

a significant number of fairly complete reports by reliable observers remained unexplained. Although no evidence existed that unexplained reports of sightings constituted a physical threat to the security of the U. S., in March, 1952, the Air Force decided that all reports of unidentified aerial objects should be investigated and evaluated to determine if "flying saucers" represented technological developments not known to this country.

Originally, the problem involved the preparation and analysis of about 1,300 reports accumulated by the Air Force between 1947 and the end of March, 1952. During the course of the work, the number of reports submitted for analysis and evaluation more than tripled, the result of the unprecedented increase in observations during 1952. Accordingly, this study is based on a number of reports considered to be large enough for a preliminary statistical analysis, approximately 4,000 reports.

This study was undertaken primarily to categorize the available reports of sightings and to determine the probability that any of the reports of unidentified aerial objects represented observations of "flying saucers". With full cognizance of the quality of the data available for study, yet with an awareness of the proportions this subject has assumed at times in the public mind, this work was undertaken with all the seriousness accorded to a straightforward scientific investigation. In order to establish the probability that any of the reports of unidentified aerial objects represented observations of "flying saucers", it was necessary to make an attempt to answer the question "What is a 'flying saucer'?" However, it must be emphasized that this was only incidental to the primary purpose of the study, the determination of the probability that any of the reports of unidentified aerial objects represented observations of "flying saucers", as defined on Page 1.

The basic technique for this study consisted of reducing the available data to a form suitable for mechanical manipulation, a prerequisite for the application of preliminary statistical methods. One of International Business Machine Corporation's systems was chosen as the best available mechanical equipment.

The reduction of data contained in sighting reports into a form suitable for transfer to IBM punched cards was extremely difficult and time consuming.

For this study a panel of consultants was formed, consisting of both experts within and outside ATIC. During the course of the work, guidance and advice were received from the panel. The professional experience available from the panel covered major scientific fields and numerous specialized fields.

All records and working papers of this study have been carefully preserved in an orderly fashion suitable for ready reference. These

records include condensations of all individual sighting reports, and the IBM cards used in various phases of the study.

#### ORIGIN AND NATURE OF DATA

Reports of sightings were received by the U. S. Air Force from a representative cross section of the population of the U. S., and varied widely in completeness and quality. Included were reports from reputable scientists, housewives, farmers, students, and technically trained members of the Armed Forces. Reports varied in length from a few sentences stating that a "flying saucer" had been sighted, to those containing thousands of words, including description, speculation, and advice on how to handle the "problem of the 'flying saucers'". Some reports were of high quality, conservative, and as complete as the observer could make them; a few originated from people confined to mental institutions. A critical examination of the reports revealed, however, that a high percentage of them was submitted by serious people, mystified by what they had seen and motivated by patriotic responsibility.

Three principal sources of reports were noted in the preliminary review of the data. The bulk of the data arrived at ATIC through regular military channels, from June, 1947, until the middle of 1952.

A second type of data consisted of letters reporting sightings sent by civilian observers directly to ATIC. Most of these direct communications were dated subsequent to April 30, 1952, and are believed to be the result of a suggestion by a popular magazine that future reports be directed to the Air Technical Intelligence Center. As could be expected, a large number of letters was received following this publicity.

A third type of data was that contained in questionnaire forms completed by the observer himself. A questionnaire form, developed during the course of this study, was mailed by ATIC to a selected group of writers of direct letters with the request that the form be completed and returned. Approximately 1,000 responses were received by ATIC.

In general, the data were subjective, consisting of qualified estimates of physical characteristics rather than of precise measurements. Furthermore, most of the reports were not reduced to written form immediately. The time between sighting and report varied from one day to several years. Both of these factors introduced an element of doubt concerning the validity of the original data, and increased its subjectivity. This was intensified by the recognized inability of the average individual to estimate speeds, distances, and sizes of objects in the air with any degree of accuracy. In spite of these limitations, methods of statistical analysis of such reports in sufficiently large groups are valid. The danger lies in the possibility of