A STATISTICAL SUMMARY OF REPORTS FROM THE TOPPENISH UFO STUDY

Submitted November 11, 1975
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Revised March 27, 2001 for Distribution on Electronic Media.

NOTES ON THE ANNOTATED ACROBAT DOCUMENT VERSION

This release of the 1972-1974 Nocturnal Light Field Study reports attempts to take advantage of the current state of the art in electronic publishing technology. It reproduces the slides, maps, and related data contained in the original typewritten documents. The report is electronically stored in the Portable Document Format to permit reproduction across many computer platforms.

Text of the original report is shown in plain font or strikeout - where the original text is no longer valid. Annotations are in italicized font. Images and other graphics have been compressed to make the document a practical size for distribution. Layout of the original report was changed to integrate graphic elements.

Publication of this document is supported by the Willard J. Vogel Study, a Washington nonprofit scientific research corporation. Any comments or suggestions may be sent to:

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INTRODUCTION

This report is intended as an update of earlier reports covering the efforts being made to discover the source of UFO activity on the Yakima Indian Reservation, near Toppenish, Washington. It is devoted to a brief description of the type and format of data being collected for statistical analysis and to reporting progress being made towards the discovery of patterns of behavior for the manifestation in the study area[1]. A summary of selected data, obtained over the four year period of the study, is included at the end of the report.

DESCRIPTION OF THE DATA BASE

The value of a system for encoding and storing reports of UFO observations in a standardized form, which permits high-volume, computer-aided study, was recognized early by a number of investigators in the field. Unfortunately, there was little communication between the groups involved in establishing data files and, consequently, no standardization of data formats. This lack of standardization, along with substantial disagreement over just what information should be included in such a file, has made the exchange of information among the various investigators and groups extremely difficult.

Faced with the above lack of standardization and detailed information regarding the formats being used by others, this investigator set-out to develop still another database format in 1971. The file, called APDF, was originally intended to catalog the pertinent details of worldwide UFO sighting reports on a systematic basis. The format used for encoding data from the Toppenish study area is a modified version of the original format and, while it is not the last word in computer databases, provides a means of analyzing the patterns of many parameters of sighting reports, over a number of years and in a consistent time and location reference frame. Table I. gives the parameters included in APDF encoded reports from the study area.

Each report, with all of the parameters given in Table I. encoded, occupies one standard IBM Hollerith card. Rapid and consistent coding of reports is accomplished with a set of tables which closely define the characteristics of each parameter of the source report and convert that information into numerical data. The resulting punched card contains most of the information in the source report, but now in a form which can be analyzed by the computer.

All of the reports encoded using the above system are coarsely filtered, as described in earlier papers, to eliminate observations which have too little information content to be usable or those which include details strongly suggesting a known cause. In addition, reports which do not include a date are eliminated from the computer file, since such information is required by the operating program to unambiguously identify the
report.

It should be noted that the APDF format allows the deletion of any unknown parameters, with the exception of the year, month, day and, at least, the approximate location of the observation. Some of the reports gathered during the last four year were deleted from the computer file as a result of the above constraints. In some cases, the deleted reports were of reasonably good quality, lacking only a date.

The APDF format was later modified to work with commercial database software (see below).

[1] Earlier reports, dated November 2, 1972 and April 8, 1974, provide additional background on the work being conducted in the study area.

TABLE I. PARAMETERS INCLUDED IN THE APDF DATA FORMAT

Parameter	Remarks
1. Observation Date and Serial Number	Date at Greenwich Mean.
2. Observation Time	Time at Greenwich Mean (Universal Time).
3. Observation Coordinates	Latitude and Longitude to nearest tenth of a minute, when location is off of Yakima Reservation grid. Grid coordinates to the nearest mile, when known and within the Reservation study area.
4. Population Density	
5. Topography	
6. Temperature	
7. Weather Conditions	Cloud cover, precipitation, etc.
8. Source of Report	Press, police, investigator, etc.
9. Strangeness Index	Subjective scale of 1 to 5.
10. Probability Index	Subjective scale of 1 to 5.
11. Observation Class	Nocturnal light, Radar-Visual, Close encounter, daylight object, etc.
12. Length of Observation	
13. Shape of object	
14. Color of Object	
15. Luminescence	
16. Kinetics	
17. How First Observed	
18. How Last Observed	
19. Observer Reaction	
20. Additional Observations	Smoke, odor, sound, photographs, etc. (up to four of 27 choices, plus a flag indicating other observations of interest in the source report, which were not encoded.)

SUMMARY OF SELECTED DATA GATHERED SINCE 1972

The total number of reports, encoded since the study began in 1972, stands at 55 *(82 reports in the final tally.)*. These reports breakdown into the following classifications:

Nocturnal Lights	43 (78.1%)
Daylight Objects	3 (5.5%)
Close Encounters	6 (10.9%)
Others	3 (5.5%)

Figure I. is a plot of the number of reports received over the four year study period versus the month of the year. Figure II. graphs the number of reports versus the hour of the day, over the four year period.

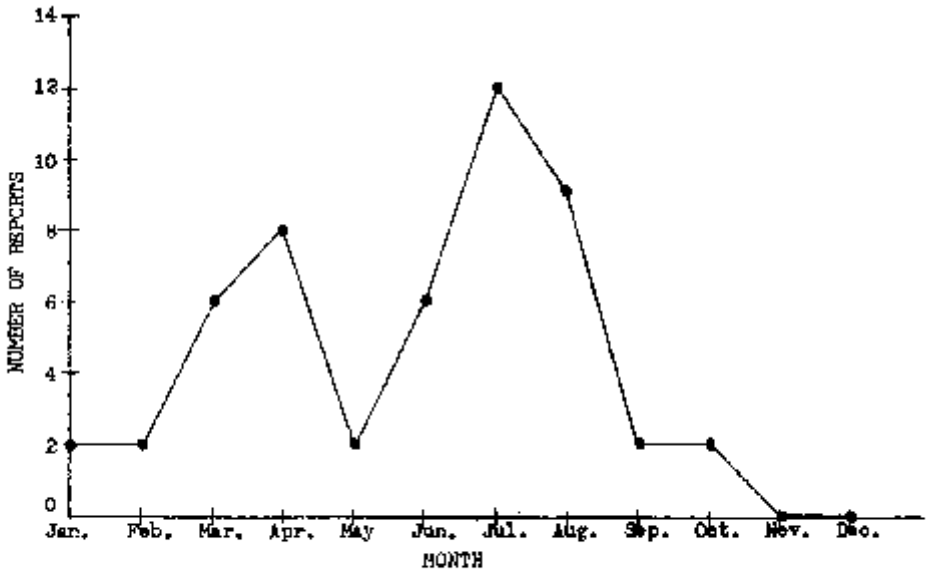

FIGURE I. NUMBER OF REPORTS VS. MONTH OF THE YEAR (FOUR YEARS)

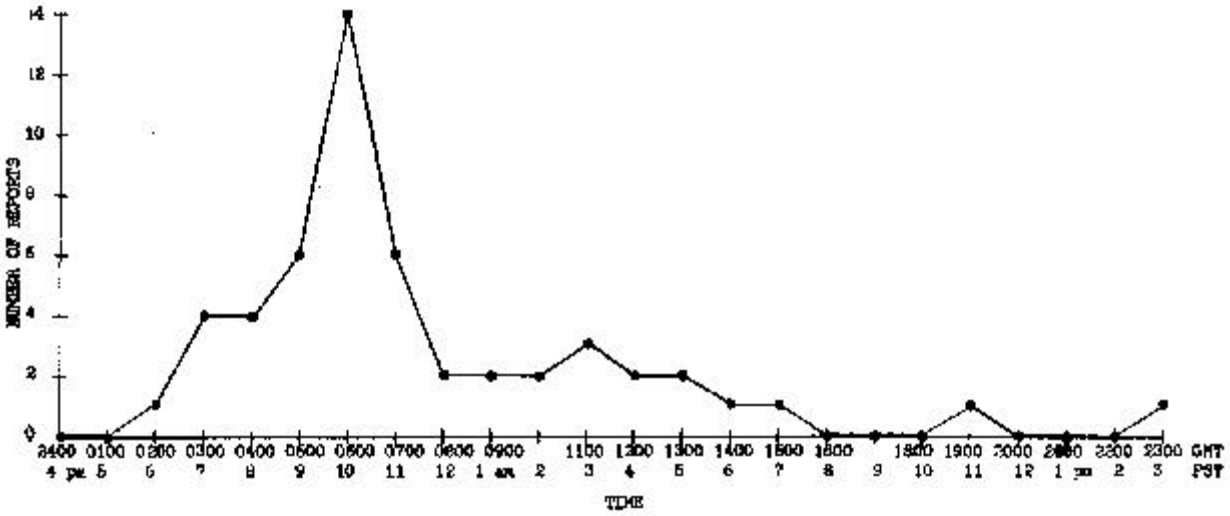

FIGURE II. NUMBER OF REPORTS VS. HOUR OF THE DAY (FOUR YEARS)

SUMMARY OF TOPPENISH PROJECT REPORTS - 1972 TO 1977

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***** UT ***** YR/MO/DY	TIME	CLASS	*LOCATION** RNG	TWN	SEC	S/P
72 08 19	0415	NL	18E	15N	13	44
72 08 20	0405	NL	11E	15N	26	33
72 08 20	0619	NL	11E	16N	12	55
72 08 21	0352	NL	11E	16N	07	23
72 08 23	0510	NL	18E	14N	32	55
72 08 25	0845	NL	08E	17N	19	23
72 08 30	0518	NL	10E	15N	13	55
73 02 21	0220	NL	09E	17N	34	22
73 03 13	1500	D	09E	16N	24	53
73 04 03	0643	CE1	11E	20N	04	22
73 04 04	0745	NL	09E	20N	00	23
73 04 04	0915	CE1	10E	20N	15	51
73 06 23	UNKN	D	07E	17N	05	54
73 07 21	UNKN	NL	07E	17N	00	12
73 07 23	0645	NL	07E	21N	00	12
73 07 25	0645	NL	09E	16N	15	22
73 07 27	1100	NL	10E	21N	21	43
73 07 27	1135	CE1	11E	20N	35	53
73 08 26	0330	NL	09E	12N	20	11
73 10 01	0900	NL	09E	20N	25	33
74 02 28	0500	NL	10E	20N	03	15
74 03 23	1100	NL	10E	20N	03	32
74 04 03	0600	NL	06E	11N	00	23
74 06 16	0718	NL	10E	20N	03	22
74 07 19	1345	NL	11E	11N	35	33
74 07 20	0745	NL	06E	12N	22	12
74 07 20	1100	NL	09E	16N	00	33
74 07 21	1240	NL	10E	15N	31	22
74 07 21	1950	D	09E	15N	24	33
74 07 31	0648	NL	11E	20N	08	12
74 08 02	0800	NL	12E	17N	26	43
74 09 19	1400	UNCL	10E	20N	03	22
74 09 22	0645	NL	10E	20N	03	33
74 10 28	1200	UNCL	09E	13N	36	22
75 01 04	0630	NL	09E	17N	12	33
75 01 16	0330	NL	09E	16N	00	33
75 01 19	0600	NL	12E	15N	00	22
75 02 16	0500	NL	10E	21N	00	23
75 02 24	0430	CE1	12E	19N	20	22
75 03 06	0620	NL	10E	21N	00	23
75 03 13	0400	NL	10E	18N	26	33
75 04 12	1300	CE1	11E	16N	00	33
75 04 17	0750	NL	11E	16N	23	23
75 04 21	2325	UNCL	10E	20N	03	23
75 04 30	0615	NL	10E	20N	03	22
75 05 01	0710	NL	11E	20N	21	22
75 05 14	0630	NL	08E	17N	00	13
75 06 11	1000	NL	22E	18N	00	33

PAGE 02

***** UT ***** YR/MO/DY	TIME	CLASS	*LOCATION** RNG	TWN	SEC	S/P
75 06 11	1010	NL	22E	18N	00	33
75 06 29	0600	NL	08E	11N	00	33
75 06 29	0700	NL	08E	11N	00	33
75 09 16	0530	NL	16E	09N	12	43
75 12 16	2130	D	18E	08N	06	34
75 12 15	0700	CE3	20E	10N	32	53
76 03 06	UNKN	CE3	18E	10N	27	42
76 03 09	UNKN	CE2	18E	10N	32	32
76 04 04	UNKN	UNCL	19E	09N	26	22
76 05 23	0655	NL	18E	12N	14	22
76 09 06	UNKN	NL	21E	12N	04	21
76 10 19	0356	NL	19E	09N	26	44
76 10 22	0100	NL	20E	10N	31	43
76 10 27	0455	NL	16E	09N	16	33
76 10 27	0500	NL	16E	09N	24	33
76 10 27	0520	NL	16E	09N	06	33
76 10 27	0610	NL	11E	08N	17	33
76 10 31	0600	NL	17E	08N	25	33
76 11 02	0430	NL	16E	10N	17	32
76 11 03	0215	NL	19E	09N	26	22
76 11 06	UNKN	NL	16E	09N	17	22
76 11 11	0200	NL	19E	09N	26	33
76 12 09	0200	NL	19E	09N	26	33
76 12 10	0230	NL	19E	10N	24	33
76 12 29	UNKN	NL	18E	10N	32	43
77 01 19	1400	CE3	18E	11N	26	53
77 02 11	0400	NL	20E	10N	34	23
77 02 11	1415	NL	16E	09N	24	33
77 03 07	0200	NL	19E	09N	26	33
77 03 10	0605	NL	20E	10N	20	33
77 03 14	0745	NL	20E	09N	13	33
77 03 14	0747	NL	16E	11N	22	34
77 03 15	0230	NL	19E	10N	15	43
77 03 16	0400	NL	16E	11N	22	23

OF REPORTS: 082

The above summary of observation reports was compiled from the original Holorith punch cards after the publication of this report. The database was complete through March of 1977. No further cases were encoded in the database after this time, but reports were still being received.. The Version 1. APDF format was later abandoned, because new computer technology was becoming available. Eventually, the format was ported to a number of commercial database programs.

The table above was generated in the following manner: The cards were translated into paper tape files and read by a Signetics 2650 microcomputer system attached to a Teletype printer. The data was formatted by the 2650 then and printed back to the Teletype printer. The 2650 was programmed in Assembly language. (Note that personal computers were just coming on the market at this time and were very expensive.)

Further analysis of these data indicates, among other things, that there were nine photographs made, four cases involving the scouting of a terrestrial vehicle, at least one case involving electromagnetic effects, one case of a "beeping" sound and one case in which animals were affected.

CONCLUSION

It seems certain that, as more cases are added to the data base and further analysis of the information is made, some patterns of behavior will become apparent. The ultimate goal, of course, is to be able to forecast periods of activity and their most probable locations. With such information, it should be possible to deploy an investigator and instruments in the field, with the greater probability that useful measurements will be obtained.

Because of the relatively small number of reports available, caution should be used in drawing conclusions from the data at this time. A pattern which does seem to emerge from the information available at the present time, is the relationship between the number of sightings and the hour of the day (Figure II.). It would appear that the time of highest probability for a sighting in the study area is in the zone between 7 pm and 12 midnight, local standard time. The peak in reports, centered about the month of July, in the plot of Figure I., might be reasonably expected, since more observers are in the field during this period. The February-March-April peak, found in Figure I.,
lacks a satisfactory explanation at the present time.

At the time of this writing, activity in the study area is very low. Reports reached a peak towards the end of May, 1975 and abruptly dropped to only two reports in the following five month period. Such behavior has been observed before and is not considered to be unusual.

ACKNOWLEDGEMENTS

The collection of the data for study in the Toppenish project would be impossible without the patience and hard work of those people who have forwarded reports to this investigator. Without the assistance of Bill Vogel, the ladies in the fire lookouts, the Yakima Reservation Tribal Council and many other individuals, this on-going study would be impossible. Many thanks for their help.