

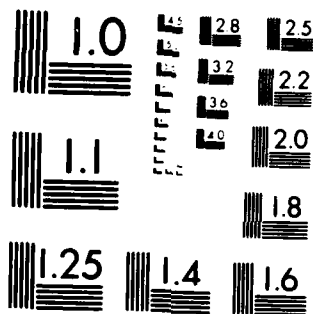
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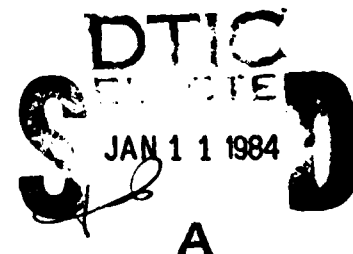
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THE
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by

Lester L. Miller, Jr.

1 Jan 84



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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This summary presents materials written on the subject of heliographs. First in- vented during the 1814-1826 period, the land communications procedure is now in use for solar and satellite communications means. Materials have been selected from the holdings of the Morris Swett Technical Library, USAFAS.		

FOREWORD

This entry in the Morris Swett Library, USAFAS Special Bibliography series presents literary citations held in the collection on the heliograph. The name, from the Greek, means literally, "to write with solar rays," after the photographic process developed by J. Nicephore Niepce (1765-1833), and others during the 1814-1826 period. Sir Henry C. Mance (1840-1926) invented an instrument for communicating with mirrors by using an external light source in 1875 while he was assigned to duties with the Persian Gulf Telegraph Department. This development was successfully used in both the Second Afghan and Boer Wars. The invention refined procedures pioneered by American Indians in the Southwest.

The first US military use was made following tests conducted at Fort Whipple, VA (Fort Meyer) during August, 1877, in artillery and general signal communications work in the Southwest and in Cuba. The compelling features of rapidity, secrecy, ease of use, and low cost have been applied and the heliograph is now used in radio and spectro-heliography for solar study and satellite communication applications.

This bibliography is arranged in parts, per the following table of contents. Featured in Part One are citations to a series of nine undated pamphlets selected from our rare books collection. They were published by the Carl Zeiss Optical Works or Jena (East), Germany in about 1910 and were based on the collaborative work of the company's namesake (1816-1888) with the technical staff of the University of Jena.

Inclusion of an item, or omission, neither implies USAFAS indorsement or sanction of the compiler's point-of-view. Comment regarding entries in the series is invited.

LESTER L. MILLER, Jr.
Supervisor/Reference Librarian

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Classification

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Dist	Avail	Special
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PART 1 - BOOKS AND DOCUMENTS

<u>Library of Congress Call #</u>	<u>Entry</u>
UJ200.22 H323 RARE	Carl Zeiss Optical Works. <u>3½-Inch and 4-Inch Triple Mirror-Signalling Apparatus</u> , Reference #T93, Jena, Germany: The Co., (22p)
UJ200.22 H323	_____. <u>3½-Inch, 5-Inch, and 6½-Heliographs</u> , Reference #: T105, Jena, Germany: the Co., (30p).
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