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The WIR in Brief

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Space

VENERA 4 CARRIED 2 TYPES OF ATMOSPHERIC SAMPLERS, BUT RESULTS ARE SUSPECT ~~15~~ 7
Data disagrees with Earth-based data.

COSMOS 231 IS SOVIETS' 14th RECSAT LAUNCH THIS YEAR ~~15~~ 7

Carries low-resolution camera system.

3d SOVIET ATTEMPT AT CIRCUMLUNAR FLIGHT WITH EARTH RECOVER EXPECTED SOON ~~15~~ 8

Support ship heading for station.

SOVIET SCIENTISTS ADMIT POSSIBILITY OF VENUS 4 ERROR, BUT REGIME NOT LIKELY TO DO SO ~~15~~ 8

Radar ambiguity could have triggered its operation prematurely.

COSMOS 230 MAY BE STUDYING X-RAYS IN SPACE ~~15~~ 9

COMPLETE MOLNIYA COMMUNICATIONS NET MAY REQUIRE 6 SATELLITES ~~15~~ 9

Five now operating; most are spaced 60 degrees apart.

COSMOS 232 IS 15th SOVIET RECSAT OF 1968 ~~15~~ 9

Portion identified as non-responsive to the appeal

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COVER: BLINDER Bs carrying ASMs (from Aviation Week & Space Technology) (OFFICIAL USE ONLY)

NOTE: Pages 28, 30, 31, 34, 35, 38, 39, 42, and 43 of this issue are blank.

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significant
intelligence
on space
developments
and trends

Venera 4 Carried 2 Types of Atmospheric Samplers, but Results are Suspect ~~(S)~~

New information indicates that Venera 4, Soviet interplanetary probe which descended into the atmosphere of the planet Venus on 18 Oct 1967, and radioed information on the Venusian atmosphere back to Earth, carried two types of atmospheric samplers rather than the one previously reported.

Some of the samplers were designed to measure directly the abundance of certain substances, while others determined only whether a substance was present in an amount exceeding or less than a certain pre-selected value. The samplers were designed to detect the presence of carbon dioxide, water, oxygen (O₂), and nitrogen (N₂).

The Soviets concluded from their data that the Venusian atmosphere consisted primarily of carbon dioxide with small amounts of water, about 1% O₂, and possibly nitrogen or other inert gases. The reported presence of 1% O₂ is completely incompatible with Earth-based spectroscopy of the Venusian atmosphere; US experts feel that the spectroscopic data is more secure in the case of O₂ than the Venera 4 data.

(FTD)

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Cosmos 231 is Soviets' 14th Recsat Launch Attempt This Year ~~(S)~~

Cosmos 231, which the Soviets launched from Tyuratam missile test range at about 1950Z, 10 July, is a military reconnaissance satellite. Carrying a low-resolution camera system and ELINT gear, it is the Soviets' 14th recsat launch this year.

Correction: WIR 27/68 reported (p. 15) that Cosmos 229 was launched on 27 June; it was actually launched 26 June.

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3d Soviet Attempt at Circumlunar Flight with Earth Recovery Expected Soon (S)

The Soviets are soon expected to make their third attempt to launch a spacecraft around the Moon and back to Earth for recovery. The Soviet space event support ship Cosmonaut Vladimir Komarov, which deployed to Cuba to support the first two attempts, again is en route to the Havana area. It will arrive probably on the 19th or 20th.

The Soviets' first two attempts to send a payload around the Moon and back to Earth for recovery -- 22 November 1967 and 22 April 1968 -- aborted because of malfunctioning of upper staging of the SL-12 propulsion systems, the Soviets' "largest."

The next "launch window" for an event of this type opens from about the 19th to the 24th of July. If the Soviets are not fully prepared for launch at this time, the attempt could come during the August or September launch windows.

The Komarov, a relatively new ship loaded with communications gear and notable for its large radomes, will extend the coverage of the Soviets' land-based system for commanding and communicating with deep-space probes. It will maintain contact with other deep-space command and control centers via the Soviets' Molyina communication-relay satellites, 5 of which are now in operation.

(NORAD)

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Soviet Scientists Admit Possibility of Venus 4 Error, but Regime Not Likely to Do So (C)

At the 1968 COSPAR (Committee on Space Research) meetings in Tokyo, it was pointed out that the data on the planet Mars taken by the Soviets' Venus 4 and by the US's Mariner 5 were mutually contradictory if, as the Soviets claimed, the Soviet data represented atmospheric conditions from an altitude of 26 kilometers down to the surface; on the other hand, the data would jibe if it represented conditions between altitudes of about 51 and 25 kilometers.

This comment provoked a data exchange in which it was revealed that Venus 4's radar altimeter took only a single reading. After some discussion, the Soviets admitted that the signal from the radar which was to indicate an altitude of 26 kilometers may have been received at twice the intended altitude. (This could have resulted from radar ambiguity. For example, if the radar altimeter signal was transmitted on a PRF which would trigger operation of the Venus 4 capsule instrumentation at a pre-selected altitude, the signal easily could have triggered it at any multiple of that altitude.)



Although some Soviets may now admit privately that the initial Soviet claims were overstated, the official Soviet position that Venus 4 was a complete success is not likely to change.

(CIA)

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Cosmos 230 May Be Studying X-Rays in Space (S)

Preliminary analysis indicates that the payload of Cosmos 230, which the Soviets launched from Kapustin Yar on 5 July, may be similar to that of Cosmos 166, which was launched on 16 June 1967. Cosmos 166, the Soviets announced, carried an X-ray photometer (to measure the intensity of X-ray emissions) and a heliograph for study of solar X-ray emissions.

These space craft are apparently involved in the Soviets' intensive effort to learn how to predict the onset of solar flares, which can be hazardous to manned space flight.

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Complete Molniya Communications Net May Require 6 Satellites (S)

The 9th Molniya 1, which the Soviets launched on 5 July (p. 13, last week's WIR), was injected into an orbit midway between the orbits of the 5th and 7th Molnyias, which are still operating. This orbital arrangement, in which 5 of the Soviets' Molniya communications-relay satellites are still operating, suggests that the Molniya comsat net may be designed to comprise 6 satellites spaced about 60 degrees apart, although 4 satellites 90° apart would afford adequate coverage. Such a net would provide 100% 24-hour-per-day coverage of the Northern Hemisphere down to about 10 degrees N. for communication with Moscow.

(FTD)

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Cosmos 232 is 15th Soviet Recsat of 1968 (S)

Cosmos 232, which the Soviets launched at about 1310Z, 16 July from the Plesetsk space and missile complex, is a military reconnaissance satellite.

Carrying a high-resolution camera system, it is the 15th Soviet



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recsat launched this year.

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