

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



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basic imagery interpretation report

Akhtubinsk Flight Test Center (S)

MISSILE RANGES: AIR-LAUNCHED FACILITIES

USSR

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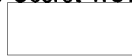
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INSTALLATION OR ACTIVITY NAME					COUNTRY
Akhtubinsk Flight Test Center (Also see below)					UR
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETB NO.
NA	48-17-53N 046-11-22E				
MAP REFERENCE					
DMA. USATC, Series 200, Sheet 0235-22, scale 1:200,000					
LATEST IMAGERY USED			NEGATION DATE (if required)		
See "Abstract"			NA		

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Installation Name	Coordinates Geographic	Category	BE No	COMIREX No	NIETB (MRN) No
Akhtubinsk/Vladimirovka Airfield	48-18-38N 046-14-24E				
Akhtubinsk/Vladimirovka Area Airfield	48-18-15N 046-16-30E				
Akhtubinsk/Vladimirovka ASM Support Complex	48-17-38N 046-12-03E				
Akhtubinsk/Vladimirovka ASM/AAM Support Complex	48-18-53N 046-10-35E				
Akhtubinsk/Vladimirovka AAM and ASM Storage Facility	48-22-41N 046-12-18E				
Akhtubinsk/Vladimirovka Air Warning Radar Facility TALL KING	48-17-10N 046-11-00E				

ABSTRACT

1. (S) Akhtubinsk Flight Test Center is the largest of the Soviet facilities supporting advanced, integrated airborne weapons systems testing. The center is capable of supporting all known Soviet aircraft and their associated weapons systems. The facility consists of six functionally distinct areas and a new radar site, each of which is discussed in this report.

2. (S) This report updates the previous NPIC report, [redacted] dated March 1979, and includes a location map, four tables, and 19 annotated photographs. The information cutoff date and the date of the latest imagery used for this report is [redacted]

INTRODUCTION

3. (S/WNINTEL) Akhtubinsk Flight Test Center (Figure 1) consists of the following six functionally distinct areas (Figure 2): Akhtubinsk/Vladimirovka Airfield, Akhtubinsk/Vladimirovka Area Airfield, Akhtubinsk/Vladimirovka ASM Support Complex, Akhtubinsk/Vladimirovka ASM/AAM Support Complex, Akhtubinsk/Vladimirovka ASM Storage Facility, and Akhtubinsk Air Warning (AW) Radar Facility TALL KING. The flight test center is the largest of the Soviet facilities supporting advanced, integrated airborne weapons systems testing. The center is capable of supporting all known Soviet aircraft and their associated weapons systems. Significant changes observed within the functional areas since [redacted] as well as significant aircraft/weapons/electronics systems observations since that date, are discussed in this report. The numbering system used for this report is, where possible, a continuation of that used in the previous NPIC reports.^{1,2}

BASIC DESCRIPTION

Construction Activity

Akhtubinsk/Vladimirovka Airfield

4. (TSR) Akhtubinsk/Vladimirovka Airfield consists of 18 separate areas and a flightline area.² Construction activity was observed in the flightline area and six of the areas and is discussed in this report.



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5. (TSR) **Flightline Area.** Minor changes were observed along the flightline of the airfield. From April to June 1979, asphalt resurfacing was completed on approximately one-third of the central parking apron (item 9, Figure 3). In the helicopter dispersal area at the southeast end of the airfield, an operations/flightline support building (item 5) was completed. Three small, single aircraft hangars were observed under construction during the reporting period. Two of the hangars at the northwest end of the airfield (items 7 and 8) had been completed, and only the foundation of the third hangar at the southeast end of the airfield (item 6) had been completed as of [redacted]

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6. (TSR) **Flightline Operations/Maintenance Area.** Minor construction has taken place within the flightline operations/maintenance area (Figure 3) during the past several years. A quonset-type support building (item 3) was completed during the reporting period. A probable operations/administration building (item 2) was in the midstage of construction by [redacted]. A probable shop building (item 1) was in the late stage of construction on the northwest side of a previously reported five-bay hangar (item 4).² The concrete apron in front of the hangar had been completed and was being used regularly for temporary parking of transport aircraft. A new operations/flightline support building (item 10) was in the late stage of construction by [redacted]

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7. (TSR) **POL Storage Area A.** Minor changes were seen in POL storage area A (Figure 4). Four aboveground, horizontal POL storage tanks were removed during the reporting period; 86 tanks remained. On [redacted] 14 dark-toned, probably new, horizontal storage tanks were scattered along the nearby area rail siding. These tanks will probably be used at the facility.

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8. (TSR) **POL Storage Area B.** Several minor changes were observed within the central and western sections of POL storage area B (Figure 5). In the central section, four aboveground, horizontal POL tanks had been added to one row, and two tanks had been removed. Nine tanks had been removed from the western section. No significant changes were observed in the eastern section of the storage area.

9. (TSR) **Motor Pool/Support Area A.** Two minor changes were seen within motor pool/support area A of the central section (Figure 6). The masonry exhaust stack (item 2) which serves the new boilerhouse/heating plant was completed. A small earth-covered structure (item 3) had been constructed and was probably used for water storage. This structure was previously reported as a support building under construction.²

10. (TSR) **Motor Pool Area D.** Only one small change was observed within motor pool area D during the past year. A small support building (item 1, Figure 6), reported as a foundation on [redacted] [redacted] had exterior walls but no roof on [redacted]

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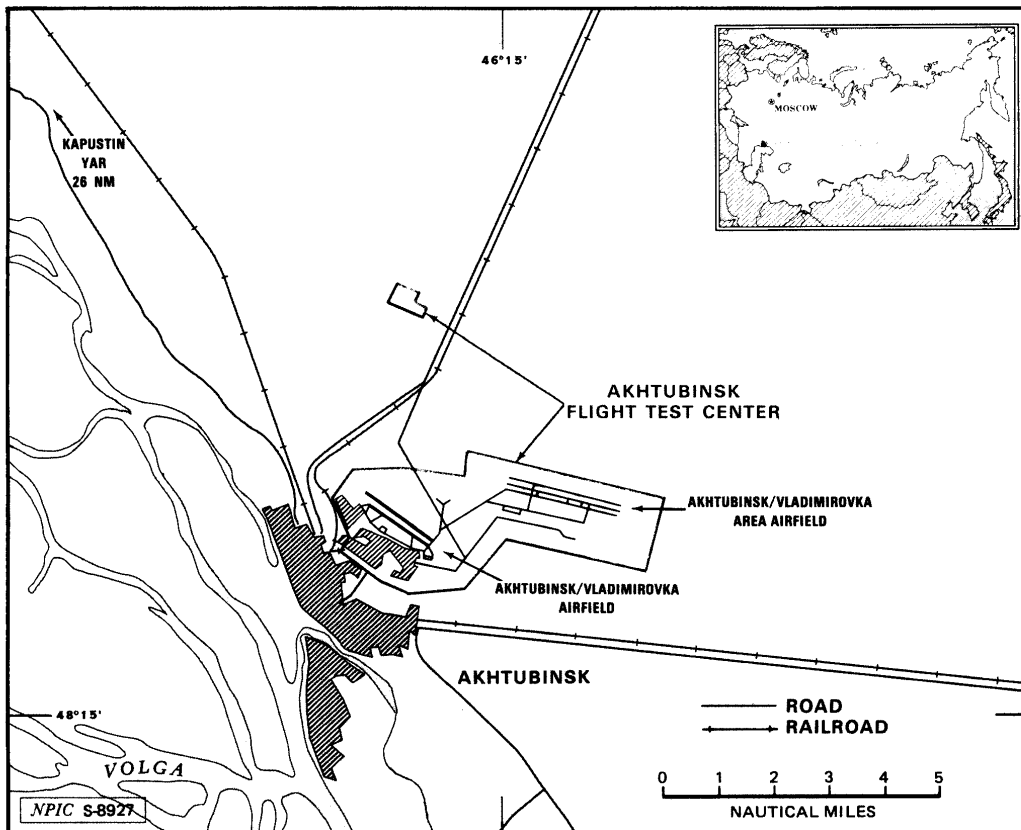


FIGURE 1. LOCATION OF AKHTUBINSK FLIGHT TEST CENTER, USSR

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11. (TSR) **Administration and Housing Area.** During the reporting period, construction was begun on a new support/administration section (item 14b, Figure 6) adjoining one of the probable officer's barracks.

Akhtubinsk/Vladimirovka Area Airfield

12. (TSR) The area airfield (Figure 7) was upgraded with the construction of two buildings and additional aircraft parking facilities and by the operational deployment of several mobile, electronic landing aids during the reporting period. Three additional, concrete parking hardstands (items 1 and 2) were completed, increasing to 11 the number capable of handling large bomber-size aircraft. A new support building (item 4) and a quonset-type support building (item 3) were also completed during the reporting period.

13. (TSR) Several new items of electronic equipment were operationally deployed to the area airfield during the past year, significantly upgrading both the ground-control approach (GCA) site and instrument landing system (ILS). At the GCA site (item 5), two ONE EYE radars had been added to supplement the single LONG TALK radar previously identified. At the west inner-marker beacon site (item 6), an SP-50M course beacon had been installed. Each of the airfield inner-marker beacon sites was equipped with both the SP-50M course beacon and the THIN PATH localizers. At the east glide slope site (item 7), an SP-50 glide slope transmitter had been added. At the west glide slope site (item 8), a TALL PATH set had been added to supplement the SP-50 transmitter already there.

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Aktubinsk/Vladimirovka ASM Support Complex

14. (TSR) Significant activity was observed within the ASM fueling area of the ASM support complex (Figure 8). Unidentified construction activity was seen immediately south of a shop/storage building (item 29). On [] the wall/fence securing the shop/storage building on the south side was moved approximately 30 meters closer to the building. Between [] and the end of September, a stand of trees and a concrete, looped road had been removed, and work had begun on a large excavation. No further progress was observed in the area for the remainder of the reporting period. A small support building (item 37) was enlarged during this reporting period. In the ASM fueling area, four aboveground, horizontal POL storage tanks were removed.

Aktubinsk/Vladimirovka AAM and ASM Storage Facility

15. (TSR) The general level of activity within the ASM storage facility (Figure 9) continued to be low with no new construction or significant activity observed during the reporting period.

Aktubinsk/Vladimirovka ASM/AAM Support Complex

16. (TSR) Several changes were observed in the ASM/AAM support complex (Figure 10). Construction completed during this reporting period consisted of a shop/maintenance building (item 7), two administration/engineering buildings (items 9 and 11), two support buildings (items 56 and 60), and two quonset-type storage/support buildings (items 53 and 54). In addition, a single aircraft hangar (item 61) in

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the northwest corner of the facility was also completed. Several new construction projects, initiated during this reporting period, were still underway as of [redacted] This ongoing construction consisted of an extension to the north end of a storage building (item 28), an extension to the south side of a shop/storage building (item 49), an extension to the south side of a vehicle storage building (item 55), an extension to the south side of a shop/maintenance building (item 2), two barracks/administration buildings (items 58 and 59) in the early stages of construction, and a shop/support building (item 57) in the late stage of construction. 25X1 25X1

Akhtubinsk AW Radar Facility TALL KING

17. (TSR) The most significant changes observed at the TALL KING site (Figure 11) were the removal of three of the four ODD PAIR radars and the installation of an operational R-410 TWIN PLATE set. In early December 1978, four ODD PAIRs were at the facility, but three of the radars had been removed from their positions by [redacted] The radars had apparently been transferred to the new AW radar site (Figure 12). In mid-October 1978, two R-410 TWIN PLATE sets in the travel mode were observed at the TALL KING site. By late November and throughout the remainder of this reporting period, one R-410 TWIN PLATE set was observed in an operational mode with the antenna screen oriented approximately northeast. 25X1

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New AW Radar Site

18. (TSR) Significant upgrading had occurred at the new AW radar site (Figure 12) just east of operations/control area A. On [] the facility consisted of six radar mounds with one mound occupied by a SPOON REST A. By [] an additional three mounds had been constructed, and the electronic order-of-battle included one SPOON REST A, one SPOON REST C, one FLAT FACE, and three ODD PAIR radars. On [] four ODD PAIRs were observed at the new site; three of which were probably moved from Akhtubinsk AW Radar Site TALL KING. On [] one of the four was being disassembled, with the three remaining operational for the remainder of the reporting period. A SPOON REST D had been added to the site by []

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Significant Aircraft and Weapons Activity

Modified BACKFIRE B

19. (TSR) A modified BACKFIRE B aircraft (Figure 13) was identified at the area airfield for the first time on [] This aircraft has since been observed at the ASM support complex, as well as the area airfield. Previously, modified BACKFIRE B aircraft have only been seen at Kazan Airframe Plant Gorbunov 22 ([]) and at Ramenskoye Flight Test Center ([])

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20. (TSR) The modified BACKFIRE B has reconfigured engine inlets which are squared on top with the inlet sideplates cut back at a sharp angle, giving them a wedge-shaped appearance. By repositioning the refueling probe at the very end of the nose, a more streamlined fuselage was created.

21. (TSR) The identification of a modified BACKFIRE B at Akhtubinsk could indicate that this aircraft is being prepared for weapons testing.

RAM J

22. (TSR) The RAM J testing program continued at the flight test center. During the past year, most RAM J observations occurred during the spring and summer months. The RAM J was observed only four times between November 1978 and April 1979. Between May and September 1979, one and sometimes two RAM Js (generally canvas covered) were observed either on the northwest parking apron of Akhtubinsk/Vladimirovka Airfield or within the Sukhoy area of the ASM/AAM support complex. []

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of the ASM/AAM support complex on [] revealed perhaps the best noncanvas-covered view of the RAM J yet obtained (Figure 14). Each wing appeared to have five pylons or mounting stations, and on the outboard port wing mounting station, an unidentified pod/weapon was observed. Probable auxiliary fuel tanks were mounted on the second-from-inboard wing mounting stations. Mensuration of this RAM J revealed the following data:

	Wings		
Span (not including tip pods)			25X1
Root chord			
Tip chord			
Wing tip height above ground			
Wing root height above ground			
Distance to wing fences from aircraft centerline			
Distance to wing mounting stations from aircraft centerline			
Wing leading edge sweep angle			
	Wing Tip Pods		
Length			
Width			
	Fuselage		
Length overall			
Width forward of air intakes			
Width at air intakes			
Length of engine housing			
Maximum height above ground			
	Horizontal Stabilizer		
Span			
Root chord			
Tip chord			
Tip height above ground			
Root height above ground			
	Vertical Stabilizer		
Maximum height above ground			
Base span			

Modified FOXBAT

23. (TSR) Modified FOXBAT aircraft (Figure 15) continued to be observed regularly at the flight test center. Generally, from three to five of these aircraft were seen on any given day. However, on [] a high count of six was observed. The modified FOXBATs were often observed on the reserved parking apron at the northwest end of the main airfield. Occasionally, one was observed within the ASM/AAM support complex.

Probable AS-X-11 ASM

24. (TSR) A probable AS-X-11 tactical air-to-surface missile was identified for the first time at the flight test center on [] (Figure 16). The missile was mounted on the port wing of a FOXBAT B/D on the northwest alert apron of the main airfield. The missile was pylon mounted, [] from the aircraft fuselage centerline and protruded [] beyond the leading edge of the wing. Although the aft portion of the missile, including all aerodynamic surfaces, was obscured by the FOXBAT wing, the visible portion of the missile appeared similar in size and configuration to the forward portion of a missile identified as the AS-X-11 in an air weapons display at Moscow/Shchelkovo Airfield [] Two service vehicles and a small crew bus were immediately adjacent to the FOXBAT, and the aircraft appeared to be undergoing preflight preparations.

Unidentified AAMs

25. (TSR) On imagery of [] five unidentified probable air-to-air missiles (AAM) (Figure 17) were observed within the Akhtubinsk/Vladimirovka ASM/AAM Support Complex. The five unidentified missiles were on individual handling dollies on a separately secured concrete apron at the west end of the support complex. Although two unidentified missiles appeared to be longer than the other three, all five were similar in configuration. The missiles appeared to have similar forward and aft control surfaces—a delta-shaped set of aft fins and a possible set of forward canard fins. All five missiles were covered by canvas.

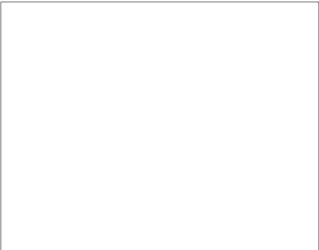


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26. (TSR) Mensuration revealed the following dimensions for the unidentified missiles:

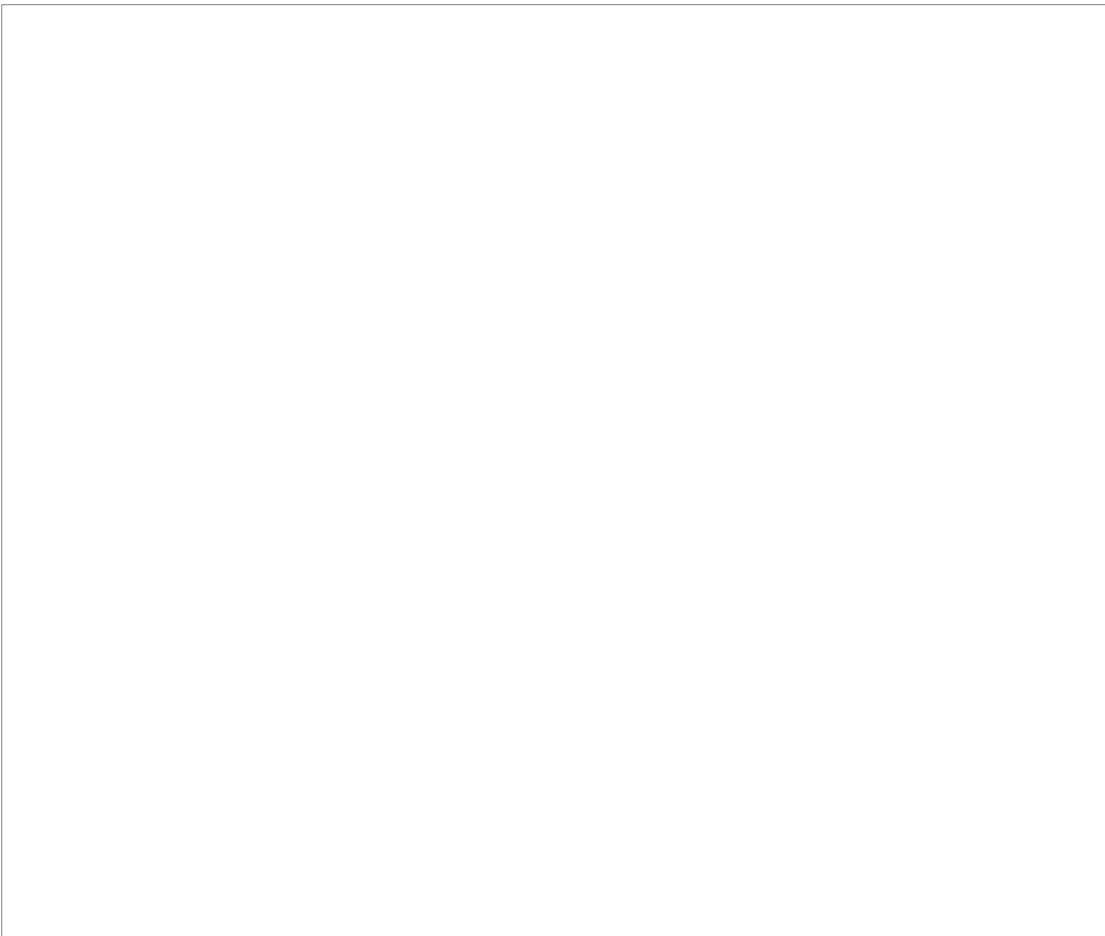
	Longer missiles	Smaller missiles	
Length overall			25X1
Fuselage diameter			
Computed wing span			
Actual observed span between tips of perpendicular wings			
Approximate wing root chords			
Distance from nose to aft control surfaces root leading edges			
Distance from trailing edge of the missile to the trailing edge of aft control surfaces			

No mensuration was attempted on the forward control surface due to the indistinct appearance.

27. (TSR) The shorter missile appeared to be similar in size and configuration to a new probable AAM reported in November 1977 in the same secured area.⁴ The larger missile appeared to be a new, previously unseen type. Two of the long and one of the short missiles were observed within the secured areas as early as [redacted] and remained visible until [redacted] when they were removed. 25X1

New Unidentified Probable Air-Launched Missile

28. (TSR) A new, unidentified probable air-launched missile (ALM) has been observed on several occasions at the test center during the past year (Figure 18). The probable ALM appeared to be the same as the one observed at the area airfield on [redacted]. The probable ALM, [redacted] meter in diameter, was distinctive in appearance with no visible wings or forward control surfaces. The wings were possibly folded into the missile fuselage. Although no vertical control surfaces were observed on the ALM, there are two horizontal stabilizers which are aft control surfaces. The probable ALM was 25X1



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observed on [redacted] on the main parking apron of the ASM support complex. On both dates, the probable ALM was on a handling dolly between a BLINDER B and a BACKFIRE B aircraft. The probable ALM was not seen again until [redacted] when it was observed within a double-fence-secured open storage area at the northwest end of the main airfield flightline operations/maintenance area. With the exception of [redacted] the probable ALM was observed in this area for the remainder of the reporting period. On [redacted] the probable ALM was not observed at the flight test center. On [redacted] the probable ALM was observed on a handling dolly in tow on an access road serving the area airfield. The placement of this probable ALM within an environmentally unprotected storage area suggests that it was probably a mockup.

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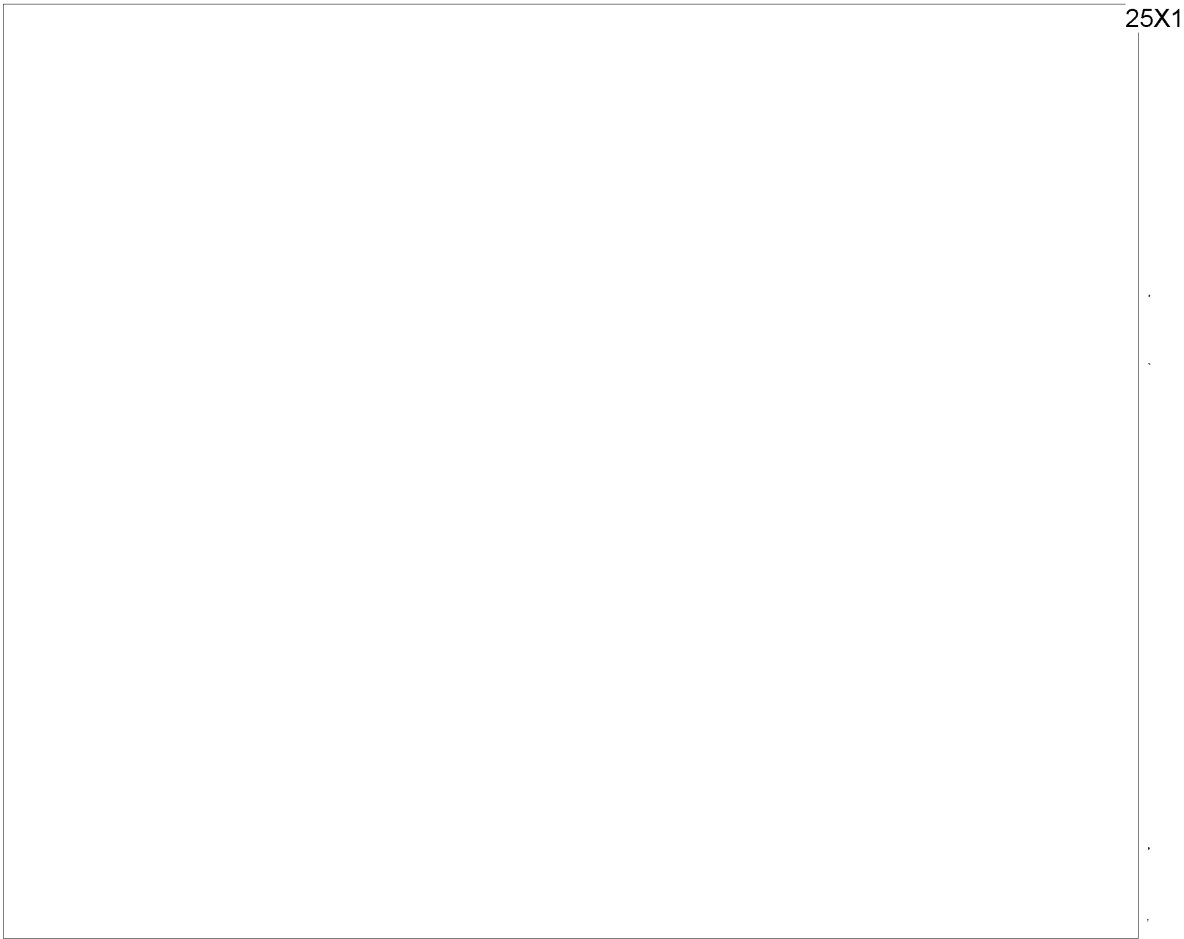
New Unidentified Missilelike Object

29. (TSR) An unidentified, missilelike object was observed adjacent to a FENCER A aircraft at the area airfield on [redacted] (Figure 19). The object, [redacted] in diameter, had a stabilizer span of [redacted]. These dimensions are similar to those of the AS-X-11. Unlike the AS-X-11, however, no large control surfaces were discernible. Two similar missilelike objects (one mounted under the port wing of a FENCER A and the other on a dolly next to the FENCER) were observed at Voronezh Airfield Southwest [redacted]

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Unidentified Radar

30. (TSR) On [redacted] an unidentified radar (Figure 20) was observed for the first time within the administration/engineering area of Akhtubinsk/Vladimirovka ASM Support Complex. The radar set consisted of a parabolic screen mounted on one end of a lowbed trailer with an adjacent support van. The antenna trailer was stabilized by four support legs, one projecting from each of the four corners of the trailer. The radar was present on most coverages throughout the first half of the year but had been removed by [redacted] Mensuration revealed the following data:

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Antenna Screen

Width
Height
Height of screen top above ground
Lowbed antenna trailer

Length
Width

Support Van

Length
Width
Height



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REFERENCES

IMAGERY

(TSR) All available KEYHOLE imagery acquired between [redacted] the information cutoff date, was used in the preparation of this report. 25X1 25X1

MAPS OR CHARTS

DMA. US Air Target Chart, Series 200, Sheet 0235-22, scale 1:200,000 (UNCLASSIFIED)

DOCUMENTS

- 1. NPIC. [redacted] RCA-16/0001/77, Akhtubinsk Flight Test Center (S), Feb 78 (TOP SECRET [redacted]) 25X1 25X1
 - 2. NPIC. [redacted] RCA-16/0001/78, Akhtubinsk Flight Test Center (S), Mar 79 (TOP SECRET [redacted]) 25X1 25X1
 - 3. USAF/FTD. [redacted] Air Force Foreign Technology Bulletin, 10 Jul 79 (TOP SECRET [redacted]) 25X1 25X1
 - 4. NPIC. [redacted] IIR-097/77, New Probable Air-to-Air Missile at Akhtubinsk/Vladimirovka AAM Support Complex, USSR (TSR), 17 Nov 77 (TOP SECRET [redacted]) 25X1 25X1
- [redacted] 25X1

REQUIREMENT

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Project 290001DQ

(S) Comments and queries regarding this report are welcome. They may be directed to [redacted] Warsaw Pact Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1 25X1

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