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November 1964

CENTRAL INTELLIGENCE AGENCY

PHOTOGRAPHIC INTELLIGENCE REPORT

MOON CONE RADARS, CHINA



PHOTOGRAPHIC INTELLIGENCE DIVISION

DECLASS REVIEW by NIMA/DOD

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GROUP 1
Excluded from automatic
downgrading and declassification

MOON CONE RADARS, CHINA

INTRODUCTION

MOON CONE radars, apparently another physical modification of the obsolete American SCR-270 radar of World War II vintage, have been observed on photography at a number of locations in China (Figure 1). This report dis-

cusses the MOON CONE radar, presents detailed sketches and dimensions of it and other Communist Chinese SCR-270-type radars, and includes photographs of seven sites at which the MOON CONE has been observed.

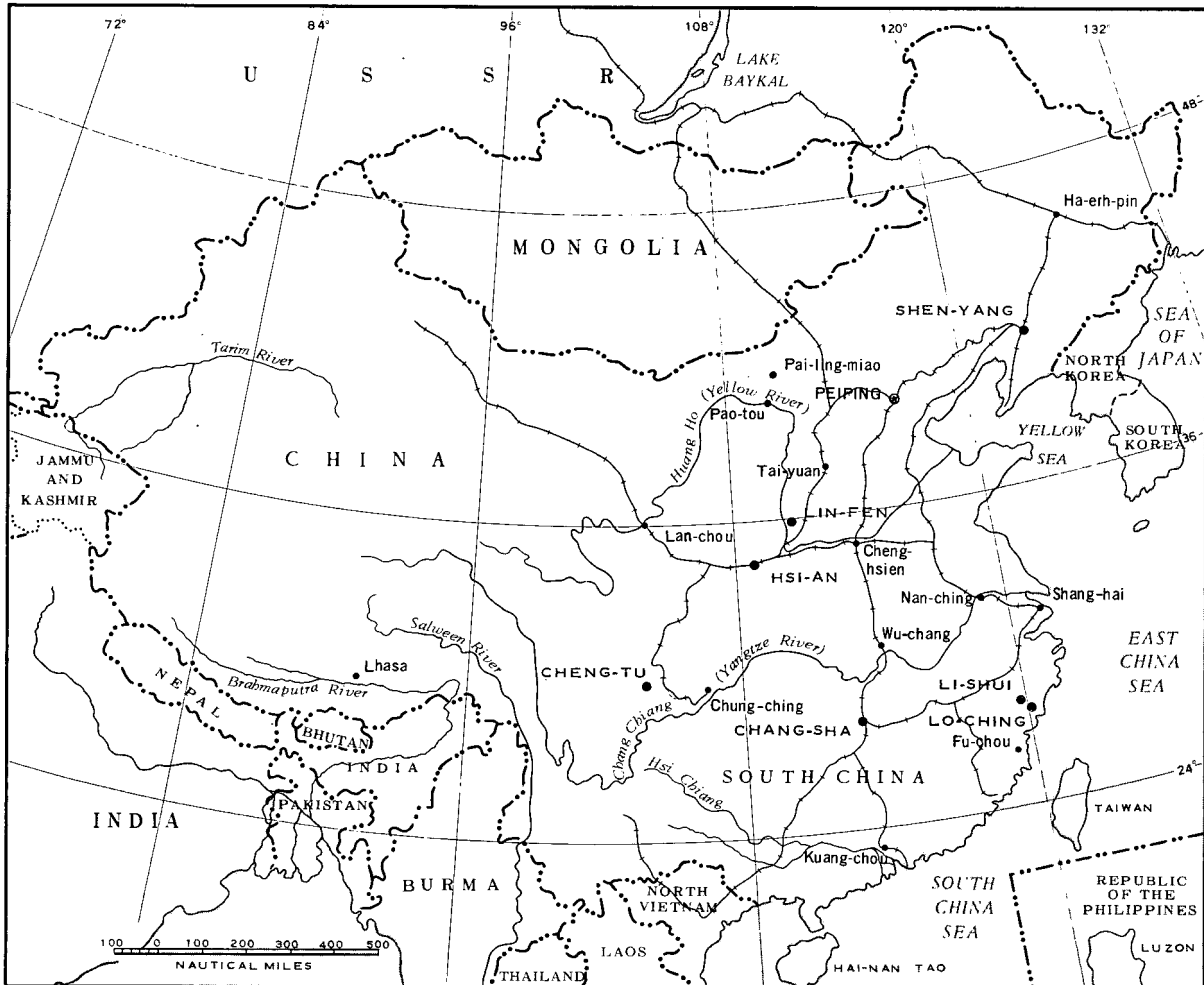
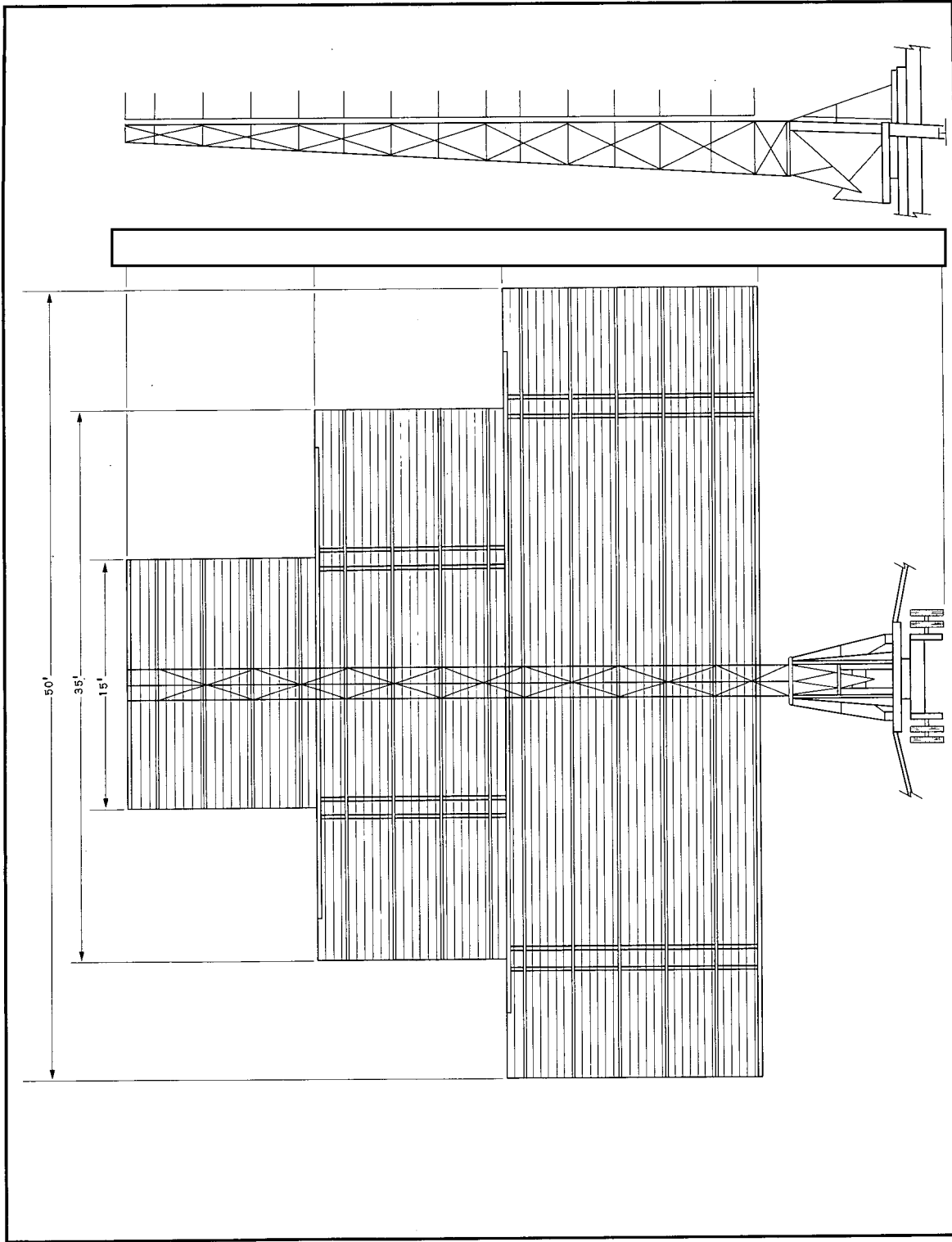


FIGURE 1. LOCATION MAP.

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FIGURE 2. MOON CONE RADAR.

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DESCRIPTION AND DERIVATION

The MOON CONE radar (Figure 2) is characterized by a large, generally triangular antenna mounted on a trailer similar to that of the old SCR-270. The antenna structure is of light construction, as is that of the SCR-270

and its various modifications. Dimensional details for the MOON CONE, as given in Figure 2, have been derived from a number of separate photographs.

The physical appearance of the MOON

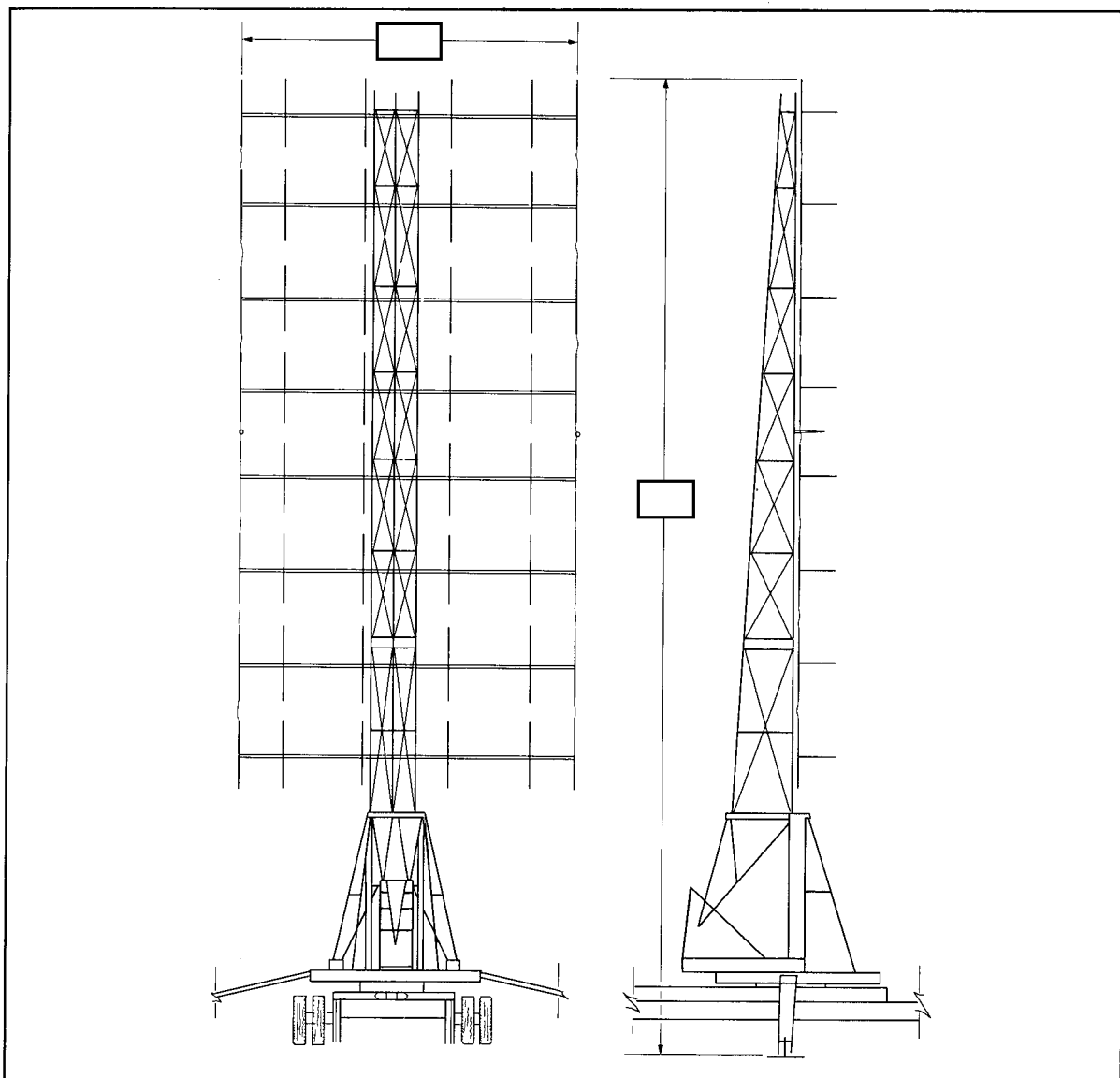


FIGURE 3. SCR-270DA RADAR.

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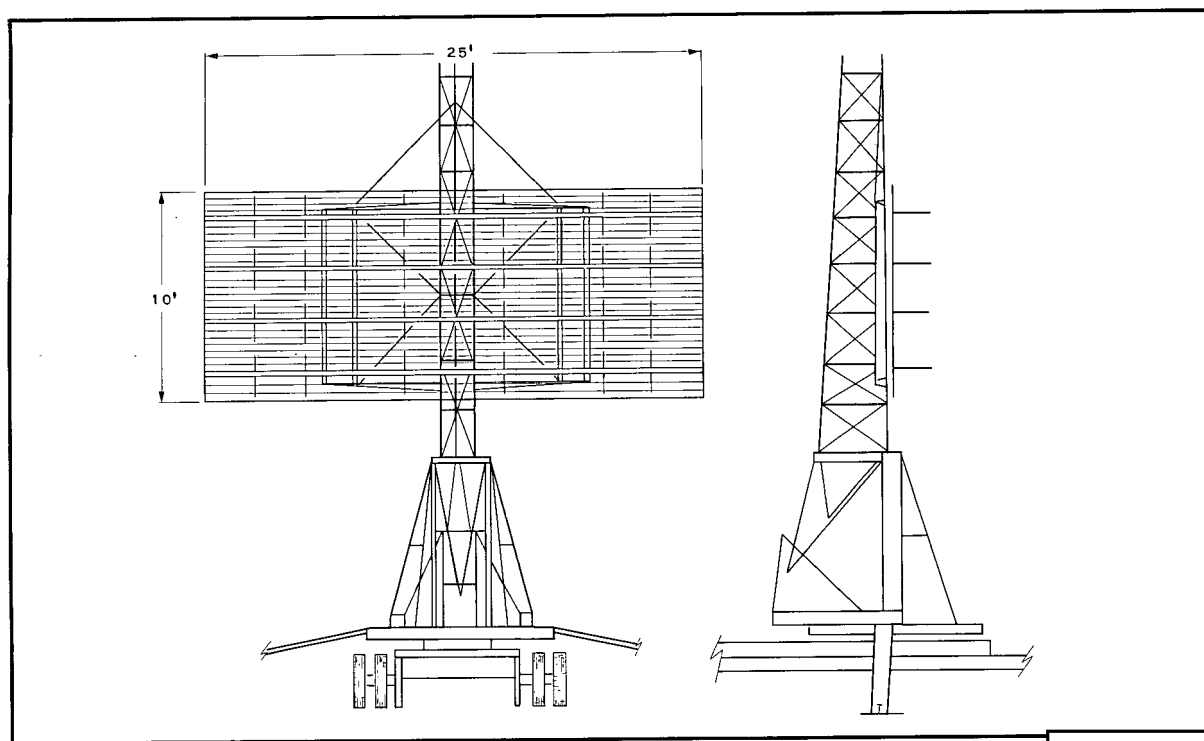


FIGURE 4. SCR-270DB RADAR.

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CONE radar suggests it to be a further modification of the obsolete American SCR-270. A number of SCR-270-type radars are known to have been obtained by Communist China from the USSR, primarily the SCR-270DA (Figure 3) and the SCR-270DB (Figure 4). Although now considered obsolete by Western standards, various copies and modifications of the basic SCR-

270 design have been made by the Chinese Communists and have been observed in current use in their radar systems. Figure 5, for example, illustrates a Communist Chinese modification of the 4-element SCR-270DB, in which the only physical difference appears to be the addition of 2 elements.

OBSERVED LOCATIONS

Generally speaking, only low-level or ground photography is of sufficient scale to enable precise identification because the lack of visual detail on high-level photography tends to place all the various models in a general SCR-270-type category. However, it has been possible to observe and identify MOON CONE

radars on photography at seven locations in China:

- Lin-fen, 36-03N 111-30E (Figure 6)
- Hsi-an (Sian), 34-40N 108-58E (Figure 7)
- Shen-yang (Mukden), 41-47N 123-17E (Figure 8)
- Li-shui, 28-28N 119-57E (Figure 9)
- Cheng-tu, 30-46N 104-04E (Figure 10)
- Lo-ching, 28-04N 120-58E (Figure 11)
- Chang-sha, 28-05N 112-57E (Figure 12)

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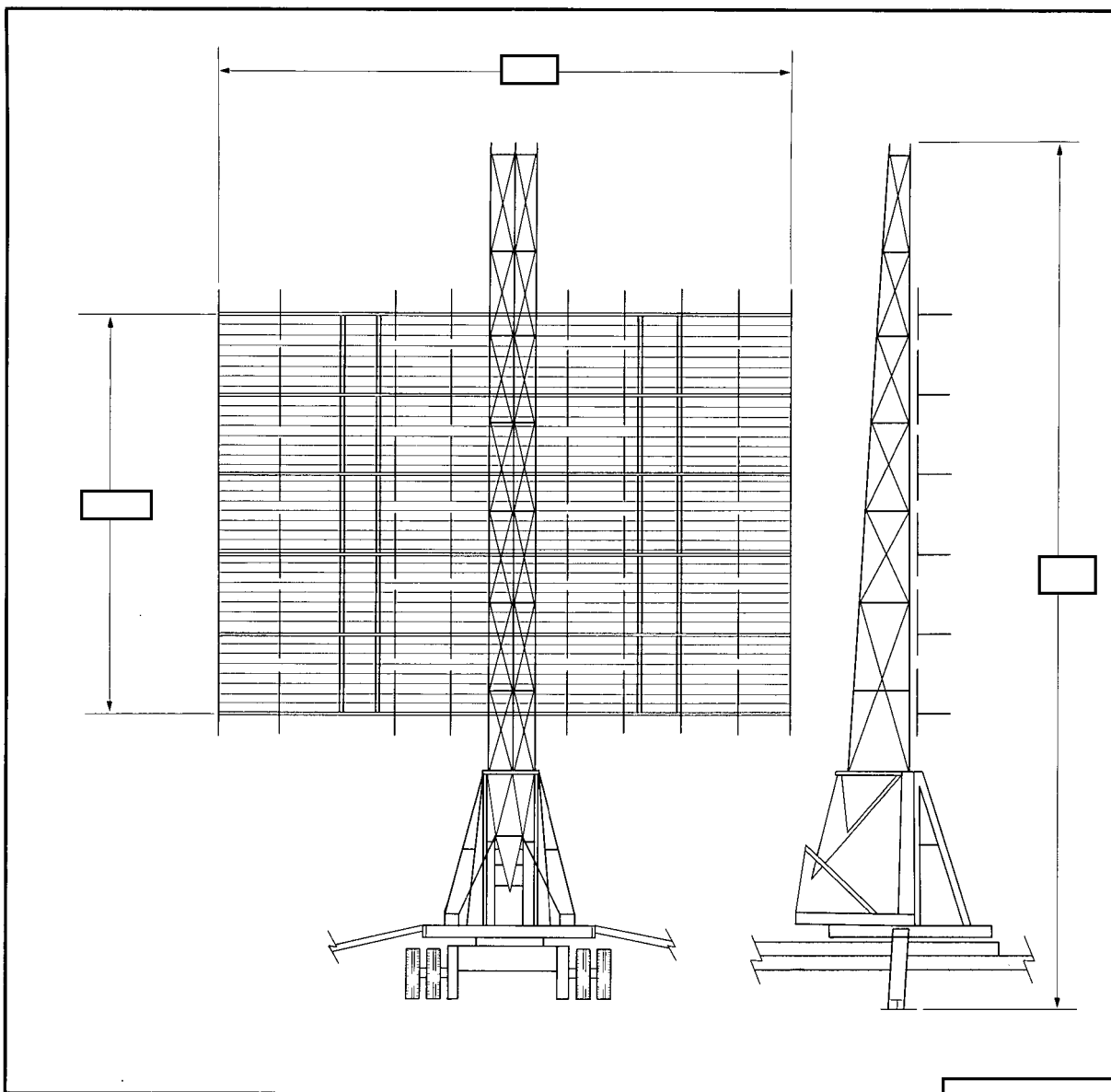


FIGURE 5. CHINESE COMMUNIST MODIFICATION OF SCR-270DB.

Of the seven radars observed at Cheng-tu, only one can be positively identified as a MOON CONE, but such measurements as are obtainable suggest that the other six are probably of the same type. At the Chang-sha location, precise measurements were precluded by photographic quality and rectification difficulties even though

the radar was observed on ground photography. However, this radar and the others shown in Figures 6 through 12 seem identical in overall proportion and appearance to the MOON CONE radar definitely identified on low-level aerial photography at Lo-ching.

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FIGURE 6. MOON CONE RADAR AT LIN-FEN.

FIGURE 7. MOON CONE RADAR AT HSI-AN.

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FIGURE 8. MOON CONE RADAR AT SHEN-YANG.

FIGURE 9. MOON CONE RADAR AT LI-SHUI.

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FIGURE 10. RADARS AT CHENG-TU.

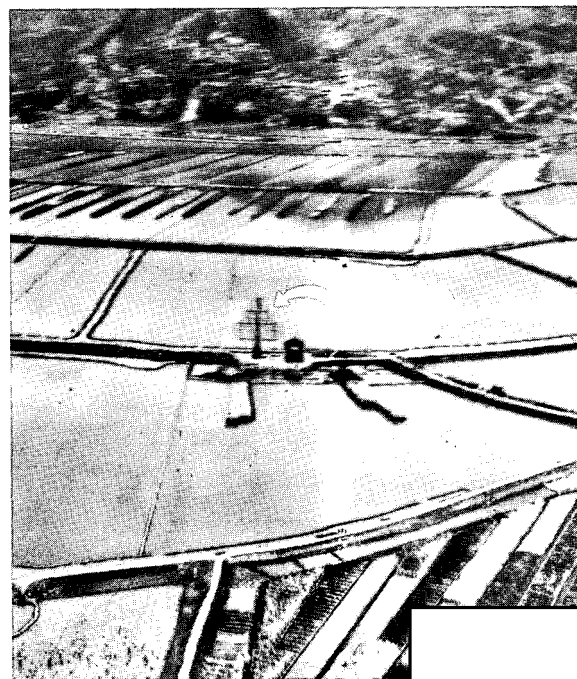


FIGURE 11. MOON CONE RADAR AT LO-CHING.

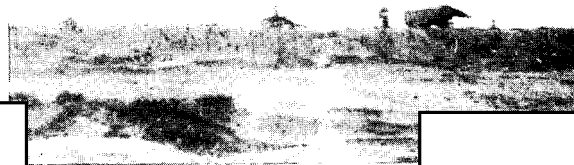
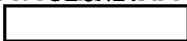


FIGURE 12. MOON CONE RADAR AT CHANG-SHA.

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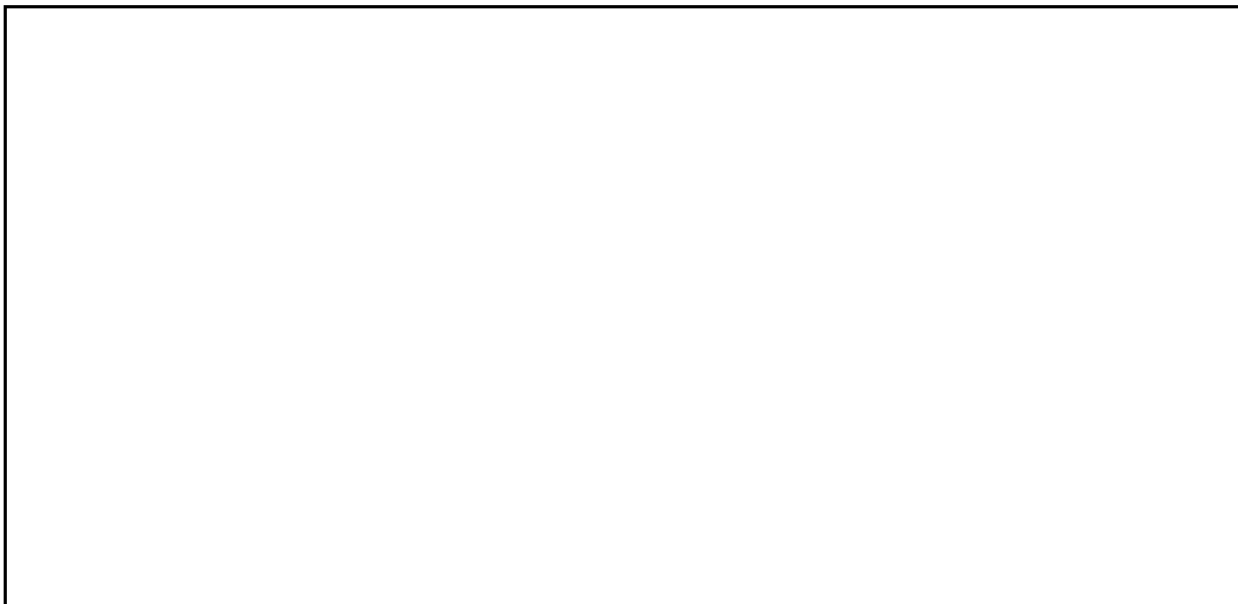
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REFERENCES

PHOTOGRAPHY



REQUIREMENT

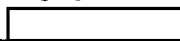
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