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PHOTOGRAPHIC INTERPRETATION REPORT



**SPHERICAL CURTAIN ARRAY
FACILITIES, USSR**

TCS-81481/65

NOVEMBER 1965

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4 PAGES

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WARNING

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SPHERICAL CURTAIN ARRAY FACILITIES, USSR

INTRODUCTION

This report has been prepared in response to USAF requirement DIA-39-65 (AFNIE) of 15 October 1965 requesting a chronology of activity at Soviet spherical curtain array facilities at Taldom, Nikolayev, Podolsk, Rustavi, and Odessa; and identification of similar electronic facilities in the Soviet Union including linear curtain arrays possibly at Irkutsk, Alma-Ata, and Sverdlovsk.

The antenna facilities near Taldom and Nikolayev, USSR, were described in NPIC/R-901/64 (TCS-8455/64). 1/ Subsequent photography has not revealed any significant changes in these facilities. The chronology of the antenna facilities near Odessa, Podolsk, and Rustavi is described below. NPIC publication TCS-80679/65 discusses the shape and mensural data of Podolsk and Odessa.

The Alma-Ata HF Linear Curtain Antenna Array Facilities were complete when first seen on [REDACTED]. The HF curtain arrays of the Alma-Ata facilities have been fully described in PIC/JR-29/59 2/, which was based on TALENT photography of the facilities. Since this report, 2 pairs of day-night rhombic antennas (4 antennas) have been constructed in the south-southwest portion of the facilities, near the newest transmitting building. The fact that this transmitting building (central control building) was under construction in [REDACTED] gives evidence that the Alma-Ata antenna facilities were being constructed between [REDACTED] and [REDACTED].

The Sverdlovsk HF Curtain Array Facility was complete when first seen on [REDACTED]. There have been

no significant changes in the facility since that time. This facility is described in [REDACTED] which was based on TALENT photography of the facility.

A complete search of the photography of the Irkutsk area of the USSR was made for HF spherical curtain array facilities. None have been identified.

ODESSA SPHERICAL CURTAIN ARRAY FACILITY, USSR

The Odessa Spherical Curtain Array Facility, USSR (46-26-30N 030-30-00E), was not present on [REDACTED].

[REDACTED] revealed a control building was under construction and a cable scar extended from the construction area to a support area. The facility was next observed on [REDACTED] at which time the control building appeared to be in a late stage of construction.

[REDACTED] the control building was externally complete. On [REDACTED] the only additional construction was a new cable scar from the control building to the support area. The next coverage of the facility was [REDACTED].

[REDACTED] at which time the pentagonal security fence was evident. Subsequent photography of the facility has revealed no further construction on the facility. No antenna positions or tracks for the feed towers have been observed on any of the photography of the facility.

PODOLSK SPHERICAL CURTAIN ARRAY ANTENNA FACILITY, USSR

The Podolsk Spherical Curtain Array Facility, USSR (55-22-20N 037-27-50E), was first

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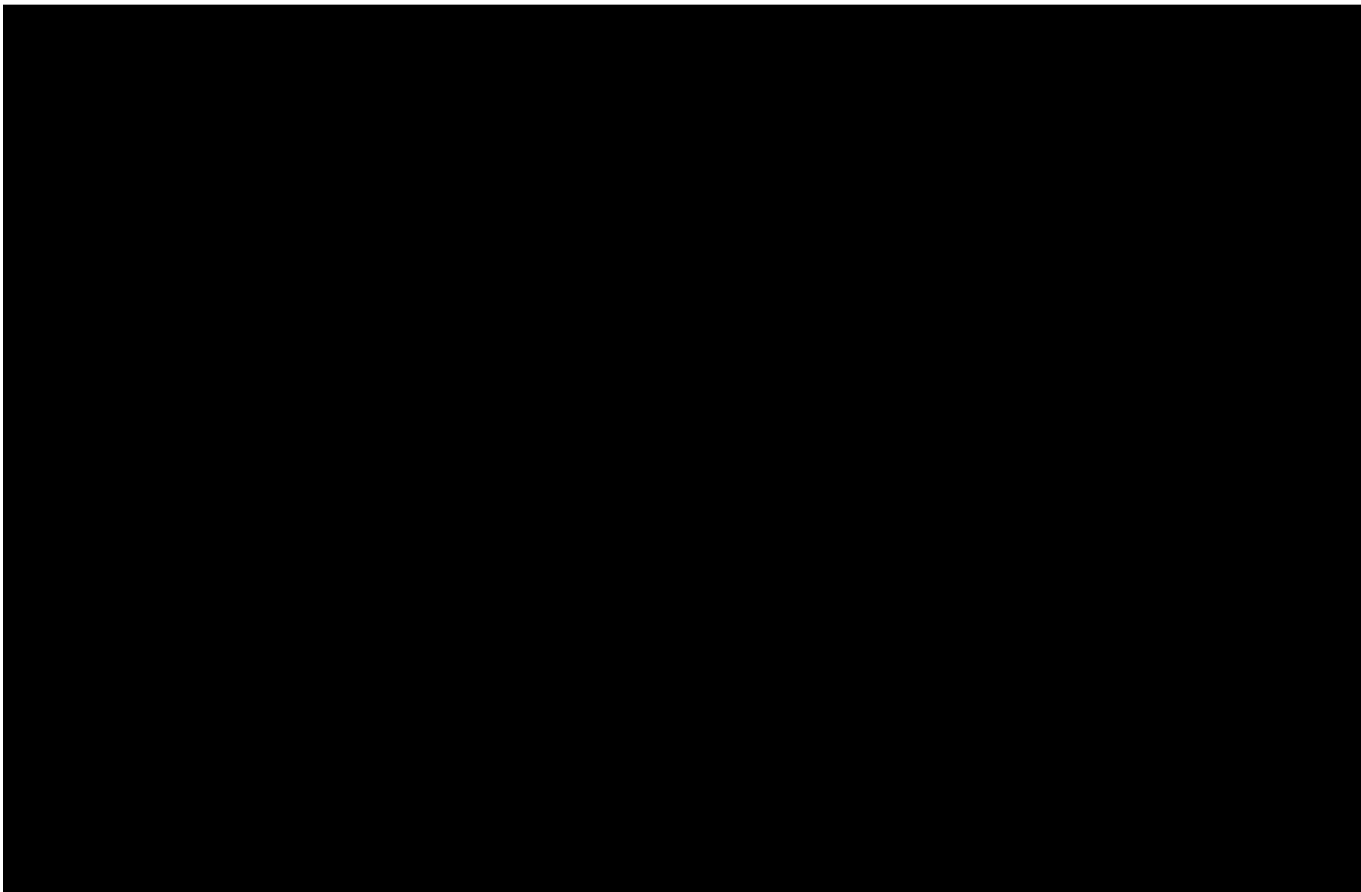
observed on [redacted] in the very early stage of construction. There had been some ground scarring in the area observed on [redacted] but haze and poor image quality precluded further interpretation of the scars. On [redacted] the facility was observed on very-poor-image-quality photography to be still in an early stage of construction. On [redacted] the facility was in a midstage of construction. The antenna positions were well delineated, the security fences complete, the central control building was under construction, and the antenna guying scars were evident. [redacted]

[redacted] revealed that the facility was in a late stage of construction with the antennas in position, the control building complete, and the tracks for the antenna feed towers under construction. On [redacted] it appeared that the facility was externally complete and probably operational. In summary, the facility was first observed on [redacted] in a very early stage of construction and was considered complete on [redacted] or a total of approximately 18 months were required for the construction of this facility. A detailed analysis of this facility is available in CIA/TCS-84008/65 and NPIC/TCS-80679/65. 4, 5/

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CONSTRUCTION CHRONOLOGY SUMMARY

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**RUSTAVI SPHERICAL CURTAIN
ARRAY FACILITY, USSR**

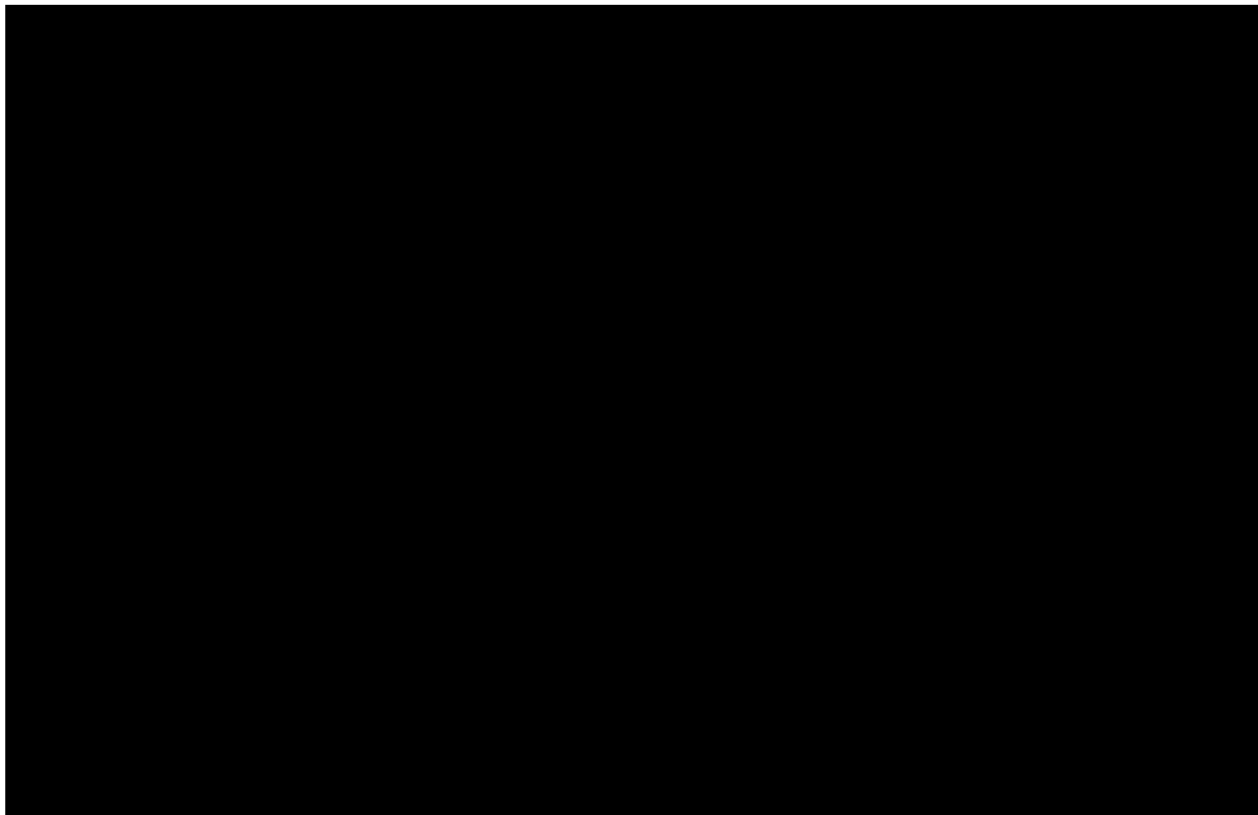
25X1D The Rustavi Spherical Curtain Array Facility, USSR (41-26-35N 045-09-30E), was not present nor under construction on [REDACTED]
25X1D [REDACTED] The area was observed on photography of [REDACTED]
25X1D Although this photography was both oblique and of poor image quality, the pentagonal security fence was visible as were the tracks for the feed towers. On [REDACTED]
25X1D the site appeared externally complete. Although this small-scale photography precludes a detailed analysis of the facility, the control building ap-

peared externally complete, the antenna positions were visible, but no antennas were visible, and there was no evidence of construction in progress at that time. Although [REDACTED] photographed the facility, it was not seen clearly until [REDACTED] At that time, the antennas, the feed towers, and the control building were apparently externally complete and apparently operational.
It is assumed that the site was constructed between [REDACTED] It is believed to be a valid assumption since the Podolsk facility required approximately 18 months to complete.

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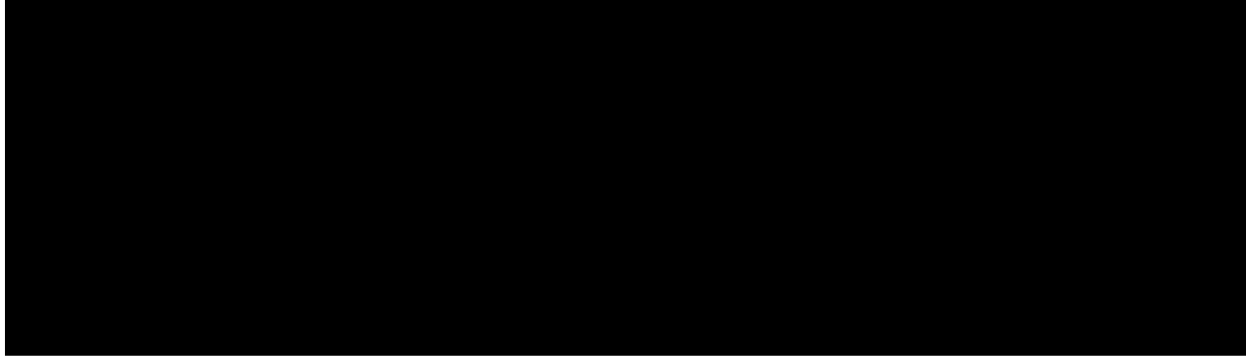
REFERENCES

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REFERENCES (Continued)



MAPS OR CHARTS

- SAC. US Air Target Chart, Series 200, Sheet 0250-8HL, 3d ed, Sep 62, scale 1:200,000 (SECRET)
- DIA. US Air Target Chart, Series 200, Sheet 0167-5HL, 2d ed, Apr 63, scale 1:200,000 (SECRET)
- SAC. US Air Target Chart, Series 200, Sheet 0325-17HL, 2d ed, Apr 64, scale 1:200,000 (SECRET/No Foreign Dissem [redacted])

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DOCUMENTS

1. NPIC. R-901/64, *Unusually Configured Antennas at Facilities Near Taldom and Nikolayev, USSR*, Oct 64 (TOP SECRET RUFF)
2. CIA. PIC/JR-29/59, *Five Soviet High-Frequency Broadcasting Stations*, Dec 59 (TOP SECRET CHESS)
3. [redacted]
4. CIA. TCS-84008/65, *Unidentified-Type Antenna Arrays, Podolsk and Odessa, USSR*, Apr 65 (TOP SECRET RUFF)
5. NPIC. TCS-80679/65, *Spherical Curtain Antenna Array Facilities, Podolsk and Odessa, USSR*, Jun 65 (TOP SECRET RUFF)

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REQUIREMENT

DIA. 39-65 (AFNIE)

NPIC PROJECT

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