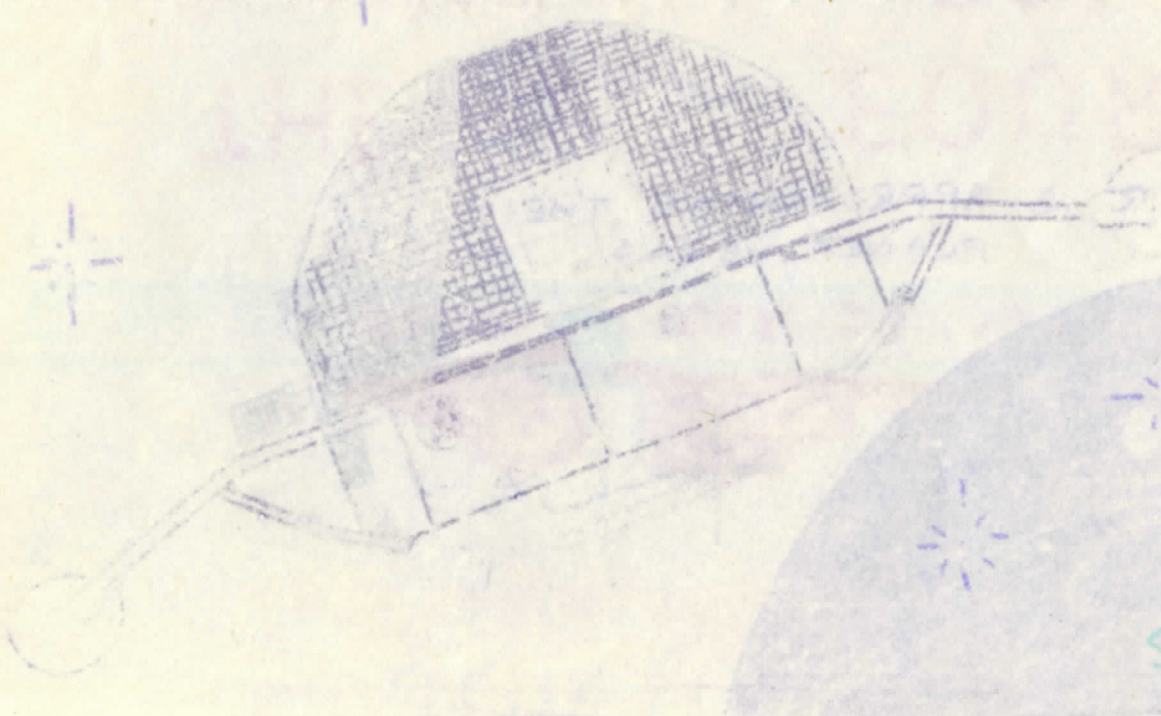
JUNIOR

NASA NEWS

VOL. II NO. 22 FRIDAY, OCTOBER 20, 1967 5¢

THE FOURTH ORBITING SOLAR OBSERVATORY



CREDITS

EDITORS: JIM SAKALY
CO-EDITS: MARY POLLACK

EDITOR: PHILIP KEMP
ARTISTS: JIM SAKALY KEMP POLLACK

PUBLISHERS: KEMP & SAKALY

Application for Membership

Name _____

Address _____

City _____ State _____

Zip _____ Phone _____ Area Code _____

Application for SUBSCRIPTION

Name _____

Address _____

City _____ State _____

Zip _____ Phone _____ Area Code _____

Send the Application for Membership to:

Philip Kemp
President of Junior NASA
6553 West 81st Street
Los Angeles, California 90045
213-670-8945

Send Application for Subscription

Jim Sakaly
Vice President of Junior NASA
7855 West Manchester Ave. Apt. #2
Playa Del Rey, California 90291
213-398-4843

Prices for the Paper are:

13 issues for $0.50
26 issues for $1.00

If the paper is sent to you through the mail must be doubled to help pay for postage. Please notify us if there is any change of your address or phone number.

THANK YOU

NEXT ISSUE WILL BE:

MARINER 5 APPROACHING THE PLANET VENUS

THE ORBITING SOLAR OBSERVATORY

by Philip Kemp

The weight of the Orbiting Solar Observatory (OSO) depends upon its particular mission. It may vary from 400 to 600 pounds.

The OSO spacecraft is noted for its ability to keep stationary for long periods of time in space. Since the spacecraft can stay aimed at the Sun for so long, it can gather a great deal of information.

The OSO spacecraft consists of two main sections; the platform and the sail . The platform or drum of the OSO is the heaviest part. This section contains batteries, radio equipment, experiments, and position control equipment. A shaft holds the sail onto the OSO's drum section. This semi-circular section is on one side covered with solar cells to power the spacecraft. The other side has Sun sesing equipment. While the third stage of the launch vehicle (Douglas Delta) is pushing the spacecraft into orbit it spins very rapidly. This spinning is to keep the spacecraft on course. After orbital insertion, the three arms extend. At the end of each arm there is a small tank of high-pressure nitrogen. The nozzles on these tanks let the nitrogen escape and slow the spin to about the speed of a 33 1/3 rpm phonograph record.

The Sun sensors start looking for the Sun. After the Sun is located, a nitrojen jet in the drum move the craft until it is aimed at the Sun. A motor then starts the sail rotating at the same speed in the other direction. This makes the sail stand still. The drum is still spinning at 30 revolutions per minute to stabilize the craft.

FACTS ABOUT THE OSO'S ALREADY LAUNCHED

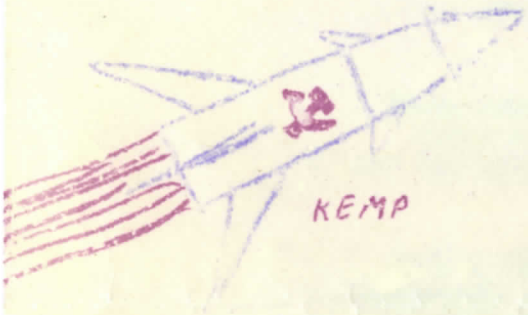
OSO I was launched March 7, 1962. OSO I was operational for 77 days. It transmitted more than 1000 hours' data . It had an orbit of about 350 miles above the earth.

OSO II was laujched from Cape Kennedy on February 3, 1965. It performed many of the same experiments that OSO I did.

OSO 4 was launched from Cape Kennedy on October 18, 1967 to make test on the Sun's radiation. It is still working properly. This spacecraft has nine experiments to do.

THE END

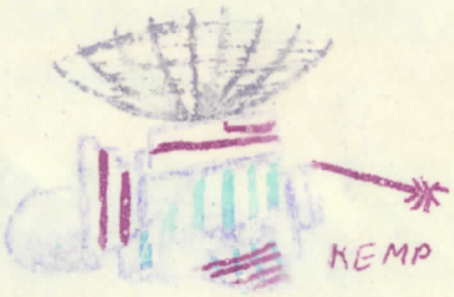
SOVIET VENUS PROBES



LAUNCH VEHICLE FOR "VENUS I" AS PICTURED ON SOVIET STAMP

Contact with VENUS I was lost soon after launch.

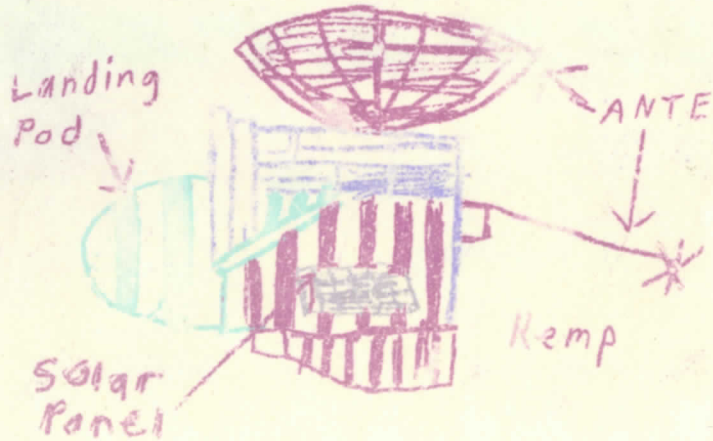
VENUS I
LAUNCHED ON Feb. 12, 1961



VENUS' 3 and 4 are the same type of Spacecraft.

My idea of Venus 3rd and 4th

Pattered after VENUS I and low quality Photos of it.



(These may not be too accurate. I am going by Russian Postage Stamps and Films)