to one percent, and there is very little nitrogen. In the lower layers of planet's atmosphere the pressure attains, according to data of VENERA-4 up to 18 atmospheres at a temperature of 270°C. Astronomers currently dispose of a model atmosphere for this mysterious planet. This is a significant step forward in the knowledge of physical processes in the atmosphere of Venus. But, since there are still many enigmas, we shall abstain from generalizing, as new questions arise.

Currently AIS "VENERA-5" is in flight. It must perform a smooth descent in planet's atmosphere and conduct its investigation. In the course of the flight conditions in interplanetary space will be evaluated alongside with those in planet's immediate vicinity. We are expecting confirmations and more accurate data, refining those obtained earlier.

It should be noted that the possibility of conducting Venus' atmosphere study with the aid of space probes does not relieve us from the necessity of pursuing ground observations by all means at our disposal. As assumed by astronomers, in this current year the position of Venus will be practical for optical observations.

CONTRACT No/NAS-5-12487
VOLT INFORMATION SCIENCES, INC.
1145 - 19th St.NW
WASHINGTON D.C. 20036.
Tel: 223-6700 (X-36)

Translated by ANDRE L. BRICHANT
on 14 January 1969

N 69-15846

FACILITY FORM 602	(ACCESSION NUMBER)	(THRU)
	(PAGES)	(CODE)
	CR 99104	30
	(NASA OR TRN OR AG NUMBER)	(CATEGORY)