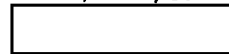
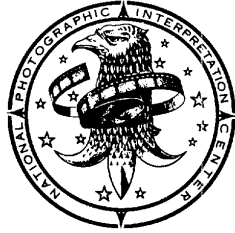


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Basic Imagery Interpretation Report



**NATIONAL
PHOTOGRAPHIC
INTERPRETATION
CENTER**

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MOSCOW ABM LAUNCH COMPLEX E21

B.E. NONE

DEPLOYED AMM FACILITIES

USSR

FEBRUARY 1969

COPY NO. 103

6 PAGES
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INSTALLATION OR ACTIVITY NAME

Moscow ABM Launch Complex E21

COUNTRY

UR

UTM COORDINATES

NA

GEOGRAPHIC COORDINATES

55-04N 037-01E

CATEGORY

BE NUMBER

NA

COMIREX NO.

NIETR NO.

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MAP REFERENCE

SAC. USATC 200, Sheet 0167-9HL, 2d ed, Mar 64, scale 1:200,000 (SECRET)

LATEST IMAGERY USED

NEGATION DATE (if required)

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ABSTRACT

Construction of Moscow Antiballistic Missile Launch Complex E21 was initiated during the spring of [redacted] almost four years after the initial construction of ABM complexes in the Moscow area was identified. Launch Complex E21 is now considered to be in a dormant construction state.

This report consists of a detailed discussion of the launch complex's basic components -- a launch area and two support facilities -- supplemented by annotated photographs with mensural data. The information herein is current through [redacted] the date of the latest usable photograph of the complex.

INTRODUCTION

Moscow Antiballistic Missile (ABM) Launch Complex E21 is approximately 45 nautical miles (nm) south-southwest of Moscow, USSR (Figure 1). Complex E21 shares with ABM Launch Complex E24 1/ the southwest quadrant of the area encircling the city.

Construction of this complex was initiated during the spring of [redacted] (Table 1) concurrently with that of Moscow ABM Complex E03. 2/ Initial ABM construction in the Moscow area predated construction of E21 by approximately four years. Of the eight ABM launch complexes believed to have been originally planned, E21 is now one of two considered to be in a dormant state of construction, E03 being the other. Three ABM complexes, E05, E24, and E33, are now considered to be complete, while construction of E31 is actively underway. Complex E15 has apparently been abandoned, and construction of the launch area for the eighth ABM complex, E12, was never actually begun.

BASIC DESCRIPTION

ABM Launch Complex E21 (Figures 2 and 3) consists of a launch area, an operational support facility, and a support and housing facility. Three areas of possibly ABM-associated activity are in the vicinity of the complex.

Launch Area

Although the initial construction pattern at E21 indicated that the launch area would contain two triads with each triad controlling eight launch positions, one triad was never completed. Initial groundwork was undertaken for both triads in [redacted] but as early as [redacted] an obvious construction gap existed between the two. Since this time, construction of Triad 1 has progressed while Triad 2 has remained dormant, never advancing beyond the land-clearing phase. Also, a rectangular building and a possible building foundation are present within the area of Triad 2, and their positioning precludes construction of at least two basic elements of a typical triad.

Triad 1. Triad 1 [redacted] 55-03-58N 037-03-10E), so numbered because it was the first triad for which construction was initiated at the launch complex, consists of a rectangular road pattern, including launcher service roads, and the triad of buildings normally associated with a GALOSH ABM launch complex. No significant construction activity has been observed at this triad since [redacted]

Two of the triad buildings (A and C, items 7 and 8, Figure 2) are apparently complete externally, excluding radome installation. A pedestal for the radar mount does not protrude from the roof of Building A; however, one does project from the center

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of the roof of Building C. The third triad building (B, item 9) has remained since [redacted] a partially completed superstructure. Construction materials are adjacent to each of the three buildings.

A rectangular wing is under construction at the southwestern corner of Building A. This structure is similar to one of the two wings housing the ventilating and cooling apparatuses at second generation "A" buildings at Launch Complexes E05, E24, E31, and E33.

Building A of this triad is typical of the second generation A buildings observed at the latter four complexes. Second generation A buildings differ from those originally constructed (first generation) in their smaller size and in the configuration of the structure housing cooling and ventilating apparatuses. Second generation A buildings were first noted at Triad 2 of Launch Complexes E05, E24, and E33. Triad 1 of these complexes has a first generation A building. Both A buildings at E31 and the single A building under construction at E03 are second generation.

Triad 2. The construction of Triad 2 ([redacted] 55-04-05N 037-02-35E) progressed at a pace equal to that of Triad 1 until [redacted] when the first evidence of

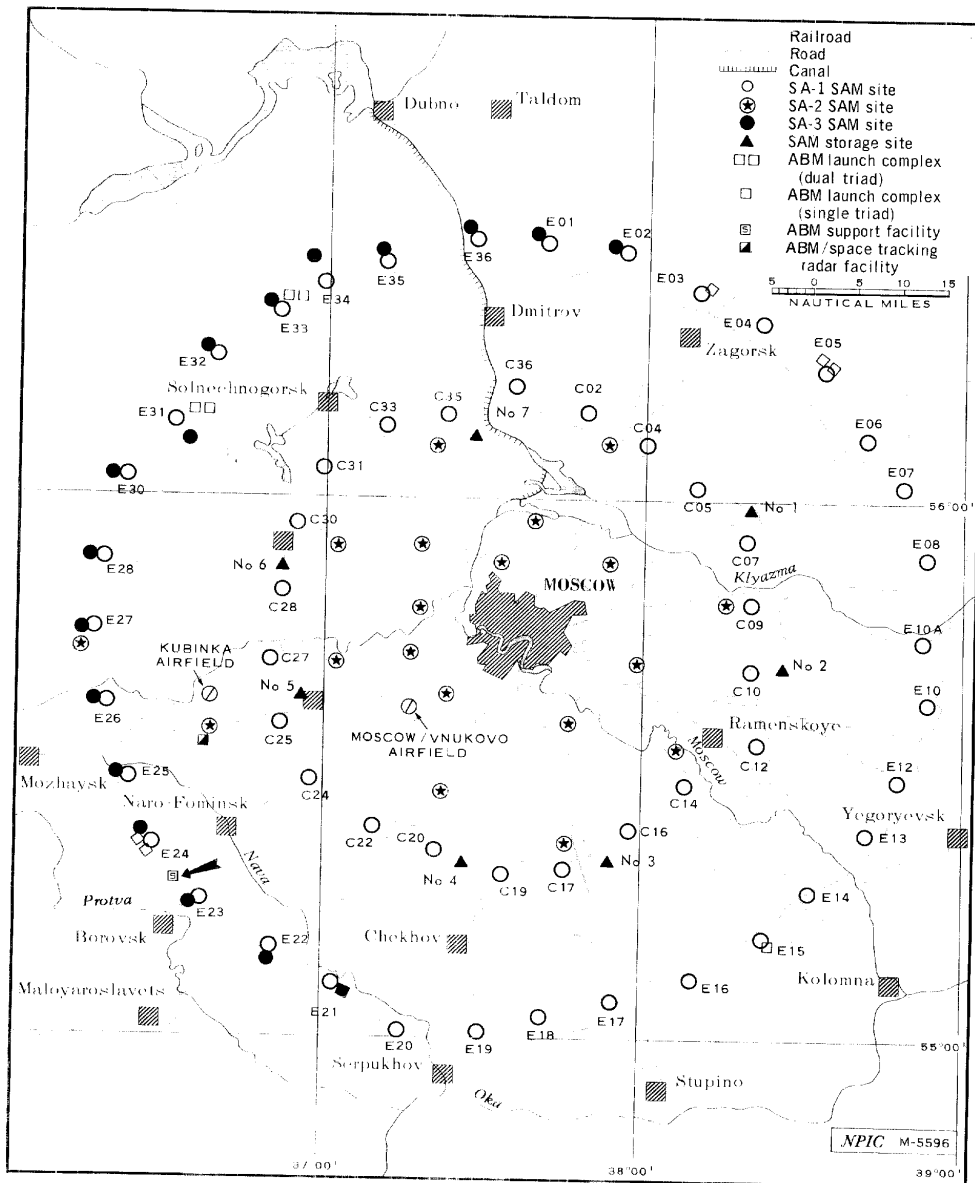


FIGURE 1. LOCATION MAP.

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a construction gap between the two was noted. Since this date no significant activity has occurred at Triad 2. Construction of the triad never advanced beyond the development of a typical service road pattern and the preliminary clearing for the triad buildings.

A possible building foundation (item 13) and a large, rectangular, single-story building (item 14) are under construction within the area of the triad. The possible building foundation is on the launcher service road, and its location precludes construction of at least one launch position in the typical pattern of launcher placement. This foundation may be the initial construction stage of a missile checkout building. The dimensions of the foundation are similar to those of a missile checkout building at ABM Complex E03. The large rectangular building is under construction in the position at which Building A of a triad is normally built. Construction of the building was first

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A dark-toned covering material is observed being applied to the roof's surface on [redacted] coverage. The limited height [redacted] of this building may preclude its use for storage of GALOSH missile canisters. The interior storage space is further limited by the above-mentioned vertical supports. No windows have been observed. A similar building is observed at ABM Complexes E03, E05, E24, E31, and E33. The continuing construction of this building has been the only activity of significance noted in the launch area at Complex E21 between [redacted]

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Midway between this rectangular building and Building A of Triad 1 is a foundation for a probable T-shaped bunker (item 10) similar to those at other ABM complexes. The function of these bunkers has not been determined.

Operational Support Facility

The operational support facility is at the western end of the launch area and adjacent to Moscow SAM Site E21-1. Four elements comprise the facility: East of the L-shaped building at the entrance to the launch area is a fence-enclosed transformer substation containing a low-voltage switching building (item 17), two 3-phase transformers, and eight switching positions. North of the substation is a thermal plant (item 18). A flat-roofed, two-story building (item 16) which possibly serves an administration function is southeast of the substation. North of this building are footings (item 20) for a rectangular structure. This construction was part of the original development of the operational support facility, but no activity has been observed here since [redacted]

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An area of construction activity, possibly associated with the launch complex, is southeast of Triad 1. The area contains four gable-roofed barracks-type buildings that appear externally complete, a flat-roofed structure, and five additional buildings under construction.

Support and Housing Facility

The support and housing facility is approximately 1 nm southwest of the launch area and adjacent to a support and housing facility associated with SAM Site E21-1. The ABM-associated facility contains six externally complete, multistory apartment buildings, a thermal plant, 18 externally complete miscellaneous buildings and structures, four buildings under construction, and four building foundations. Construction activity in this area has been relatively light since [redacted]

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South of the complex support and housing facility is a group of 11 buildings and structures that possibly serves as a construction support area. Association of this area with ABM activity at E21 is based on the concurrency of its construction start with that of the launch complex.

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Table 1. Chronology of Launch Complex Development

Latest coverage on which no construction activity for launch area is observed
 Construction of launch area first observed
 Possible construction support area south of complex support and housing facility first observed
 Operational support facility under construction
 Preliminary groundwork for triad buildings observed
 Construction gap between triads in evidence
 Superstructure of Buildings A and C of Triad 1 first observed

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[Redacted]

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Probable T-shaped bunker under construction between Triads 1 and 2
 Possible building foundation at Triad 2 identified
 Buildings A and C of Triad 1 appear externally complete excluding radome installation; possibly ABM-associated area southeast of Triad 1 observed
 Latest coverage revealing little significant construction activity in launch area for period in excess of 12 months

REFERENCES

IMAGERY



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MAPS OR CHARTS

SAC, US Air Target Chart Series 200, Sheet 0167-911L, 2d ed, Mar 64, scale 1:200,000 (SECRET)

DOCUMENTS

1. NPIC, [Redacted] ABM Launch Complex E24, Moskva, USSR, Jun 68 (TOP SECRET [Redacted])

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2. NPIC, [Redacted] ABM Launch Complexes E03 and E21, Moskva, USSR, Mar 68 (TOP SECRET [Redacted])

REQUIREMENT

EXSUBCOM BR-B/001-69

NPIC Project 210329

[Redacted]

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