

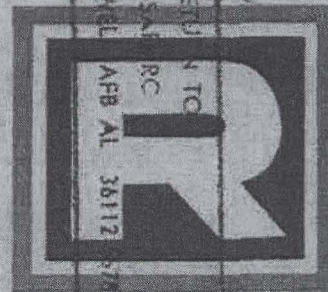
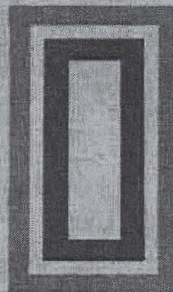
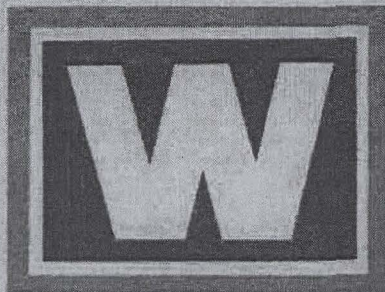


DECLASSIFIED UNDER AUTHORITY OF THE
INTERAGENCY SECURITY CLASSIFICATION APPEALS PANEL,
E.O. 13526, SECTION 5.3(b)(3)

ISCAP APPEAL NO. 2009-068, document no. 185
DECLASSIFICATION DATE: February 25, 2015

SECRET

NORTH AMERICAN AIR DEFENSE COMMAND



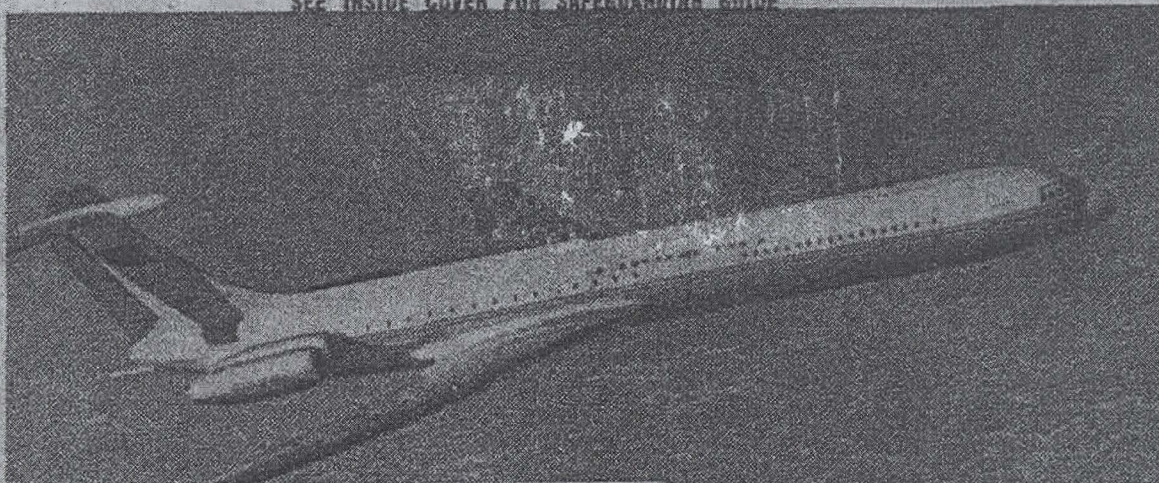
SCANNED 15 AUG 2008

ATR
K410.607-336

W O R
WEEKLY INTELLIGENCE REVIEW (U)

PRIVILEGED INFORMATION

SEE INSIDE COVER FOR SAFEGUARDING GUIDE



00880800

EXEMPTED FROM
DECLASSIFICATION IAW EO 12958
REVIEW DATE JUN 97 REVIEWER 64
REFER TO NAOAD
EXEMPTION (S): (1) 2 3 4 5 6 7 8 9

RAND LIBRARY

FOR OFFICIAL USE ONLY

REC'D, JUL 25 1967

SECRET

SPECIAL HANDLING REQUIRED
This document is releasable only
to U.S. and Canadian Nationals

EXCLUDED FROM AUTOMATIC
REGRADING, DOD DIRECTIVE 5200.10
DOES NOT APPLY Group 1

WIR 29/67
21 Jul 67

JUL 24 1967
Postal Registry No. 250746

FORM 10-100, Field Printing Plant
For AM, Fairbanks

NORAD

**Weekly
Intelligence
Review**

K410.607-336

The WIR in Brief

Portion identified as non-responsive to the appeal

Space

Portion identified as non-responsive to the appeal

CRASH PROGRAM ON FOR COMSAT RELAY OF
DOMESTIC TV PROGRAMS; NEW INTERNATIONAL
COMSAT SYSTEM PROPOSED

Ground stations should be ready and operational
comsat launched before 7 Nov.

Portion identified as non-responsive to the appeal

Portion identified as non-responsive to the appeal

COVER: CLASSIC/IL-62 transport (from Soviet press (OFFICIAL USE ONLY))

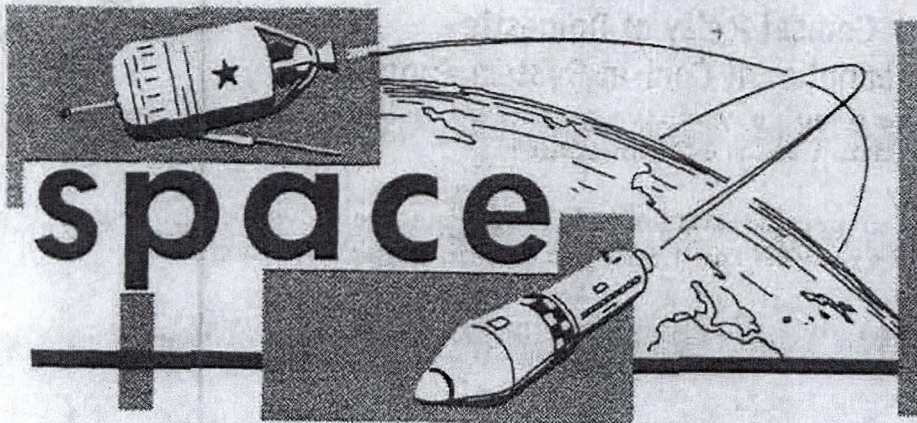
NOTE: Pages 28, 29, 32, 33, 36, 37, 40, 41, 44, and 45 of this issue are blank.

00880800

FOR OFFICIAL USE ONLY

MICROFILMED BY ADAM

~~SECRET~~



significant
intelligence
on space
developments
and trends

Portion identified as non-
responsive to the appeal

-6-

WIR 29/67 21 Jul 1967

~~SECRET~~

~~secret~~



Crash Program on for Comsat Relay of Domestic TV Programs; New International Comsat System Proposed

The Soviets have been very active on the TV front recently. They are rushing to put into operation before 7 November:

- A system of ground stations for relaying Moscow TV programs to remote areas of the USSR via communication satellites (comsats).
- A TV studio and transmission complex in Moscow which will feature a 490-foot antenna installation atop the world's tallest building (1270 feet).

Success in these ventures is expected to boost morale at home and Soviet prestige abroad.

Moscow has also invited a number of nations to join it in establishing a Soviet-sponsored international comsat system, with a view to reducing US dominance in this field.

The domestic comsat TV-relay system, with a little further development, could also lend itself to significant improvements in Soviet strategic communications.

The Crash Program for Comsat Relay of Domestic TV. The Soviets have embarked on a crash program to inaugurate relay of central Moscow TV programming to remote areas of the northern and eastern USSR by means of comsats. The system is scheduled to go into operation prior to 7 November, 50th Anniversary of the Bolshevik Revolution -- both to celebrate the anniversary itself and to relay coverage of the festive activities of the Moscow celebrations to much of the rest of the country.

The USSR has had one of the most elaborate domestic radio broadcasting systems in the world, but its television -- a medium having far greater impact on the average citizen -- has lagged far behind, mainly because of the high cost of cable and microwave relay systems to bridge the great distances involved. As of 1965 "live" TV programs from Moscow could reach only about one third of the USSR landmass and could be seen by only 50-70 million Soviet citizens -- most of them living west of the Urals. (The shaded area of the map on page 39 indicates maximum current coverage of Moscow TV programming as relayed via cable and microwave; even within this area, some main TV stations and many secondary ones have not been hooked into the network.) But Moscow is now preparing to extend its domestic dissemination of central Moscow programming.

The Soviet press announced in early 1966 that TV coverage of the Moscow celebration of the 50th Anniversary of Bolshevism would be transmitted to the more remote regions of the USSR via comsat. The system was to involve:



WIR 29/67 21 Jul 1967

~~secret~~

- Molniya-type satellites, which had already displayed their capability to relay TV and communications traffic between Moscow and Vladivostok.
- A network of 20 so-called "Orbita" ground receiving stations dispersed widely throughout the eastern and northern USSR (map on page 42).

Each Orbita station consists of a circular building about 50 feet in diameter supporting a single 40-foot dish antenna weighing 54 tons. To track the Molnias as they move across the sky, the antenna will be fully steerable, a feature which adds greatly to building and maintenance costs. On the other hand, the high power of the Molniya's transmitters (several times more powerful than those of the West's Intelsat) held down construction costs by permitting the use of a smaller antenna and less complex station equipment. On the average, cost per station is estimated at US \$1.5 million.

Orbita station operations initially will be limited to reception of a single TV channel. Later modifications to accommodate two-way communication traffic as well as TV are both possible and probable, though they are likely to equal initial construction costs.

It is believed that, despite evidence of problems in construction and installation, official pressures will insure that all 20 stations will be ready for operation by the 7 November deadline.

The Molnias have been launched into highly eccentric 12-hour orbits; each has successfully relayed TV or, alternatively, 60 channels of communications traffic between Moscow and Vladivostok. On two occasions -- November 1965 and May 1966 -- Molnias relayed color TV, using the French SECAM system between Moscow and Paris. Three would be needed to establish 24-hour coverage of the USSR. (See page 43.)

All five Molnias launched to date have been labeled "experimental," but the system is probably rapidly approaching operational status. The operating lives of the first three were short, probably because of the effects of space radiation on unshielded components, but the USSR is probably on the road to solution of this problem.

It is expected that a fully operational Soviet comsat will be launched before 7 November.

The New TV Complex in Moscow. The USSR is also rushing to completion an unparalleled studio and transmission complex which has been under construction since 1961. Its dominant feature is a mammoth transmission tower which rises 1,760 feet (a third of a mile), and includes a 490-foot antenna (page 42). The ferroconcrete tower, less antenna, is slightly taller than the Empire State Building.

To be a national facility for TV programing, production, and transmission -- a Soviet version of ABC, CBS, and NBC combined, it will be equipped with 18 large studios and five 50-KW TV transmitters. Plans call eventually



for 40 hours of telecasting per day on five channels -- about 2.5 times Moscow's current output of 16-17 hours per day on three channels. Effective radius of direct telecasting from the main antenna will be 100 miles, compared with 25-35 miles for the present facilities.

One of this TV center's channels will be relayed to other areas of the USSR by coaxial cable, microwave, and comsat.

Reliable estimates place the full cost of the new complex at US \$110 million.

Proposals for a Soviet International Comsat System. The USSR rejected an invitation to join Intelsat when it was formed in 1964, charging that it was a capitalistic venture subordinated to US interests. (The Intelsat charter gives each member nation ownership of the space segment directly proportionate to the member's share of international communications traffic; this arrangement would give the US a 60.5% interest, the USSR only 1.5%.)

The Soviets insisted at the time that international comsat systems should be controlled by the UN. Having failed to make their point and having meanwhile proved out their Molniya system, the Soviets are moving ahead in several directions in the field of international comsat systems with a view to eroding the US's concept of a single global system and its commanding position in international comsat affairs.

The Soviets have tried to expand the Molniya operation into an international comsat system. It invited France and Japan to help in tests of Molniya's international relay capabilities, using ground stations built for Intelsat. Japan declined the offer, but France accepted, following which color TV was twice transmitted successfully between Moscow and the French Intelsat-type ground station at Pleumeur Bodou.

The Soviets reportedly also offered to build ground stations in certain less-developed countries. Although the rumors could not be confirmed at the time, the USSR announced in December 1966 that it had agreed to help install and maintain a comsat ground station in Cuba and to build one in Egypt. No announcements have been made about construction schedules, and it is not known whether these stations are to be of the Orbita type (for TV reception only) or would be equipped also for a full range of two-way communications.

A Soviet draft communique of April 1967 invited both Communist and non-Communist countries to join with it in forming an independent comsat system. The communique was typically ambiguous as to commitments and planning, but Soviets diplomats abroad have probably been told to keep the matter alive.

The Soviets, meanwhile, have also relaxed their attitude toward Intelsat -- from one of unrelieved hostility to one of tolerance and some interest in mutual use of facilities on occasion. In April they allowed live telecasting via Intelsat of the opening of direct Moscow-Tokyo air service. They also agreed to take part in a global TV spectacular scheduled for 25 June in which a Soviet Molniya was to work with three Intelsat vehicles. However, the Soviets withdrew from their commitment on 21 June, apparently because of deterioration



~~secret~~



of the international political climate: Moscow said it was withdrawing because Western TV stations were "conducting a smear campaign against Arab countries and the peaceful policy of the Soviet Union and other socialist states."

Prospects. The Soviets will probably claim, when their Orbita ground stations become operational, a technological lead over the US in developing a national system of TV relay by satellite. They will say that they have conferred the benefits of comsat technology on the Soviet people while government and industry in the US are still debating the issue. They will ignore the fact that the US and many other Western nations, having adequate terrestrial facilities for relaying TV nationwide, have little urgent need for a national comsat system.

Recent Soviet cooperation with Intelsat may be intended to pave the way for relaying the 7 November Anniversary celebrations abroad and, possibly, for reception of the 1968 Olympic games in the USSR.

By agreeing to install comsat ground stations in Cuba and Egypt and by inviting other nations to join a Soviet-sponsored comsat system, the USSR is clearly signaling that it does not intend to join Intelsat unless the charter is changed fundamentally and/or that it will not permit US dominance in this field to go uncontested.

The USSR is aware of and will probably encourage the growing sentiment for regional comsat systems. Japan wants one for traffic with Asia, and France and West Germany have announced their intention to launch a joint regional system by 1970 to handle European communications traffic with Africa and Latin America. The Soviets will probably offer technical assistance and mutual operating arrangements.

Moscow will probably be cautious in future offers to build comsat ground stations in underdeveloped nations, because communications traffic between them and the USSR is modest, these countries have limited TV audiences, and Moscow would probably have to finance construction and installation of the stations. Finally, Moscow will probably have to consider whether it can maintain satisfactory relationships with these countries, many of which are not very stable politically.

The Orbita ground stations, if and when they are modified to include multichannel telephone/telegraph facilities, will add significantly to the Soviet strategic communications net. Virtually all of the stations are in or near areas of considerable strategic/economic importance to Moscow; most of them now have to use unreliable HF radio or very-low-capacity wirelines for long-range communications. Some of the Orbita stations also are located near facilities of the Soviets' major tropospheric scatter network. These two systems -- tropospheric and Orbita/Molniya -- will probably be interconnected when both are operational, strengthening strategic communications still further.

(CIA)

~~(SECRET NO FOREIGN DISSEMINATION -- Releasable to US, UK, Can, Aus & NZ)~~

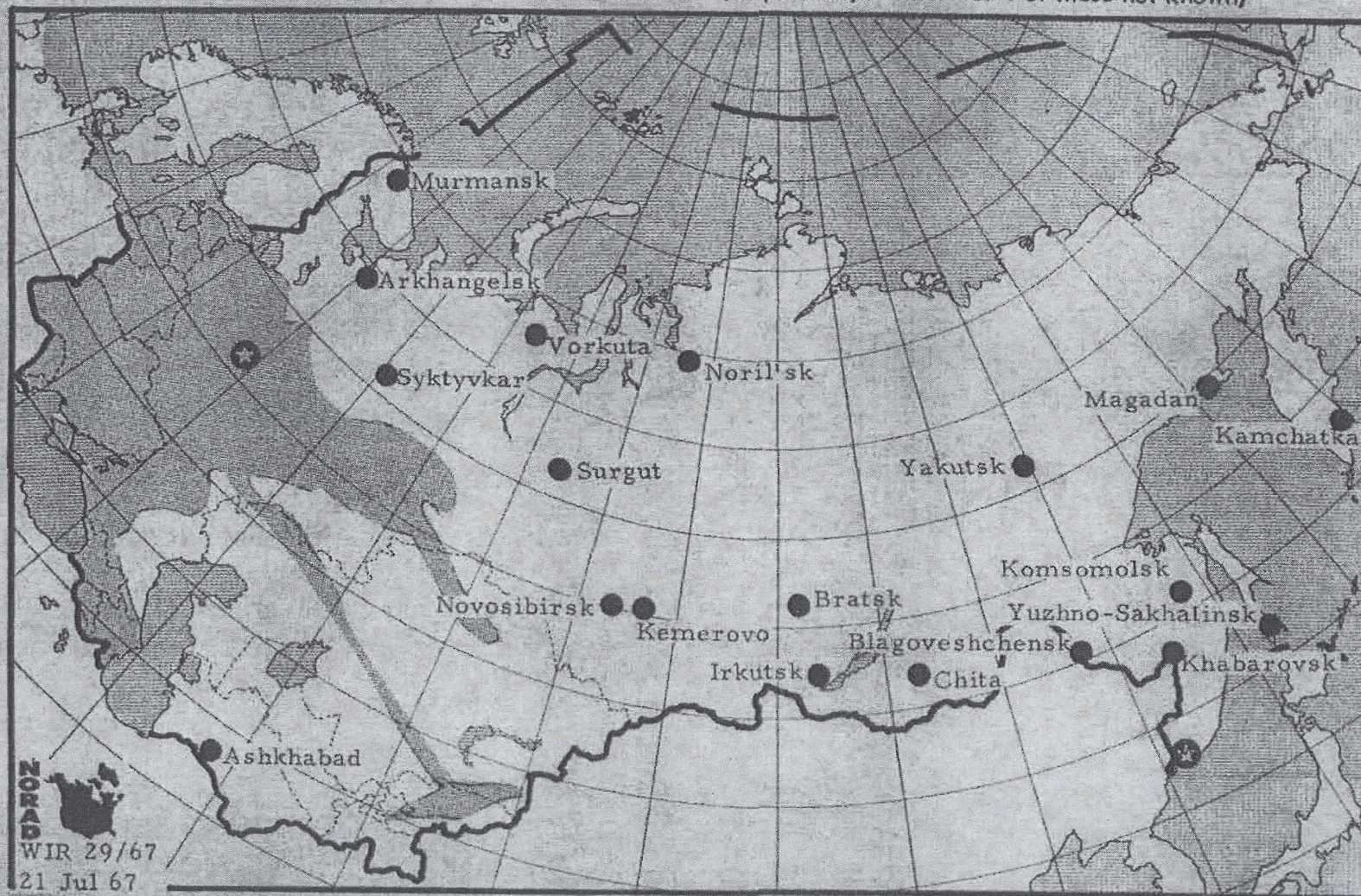


WIR 29/67 21 Jul 1967

~~secret~~

Ground Terminals for Communications via the Soviets' Molniya-type Satellites

- ★ Two-way terminals
- Orbita stations (designed initially only for TV reception) (20 planned; location of 1 of these not known)



SECRET

-39-

SECRET

WIR 29/67
21 Jul 67

SECRET

CIA

Ferroconcrete Transmission Tower of the Soviets'
All-Union TV Center, Moscow -- the World's Tallest
Building: 1,760 feet high, including 490-foot
antenna



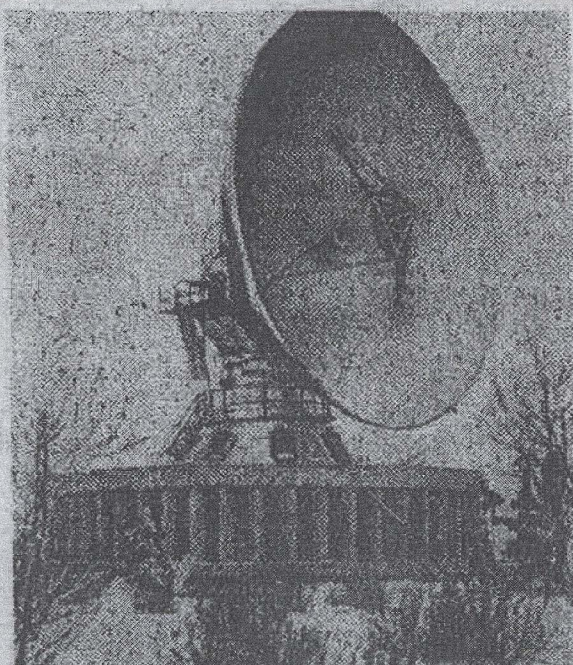
WIR 29/67

21 Jul 67

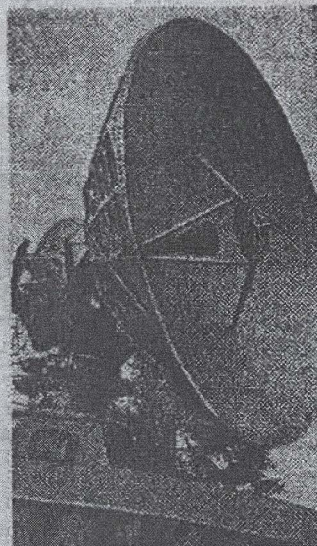
OFFICIAL USE ONLY

~~SECRET~~

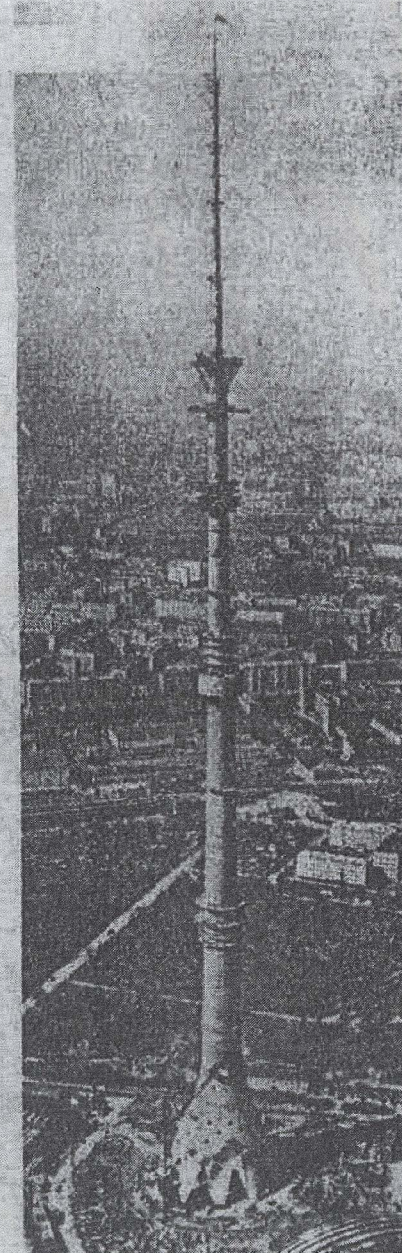
-42-



ORBITA COMMUNICATIONS SATELLITE
GROUND STATION

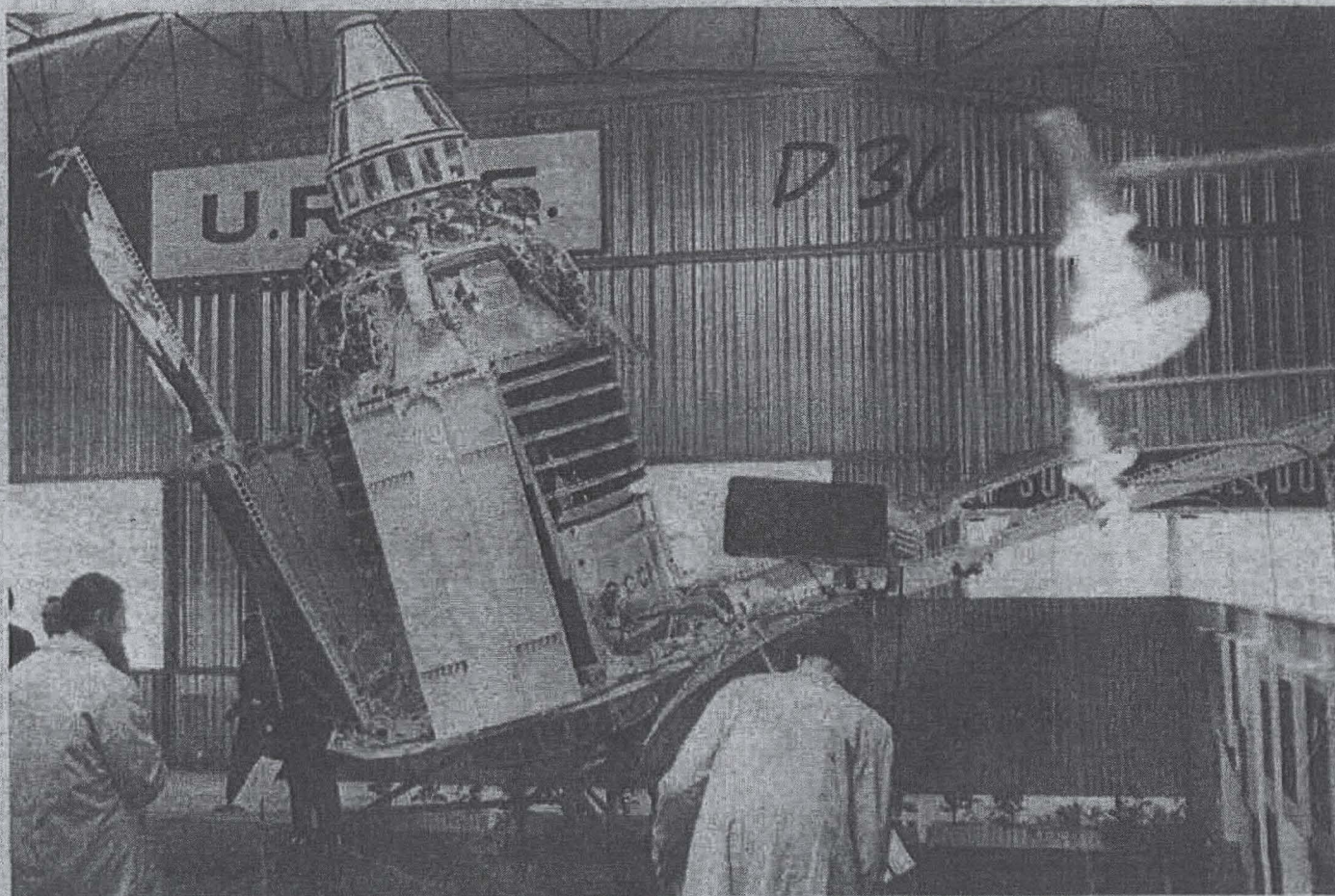


Это устройство, смонтированное в Ижевске, будет служить для приема передач Центрального телевидения через искусственный спутник Земли. Скоро сибиряки смогут смотреть телепередачи из Москвы и Ленинграда, Киева и Свердловска, Владивостока и Новосибирска. Всего в нашей стране будет построено двадцать таких приемных пунктов телепередач, образующих систему «Орбита».
Фото А. Кузнецова. ITASS.



~~SECRET~~

Model of Molniya Communications Satellite
at Paris Air Show, 1967



~~SECRET~~

-43-

~~SECRET~~

NORAD
WIR 29/67
21 Jul 67

FTD

OFFICIAL USE ONLY