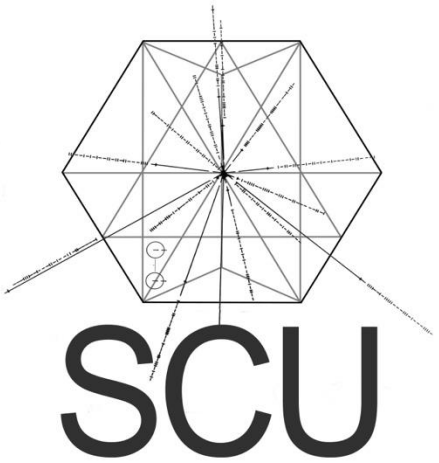
UAP Indications Analysis 1945-1975
Military and Public Activities



UAP Indications Analysis 1945-1975
Military and Public Activities

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Abstract

This paper provides an assessment of indicators associated with UAP reports, described initially as Unidentified Flying Objects (UFOs) and contemporarily as Unidentified Anomalous Phenomena (UAP), included in the Scientific Coalition for UAP Studies (SCU) Activity Pattern Study[1]. The Activity Pattern Study and Indications Analysis for Military and Public Activities was conducted in association with the Pattern Recognition[2] and Indications Analysis for the US Atomic Warfare Complex[3]. The Activity Pattern study analyzed UAP incidents in the military and public between 1945 and 1975. A set of 597 UAP reports from this period were collected from the US Air Force's multi-decade UFO investigations (including Project Bluebook), and other select sources. Seven UAP intention scenarios were evaluated in this work: 1) Survey - Human Behavioral Studies, 2) Recognition, 3) Contact, 4) Communication, 5) Collaboration, 6) Unilateral Assistance, and 7) Unilateral Exploitation. The UAP Activity Pattern Study indicated a shift from daytime to nighttime reports over the period of the study, with a shift in focus from intrusive activity at military installations to close approaches to small groups of observers within the general public. A list of indicators was created and mapped to the seven major scenarios for assessment. Based on the analysis of indications for UAP incidents included for this study, recognition of intelligent action and advanced UAP technology was indicated as the most probable scenario for the early years of the study, with a transition to Human Behavioral Studies occurring in later years. There was some indication of contact intention, with less likelihood of Communications, Collaboration, Unilateral Assistance or Unilateral Exploitation.

The four papers on patterns and indications conducted by the SCU Intentions Study team are inter-related and included in a common database of 1163 UAP reports, available at https://zenodo.org/records/14647871.

1. Introduction

The methodology used in this indications analysis was derived from the tools and practices which are the intelligence community industry standard for threat and warnings studies.[4] These structured analytic techniques provide an approach to evaluating observed activities which are not reproducible nor predictably repeatable.

Within the intelligence and military communities, this methodology is described as threat and warnings intelligence. In public and commercial applications, such as in marketing and strategic business planning, it is commonly referred to as indications analysis. In their most basic form,

indications studies involve long-term collection of activities occurring within a specific area of interest. With a sufficient historical baseline of data, it is possible to determine when anomalies in that activity occur. Suspected anomalies are investigated and fact-checked; and if deemed worthy of ongoing study, the next step in the process involves developing a set of hypothetical motives (intentions scenarios).

The process of indications analysis is a scientific process. Any numbers assigned to probabilities of scenarios are a weighted criteria defined in the methodology and agreed upon by the authors and contributors to this research project. The use of weighted numeric drives the analytic standards outlined in Intelligence Community Directive (ICD) 203.[5] The approach to codifying numeric findings is simply to use terms such as "It seems probable that" regarding positive indications support for scenarios, and terms such as "It appears unlikely" or "It seems improbable that" in reference to negative indications for a scenario.[6]

This methodology does not claim to produce either numeric or testable scientific results. It accepts the fact that indications analysis produces an estimate of motive and intentions, but that estimate will always be fundamentally based on the objective analysis of data and the relativity of the indicators in space and time, based on structured analytic techniques. Such analyses are often handicapped by the paucity of data needed to establish veracity of intelligence information. The only recourse to this problem is to build a historical record covering a substantive period and to use observations vetted to the greatest extent possible. In both military operations and competitive marketing, decisions must be made even if the data are not scientifically sufficient for quantitative probabilities. The data from UAP reports is similarly insufficient, but the use of the scenarios and indications structured analytic technique allows some progress to be made in understanding the possibilities of intent associated with limited and incomplete data.

The final step in the analysis process is the assessment and description of relative likelihoods for the scenarios being evaluated. Scenarios are itemized with no attempt to rank one above the other. The relevance of indicators to all possible scenarios are considered to avoid preconceptions as much as possible. The seven major scenarios analyzed for the military and public domains are outlined below.

2. Study Scenarios

This research project evaluated seven UAP public intention scenarios.

- Survey - Behavioral Studies
- Recognition of intelligence
- Contact
- Communications
- Collaboration
- Unilateral Assistance
- Unilateral Exploitation

2.1. Survey - Behavioral Studies

Behavioral studies involve a wide range of disciplines, all dealing with questions of how individuals interact and work with one another, as well as how social groups operate. In addition to the disciplines of psychology and sociology, cultural anthropologists' study human activities,

past and present, across a broad range of groups and cultures.[7] Additional areas of behavioral study include Human Ethnology (biologically oriented studies carried out in a natural environment) which include sociobiology, attachment theory, gender differences, mourning, and pursuit of possessions) and Human Ethnography (culturally oriented studies carried out in a natural environment) which include the scientific description of the customs of individual peoples and cultures.[8]

However, one common element associated with all these types of behavioral studies is that of extended and repetitive communication and interaction with the subjects and groups under study.

In contrast, other types of behavioral studies require only minimal exposure to the subjects being studied and no verbal, symbolic, or other higher-level messaging, much less communication. Ethological observations focus directly on observable physical reactions as well as non-verbal communications involving interactive signaling through spatial behavior, physical positioning, and perceived posture/attitude. Physical reactions assume a special importance in such studies and there is a preference for conducting field studies in the subject's natural environment.[9] Both animal and human ethological studies are carried out with minimal to no observer subject interaction – they involve activities ranging from the collection of samples of biological material to studies of fixed action patterns regarding stimuli (releasers or triggers) related to basic behaviors such as approach/avoidance and fight/flight response.

This study considers activities particularly suggestive of an ethological study of human reactions, including UAP close approaches to observers and loitering in the vicinity of observers. It also assesses activities that stimulate human physical responses – relevant UAP activities include close approaches to ground-based observers and aerial encounters, and active 'engagement' with aircraft (incidents in which the UAP closes distance with and maneuvers around the aircraft).

2.2. Recognition of Intelligence

Recognition and acknowledgment that certain observations of UAPs reflect the existence and activities of an unknown intelligence would be the first step in any form of contact or mutual messaging/communications. Recognition of intelligence in UAP activities would conceptually begin with inferential elements, including the demonstration of unconventional technology. Other inferential elements involve indicators such as visibility, intrusiveness, signaling, messaging, physical interaction, and display-type activities. Another indicator would be a structured pattern of focused, non-random activity (behavior based on something other than chance).

A standing problem with identifying 'recognition' activity is that inferential evidence has not generally been accepted as sufficient for the recognition of non-human intelligence by either the scientific or official (government) communities. Within our planetary biome, recognizing and estimating levels of human evolutionary intelligence and non-human intelligence has led to the common practice of defining it not by inference, but more concretely in terms of symbolic and verbal language development.[10,11,12] The challenge of applying such criteria to the recognition and acknowledgment of intelligence associated with UAP activities is discussed and illustrated in Section 2.4, under the scenario of Communications.

In this paper, the team treats inferential messaging as valid in the evaluation of UAP activities being suggestive of intelligence, with reference to patterns and transitions in UAP visibility,

spatial behaviors such as interactive flight patterns, displays of radical flight (suggesting anomalous technology), and interactions with observers. In doing so, this paper considers an observation by the Search for Extraterrestrial Intelligence (SETI) Institute regarding the recognition of non-human intelligence - "if we can't recognize what they are saying, we should be able to recognize someone is saying it."[13] Despite our inability to recognize the meaning of a message, we must consider that the transmitting party may also be aware that the message may not be understood but still accomplishes the intent of being recognized as intelligent.

2.3. Contact

In reference to the discussion of UAPs, the term 'contact' has a range of activities including signaling and messaging (symbolic or verbal), acknowledging that non-human intelligence could be involved in any of these activities. In literature, entertainment, and the popular media, 'contact' is often presented in terms of an extended, bilateral exchange of information - with both participants sharing at least a minimal knowledge of the "language" being used in communications.

In the context of this study, it is important to note that signaling/messaging might well represent an early phase of 'contact' intention, without a capability for full bilateral communication or anything like an extended knowledge of each party's languages. An illustration of a basic level of messaging with non-human intelligence is described in a paper by the SETI Institute, the University of California/Davis and the Alaska Whale Foundation, titled "Interactive Bioacoustics Playback as a Tool for Detecting and Exploring Nonhuman Intelligence: "Conversing" with an Alaskan Humpback Whale."[14] In that study, communications were determined to have occurred by repeated transmission of what was defined as a "greeting" signal. In each instance the whale responded with the greeting, matching the signaling from the scientists in both time and duration.

The relevant literature on contact suggests that safety concern is an issue in non-human contact (as it is regarding encounters between humans who are unknown to each other), especially when physical proximity is required. That concern would be elevated in non-human contact where there would be a lack of mutual knowledge of meanings related to an individual's physical space needs, gestures, expressions, and even what constitutes the trigger distance regarding individual fight/flight reactions (the automatic physiological reaction to an event that is perceived as stressful or frightening). Such concerns exist even in contact between individuals or groups from different human cultures. Given the challenges related to both direct physical approaches as well as higher-level linguistic/symbolic communications, this paper posits that advanced non-human intelligence with the ability to communicate information beyond basic behavioral signaling (themselves aware of the issues) would initiate contact with basic, inferential messaging – 'We are here, we are intelligent, we are non-threatening.'

Kenneth Wisian Ph.D, with experience in both science and the military, has written on the issues of first contact with unknown intelligences and offers considerable guidance on the stages and activities that might be expected in a structured, largely inferential contact sequence. Elements of that protocol are primarily inferential, and include predictability, the avoidance of hostile intent, and high visibility with basic physical signaling involving limited physical maneuvers while maintaining distance and with the use of light or electromagnetic (EM) signals (with a caution that EM/light signals might be interpreted as weapons tracking or jamming so either low power EM should be used, and light signals should be omnidirectional). In addition, all sensor systems should be passive rather than active (operating in receive only).[15]

For this study, we have consulted contact protocols used in both ethnological and military practices and based on those materials a generalized contact protocol was developed as part of this study.[16] In this section we are referring to a general contact protocol that would be followed by the contactor, so would be the protocol followed by the non-human intelligence (NHI) when initiating contact with humans. The General Contact Protocol is summarized as follows:

Generalized Contact Protocol

The nature of this study is anthropomorphic in the sense that elements such as contact scenarios are extrapolated from known human behavior. That assumption underlies both our assessment of contact protocols and behavioral testing.

- Act at a distance to gain attention and be recognized as foreign/unidentified.
- No immediate approach, maintain distance.
- Minimize any action suggesting active threat or hostility.
- Slow approach only if no observer flight observed.
- Leave immediately in response to either observer flight or fight reaction – limit any contact that may be interpreted as invasive or unclear, such as EM transmissions.
- If "engaged" by observer do not respond in any way – leave immediately and do not go covert or carry out any defensive action which might be interpreted as an aggressive response.
- React to any observer response only passively, no action which might suggest 'targeting'.
- Approach only if given some passive signal of recognition, even if it is only a mimicking of your own signal.
- No proximity approach during initial contact – strictly iterative, 'non-threatening actions'
- Follow-on 'no threat' patterns of approach must be consistent and repetitive up to the point where mutual messaging is initiated.

This study refers to a generalized contact protocol in examining UAP activities for indications of inferential contact activities. In examining UAP incidents for contact-related activities, we assessed aircraft, and observer encounters for indications of inferential messaging, as well as incidents in which more overt communications (symbolic, verbal, telepathic) have been reported. Even a low level of inferential messaging would suggest a UAP intention of initiating contact. Beyond the possible inferential messaging indication, this paper evaluated the extent to which such activities are an element of overall UAP activity in the public domain – regardless of the lack of return messaging.[17]

2.4. Communications

A review of relevant SETI, ethnological, archeological, and linguistic anthropological literature (linguistic anthropology studies language in its cultural context with a focus on language shapes culture and behavior) suggests that the challenge of even minimal two-way communications is far more challenging than is generally discussed in reference to UAPs and any associated unknown intelligence. It has taken most of human history to reach an appreciation of the true extent of the information that is exchanged in even non-verbal messaging. And as far as 'true' communication, the assumption has been that 'language' is necessary for communications between intelligent actors – including not only 'words' (symbolic or verbal), but grammar, and the complex sentences constructed with them.[18]

Yet even in this biosphere, contemporary research is beginning to challenge the assumption that only humans have the capability to use ‘words” and employ ‘language’ for communications. A recent study of dolphins has led some marine biologists to posit that isolated acoustic signals can be linked to individual dolphins, and that those dolphins can link together a handful of ‘words’ to form ‘sentences’ for mutual communications.[19,20]

Such findings have provoked extended controversy and debate, but for the purposes of this study the example of animal communication illustrates the possibility that UAP may make basic attempts at communication at the language level of semantics. UAP communication attempts may have occurred and were not recognized due to either sensory differences or simply the failure to recognize the attempt. As one article on the problem notes, “It is not easy to see what you are not looking for…even our choice of what counts as data is interpreted according to our assumptions about what we expect to see.”[13]

To that point, in identifying an intention of more than basic messaging, the second major issue is that of translation. Without some sort of translation agency, the content of thousands of spoken and written human languages are lost to history. Both linguists and anthropological professionals have pointed out the major issues in translation to NASA, in commentary related to the SETI project.[21] In brief, their observations cautioned that any effort to initiate a meaningful level of communication beyond inferential signaling would have to begin with imagery and symbols and even that is culturally different. For example, red = stop, green = go, a music note represents music, etc. These are not necessarily universally used symbols so aligning on how we define those symbols and images would be relevant too. Even then, human cultural variability has demonstrated that “understanding the meaning of individual words does not produce reliable communications, the use of words is too variable and individually or culturally selective.[22]

Given the challenges in recognizing any UAP intent to carry out full, bilateral communications, our study evaluates the intention of communication by examining the use of imagery, electronic transmissions, the display of graphic symbols, and verbalization or transmission of speech during reported contact with UAP and/or its occupants.

2.5. Collaboration

Based on the indications of intelligence collection activity analyzed in the previous studies, collaboration is included as a possible scenario[1,2,3]. Collaboration could involve any number of agendas, ranging from simple relationships based on trade, through social, diplomatic, or political relationships, to scientific/technology mentoring. Irrespective of the type of collaboration, some level of bilateral communication would seem to be an absolute requirement, suggesting that an early indicator of such an intention would an extended pattern of UAP messaging activity as well as some evidence of structured, ongoing attempts at higher level graphic or symbolic communications.

Concerning a collaboration scenario, this study uses the same activity indicators as defined for communications. However, the analysis derived from this project assesses that a pattern of extended communications activity, involving a significant number of incidents would be involved with any serious intention of initiating a collaborative relationship. Mutual interests must be identified for a collaborative relationship to be established.

2.6. Unilateral Assistance

The major challenge in addressing a UAP intention to effect unilateral assistance is that of inferring the nature of such assistance from known UAP activities. From the earliest days of 'flying saucer' reports through the following decades, the concept of intervention (overt or clandestine) related to atomic weaponry has appeared in books, movies, and social media. In the earliest years, there was a focus on the possibility of external action to deal with the escalation of atmospheric atomic weapons testing, and the impacts of radioactive fallout and nuclear waste.[23] This discussion has continued into contemporary times, where literature connects UAP activity to atomic weapons and clouds of radioactive fallout from atomic testing.[24]

As early as 1953, movies such as *The Day the Earth Stood Still*, carried the message of unilateral intervention not to assist but instead to ensure that atomic weaponry was not carried beyond the planet.[25] And popular books on the subject of 'flying saucers' published as early as 1952 are still being reissued in the 21st Century - containing warnings related to environmental dangers of radioactivity, the use of atomic weaponry and the premise that self-destruction through atomic warfare will not be "permitted".[26]

Given the history of this discussion, and its continuing appearance in popular media, this study focused on the possible intention of UAP unilateral action directed towards atomic weapons deployment and warfighting capabilities. Such an intention would not necessarily require related UAP activities such as messaging, nor any consistent pattern of activities related to either communications or an intention to establish contact.

However, one activity that would likely be related to such an intention is the ongoing surveillance and security testing of strategic (fusion class) atomic weapons. Fusion class atomic weapons, also known as thermonuclear weapons or hydrogen bombs, are a type of nuclear weapon that uses both nuclear fission and nuclear fusion to create an explosion. These weapons are significantly more powerful than first-generation atomic bombs. Current information on strategic weapons capabilities and deployment is critical to the ability to either preempt or abort atomic warfighting. Surveillance and reconnaissance activities do present the chance of detection and even a defensive military response, yet contemporary military history suggests that surveillance and reconnaissance activities are a standard practice even in peacetime, even given the associated risks.[27]

With respect to the dangers of atomic weapons and radioactive fallout/environmental contamination, data are presented and used to evaluate ancillary activities suggesting the preparation which are required for an intention of unilateral assistance. Those indicators include incidents of interference with operational strategic (fusion class) weapons systems, intrusions at military sites where strategic weapons are deployed, and engagements with military aircraft and air defense systems capable of protecting strategic weapons installations.

2.7. Unilateral Exploitation

In the context of UAP intentions, exploitation is generally discussed within popular culture and the media in terms in terms of the removal, or use of resources including minerals, chemical compounds, and biological organisms. Most recently "Battle for Los Angeles" (2011) have presented exploitation in terms of the forceful acquisition of earth's water, presumed to be an especially valuable resource.

Such exploitation has been generally assumed in popular culture to follow or occur in conjunction with UAP aggressive action. Writing about such action has been part of popular American culture for decades, deeply embedded in fiction and popular media. The nationwide broadcast of the "War of the Worlds" created national media coverage of the idea of hostile action against Earth by non-human intelligences. Even though the broadcast itself had seriously affected only a minority of its listeners, it helped set a theme of potential hostility which would continue for decades, first in print and radio and later much more broadly in both broadcast and social media.[28,29]

Given the amount of public attention related to such intentions, this work considers unilateral exploitation as a scenario. In doing so this project found no substantive data to support either physical attacks or the documented acquisition of resources. As with unilateral assistance, such activities include incidents of interference with operational strategic (fusion class) weapons systems, intrusions at military sites where strategic weapons are deployed, engagements with military aircraft and air defense systems capable of defending strategic weapons, close approaches, and occupant encounters. The assessment of this unilateral exploitation largely mirrors that of unilateral assistance, the only difference being the subjective perception of such activities. Close approaches and occupant encounters serve as the basis of fears for non-consensual engagement resulting in physical/emotional trauma.

We can offer no inferences about purported alien communications as cases reporting contact with NHI, without association with a UAP technology, did not meet our collections criteria. A small number of cases in which such communications were described (including abduction cases) were only reported well after the actual incident, involve strictly anecdotal and uncorroborated information, and included the recovery of information by controversial practices.[30]

3. Methodology

The following are the general criteria for the curation standard that guided selection of incidents for this study:

1) **Incident Report** - The case was officially reported as an unidentified flying object to a military element, law enforcement, other government personnel with the authority to interrogate the general public, or other entity that drafted a written report. The report and any related field investigation had to be initiated within one year of the observation.

2) **Data Quality** - The report must contain sufficient detail to include the approximate date, time, location, and description of the encounter.

3) **Anomalous Characterization** - Detail for the incident contained elements that were anomalous relating to structure, flight characteristics, and/or occupants associated with a UAP.

4) **Investigation** - Investigation must be conducted by an independent entity, to include efforts to establish eyewitness testimony, photographic/video evidence, instrumented data, and physical evidence.

5) **Credibility** - Witnesses were military personnel, civilians employed by military organizations, government employees, aircraft pilots and civilians filing a report with law enforcement.

The conceptual model for our two linked studies (Pattern Recognition and Indications Analysis for Military and Public Activities) is illustrated in:

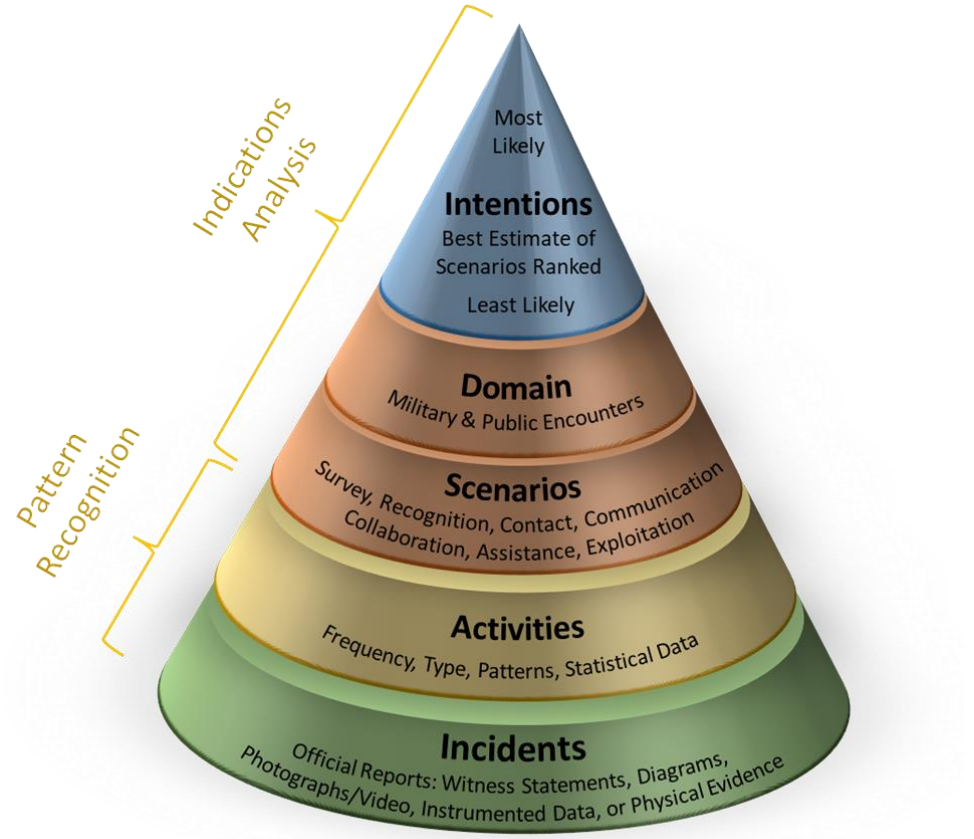

Figure 3-1 Intentions Study model – Military and Public Activities.

The outline of the pattern and indications analysis process is as follows:

- Collect and build a database of the most credible incidents possible.
- Chart the incidents to reveal patterns within the data.
- Analyze patterns to identify activity indicators.
- Map activity indicators to scenarios of intent and determine the most likely scenarios.

3.1. Data Sources

A set of 597 comprehensively documented UAP reports from this period were collected from select sources, including the Sparks Blue Book catalog (2020), National Investigations Committee on Aerial Phenomena yearly chronologies (NICAP); and the books Clear Intent and Faded Giant.[31,32,33,34] All reports for this study were classified as unidentified and unexplained. The Sparks Blue Book catalog (2020), herein referred to as the Sparks catalog, served as our primary data source for Project Blue Book reports that remained classified as unidentified. Some NICAP reports were sourced from Blue Book and were removed to avoid duplication of data. This list contains reports which were officially reported to and investigated by the US Air Force's various UFO investigations programs (SIGN, GRUDGE, BLUEBOOK).[35]Additionally, the NICAP yearly chronologies were used to access related case studies and reports from military personnel, law enforcement, pilots, and other observers. Details on individual incidents were taken from NICAP investigation summaries and linked Blue Book investigation documents.

Years	Military	Public	Total
1945-1949	27	22	49
1950-1959	204	118	322
1960-1969	25	119	144
1970-1975	16	66	82
Total	272	325	597

Table 3-1 Summary of the 597 incidents used for each decade by military and public.

The UAP Pattern Recognition Study 1945-1975 US Military Atomic Warfare Complex examined UAP reports between 1945 and 1975.[2] The patterns suggested an abnormally high level of UAP activity at atomic warfare military facilities relative to standard military facilities, activity that reflected both an intelligent actor and prioritization of information collection efforts.[3] The UAP Activity Pattern Study 1945-1975 US Military and Public Activities examined UAP reports involving the military and public between 1945 and 1975. The Activity Pattern Study concluded there was a shift from military engagements primarily during the daytime to public encounters during the nighttime.[1]

Data used for this paper and the three previous papers on patterns and indications conducted by the SCU Intentions Study team are in a common database of 1163 UAP reports, available at https://zenodo.org/records/14647871 and the high level overlap between the incidents used in the four studies is outlined in Appendix 1.

Figure 3-2 shows the numbers of incidents collected by the US Airforce (top chart), which includes incidents that have been explained, the Sparks list of unexplained reports from that US Airforce list compiled by Brad Sparks (middle chart) and the NICAP database of reports (bottom chart).

It should be noted there are other data repositories with incidents that did not meet curation standards for this study. Other sources may indicate UAP activities described by this study but are not included due to a lack of reporting, witness corroboration, anomalous characterization or investigation. Other datasets may show differences in total cases but show a similar trend for the increase and decrease in types of UAP activities.

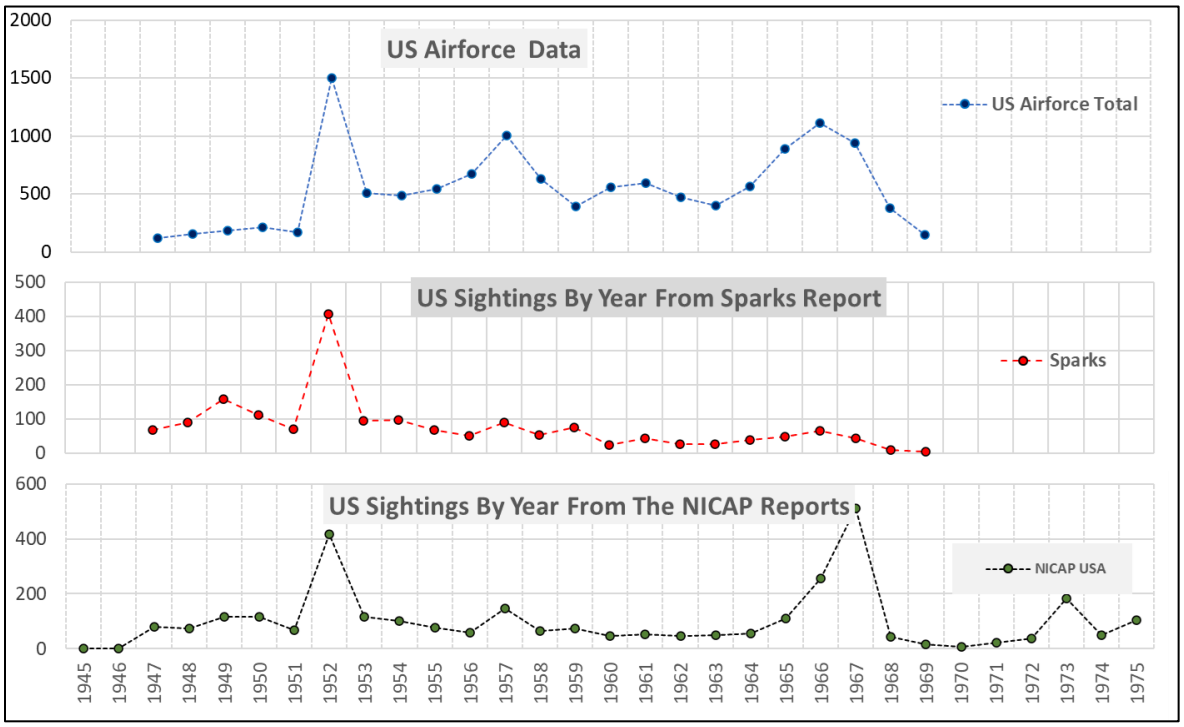

Figure 3-2 US Airforce, Sparks and NICAP incidents numbers per year.

Within the discipline of threat and warnings intelligence and indications analysis there are usually elements of incomplete, erroneous or deceptive information that need to be understood, managed, and considered when drawing conclusions. One consideration within the study data is the transition from using predominantly the Sparks dataset to the NICAP dataset after Project Blue Book was shut down in December 1969.

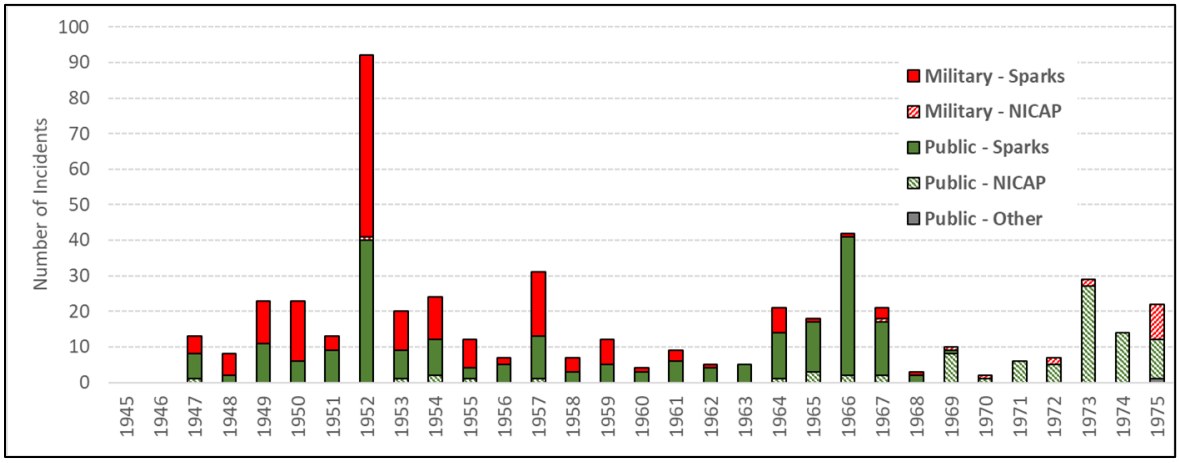

Figure 3-3 Incidents used in the study by the incidents source and by military vs public.

This transition needs to be considered when interpreting the patterns identified in the previous study 'UAP Activity Pattern Study 1945-1975 Military and Public Activities study'[3] which are used as indicators in this study. For all the indicators that exhibited a discernable pattern, these patterns are established prior to the close of Project Blue Book, with the period after which relied on the NICAP data consistent with these prior patterns. A high-level summary of these patterns is in appendix 2. The wave of public activity during 1969 to 1974 outline in Figure 5-5 - 1969 to

1974 public incidents in study by year Figure 5-5 which is sourced from the NICAP data follows on from a previous public wave of activity during 1964 to 1967 sourced from the Sparks data.

3.2. Data Selection

After compiling the incident data into an Excel database, the team conducted manual reviews of incidents to remove duplicates and reconciled a final set of entries for analysis. A total of 597 incidents were included in the study data set for this paper, which is a subset of the incidents used in all four studies. Appendix 1

For the purposes of this study, occupant observed, and occupant encounter incidents were collected when observers reported an NHI in proximity to a UAP and described some form of interaction, communication or messaging associated with a direct physical encounter. Encounters such as reported abductions from bedrooms or other locations not directly associated with a UAP were not included nor were any instances of messaging or communication which were not contained in the initial reports of the incidents. Messaging obtained through hypnotic regression following the initial reports was also not included, due to insufficient studies to support the veracity of information obtained from hypnotic regression.

4. Intention Scenarios and Related Indicators

The fundamental approach to the analysis conducted for this project is the development of a list of potential intention indicators to the scenarios meeting curation standards. Indicators are activities which, based on the frequency, type, and pattern of activity, would suggest one or more intentions scenarios.

The following is a UAP-activity indicator list developed for scenario analysis and evaluation in this study and are defined in the indicator sections:

1. Visibility - daytime vs nighttime
2. Military & public
3. Interactive flight
4. Radical flight
5. Electronic transmissions
6. Interference with weapons systems
7. Intrusions at military facilities
8. Loitering
9. Close approach
10. Occupant observed.
11. Occupant encounter
12. Aircraft encounters
13. Aircraft engagement

4.1. Indicator Analysis Matrix

The Intelligence Community Directive (ICD) 203 outlines standards for properly expressing uncertainties associated with major analytic judgments.[5] Degrees of likelihood for an event or development encompass a full spectrum from remote to nearly certain. Analysts' confidence in an assessment or judgment may be based on the logic and evidentiary base that underpin it, including the quantity and quality of source material, and their understanding of the topic. Assessments should identify indicators that would alter the levels of uncertainty for major analytic judgments.

Expressions of likelihood or probability have been adapted from ICD 203 to include the following sets of terms and scoring:

almost no chance	very unlikely	unlikely	roughly even chance	likely	very likely	almost certainly
remote	highly improbable	improbable	roughly even odds	probable	highly probable	nearly certain
01-05%	05-20%	20-45%	45-55%	55-80%	80-95%	95-99%
			No data			
-3	-2	-1	0	1	2	3

Table 4-1 Expressions of likelihood or probability

The scores for each scenario are based on a detailed analysis of the content and credibility of the individual reports associated with each indicator. A structured debate was used to collectively decide on the likelihood of each intention scenario based on the combined data.

Each indicator for each scenario was scored (Table 4-2) based on the quality of the information available for that indicator, the frequency and strength of pattern of activity for that indicator, and whether the pattern of activity supports or not the specific scenario.

Indicators are specific activities documented as part of an analysis that provide insights into cause, effect, or condition.

Data quality contains a data quality score from 0, no information is available to make an informed assessment about this indicator, through to a score of 3, high quality and quantity of information is available to make an informed assessment, or the data collection process would have collected reports had there been any.

Pattern support contains a score for how well the data support the pattern described by this indicator, from +3 highly probable, +2 moderately probable, +1 remote probable, 0 insufficient data, -1 limited improbable, - 2 moderate improbable, -3 strong improbable.

Pattern support is rated based on a quantitative assessment of level and intensity of UAP activity over time. In contrast, the probability scoring in the overall matrix analysis is qualitative and is defined within the references we cite on usage of qualitative terms and the practices of strategic intelligence studies. Our findings are expressed as relative probabilities rather than in quantitative/statistical terms.

Scenario rating, each of the seven scenarios are scored based on how well the data and pattern supports for each individual indicator supports the scenario. The scores range from +3 very positive strong support, +2 moderate positive support, +1 limited positive support, 0 no or unclear support, -1 limited negative argument, - 2 moderate negative argument, -3 strong negative argument. Positive ratings argue in favor of the scenario; Negative ratings argue against the scenario. The absence of data where data collection is available is also a negative indication for a scenario indicator.

			Scenarios						
				Contact Protocol				UI Unilateral	
Indicators	Data Quality	Pattern Support	Behavioral Studies	Recognition	Contact	Communicate	Collaboration	Assistance	Exploitation
Visibility (are they visible)	3	3	3	1	-2	-1	0	1	-1
Geographic distribution	3	2	2	-1	1	-1	0	1	0
Interactive flight	3	3	1	2	2	1	0	0	1
Radical flight	3	3	-2	2	0	0	0	2	1
Electronic transmissions (IFF)	3	1	-2	1	1	1	0	0	0
Interference with weapons systems	3	1	-1	1	-2	1	0	0	0
Intrusions at military facilities	3	2	-2	-2	-2	-3	0	0	1
Loitering	3	3	3	3	3	1	0	0	0
Close approach	3	3	2	2	1	-1	0	0	0
Occupant observed	3	-2	-2	-2	-2	-3	0	0	0
Occupant encounter	3	-2	-2	-2	-2	-2	0	0	0
Aircraft encounters	3	3	0	1	0	0	0	0	0
Aircraft engagement	3	3	3	3	3	1	0	1	1

Table 4-2 Indicator Rating Scenario Matrix

*No single indicator is a representation of intent. Each indicator requires the observation of other indicators to determine intent.

To assist with understanding of Table 4-2, a brief expansion of the intrusions at military facilities indicator is provided below:

- Data quality - The data quality for intrusions at military facilities is assessed as a “3”. While the numbers of intrusion incidents are low at 19, there were high levels of UAP incidents reported from military bases in general. Therefore, it is expected that if there was a high number of intrusions then these would be reported and captured in our data collection process. It was determined that the data collected on intrusions was a fair representation and would enable pattern support to be determined.
- Pattern Support was rated a “2”. Of the 272 overall military incidents, 19 intrusions are low, but it does support the indicator that intrusions were occurring. Given the low numbers, it was not a high importance so was rated lower.
- Scenarios.
    - This indicator scored a negative for all the contact protocols. An important part of an early contact protocol, as outlined in section 2.3, is to minimize any action suggesting active threat or hostility and to maintain distance. This action would be counterproductive to an early contact protocol.
    - Collaboration scored a “0”. No such communication or messaging was identified to support a mutual effort. Collaboration requires communication for mutual benefit.

- Unilateral Assistance scored a “0”. Some UAP incursions could have been intended to stop our atomic warfare activities for the benefit humanity, however no such actions were sustained in a manner that prevented further development of atomic warfare. In fact, atomic weapons development continued and expanded globally, resulting in the potential for global planetary destruction.
- Exploitation scored a “1”. While intrusions might demonstrate an exploitative potential, the lack of benefit by the unknown actor diminished exploitation as an intention.

5. Indicator Assessments and Ratings

The following section describes the criteria for the assessment and rating of scenarios.

5.1. Visibility - daytime vs nighttime

Assessment: Data Quality - High Confidence, Pattern Support - Highly Probable

There are five components to the visibility indicator.

1. Whether the UAP incident occurred during the daytime vs nighttime. Daytime is defined as between sunrise and sunset.
2. Whether the incident was a coincidental observation of a UAP in the distance while travelling.
3. Whether the distance of the UAP was close enough to identify distinguishing features.
4. Whether the UAP demonstrated behaviors indicative of display. Such behaviors would include approaching an aircraft, circling the aircraft, and then moved away.
5. Whether the UAP demonstrated behaviors indicative of attempts to avoid detection.

This encompasses not only the visibility of a UAP but the perceived actions of the UAP to be seen, complicated by the fact that some actions, while not an intention to be seen would result in unavoidably being seen.

The visibility indicator itself focused on the daytime vs nighttime, with all other indicators in section 5 also analyzed for daytime vs nighttime, how this changed over the study period and how this relates to an intention around visibility.

A pattern shift emerged over the period of the study. The pattern began as a mixture of daytime and nighttime incidents and shifted to primarily nighttime reports. The analysis indicates a change in intentions based on the general shift from daytime to nighttime incidents, effectively reducing the potential witness base. The shift is assessed as reducing the recognition of anomalous technology which was apparent in the daytime reports - especially those involving radical flight, formation flight and interactive maneuvers. The shift to nighttime incidents was also accompanied with an increase close approach activity, some involving loitering, possibly suggesting a focused behavioral study.

Between 1945-1949, 60% of UAP incidents occurred during the daytime, with 40% occurring at night. By 1970, the trend shifted to predominantly nighttime incidents, with 90% occurring at night ant 10% occurring during the day.

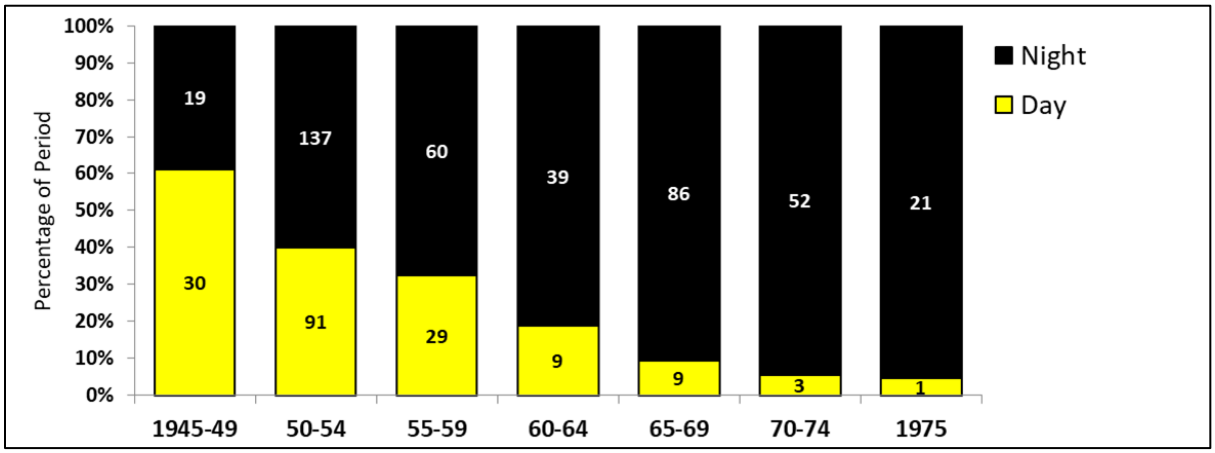

Figure 5-1 – Comparison between day and night incidents by 5-year blocks

During the study period a shift occurred from a combination of both military and public incidents prior to 1960, to predominantly public encounter incidents after 1960. Figure 5-2 compares daytime and nighttime incidents reported by both military members and the public.

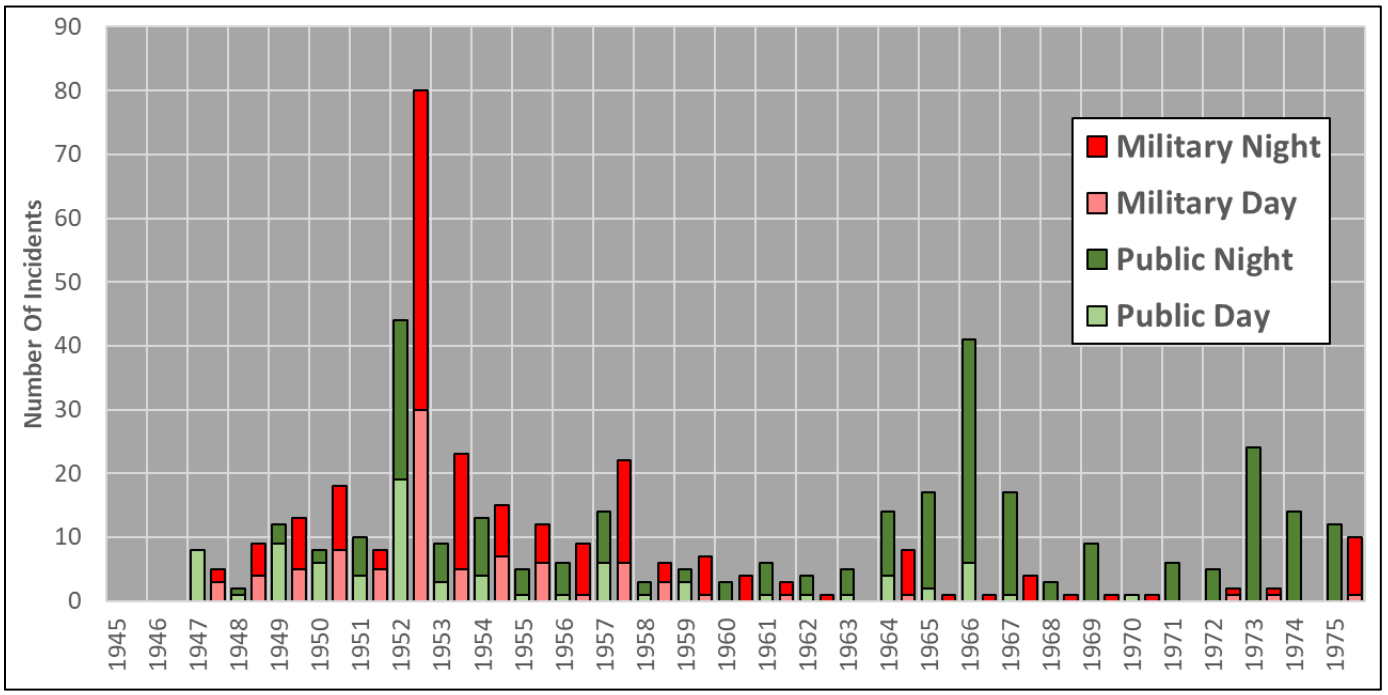

Figure 5-2 - Number of military and public incidents by year for the period 1945-1975

For both the military and the public we see a shift from a mixture of daytime and nighttime incidents to predominantly nighttime incidents, so this shift to nighttime is occurring for both the military and public incidents.

Over the study period, a shift in activity occurs which indicates a move from incidents involving more display activity predominantly during the day to nighttime incidents and close approaches. Display activity characteristics are interactive flight, radical flight (Figure 5-9), and loitering. (Figure 5-21) This shift suggests a change in behavior from overt activity to clandestine activity. While UAP incidents at night are often visible due to lights, which may suggest activity of an overt nature or an attempt to communicate, the lights may be related to operation rather than a

deliberate act to appear more visible. There are also less people around during the nighttime, so less opportunity for UPAs to be observed, which can also be a factor for UAP when operating around people to operating at nighttime.

The assessed pattern change also indicates a possible response to the increasing amount of broad-spectrum surveillance radar tracking and attempted military intercepts of UAPs. Attempted intercepts occurred during the establishment of an extensive air defense network during the 1950s.

5.2. Geographic distribution of reports over time/public vs. military

Assessment: Data Quality - High Confidence; Pattern Support - Strong in the Public Domain between 1969-1974

UAP incidents with the military are concentrated on specific types of military facilities as opposed to geographic location. For the public incidents, any unfiltered UAP reports database will contain many incidents that are misidentifications, and as such these unfiltered databases are correlated to the population areas, (more people, more reports). This study does not include reports that have an explanation, and all incidents included in our study must meet our selection criteria. Our analysis indicates that ‘unexplained’ public UAP incidents are not clustered in the high population centers but spread throughout the US. A cluster of UAP activity from 1969 to 1974 is centered around the geographic area from the upper mid-west to New York/New England.

For the below figures Figure 5-3 and Figure 5-4 the number and location of incidents for both the public (green) and military (red) are shown as green and red pie markers on the map. The population density is also shown for reference (yellow highlighted areas).

1945-1959

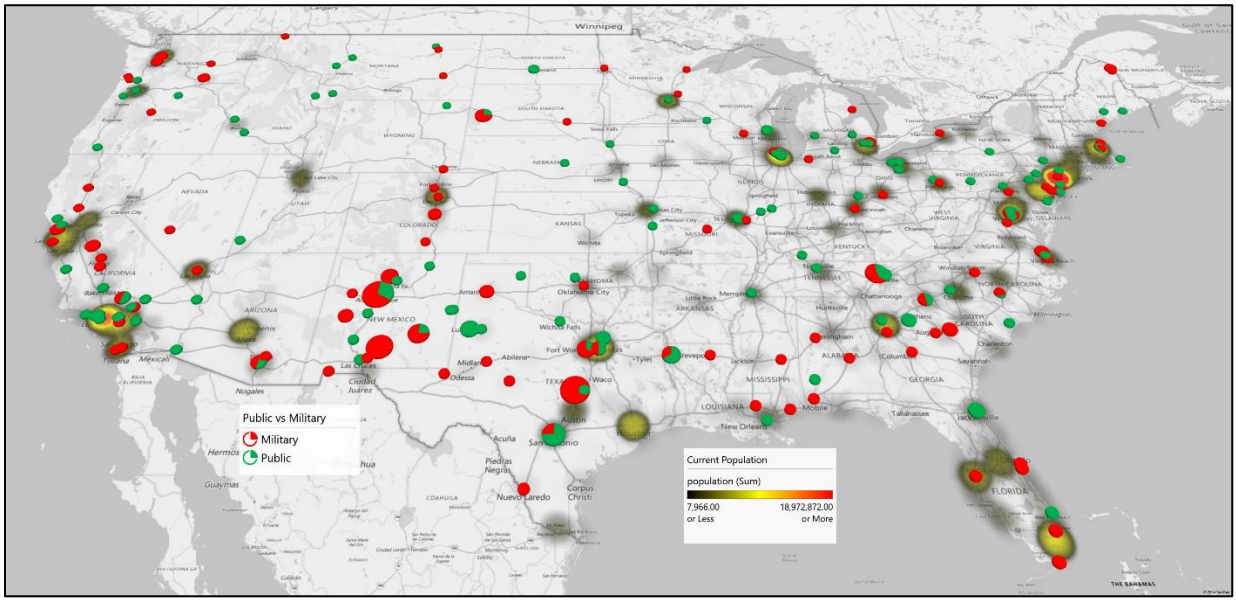

Figure 5-3 – Military vs public UAP incidents 1945-1959

1960-1975

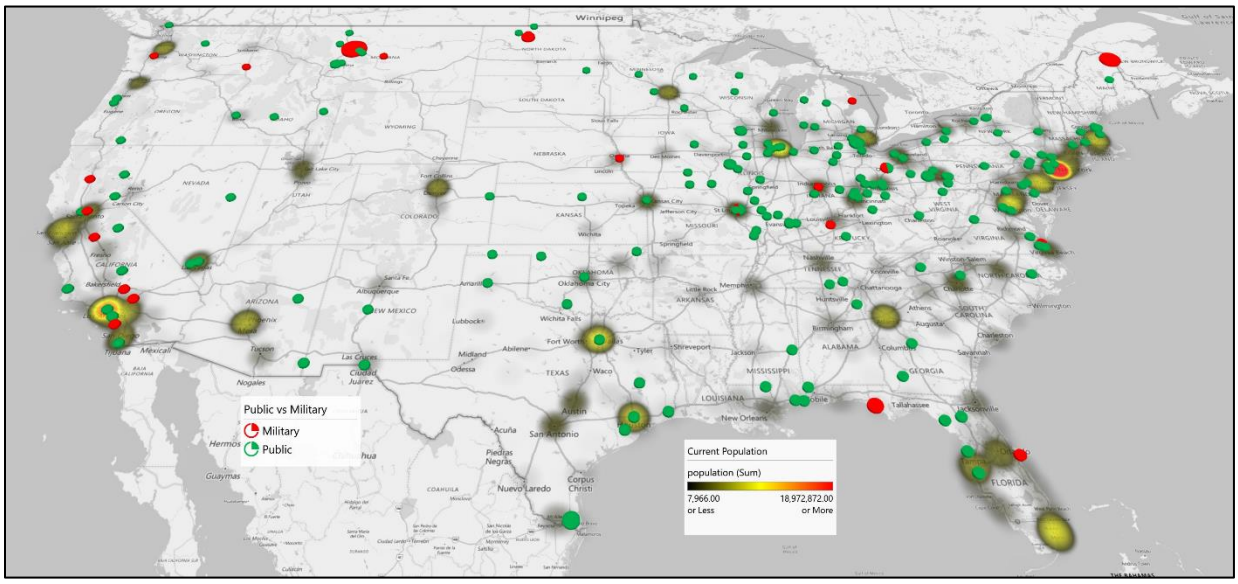

Figure 5-4 - Military vs public UAP Incidents 1960-1975

1969 to 1974

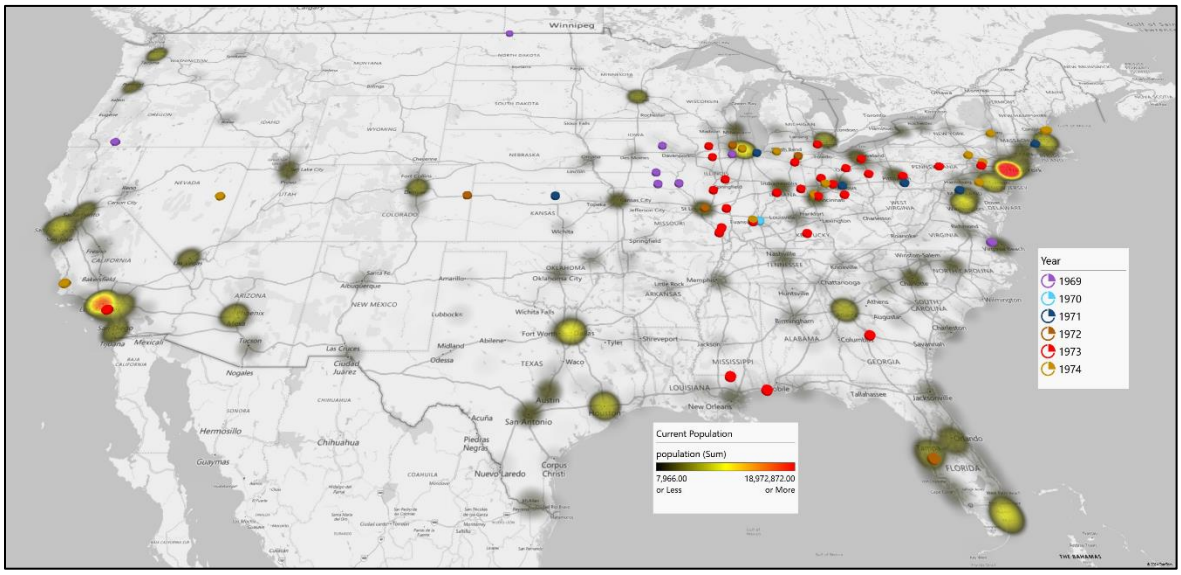

Figure 5-5 - 1969 to 1974 public incidents in study by year

The marks on the map indicate the location and number of incidents for each year. The population density is also shown for reference (yellow highlighted areas).

During 1969 to 1974 there is a cluster of incidents, in a geographic region that was the location of the US's heavy industry, manufacturing, steelmaking, coal-producing heartland that spread from New York through to the Midwest. One possible explanation for this cluster of incidents may represent an environmental survey based on tracking of industrial development in the US, however we don't have the data to draw a direct correlation between the UAP activity and US industry. Further extended analysis within the US and other additional studies in other geographic regions, such as the French study 'Spatial Point Pattern Analysis of the Unidentified Aerial Phenomena in France' need to be conducted to increase the likelihood of a NHI environmental survey intention.[36]

5.3. Multiple UAPs in interactive flight

Assessment: Data Quality - High Confidence, Pattern Support - Highly Probable

Multiple UAPs in interactive flight - multiple objects observed simultaneously or following one another over a very short period between objects. Movement may be in both structured and unstructured groups but in the immediate vicinity of each other and displaying the ability to move without collision and with reaction to each other's movements.

Controlled, interactive flight was more significant during the 1947 to 1955 period with continued occurrence at lower relative levels through 1967 as depicted in Figure 5-6. Prior to 1952, interactive flight was greater during the day and incidents were predominately with the public as depicted in Figure 5-7. After 1952, controlled, interactive flight occurred slightly more during the night but was still predominantly observed more in the public domain than the military domain. During the UAP wave of 1952, the number of incidents reached a higher level (relative to the study numbers for that year) than the 1957 and 1960s UAP waves. Interactive flight is suggestive of intelligent actors. When combined with radical maneuvers it also infers advanced technology. Interactive flight could be a display of intelligent action or a practice of mutual defense.

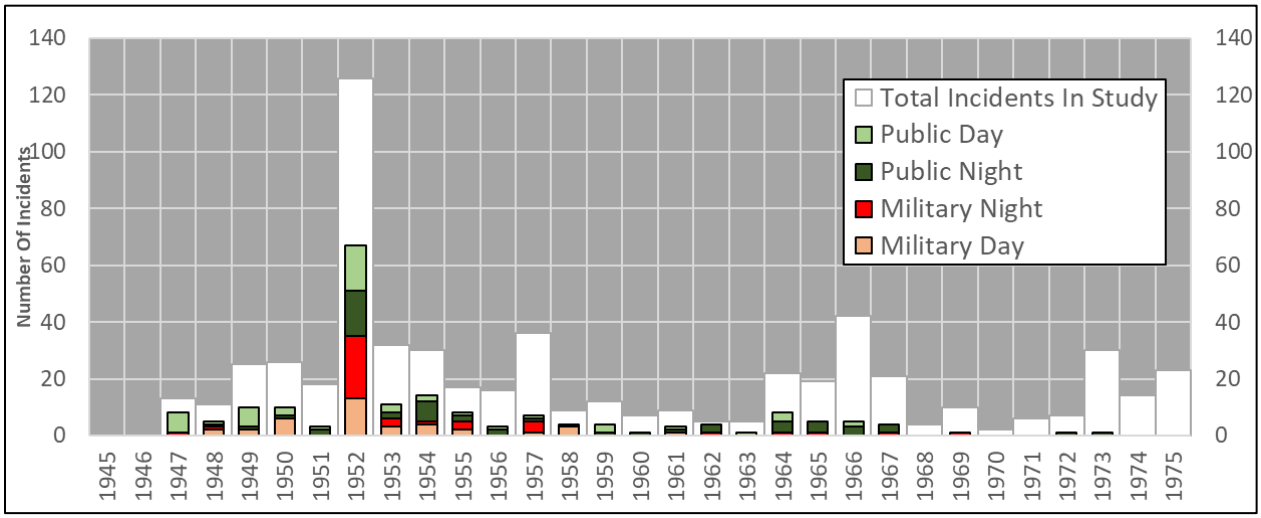

Figure 5-6 - Total number of incidents involving interactive flight / multiple UAP compared to the total incidents in the study.

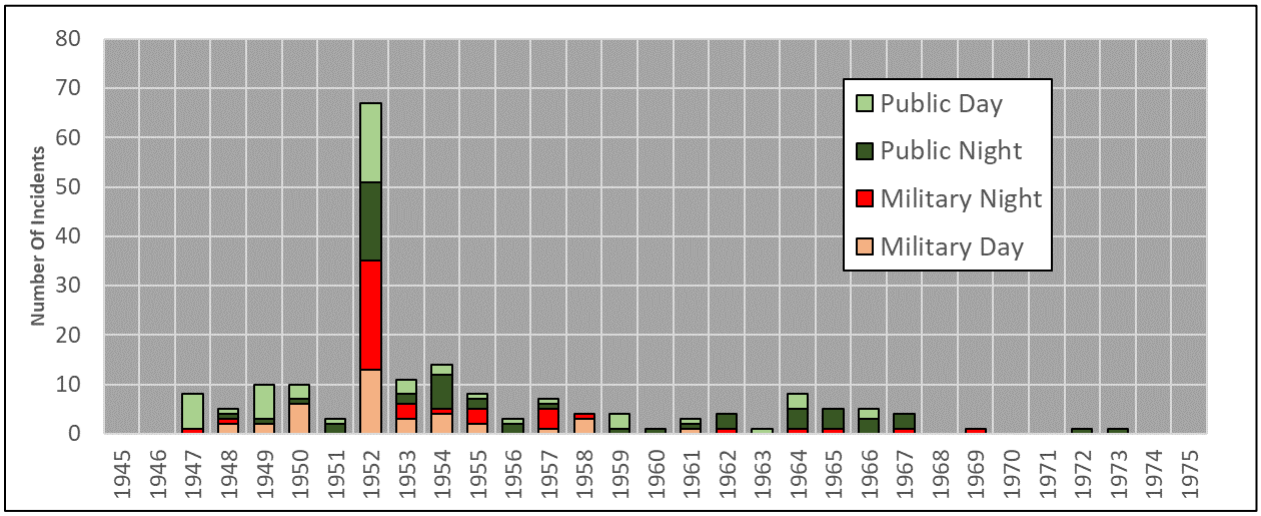

Figure 5-7 Total number of incidents in the study involving interactive flight / multiple UAP with the military and public and Day and Night.

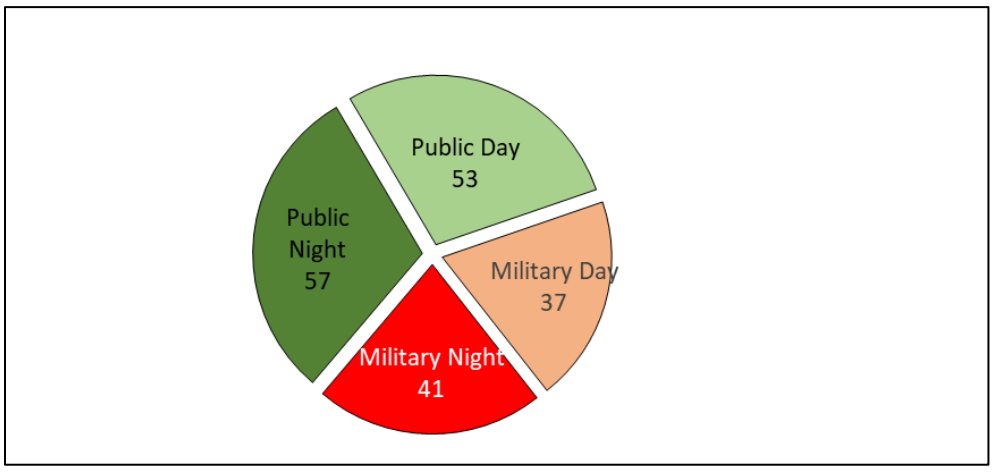

Figure 5-8 Total number of incidents during the study period (1945-1975) classified as multiple UAP's in interactive flight (188) and the distribution between Military/Public and Day/Night

Examples:
Descriptions of incidents sourced from Sparks include the following notation from the original Sparks descriptions. Uncertainties or discrepancies in reported data such as dates, times, etc., are indicated in brackets [ ] and/or with question marks [?].

June 28, 1947. 30 miles NW of Lake Mead, Nevada 3:15 p.m. Army Air Force AAF pilot Lt. K. B. Armstrong flying an F-51 fighter, at 6,000 feet out of San Antonio Texas observed a tight formation of 5-6 white circular objects off his right wing and pacing his aircraft for a time at a speed of 285 mph. (Sparks 10)

July 1, 1948. Rapid City Air Force Base (AFB), South Dakota. An Air Force intelligence officer reported 12 oval-shaped discs, each about 100 feet long, flying in excess of 500 mph and descending from 10,000 ft. as they approached the base. The discs then made 30°-40° climbing turn accelerating very rapidly out of sight. (Sparks 95)

May 1, 1952. George AFB and Apple Valley, Calif. 10:50 a.m. An officer plus three airmen on the base arms range as well as a Lt. Colonel at a separate location 4 miles away saw 5 flat, white discs about the diameter of a C-47's wingspan [95 ft] flying very fast in a formation of three in front and two behind at an estimated a formation at 4,000 feet. In passing the objects also made a 90-degree turn. (Sparks 568)

July 26, 1952. Hampton and between Newport News and Langley AFB, Virginia. 12:15-12:45 a.m. Ground air defense spotters observed a brilliant, luminous silver, red and green object hovering over the James River Bridge at about 1,500 feet for 1/2 hour, then ascend towards the east where it was also observed by the Langley AFB tower. Air force crews of 2 F- 94's interceptors and additional ground observers also reported 4 round silver/bluish objects in V-formation as they shot straight up and disappeared at 5,000 feet – during those observations Navy ground radar at Norfolk and additional airborne aircraft also tracked unidentified objects. (Sparks 721)

April 12, 1953. Sweetwater, Nevada. 3:10 p.m. The co-pilot and crew members of a C-47 on route to Stead AFB, Nev., observed 10 round flat metallic objects changing formation traveling at high speed at an estimated 7,500 feet altitude. The objects passed under right nacelle of C-47 and the aircraft made a right turn for a better view – at that point the formation made a tight turn, sharper than that of the aircraft and were lost to view. (Sparks 957)

5.4. Radical flight

Assessment: Data Quality - High Confidence, Pattern Support - Highly Probable

Radical Flight - Observer (visual or radar tracking) characterized the UAP as displaying unconventional speed, acceleration, or flight maneuvers outside those of conventional aircraft.

The is a frequent display of radical flight in the early years of the study with decrease in radical flight in the later years. Radical flight with extreme maneuvers, acceleration, or deceleration (seemingly instantaneous stops followed by holding a stationary position) is one of several activities that suggest UAP are not just unidentified, but truly anomalous objects operating with unknown technologies of unknown origin. Radical flight regarding speed was required to be faster than the fastest military aircraft in service at the time of the incident. As an indicator a pattern of radical flight activities could be considered suggestive of non-verbal inferential messaging (demonstration of advanced technology and intelligence), or as being a defensive measure. The lack of any pattern over time indicates that radical flight is an inherent UAP characteristic.

Radical flight was observed during 1947 through to 1957 in relatively high numbers as depicted in Figure 5-9. After which the observation of radical flight reduced. During this period, Figure 6-11 depicts that 38% of the reports were made during the day which indicate that the UAP either wanted to openly display their technology and intelligence capability in the form of inferential messaging (advanced technology; intelligence) or they were not concerned about being observed (Figure 5-11) o. An alternative interpretation is that radical flight is simply standard in their normal operations. Of the 69 incidents, 50 (72%) were reported by the military – suggesting either testing of our military response or defensive measures on the part of the UAPs. The military domain reported notably higher numbers of radical flight incidents (72%) than interactive flights incidents (41%).

The reduction in radical flight as UAP activity shifted to nighttime and close approach reports indicates a shift in behaviors, which could reflect a failure to elicit recognition and messaging responses. Two separate alternate interpretations emerged. First, radical flight was an artifact of UAP operations at the time. Second, UAP activities were indicative of a focused strategic atomic weapons survey which was identified in the UAP Indications Analysis 1945-1975 United States Atomic Warfare Complex and then shifted to a behavioral study in support of future contact.[3]

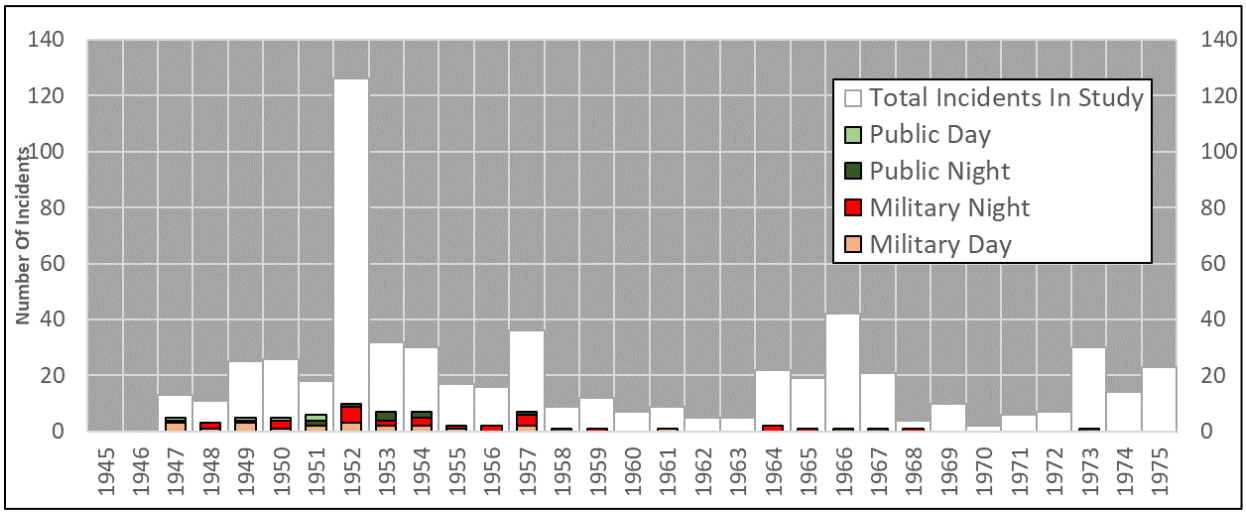

Figure 5-9- Total number of incidents involving radical flight compared to the total incidents in the study.

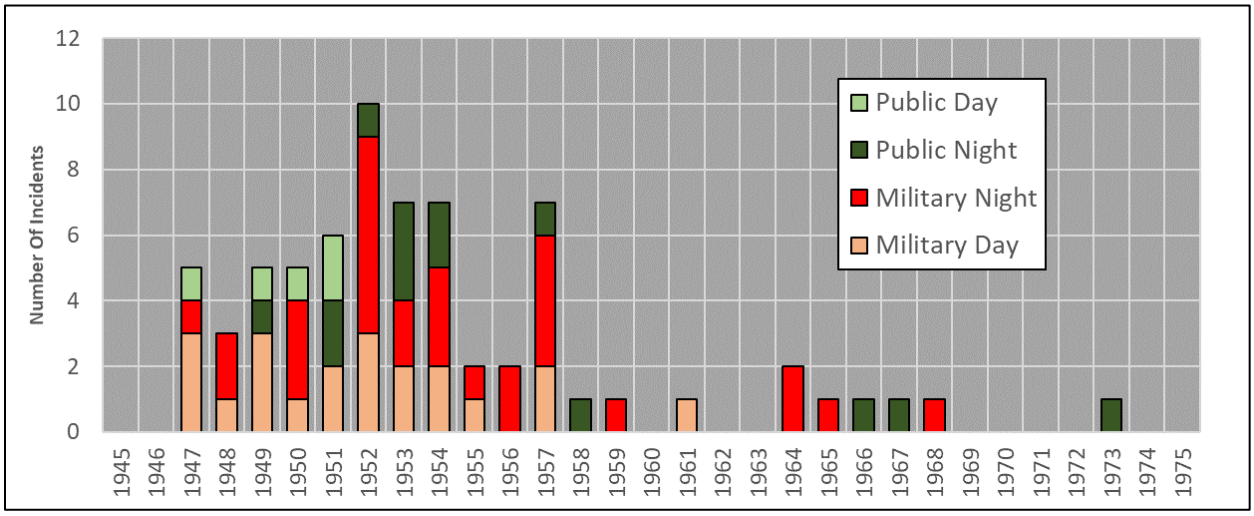

Figure 5-10 Total number of incidents in the study involving radical flight with the military and public and day and night.

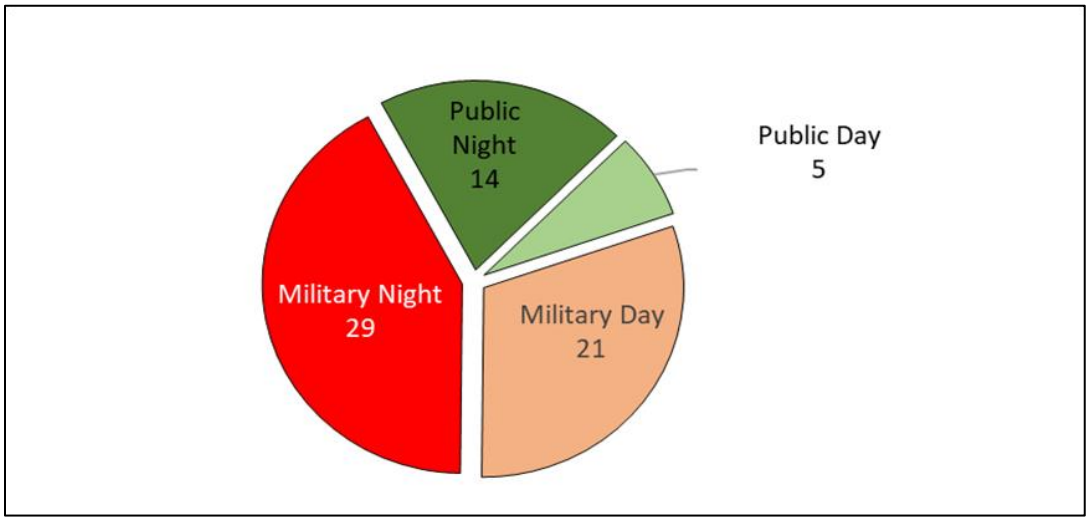

Figure 5-11 Total number of incidents during the study period (1945-1975) classified as UAP radical flight with extreme maneuvers, acceleration, and speed (69) and the distribution between Military/Public and Day/Night

Examples:
July 4, 1947. Portland and Milwaukie, Oregon, and Vancouver, Wash. 1:05 p.m. A large number of people including radio newsman Frank Cooley of station KOIN, INS wire service employees in the Portland Oregon Journal Building, Clark County Sheriff's Deputies, Portland police officers, Highway patrol officers and Harbor Patrolman all reported seeing 5 large discs moving together at high speed, with oscillating or wobbling motion and making sudden 90° turns as well as zig zag movements. The discs were aluminum/chromium color. (Sparks 19)

Jan. 10, 1953. 8 miles NW of Sonoma, California At 4:45 p.m. a retired Air Force Colonel and an employee of the Federal Security Agency observed a flat, unidentified object traveling a speed above **2,000 mph** while making three 360° right turns in 2-3 seconds. Each turn was estimated to involve force of some 300 g's as well as one eight the distance required by a conventional jet aircraft. The turns were no more than 5 seconds apart and the object sped up, slowed, and finally departed vertically out of sight. (Sparks 913)

Jan. 1-2, 1954. Toms River, Marlton, Woodbury, and Surf City New Jersey. 10:35 p.m. – 12:05 a.m. a Navy pilot, a local police chief and several police officers as well as some 20 plus additional witnesses observed 3-12 round or oval white objects with fuzzy edges (slightly smaller than Full Moon) hovering in the sky for some 1.5 hours. Two objects circled around a third and then switched places with each other. The objects then suddenly departed to the SW at extremely highspeed growing smaller until disappearance in 1-2 seconds covering about 60° of sky. Multiple independent witnesses across a baseline of at least 12 miles resulted in triangulation of the objects distance and height, later Air Force scientific consultant J. Allen Hynek calculated the UFO speed at departure to be in the **tens of thousands of mph** range. (Sparks 1003)

Jan. 13, 1967. SW New Mexico, NW of El Paso, Tex., to Flagstaff-Winslow, Ariz. 10 p.m. Pilot Carl M., a flight officer and passenger on a Lear Jet 23 at 41,000 feet saw a flashing red oval luminous object which split into 4 similar red oval objects each separated by an estimated 2,000 feet. The splitting occurred several times. Albuquerque radar tracked an unidentified object 39 miles ahead of the Lear jet moving on the same heading. Albuquerque control contacted a

National Airlines DC-8 plane over Casa Grande, Ariz., whose pilot confirmed the Lear jets pilot's reports. Albuquerque control warned the Lear jets pilot that the object suddenly darted towards the Lear jet at high speed within seconds until the radar blips merged [**UAP traveled an estimated 39 miles in 10 seconds or roughly 14,000 mph].** Object flooded the Lear jet with intense red light so bright the pilot had difficulty seeing his instrument panel, and it maintained position in front of the Lear jet for a few minutes, then blinked out then came on again and started falling back behind the left wing, then pulled forward again. Both UFO and Lear jet made left turns over Winslow, Ariz., then Los Angeles Center radar picked up both targets. Past Flagstaff, the object climbed at a 30° angle disappearing to the West. (Sparks 1712)

Oct. 24, 1968. About 30 miles NW of Minot AFB, North Dakota. 3:30-4:40 a.m. Minot AFB ground radar tracked an unidentified object correlated with an orange glow and alerted an incoming B-52H bomber in the vicinity of the base, advising that base radar placed the UFO some 3 miles from the bomber. The B-52 crew saw and radar tracked the bright red/orange object at 35 miles distance and moving at speeds estimated to be **3000-4,000 mph** in bursts of movement by the object. Additional UAP sightings were reported at several of the Minot Intercontinental ballistic missiles (ICBM) sites during the observation period (Sparks 1760)

5.5. UAP electronic transmissions

Assessment: Insufficient Data; No Overall Pattern of Activity

Electronic Transmissions - UAP was reported to have been the apparent source of broad spectrum, select frequency, or coded electronic signals received by equipment being operated or monitored by the observer.

No long-term pattern materialized during analysis. However, a tight cluster of coded signaling related to “Identification Friend or Foe” (IFF) transmissions in 1957 and 1964 emerged. Electronic transmissions included a mix of broad-spectrum transmissions similar to "jamming" broadcasts, impacting the receiving aircraft's radar systems and interfering with its mission capabilities, including radar-directed-bombing. Other incidents involved select frequency transmissions, comparable to, and in some instances, the same as those used with military air defense radar systems.

IFF is an identification system that uses an aircraft or other vehicle-mounted transponder engineered to detect a coded frequency-specific interrogation signal and then send a separately coded frequency-specific response which identifies the aircraft/vehicle. To produce a correct IFF response, the UAP must be configured for the correct interrogation query and be able to reply with the correct coded response when triggered by a specific interrogation frequency. If a UAP with advanced technology sent an IFF response, it would be considered a deliberate act of messaging. Given the complex and coded nature of an IFF response, it is unlikely to be either an equipment or transmission error. In the absence of contemporary technology that is engineered to function as a transponder, the ability of UAP to receive and respond to signals using specific frequencies requires the ability to detect signatures unknown to any previous or current technology resources.

IFF transmissions occur at preset frequencies and those frequencies contain encoded patterns of information used to query and obtain responses from aircraft for identification purposes. Discrete codes are used in both the query and response transmissions and are preset to identify the object

in question and provide information about it (originally the use of coded transmission was developed to discriminate friendly from hostile aircraft).

Electronic transmissions recorded in this study involved two forms, uncoded and coded. Non-coded transmissions included reports of both discrete frequencies either similar to or identical with frequencies associated with surveillance/object tracking radar systems, and reports of mixed/changing frequencies – often referred to as "noise" in the reports. In military reports, the occurrence of noise with strong signal strengths was frequently interpreted as an attempt to interfere with (jam) the operation of air defense radars. When reported by SAC bombers, this type of interference also disabled or diminished radar bombing capability.

While small in numbers, a cluster of six incidents occurred in 1957 as depicted in Figure 5-12, with three of these incidents occurring on three consecutive days in July. A further four incidents occurred in November 1964 and these incidents occurred during an eight-day period, all reported by the US Navy in the Caribbean.

Individual spikes in UAP electronic transmissions activity were observed and recorded by airborne Strategic Air Command aircraft. The spikes may correlate to the initiation of airborne atomic bomber alert missions with the first SAC Head Start mission flown in 1958, and the larger scale Chrome Dome missions flown from 1960 to 1968.

IFF responses from UAP can be seen as an attempt at initial communication, replicating codes from aircraft transmissions. There are no documented incidents in which the US tried to respond back electronically to their IFF message so a messaging attempt by the UAP may have been seen as a failure by them. Given that the UAP were being tracked on radar operating well above the current aircraft speeds it's unlikely they were trying to disguise themselves.

As with electronic transmissions, the IFF incidents were low in overall numbers and display no overall pattern over the duration of the study.

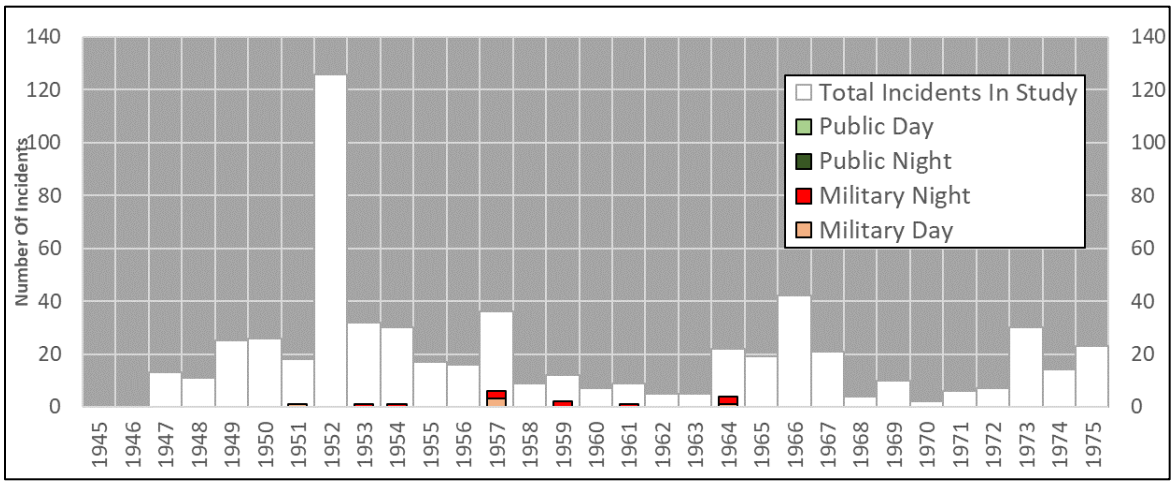

Figure 5-12 Total number of incidents involving UAP electronic transmissions compared to the total incidents in the study.

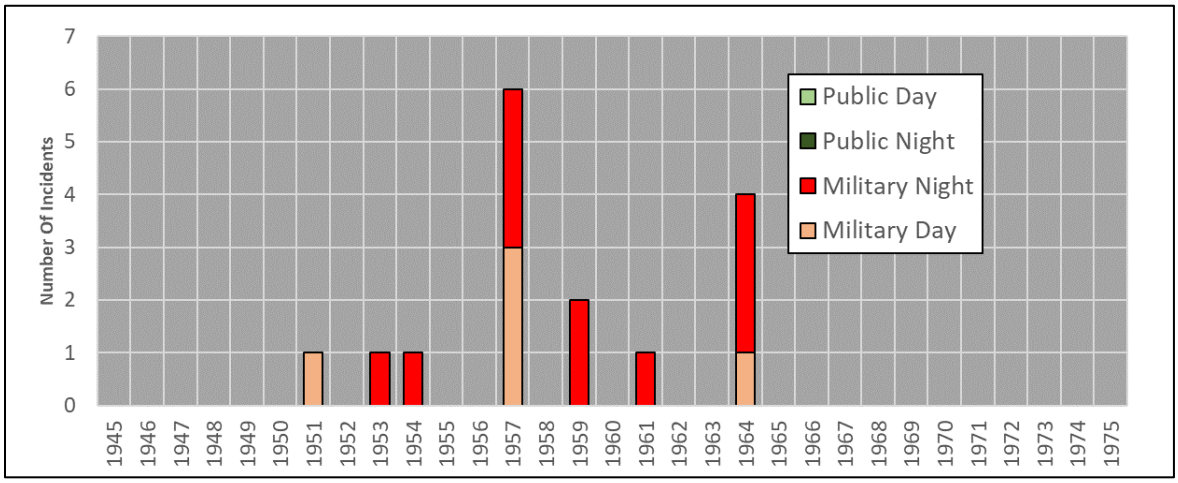

Figure 5-13 Total number of incidents in the study involving UAP electronic transmissions with the military and public and day and night.

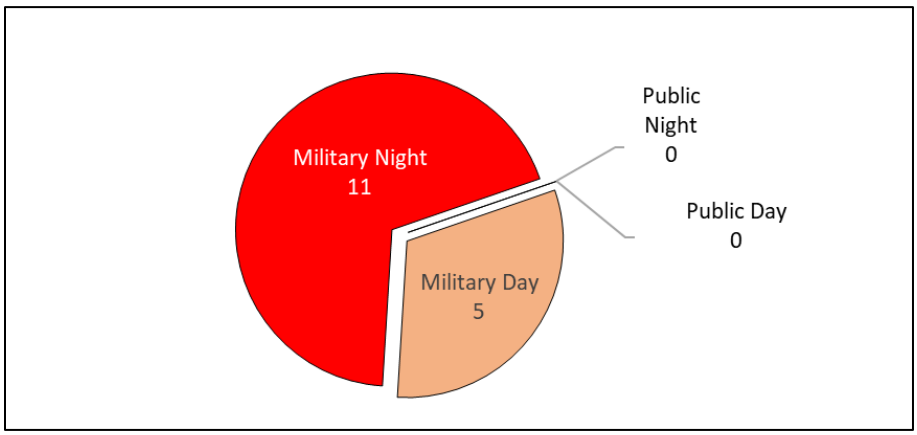

Figure 5-14 Total number of incidents during the study period (1945-1975) classified as UAP electronic transmissions (16) and the distribution between Military/Public and Day/Night

Examples:
July 17, 1957. A Strategic Air Command RB-47, with a specialized electronics intelligence platform flying with a crew of ELINT and electronic countermeasures specialists, was on a training flight from Kansas over the Gulf of Mexico during the early morning hours. Its initial contact with an unknown aerial object was the detection of what appeared to be a ground-based search radar beam, but one whose source was apparently airborne and in motion, crossing the plane's flight path. From that point on, the encounter involved a series of apparent radar transmissions from a maneuvering aerial object – whose movements matched those of a brilliant light that tracked the plane - and with concurrent appearances of the object on the aircraft's own search radar.[37] At times the UAP simply moved along with the aircraft, at other times it moved ahead of it and waited for RB-47 to pass. The entire encounter occurred over a span of approximately two hours and some 800 miles distance. (Sparks 1238)

From July 16 to July 18, 1957, an air defense radar station outside Las Vegas, Nevada (Mount Lemmon) tracked an extremely high-speed unidentified target (estimated at 6,200 mph) for a very short time before it became stationary. The UAP remained airborne and stationary for over 32 minutes, apparently hovering at 42,000 feet altitude. The target then departed at a similar and

possibly faster speed, until it disappeared beyond radar range. During the time the search radar acquired the target, it appeared to respond to an encrypted military IFF transponder signal. The UAP was sent a command to identify itself from the air defense site. In turn, the UAP sent back coded elements of an appropriate IFF response.[38] A similar incident had been reported two days earlier by the same crew at the radar site; the incidents of those two days were unique, with no similar report either before or afterward.

Analysis of the event - The object was tracked at 6,200 mph. For reference, at that time, the fastest plane was the Fairey Delta 2 at 1,132 mph.[39] The UAP then became stationary for over 32 min and transmitted a IFF signal. Combining both the incredible speed and ability to stop and stay stationary strongly suggests this was not an aircraft available at the time, either friend or adversary. A speed of 6,200 mph and hovering would put it outside of current known capabilities today, too. Given the fact that the UAP also transmitted an IFF response raises the possibility that it was not a radar anomaly and that the IFF transmission was a deliberate act, perhaps a test or potentially a form of messaging. (Sparks 1238)

September 20, 1957. Montauk Air Force Station, New York, Benton Air Force Station (Air Defense Command), Pennsylvania, 2:05:48 p.m. Radar track data corrected from detailed NORAD map plot (with supplemental data):

Montauk Air Force Station, New York, Benton Air Force Station (Air Defense Command), Pennsylvania, 2:05:48 p.m. Radar track data corrected from detailed NORAD map plot (with supplemental data): At 2:05:48 p.m. Montauk Point began tracking on NORAD-ADC radar FPS-20 (modified FPS-3) a high-speed target moving at several thousand mph (4,000-7,000) coming from the Atlantic on a path from East/Southeast to West/Southwest and over 50,000 feet altitude. Successive radar sweeps produced a plot of the object's speed varying minute by minute and both decreasing and increasing during the tracking but with the speed consistently at or above 2,000 mph. during a 2-minute period. The object was interrogated with IFF transmissions and responded with IFF Mark X encoded reply.

Benton Air Force Station near Pennsylvania correlated similar tracks to Montauk. An interception by two F-102 jets out of Kinross AFB, Michigan was attempted unsuccessfully; a second intercept by two more jets out of Truax, Wisconsin was also unsuccessful. The object appeared to proceed towards Buffalo, New York but changed course to move towards SAC headquarters at Omaha, Nebraska with radar track disappearing west of Buffalo, at altitude above 100,000 feet and still at a speed of several thousand mph. (Sparks 1253)

November 26, 1957. West Mesa AFS, New Mexico. 8:41 p.m. Airmen Montoya, Bazinette and Scott at 687th aircraft control and warning radar site tracked an unknown target at 3,000 knots (3,500 mph)**.** The target was interrogated with an IFF transmission and responded with an encrypted Mode 3 transponder response. (Sparks 1292)

November 24, 1964. Caribbean NE of Puerto Rico. 8:55 a.m. (EST). US Navy Atlantic Fleet Weapons Range (AFWR) radar tracking of unidentified object on NNE course 30° from 19°07' N, 65°05' W, to 19°52' N, 64°45' W, emitting encrypted IFF Mode 1 transponder signals. DF-8 fighter at Mach 0.99 (650 mph) at 45,000 feet vectored for intercept, but object accelerated and flew upwards beyond the fighter's ability to follow. (Sparks 1595)

5.6. UAP Interference with Weapons Systems

Assessment: Data Quality - Low Confidence: Pattern Support - Remote Probability

Interference with Weapons Systems - The proximity of UAP to a strategic atomic weapons installation or atomic weapon-carrying aircraft was involved in an undefined effect that hindered or prevented the use of the atomic weapon.

Although incidents in this category were consistent with elevated activity for other categories, the number of incidents was insufficient to establish a pattern. Interference with weapons systems as shown in Figure 5-15 suggests a focus on the deployment of strategic atomic weapons and as a demonstration of UAP capabilities. In that sense, interference with weapons systems indicates a unilateral action, either to assist in the suppression of atomic warfare or to demonstrate the capability for suppressing an atomic defense in the event of aggression or exploitation.

Due to insufficient data, analysis did not establish any patterns and trends for military weapons systems interference. Six incidents were reported and documented for the military domain; however, no incidents involving a similar effect on conventional weapons were identified. Although incidents in this category were consistent with elevated activity for other categories, the number of incidents was insufficient to establish an ongoing or long-term pattern in support of either unilateral action scenario.

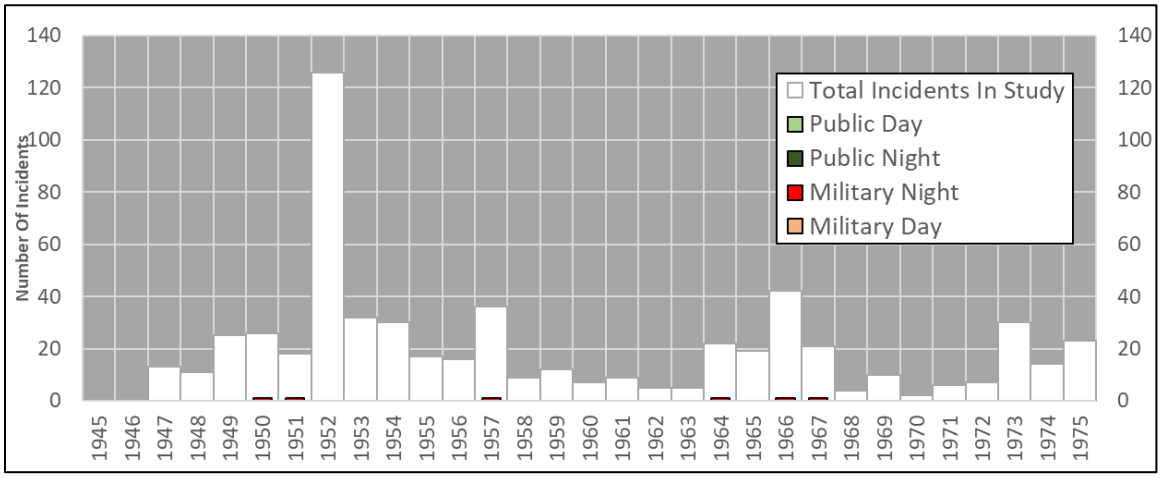

Figure 5-15 - Total number of incidents involving UAP interference with weapons systems compared to the total incidents in the study.

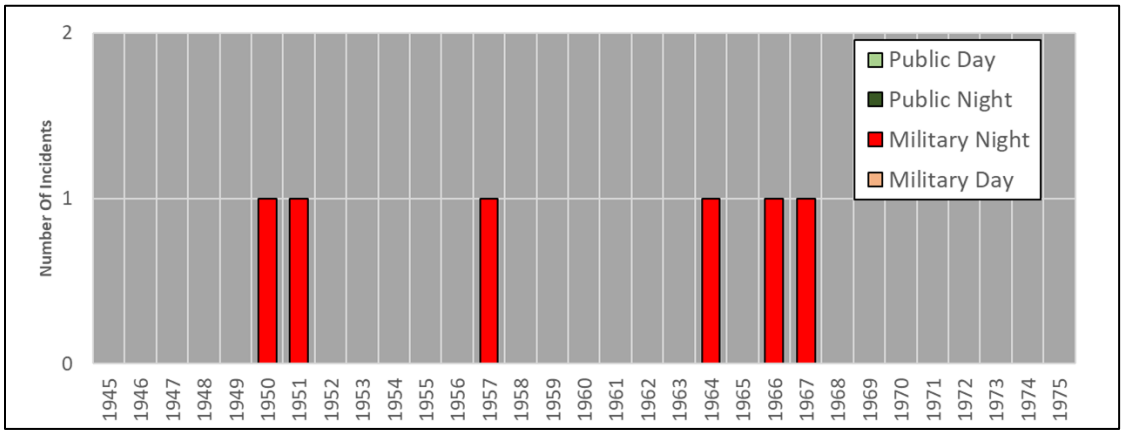

Figure 5-16 Total number of incidents in the study involving UAP interference with weapons systems with the military and public and day and night.

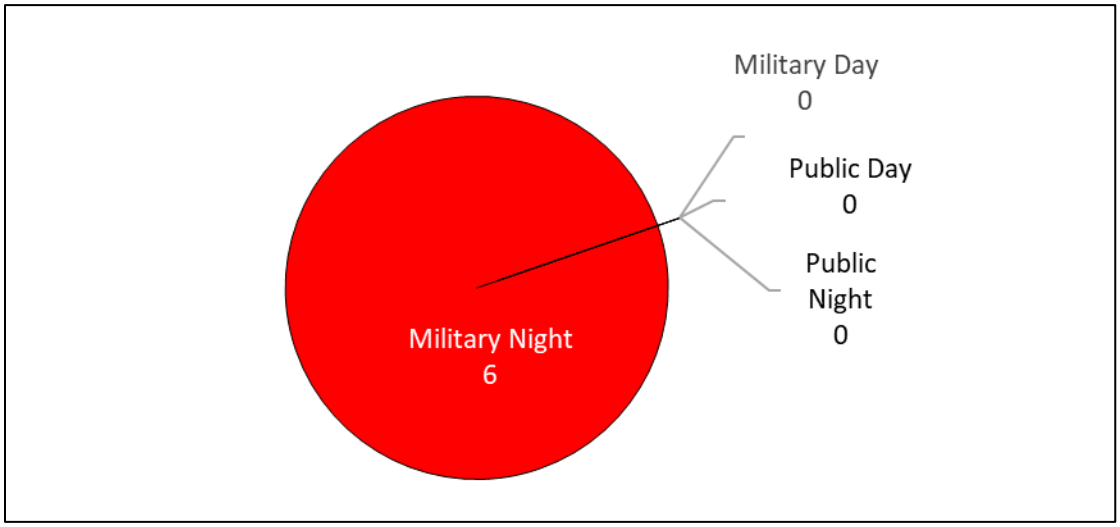

Figure 5-17 Total number of incidents during the study period (1945-1975) classified as UAP interference with weapons systems (6) and the distribution between Military/Public and Day/Night

Examples:
February - March –1967, Malmstrom AFB in Montana experienced an ongoing series of UAP incidents involving low altitude unidentified lights. Reports include UAPs hovering adjacent to security gates and missile silos. A team responsible for monitoring and controlling a set of ICBM silos were referred to as a "flight." On March 16 two flights (Echo and Oscar) reported an extended series of UAP activities, security alarms were triggered, and armed teams dispatched to multiple missile locations. Maintenance and security personnel at multiple missile silos reported unknown aerial objects in their vicinity. (Sparks 1730, 1731, 1733)

At least one flight of 10 ICBM's (Echo flight) was officially recorded as having unexplainably gone off alert status. There were also persistent reports from Air Force personnel on the base at the time that one other flight (Oscar) had also gone off alert status. The Echo flight missiles were later officially determined to have gone offline due to a control system fault triggered an "externally generated signal."[40]

It should also be noted that while the missile wing's unit history notes UAP reports, they were all dismissed – with the unit historian being on record as having been told to edit that section of the history record. The only contemporary record of the incidents, from March 17, 1967, is a message sent to SAC expressing "grave concern" because the cause for the missiles going offline could not be identified. This illustrates the discrepancy between witness testimony and official records.

5.7. Intrusions at Military Facilities

Assessment: Data Quality - High Confidence, Pattern Support - Highly Probable

Intrusions at Military Facilities - UAP was reported to have violated the immediate security perimeter of a military installation, including close physical proximity to weapons associated with the installation.

Intrusions at military sites were clearly focused on the deployment of strategic atomic weapons by the U.S. Strategic Air Command. Reporting indicates that during those intrusions, violations of the immediate security perimeters of military installations occurred. These intrusions demonstrate the ability to circumvent physical barriers and directly access the atomic weapons storage areas and operational intercontinental ballistic missiles. However, in no instance did these intrusions lead to actual any physical action against the atomic weapons, either bombs or missile warheads.

Intrusion at military facilities as shown in Figure 5-18 was ongoing suggesting a focused effort of UAP capabilities to demonstrate a presence at atomic weapons locations over the entire period of the study. While the overall number of intrusion incidents is low, they do align with the long-term patterns of activity identified in the UAP Pattern Recognition Study, these being the establishment of the atomic warfare facilities during the mid to late 1940s, the full deployment of Minuteman ICBMs in 1966-1967 and full deployment of Minuteman III ICBM with Multiple Independent Reentry Vehicle (MIRV) by 1975.[2] Intrusion over the study period (1945-1975) occur almost exclusively at night (Figure 5-20). The pattern of intrusions at night differs from the other intention indicators. Other intention indicators show a shift from day to night. Given anomalous capabilities demonstrated by UAP, there is insufficient information to explain lack of similar activity during the day. Therefore, the team assesses that no particular confidence or probability can be given regarding these activities.

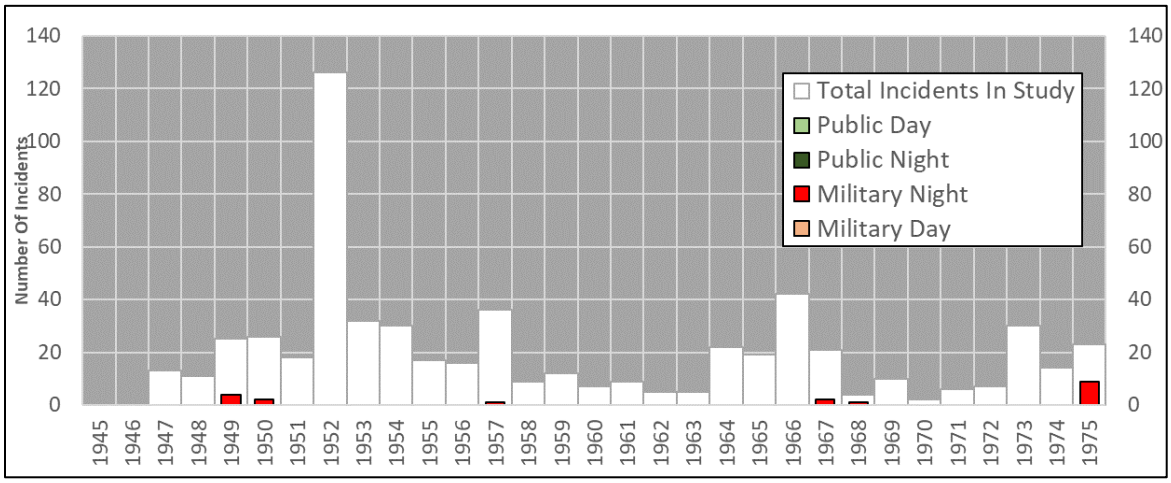

Figure 5-18- Total number of incidents involving military intrusions compared to the total incidents in the study.

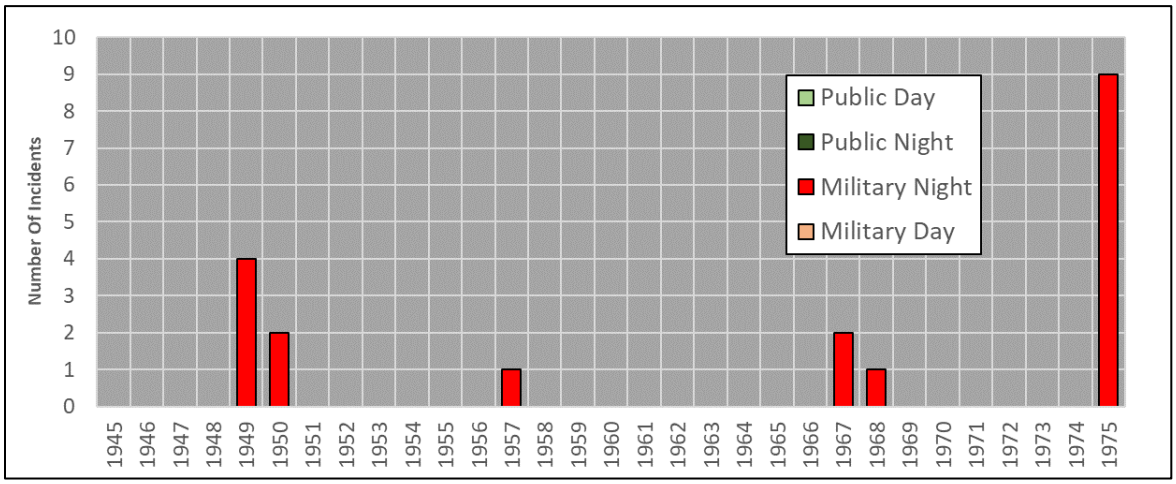

Figure 5-19 Total number of incidents in the study involving military intrusions with the military and public and day and night.

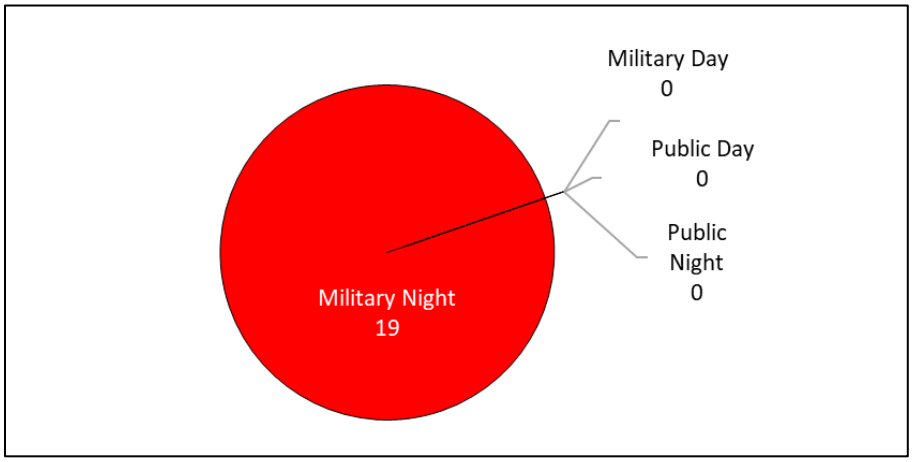

Figure 5-20 Total number of incidents during the study period (1945-1975) classified as military intrusions (35) and the distribution between Military/Public and Day/Night

Clusters of military intrusion activity occur within a specific timeframe and are geographically dispersed.[2,3] Over a four-week period, intrusive activities occurred at a series Strategic Air Command bomber/ICBM bases. In 1967, the locations reporting intrusions were Malmstrom, (Montana), Minot (North Dakota), and Offutt, which is located west of Omaha, Nebraska.

In 1975, all the military incidents and ½ of the public incidents were centered around a 21-day window, October 18 to November 8. There were 25 military incidents from October 30 - November 9 at the ICBM sites at Malmstrom (Montana), Minot (North Dakota), Wurtsmith AFB (Michigan), and the Loring AFB (Maine) There were also six public encounters between October 18 and November 11. Four occurred around the Malmstrom area and one in Idaho.

The focus of UAP for both the military and public domains during 1975 was mostly in areas associated with the atomic warfare complex.

The data for the military sites, based on the previous three studies and this study, indicates that UAP activities occurred within a parameter of time and were geographically dispersed. While the analysis did not determine any specific motives for these activity clusters, UAP indicated particular interest in specific military facility types.

Examples:
February – March, 1967, Malmstrom AFB in Montana experienced an ongoing series of UAP incidents involving low altitude unidentified lights. Reports include UAPs hovering adjacent to security gates and missile silos. On March 16 two flights (Echo and Oscar), reported an extended series of UAP activities, security alarms were triggered, and armed teams were dispatched to multiple missile locations. Maintenance and security personnel at multiple missile silos reported unknown aerial objects in their vicinity.

October 24, 1968, Minot AFB in North Dakota. Multiple radar tracks were observed, approaching both the base and an incoming B-52 aircraft. Security personnel reported an unidentified object landing and continued to observe it for some 45 minutes. Additional UAP reports were made from several sites of the 91st Strategic Missile Wing. In addition, a variety of anomalous electromagnetic effects were registered on radio and radar. Security alarms were activated at outer and inner rings around silos. Official reports state that the outer [silo?] door of one location had been opened, and the combination lock of the inner door moved (NICAP).

October 27-31, 1975, Loring AFB in Maine reported an incursion with a UAP entering a high security zone within 300 yards of the atomic weapons storage area. Similar reports from Loring throughout October became part of what was known as the "northern tier UFO wave" and are documented in several North American Aerospace Defense Command (NORAD) and National Military Command Canter (NMCC) internal communications. In October 1975 Wurtsmouth AFB in Michigan reported a base incursion with a UAP approaching and hovering over the weapons storage area. A series of UAP incidents were reported to NORAD, the National Military Command Center at the Pentagon, the Air Force Chief of Staff and Strategic Air Command headquarters. In response a Security Option 3 message was sent to all SAC installations across the northern border – Pease, Plattsburg, Wurtsmith, Kinchloe, Sawyer, Grand Forks, Minot, Malmstrom, Fairchild, and even Barksdale AFB in Louisiana.[41]

November - December 1975, Malmstrom AFB in Montana, reported multiple waves of UAP incidents which included an apparent physical incursion involving ICBM silo security gates (site security alarm triggered) and possible attempted access to one missile silo. One Air Force communication refers to a "Faded Giant" incident which is the term for tampering with or loss of control over a nuclear weapon. A Faded Giant incident had previously occurred on one and possibly two instances at Malmstrom in 1966. The UAP security incidents at "Northern Tier" Strategic Air Command bases are summarized in a Commander in Chief NORAD message of November 11, 1975, which refers to the series of UFO incidents at American and Canadian bases. The message expresses concern over possible press coverage and the need to come up with appropriate public responses.[41]

5.8. UAP Loitering

Assessment: Data Quality - High Confidence, Pattern Support - Highly Probable

Loitering - UAP remained in the same locality for an extended period, approximately one-half hour or longer. Incidents that involved radar tracking were treated in the same fashion.

Loitering in proximity to observers over an extended period is indicative of an ability to remain at a location without concern for visibility or threat. Generally, loitering also allows the observer more opportunity to recognize that the UAP is both anomalous and acting in an intelligent, rather than random, manner.

Both loitering and close approach activities facilitate the recognition of the UAP as an anomaly, indicating an initial stage in a general contact protocol, especially as it is relatively passive, involves no direct movements toward the observer, and ends with the departure of the UAP in a non-threatening manner.

As an alternative assessment, loitering and close approach activities may also indicate a first step in a series of behavioral studies, exploring observer proximity and spatial response elements as well as simple fear/flight reactions. A transition from loitering to close approach activity suggests either a second stage in the contact protocol or a progression in the behavioral study.

Over the study period, the data shows a decrease in the degree of loitering and a transition to close approach activity. It should also be noted that the geographically focused close approaches during 1969-1974 as depicted in Figure 5-5, were not proceeded by a period of loitering activities.

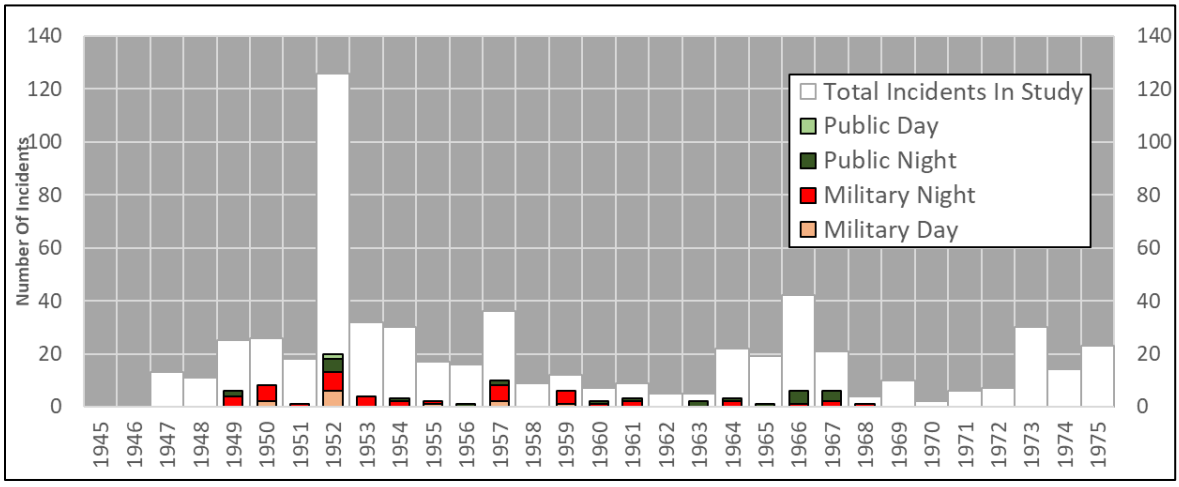

Figure 5-21 - Total number of incidents involving loitering compared to the total incidents in the study.

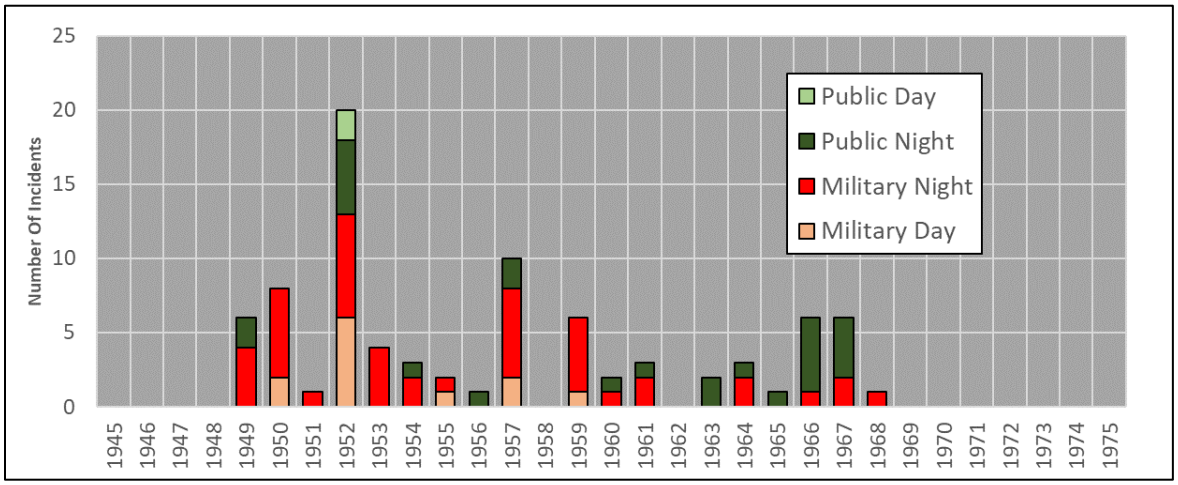

Figure 5-22 Total number of UAP incidents in the study involving loitering with the military and public and day and night.

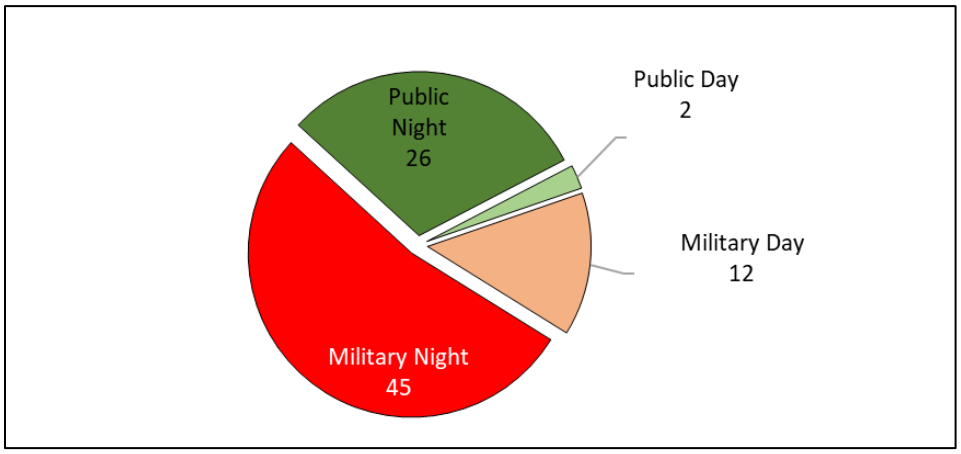

Figure 5-23 Total number of incidents during the study period (1945-1975) classified as loitering (85) and the distribution between Military/Public and Day/Night

Examples:
May 7, 1949. Killeen Base/Site B [Nuclear Weapons National Stockpile], Camp Hood, Texas Lt. Mardell E. Ward, at the Plotting Center (command post) of the Army's observation and triangulation network, and artillery observers at 3 other network observation sites, spotted a brilliant white diamond-shaped object at a triangulated location 24,000 feet away and a height of 1,300 ft. The object's size was measured at approximately about 72 feet long and it was tracked for 40 minutes over a path of 15 miles at extremely slow speed. (Sparks 222)

July 19-20, 1952. Andrews AFB and Washington National Airport, Washington, D.C. 11:40 p.m.-6 a.m. (EDT). Numerous visual, radar and radar-visual sightings by ground observers and both commercial and military pilots in the air – with military interceptors dispatched in response to the reports. (Sparks 693) This incident was followed on by Sparks 730 below.

July 26-27, 1952 when Andrews AFB and Washington National Airport, Wash., D.C. radar operators tracked similar objects for over 3 hours with the objects being reported by both commercial and military pilots. (Sparks 730)

November 4, 1957. Kirtland AFB and Manzano Base/Site A National Nuclear Stockpile, Albuquerque, New Mexico. 10:45 p.m. Air traffic controllers R. M. Kaser and E. G. Brink observed visually and on radar a highly maneuverable 15-20 feet egg-shaped object with a white light at its base circle over the west end of the base and dive down as if landing to about 1500 ft. Radar tracked part of this maneuver. The object then very slowly crossed the aircraft flight line, runways and taxiways heading towards the tower at about 50 mph at 20-30 feet above ground. After crossing the tower area, it hovered over the atomic weapons storage area and a B-58 bomber service site for up to one minute before climbing steeply away from the base. The controllers tracked the object on radar as it circulated a low frequency radio range station and moved away only to return 20 min later and follow an Air Force C-46 that had just taken off the base until both went off radar at about 14 miles; the object then returned and briefly hovered in the vicinity of the base. (Sparks 1267)

September 24, 1959. Near Redmond, Oregon about 4:00 a.m. a Redmond Police officer reported an incident lasting over two hours in which he observed an unidentified bell-shaped light descend over and hover near a local airport lighting up trees in the area. When he drove toward it the object moved into a rapid climb to some 3,000 feet and remained in the vicinity of the airport. Upon arrival at the airport an FAA flight service specialist joined him and others in viewing the object and as it remained stationary; the object was reported to the FAA and the police officer drove on towards it until within some 2-3 miles at which point it suddenly climbed into a broken cloud deck, lighting the clouds in passing. (Sparks 1420)

October 24, 1968. About 30 miles NW of Minot AFB, North Dakota. 3:30-4:40 a.m. Minot AFB ground radar tracked an unidentified object correlated with orange glow and radioed it to the attention of the crew of B-52H bomber approaching the base. At 3:52 a.m., Minot radioed the B-52H that base weather radar was also tracking the target now at 1 o'clock position and 3 miles from the B-52H. Radar scope photos show immense bursts of acceleration if only one object was involved. The object then reportedly landed or descended and hovered in an area of the base for some 45 min. Security personnel reported additional incidents during the same period. (Sparks 1760)

5.9. Close approach

Assessment: Data Quality - High Confidence, Pattern - Highly Probable

Close Approach – Observer reported UAP at a distance and observed a closing of distance in the immediate direction of the observer. For the purposes of this study, “close approach” required a distance that allowed viewing and reporting of physical characteristics of the UAP.

The key element in this activity involved the UAP closing distance with the observer(s) close enough to allow full recognition of its anomalous character and a detailed description of its physical characteristics. Close approaches are defined as the UAP directly moving towards the observer as an indication of the intent to be recognized as both unknown and intelligent. Reporting indicates that when a close approach occurs and the focal point of the activity is the observer(s), the activity itself is an indicator of a behavioral study. The objective of the close approach activity is possibly designed to test both the proximity and the reaction of the observer(s) to determine the perception of a threatening act.

Historically, close approaches were not an appreciable element of the very large burst of UAP activity in 1952. Close approaches increased during the burst of UAP activity in 1957 and then began to increase again beginning in 1961, peaking in 1966. Overall, during the entire period of the study such activity increased over time, occurring predominantly with the public and at night.

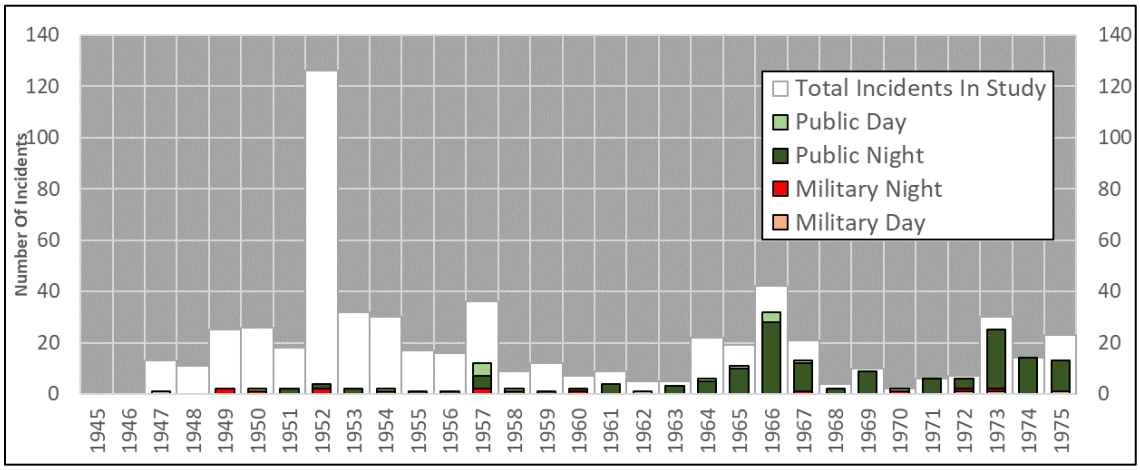

Figure 5-24 – Total number of incidents involving close approaches compared to the total incidents in the study.

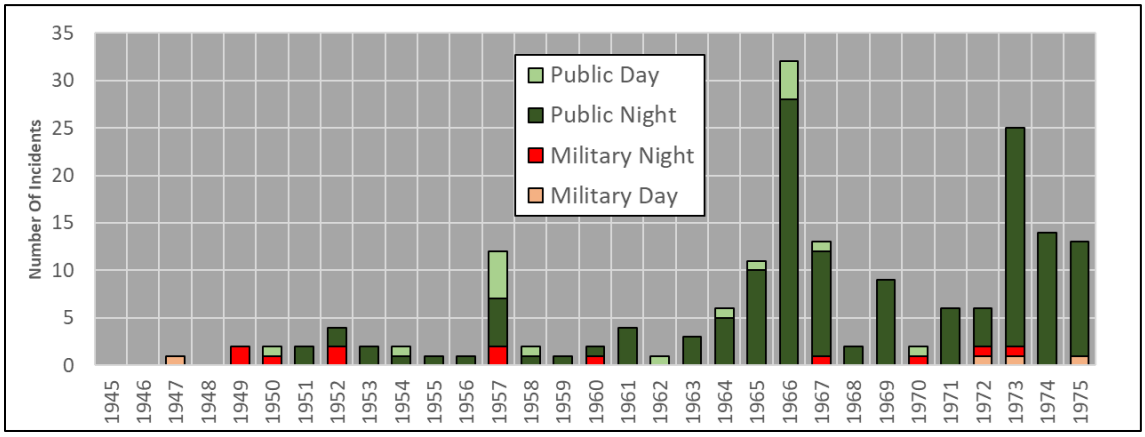

Figure 5-25 Total number of UAP incidents in the study involving close approaches with the military and public and day and night.

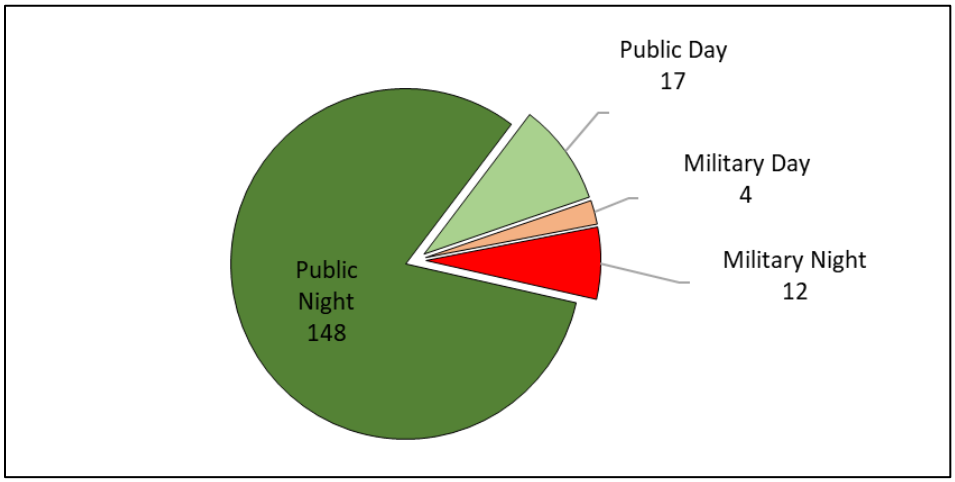

Figure 5-26 Total number of incidents during the study period (1945-1975) classified as close approaches (147) and the distribution between Military/Public and Day/Night

Examples:
July 8, 1947. Muroc Army Airfield, California Army Air Force personnel and a civilian reported 2 disc-shaped or spherical objects, silver and apparently metallic, which flew a wide circular pattern at an estimated 7-8,000 feet overhead before departing; a second report related that as the first objects departed a similar disc approached and was observed flying tight circles above the airfield by five additional Army personnel (Sparks 33)

November 7, 1957. Amarillo, Texas. 7:45 p.m. Atomic Energy Commission (AEC) security guards and a Texas highway patrolman at the Pantex plutonium nuclear weapons assembly plant sighted 3 flashing objects that hovered for 30 minutes over the plant only 50 feet in the air. A responding highway patrolman said the guards were "all shook up" when he got there. One object reportedly landed offsite and when the guards attempted to approach it, but every time they got near, the object would slip away. (Sparks 1282)

March 5, 1967. Minot AFB, North Dakota. Air defense radar tracked an unidentified target descending over the Minuteman ICBM missile silos of the 91st Strategic Missile Wing. Base security teams saw a metallic, disc-shaped object ringed with bright flashing lights moving slowly, maneuvering, then stopping and hovering about 500 feet above ground. Object circled directly over the launch control facility. F-106 fighters were scrambled but at that moment object climbed straight up and disappeared at high speed. (Sparks 1723)

April 17, 1967. Four miles from Jefferson City Airport, Missouri at 9:05 p.m. school principal John L. Metz and 3 teachers in separate cars who were also driving home behind him saw a huge 350-400 feet diameter bluish-white helmet-shaped object come over the Missouri River cliff at an estimated 300-400 feet altitude when directly overhead. It bathed their cars in intense light and hovered over a power line for some ten minutes before heading towards the airport – where two more witnesses also observed it. (Sparks 1737)

July 30, 1974. Solitude, Indiana 8:50 p.m. A couple and their little boy were on their way home from a play when they observed an object silhouetted against the moonlit haze in the southwest. Although a few miles away, the object had a clear cigar shape with three white lights. They continued driving down the highway and, as they got over the top of some hills, the object started to descend, getting larger and larger all the time. Right at the bottom of the hill they

slowed down, and the object appeared to be hovering. It was approximately a hundred yards from them then, and it was moving, but very slow. It had four lights on it, two on each end, the object was long and slender, cigar shaped. At the closest it was above the family as low as 50 feet. At one time "it was just right above us, maybe 50-60". (NICAP)

5.10. Occupant observed

Assessment: Data Quality - Low Confidence: Pattern Support - Highly Improbable

Occupant Observed - Observer reported an occupant inside a UAP or on the ground directly associated with a grounded or hovering UAP.

A small number of the study incidents included reports of occupants either inside the UAP or directly associated with it as depicted in Figure 5-27. No chronological pattern is associated with this series of reports or the observers' varied descriptions of the occupants. The only apparent commonality in the reports is that they came from the public domain rather than the military and that the incidents were described as occurring at night as depicted in Figure 5-29.

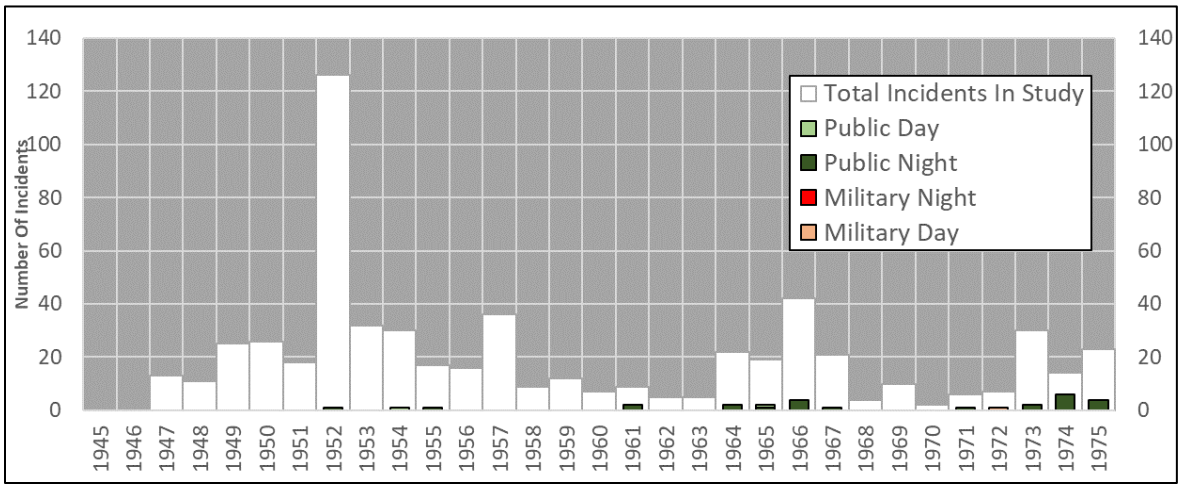

Figure 5-27 Total number of incidents involving occupant observed compared to the total incidents in the study.

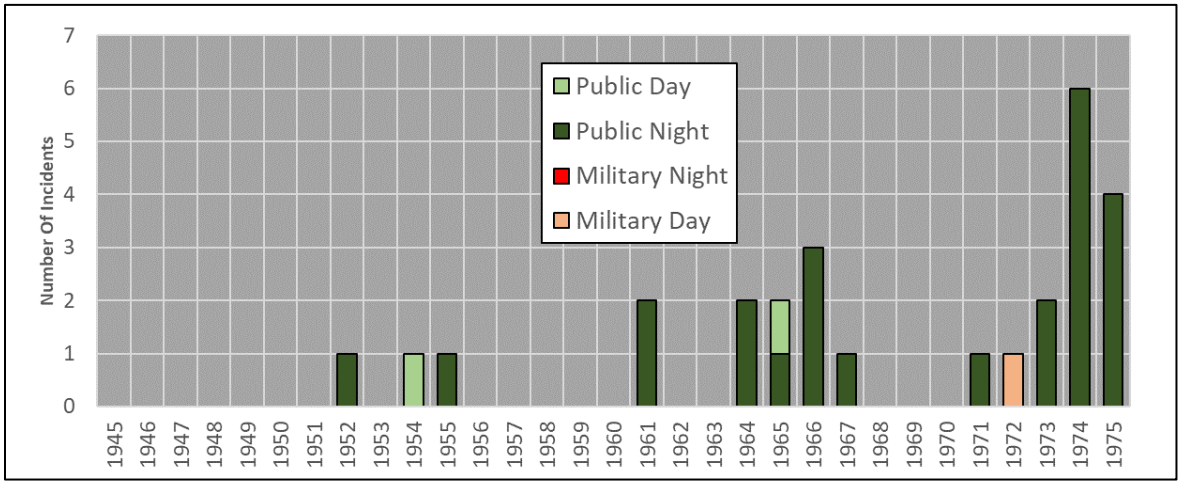

Figure 5-28 Total number of UAP incidents in the study involving occupant observed with the military and public and day and night.

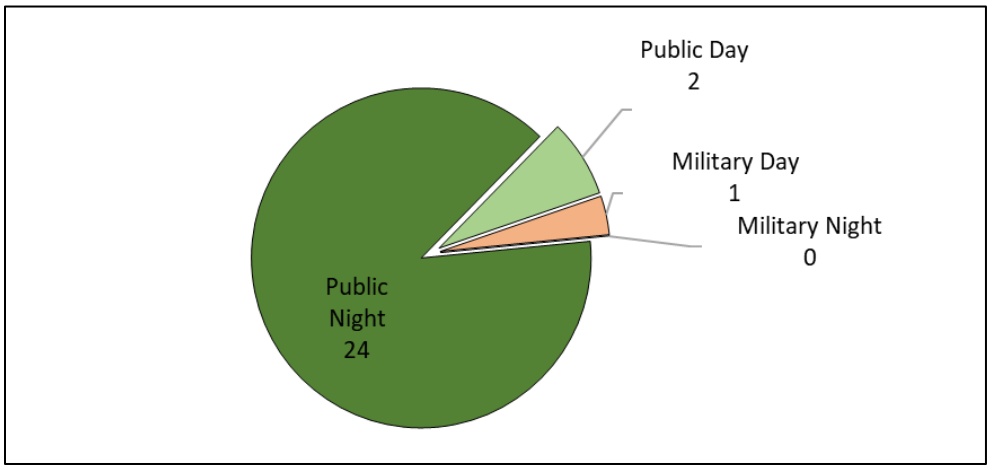

Figure 5-29 Total number of incidents during the study period (1945-1975) classified as occupant observed (27) and the distribution between Military/Public and Day/Night

Examples:
August. 25, 1952. Frontenac-Pittsburg, Kansas. 5:35 a.m. Radio station musician William Squyres saw a 70-75 feet inverted platter-shaped dull aluminum color object to right side of road about 40° elevation and 750 feet away. The midsection of the object had many windows in which the head and shoulders of a "man" and motion could be seen. The object itself had rotating propellers and after half a minute rose vertically at high speed and disappeared in a gap of broken clouds. Later found a 60 feet circle of grass matted down in the field. (Sparks 795)

April 24, 1964. 1 mile SSW of Socorro, New Mexico, 5:45-5:50 p.m., Socorro Police Dept. patrol officer Lonnie Zamora, while chasing a speeder heading S, heard a roaring sound and saw a bluish-orange funnel of flame in the sky to the SW slowly descending possibly 1/2 to 1 mile away, bottom of flame hidden behind a hill. He tried to pursue the flame, turning off to the right on a rough gravel road to the SW, lost sight of flame while trying to get car up steep rough hill. At the top after 10-15 seconds of continuing along gravel road he suddenly noticed a shiny whitish-aluminum color oval object about 12-15 feet tall on the ground and about 800 feet away. For about these 2 seconds also saw 2 small-adult-like figures in white coveralls near object, one turning toward him seemingly startled and jumping. He lost sight of object as he drove about 1,000 feet further and stopped. At that point he heard a very load roar increasing in volume and saw a smokeless blue-orange flame coming from beneath the object which slowly rose and then flew away. (Sparks 1560)

March 23, 1966. 8 mi S of Temple, Oklahoma. 5:05 a.m. Sheppard AFB civilian instructor, pilot and former newspaper publisher, William Eddie Laxson was driving to work and found the road blocked by a wingless aircraft, perch fish-shaped, landed in the road, about 75 feet [60-70 ft] long, nearly 8 feet high on 3 feet tall landing gear, 12 feet wide (thick), with a plexiglass bubble on top. The object had a 2 feet diameter porthole and a 4 feet tall door, with bright lights forward and aft. Laxson stopped his car about 240 feet away and walked toward the object to160 feet [80 feet] away, noticing a labeling on its side like "TLA138" or "TLA738". He then saw a "man" wearing a baseball cap or mechanic's hat in AF-like green military fatigues uniform inspecting the underside with a flashlight who then climbed steps or ladder on the object and soon after it lifted off vertically with a hissing or drilling sound to a height of 50 feet and headed away. (Sparks 1657)

January 5 [25?], 1967. Winsted, Minnesota, 4:30 am, a.m. Civilian man [Lenz?], 32, driving to work stopped to check his 1964 Chevy truck when its engine stalled. He then saw an intense light to his right, coming closer, then landing on the road, so he locked himself inside the truck. The object was 75 feet in diameter and 30 feet tall. It settled on tripod landing gear and an elevator-like device came down, with a man of medium height, dressed in blue coveralls with "a glass fishbowl on his head," of medium height, seemed to check something and then he and the object left. (Sparks 1710)

September 3, 1975. Manassas, VA Night. When Melinda Chow got off her homebound bus, she saw an orange disc glowing above some nearby treetops & descending. Although alarmed, "for some reason" she ran toward it instead of away. She came out in a clearing to see the UFO resting on stilts 200 feet away. Near it was walking a humanoid being about 5 feet tall, with long narrow legs, very short arms, & "a face that occupied about half the height of his body." His skin was gray & leathery, and he walked "in a bouncing, hopping motion." Terrified, Miss Chow ran to her home. (NICAP)

5.11. Occupant Encounters

Assessment: Insufficient Data; No Overall Pattern of Activity

Occupant Encounter - Observer reported an occupant in proximity to a UAP and described some form of interaction, communication or messaging associated with the encounter. For this study we only dealt with direct encounters reported by the observer.

This study did not find either symbolic or written communications associated with reports of UAP occupant encounters. In a few reports, the observer reported verbal or telepathic communications, as well as physical contact in the form of examinations, occurring during “abductions.” However, the only pattern discernible in those reports was that the communication and physical contact only became known to the individuals reporting them following hypnotic regression well after the event itself. No comments on occupant communication were contained in the initial reports of the incident.

It should be noted that in general contact protocols, a progression involving non-verbal signaling, graphic messaging, and some effort at ‘self-identification’ (personal visibility, an effort to communicate origin or characterize themselves, etc.) would be expected. This study found no incidents of self-identification or self-characterization suggesting no more than a minimal level of contact. The lack of any significant number or pattern of UAP occupant encounters is a negative indicator for contact, communications, and collaboration.

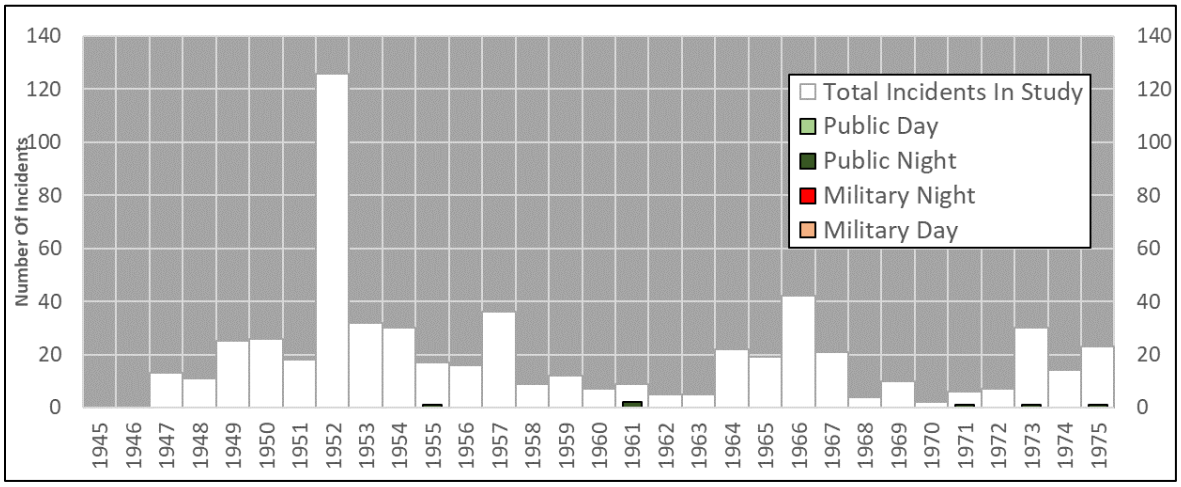

Figure 5-30 Total number of incidents involving occupant encounter compared to the total incidents in the study.

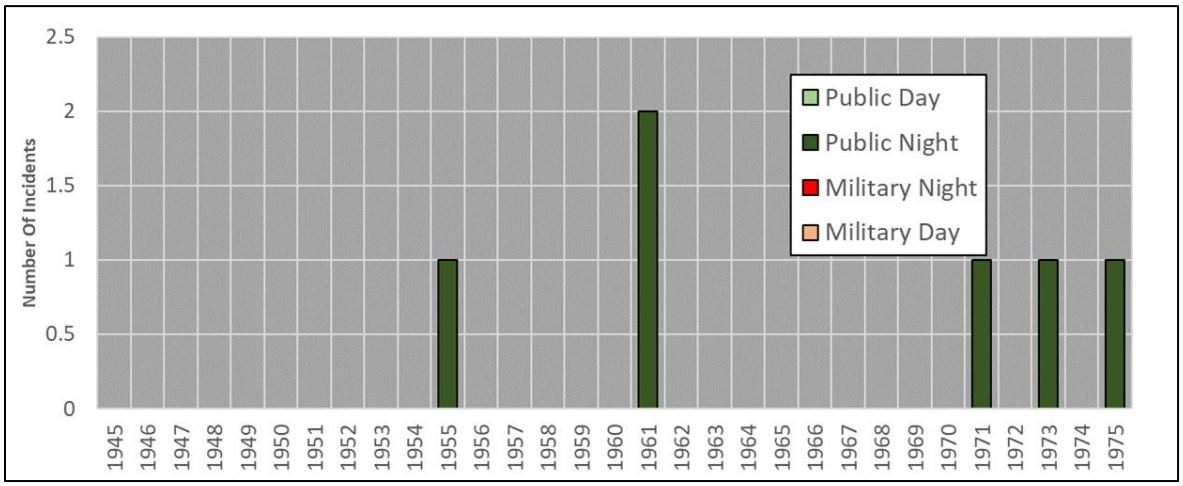

Figure 5-31 Total number of UAP incidents in the study involving occupant encounter with the military and public and day and night.

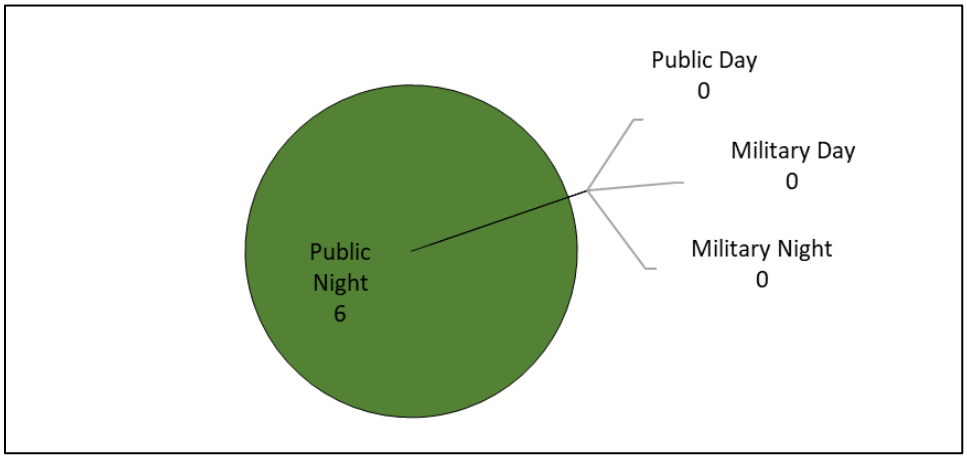

Figure 5-32 Total number of incidents during the study period (1945-1975) classified as occupant encounter (6) and the distribution between Military/Public and Day/Night

Examples:

August 21-22, 1955. Kelly 7 miles N of Hopkinsville, Kentucky (at 36.97° N 87.477° W). 7 8-11 p.m. 2:30-4:45 a.m. At about 7 p.m. Billy Ray Taylor went into the backyard of the Sutton farmhouse and saw a bright object from the SW [or actually about SSW about 210° azimuth from the direction of Fort Campbell U.S. Army base] then pass over and descend into a gully about 500 [300-600?] feet N of the farmhouse and about 35-40 feet lower elevation. Glennie Lankford and 6 other adults [most Sutton family] plus 3 children (Charlton Lonnie and Mary Lankford) saw two or more 3 feet tall gremlin-like creatures float down from trees and approach the house from the dark which were shot at by rifle and shotgun fire without effect. At about 11 p.m. the entire group fled in terror in their two cars and drove at high speed into Hopkinsville to report the incident to the Police Dept. A state police officer leaving the Shady Oaks restaurant 3 miles N of Hopkinsville in a car to respond to the call heard several meteor-like objects streaking over him sounding like artillery shells and was able to see 2 in a series looking like meteors from the SW [or actually about S from about 190° azimuth headed towards Kelly from the direction of Fort Campbell and the TOP SECRET Armed Forces Special Weapons Project Site C Clarksville Base 36.665° N 87.487° W National Stockpile Site for nuclear weapons storage apparently recently including multi-megaton yield H-bombs]. City, county, state and military police, and reporters drove out to the Sutton farm to investigate from around 11:30 p.m. to 2 a.m. UFO entities returned at about 2:30 a.m. and were again shot at without effect finally disappearing at about 4:45 a.m. (Sparks 1145)

April 18, 1961. Eagle River, Wisconsin. 11 a.m. Joe Simonton heard a whining sound and saw an object, 30 feet in diameter, 12 feet high, with exhaust pipes around the periphery, land near his house. A door opened and a man appeared, about 5 feet tall, wearing a black, turtle-neck pullover with a white band at the belt, and black trousers with a vertical white band along the side. Two other figures were visible inside. Simonton filled a jug with water, returned it to the man, who gave him three ordinary pancakes, and the object took off. (Sparks 1478)

September 19-20, 1961. Indian Head, New Hampshire. 11p.m.-2 a.m. (EDT). Barney and Betty Hill saw a lenticular object with a double row of portholes and half-a-dozen dark figures working at control panels inside, when they stopped to investigate a light following their car. The object along with entities on board was observed both with binoculars and at close range by both Barney and Betty. They became afraid and drove away but later heard a “beeping” sound and lost consciousness for an estimated one hour. Betty reported the incident to Pease Air Force Base which confirmed that they had indeed tracked (radar only) an unknown object around that time and in the general location of the report. (Sparks 1496). It should be noted, the reported abduction of Betty and Barney Hill was not mentioned in the initial report and only came about after hypnosis more than a year later.

November. 5, 1975; Snowflake (Heber), Arizona Travis Walton abduction case. One of the more persistently controversial UFO events in history took place in northeastern Arizona. A work team consisting of seven individuals reported encountering a reflective, luminous object the shape of a flattened disc hovering close to their truck on a remote dirt road in the Apache-Sitgreaves National Forest. According to the crew, one of their members, Travis Walton, exited the truck and approached the object on foot, at which time he was allegedly struck by a brilliant bluish light or flash and hurled to the ground some distance away. In fear, the other crew members fled the scene, returning after a short period of time to find no trace of the UFO, or of Walton. The driver of the truck was Mike Rogers, the crew foreman and a personal friend of Walton's. While fleeing the scene, Rogers reported looking back and seeing a luminous object lift out of the forest and speed rapidly toward the horizon. He, along with the other five witnesses, were accused of

murder and subjected to polygraph (lie detection) examinations regarding the event, the successful outcomes of which catapulted the case into the national spotlight. Walton turned up five days later, confused, and distraught but with fleeting memories of alien and exotic human entities. He was also subsequently subjected to a number of controversial polygraph examinations. (NICAP)

5.12. Aircraft Encounters

Assessment: Data Quality - High Confidence, Pattern Support - Highly Probable

Aircraft encounter – Why flying, an aircraft crew observe a UAP at a close enough distance to determine UAP features, rather than a distance light.

Observers reported the majority of aircraft encounters between 1948 and 1957 as depicted in Figure 5-33. After 1957, reports decreased for the remainder of the study. Given that private and commercial air traffic increased during the 1950s and 1960s, and that overall UAP reports did as well, the decrease in aircraft encounters appears significant. However, in the earlier years (late 1940s and early 1950s), commercial and private pilots were both reporting UAPs willingly. While not part of the study data, the Weinstein catalog of military, airliner, private pilot sightings from 1916 to 2000, a collection of 1300+ cases cataloged by Dominique Weinstein also shows a peak of active in 1952 and high levels of incidents occurring between 1947 to 1957.[42]

The pattern depicted in Figure 5-34 indicates a high level of observed UAP activity but using it to assess any scenarios beyond UAP visibility remains challenging. The majority of the reported encounters appear as random acts; therefore, visibility requires another indicator to suggest intent. Further analysis is required to determine which indicators feasibly align with visibility to establish intent. Reporting indicates that UAPs primarily cross the path or pace an aircraft until the aircraft overtakes the UAP in flight. The actions of reported UAP activity observed under the visibility indicator contrast with UAP activities observed in reported loitering and close approach encounters. Highlighting the inference of UAP intentions requires additional insight derived from reported aircraft engagement.

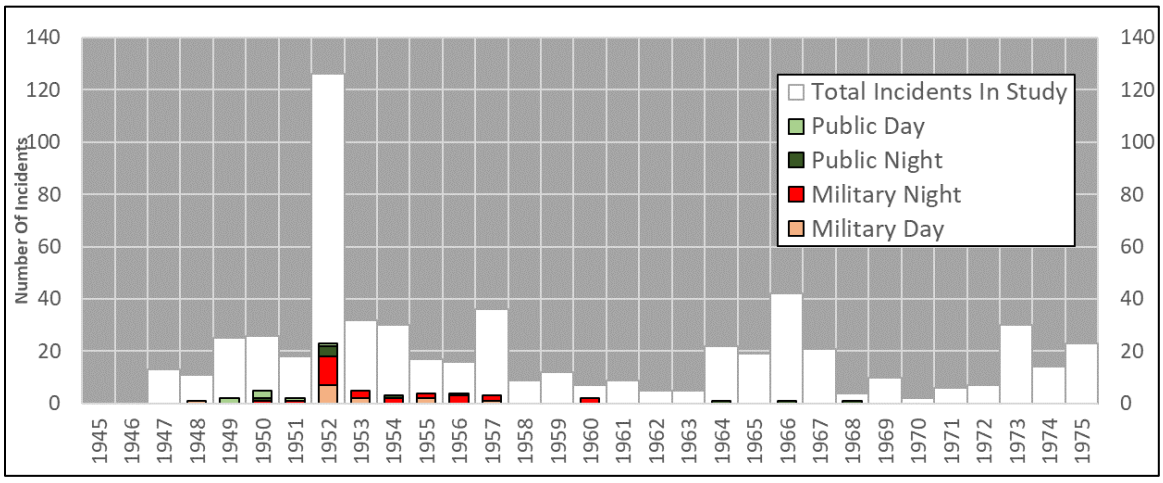

Figure 5-33 - Total number of incidents involving aircraft encounters compared to the total incidents in the study.

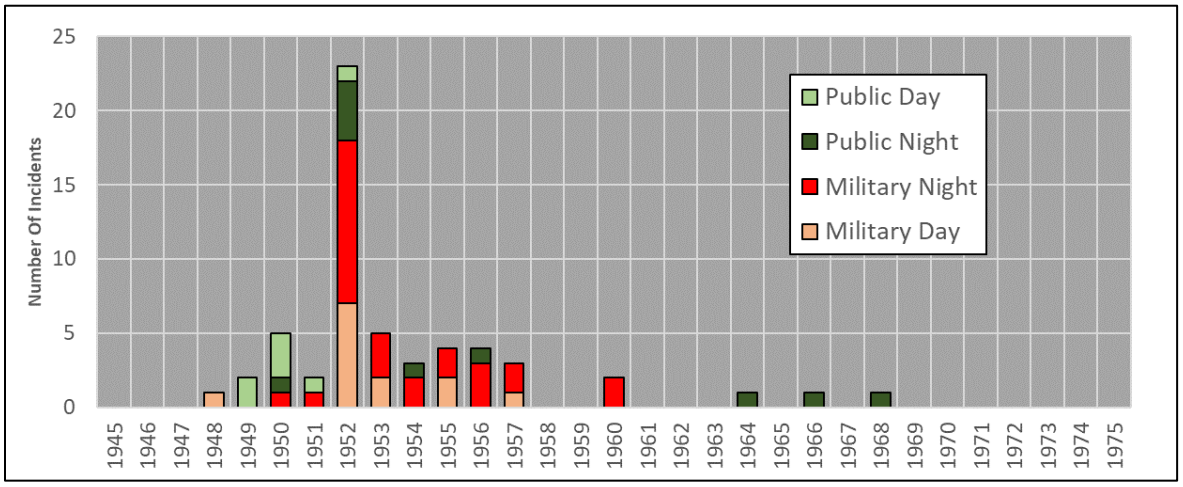

Figure 5-34 Total number of UAP incidents in the study involving aircraft encounters encounter with the military and public and day and night.

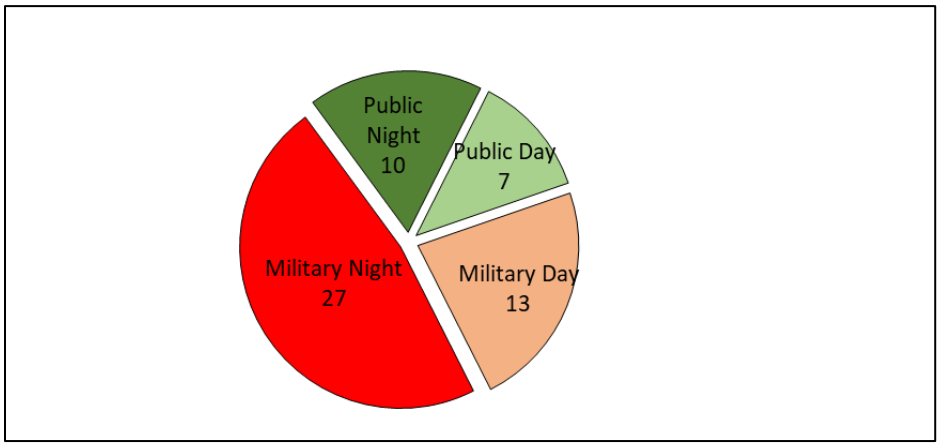

Figure 5-35 Total number of incidents during the study period (1945-1975) classified as Aircraft encounters (57) and the distribution between Military/Public and Day/Night

Examples:
May 27, 1949. Near Hart Mountain, south-central Oregon at 2:25 p.m. Joseph Shell, an oil company vice president, former Army Air Force flight instructor, and Naval Reserve pilot flying a Navy aircraft at 212 mph ground speed and an altitude of 9,000 feet saw something metallic to his right. As he approached it resolved into 5-8, oval or egg-shaped metallic objects, each approximately 20 feet in diameter. The objects were flying in a trail formation at a constant separation. (Sparks 237)

July 24, 1949. Mountain Home, Idaho, 12:03-12:12 p.m. The manager of a flying service, flying a Piper Clipper at 19,000 ft, saw 7 delta-shaped objects, 35-55 feet in span and 20-30 feet long. The objects were light colored except for a 12-foot diameter dark circle on each. The shape was flattened with a dome on top. The objects flew in a tight formation of twos and made a perfect, unbanked, right turn about 1,500 feet ahead of the aircraft, then turned right again to pass at an estimated speed of 450-500 mph. (Sparks 254)

February 27, 1950. Coulterville, Illinois. 7 a.m. The pilot and his wife were flying towards Du Quoin, Illinois in a PT-19 light training aircraft at 2,000 ft. Both individuals observed an object above them at 5,000 feet and when the pilot climbed to the object's altitude at approximately half

a mile distance. Both individuals described the object as a discus shape, approximately 60 feet in diameter and ten feet thick in the middle – having a high metallic shine. (Sparks 337)

April 27, 1950. Near South Bend, Indiana. 8:24 p.m. Trans World Airlines Flight 117 pilot Captain Robert Adickes and First Office Robert F. Manning heading west towards Chicago in a DC3 commercial aircraft flying at 200 mph and 2,000 feet altitude observed towards their right rear a bright red disc-shaped object, 5:1 to 10:1 width/height ratio, no trail, angular size of an orange at 20 ft, rolling on edge vertically on a parallel course to their plane. The object was gradually overtaking the aircraft. After about two minutes other flight personnel and eleven passengers including Boeing aircraft engineers observed the object passing the plane. The airliner turned towards the object, at which point it increased speed and veered off and departed to the north. (Sparks 368)

September 26, 1954. Altoona, Pennsylvania. 9:04 p.m. Captain Picune and the crew of United Airlines DC-6 Flight 606 at 19,000 feet and ground speed 382 mph saw a fire-colored object, flat on bottom rounded on top, approaching, flying parallel with their aircraft for about 1 minute, then pulling forward at tremendous speed, disappearing to the east. (Sparks 1083)

November 14, 1956. Near Jackson, Alabama. 10:10-10:12 p.m. Capital Airlines Flight 77 with a highly experienced pilot (16 years flying time with 15,000 air miles) and copilot flying a Viscount commercial airliner at 300 mph at 10,000 feet observed a brilliant bluish-white light (magnitude. -7, between the brightness of the moon and Venus but closer to Venus) descends in a steep downward angle from left to right and then move directly ahead of the aircraft. The object began a series of maneuvers for 30 seconds, rising and falling, darting back and forth, instant 90° turns, then hovered motionless again at same/slightly higher altitude. After a pause the object began a series of "crazy gyrations, lazy 8's, square chandelles" with undulating motion, then shot out over the Gulf of Mexico in a steep climb at "fantastic speed" until it disappeared. (Sparks 1214)

March 27, 1957. Roswell, New Mexico. 8:35 p.m. An Air Force pilot flying C-45 Air Force transport reported seeing 3 bright white circular objects in tight formation on collision course with his aircraft. He immediately flashed his taxi lights, and at that point one object shot straight up above him while the other 2 passed to the front of the plane. (Sparks 1228)

5.13. Engagement with aircraft

Assessment: Data Quality - High Confidence, Pattern Support - Highly Probable

Aircraft engagement – Why flying, an aircraft crew observe a UAP and the UAP approaches or response to the aircraft.

Aircraft engagements, with the UAP moving towards, and in a number of incidents actually interacting with the aircraft's maneuvers, were observed from 1948 through to 1959 in relatively high numbers as depicted in Figure 5-36. However, after that period, aircraft engagements decreased over the period of the study. Notably, most of the aircraft engagement reports involved military aircraft. Of the 71 incidents, 64 (90%) were with the military – one inference being that the UAPs were testing both the capabilities of the military aircraft and the nature of their response. Notably, military aircraft were unable to match UAP maneuvers during reported engagements.

The speeds and maneuvers described in many of the aircraft engagements suggest an intention to display both anomalous capabilities and intelligent action. However, in many incidents, the perceived aggressive behavior of UAP is a negative indication related to the initial steps in any standard contact protocol as outlined in section 2.3. The noticeable decline in such engagements over the study period argues for recognition but against an intention of contact.

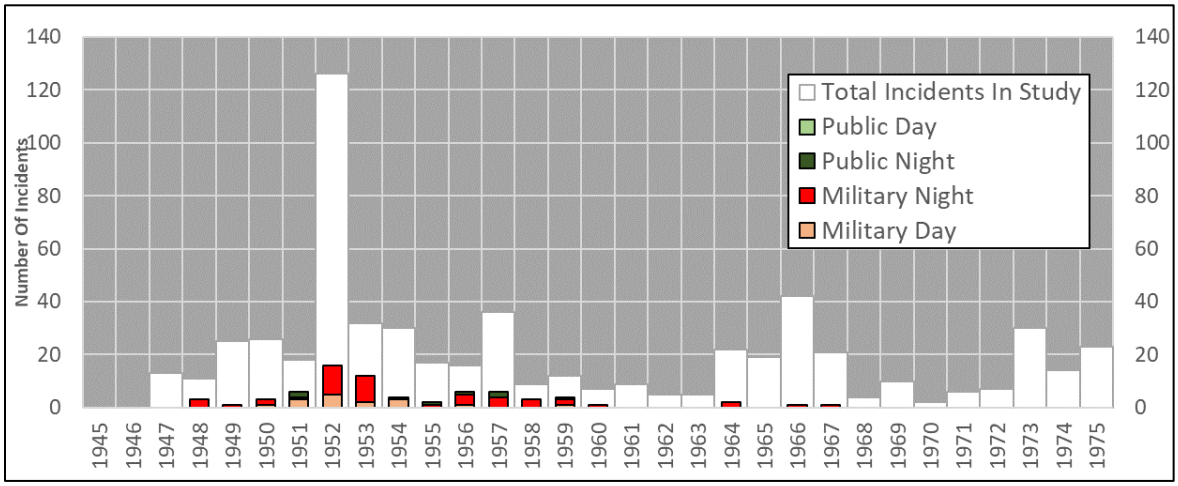

Figure 5-36 Total number of incidents involving engagement with aircraft / close approach and maneuvers compared to the total incidents in the study.

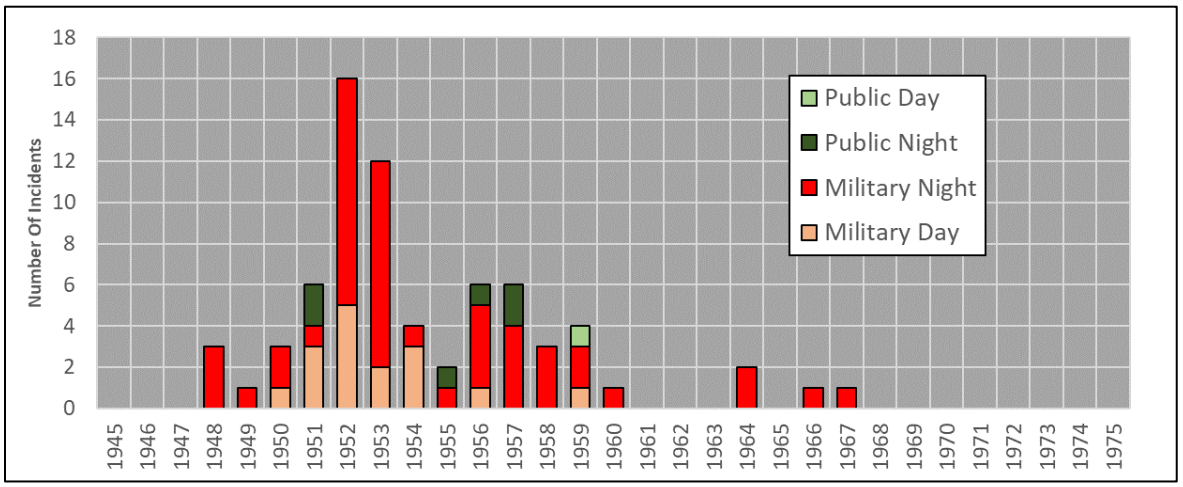

Figure 5-37 Total number of UAP incidents in the study involving engagement with aircraft with the military and public and day and night.

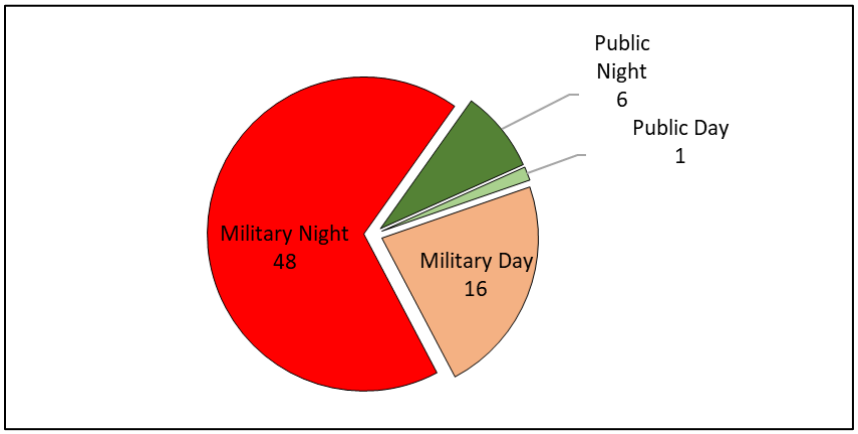

Figure 5-38 Total number of incidents during the study period (1945-1975) classified as engagement with aircraft (71) and the distribution between Military/Public and Day/Night

Examples:
February 23, 1949, Sandberg Pass 40 miles South of Bakersfield, California. 10:30 p.m. The Air Force pilot of T-11 aircraft from the 703rd Air Reserve Division flying at 10,000 feet observed a sausage-shaped object circle his aircraft, making a series of 360° and 180° turns in the process. (Sparks 168)

December 4, 1949, Hammond, Louisiana. The three-man crew of a C-47 military transport flying over Hammond, Louisiana observed a bright silver sphere the size of a fighter approach their plane head on, then execute a turn and take a station keeping position with the aircraft. It held that position, bobbing up and down. The sphere then made a series of sudden starts and stops, maneuvering in all directions. Following that activity, it flew directly across the nose of the aircraft, departing at very high speed. (Sparks 310)

July 9, 1951, near Augusta, Georgia. 1:40-1:50 pm. The pilot of an F-51 fighter observed an oval disc about twice the size of his plane come out of the sun toward him, apparently flying at high speed in a head-on approach. At the last moment the object lowered its altitude and flew underneath the aircraft – then turned to pursue the fighter, positioning itself to the front again - and made a second head-on dive. That same maneuver was repeated several times until the object finally broke off and climbed out of sight. The pilot had ample occasion to obtain a very good view of the object as it approached as close as three hundred to four hundred feet. It was a physical object, round but flat on top and bottom as well as apparently spinning. (Sparks 458)

December 4, 1952. 2 miles SE of Laredo AFB, Texas 8:46-8:56 p.m. An Air Force pilot flying T-28 trainer aircraft at 6,000 feet and 180 knots observed saw a bright bluish-white glowing object below him at about 1,500-2,000 ft. The object rapidly climbed to his altitude, showing no navigation lights. The pilot executed a tight turn left to keep object in view. At that point the object suddenly climbed to 9,000 feet only to again drop down to the level of the aircraft, then stopping and hovering in place for a brief period. The pilot proceeded towards it and the object then suddenly headed towards him on collision course at high speed - wavering slightly at about 300 feet distance as if determining which side to pass the aircraft. It then moved off the aircraft's left wing at distance of 150 feet. The pilot then observed a blurred reddish-bluish haze around the object, which appeared smaller than his aircraft. (Sparks 881)

June 20, 1952, over the Oak Ridge atomic plant in Tennessee, an F-47 fighter on combat patrol was directed toward a UAP – upon approach the object turned on the fighter and made a series of ramming like approaches towards the aircraft before leaving the area. (Sparks 629)

January 27, 1953. 4 mi S of Hanford, California 10:44 a.m. (PST). Two Air Force pilots in a T-29 aircraft at 8,000 ft, saw a round flat object like a pie tin, very bright, a brilliant silver. After 1 to 1.5 minutes and 3 or 4 more objects were observed. The original object moved towards the aircraft, then away from it, and back towards it again. The pilot of the aircraft thought a midair collision was imminent. The other, much more distant objects, appeared to be tumbling within themselves not in an ordered formation, giving a barrel-roll effect while passing inside of each other at altitude estimate at or 15,000 to 20,000 ft. (Sparks 916)

August 5-6, 1953, South Dakota. 9:05 pm. A patrol interceptor, an F-84 Thunderjet, was in the air and was immediately given directions to the UAP. Once given the proper vectors, the pilot immediately identified the target and accelerated to intercept it. Ground-based radar tracks were obtained for both the jet and the UFO, which flew away from the jet, seemingly adding speed whenever the jet closed distance. The F-84 chased the UFO for some 120 miles, tracked by the ground radar. At that point it reached the limits of its fuel range and turned to head back to base. As the jet turned, the target reversed its course as well, following the jet. (Sparks 951)

June 23, 1954. 10 miles SE of Columbus, Ohio. 8 p.m. Air Force pilot flying Ohio Air National Guard F-51 fighter at 240 mph from Dayton to Columbus saw round white object with no exhaust trailing the fighter in the same position a little above and behind him at close range. The pilot maneuvered the fighter to try to lose the object and avoid a collision, but the object maintained the same relative position to the aircraft until it departed. (Sparks 1046)

January 29, 1955. Winterset near Des Moines, Iowa. 9:07 p.m. Two Iowa Air National Guard with the 132nd Fighter Bomber Group were flying a T-33A jet at 330 mph when they observed white light flashing light approaching their aircraft on a head-on collision course in level flight at 20,000 ft. At the last instant the object rose and flew over the jet, climbing rapidly to 35,000 ft. When the pilot tried to chase the object it out-climbed and out-turned the jet, while carrying out very high-speed maneuvers. (Sparks 1104)

6. Observations

UAP activity occurring in the public domain occurred across the geographic area known as the ‘Rust Belt’ but did not contain focused cluster areas with identifiable characteristics. This finding contrasts with UAP activity occurring in the military domain. UAP activity for the military domain clustered around specific bases and installations. Military sites associated with atomic weapons development and deployment received the majority of observed UAP activity.

Between 1969 to 1974 public domain UAP incidents are clustered in the upper Midwest, and at the time still contained much of the nation’s iron and steel production. UAP reports came largely from more rural areas of these regions and in many instances involved close approach type activities.

In addition, one other area of geographic clustering was noted in the latter period of our study, that area involved major Air Force ICBM installations across the northern states adjacent to the Canadian border (commonly referred to as the 'northern tier' missile sites). Incidents at those locations involved numerous security intrusions and are inferred to represent a continuation of focus on atomic weapons deployment.

7. Conclusions

Patterns of radical and interactive flight coupled with high visibility during daylight observations further supports the conclusion that UAP are conducting activities with the early intention of recognition. The patterns and individual observations suggest that UAPs were intentionally identifying themselves as intelligent actors. These patterns indicate an intelligent actor possessing advanced technology.

An alternative assessment would be that there was no specific intention in play, with the observed activities simply reflecting the intention of a military survey, with either no concern over the associated observations or with some activities such as aircraft engagements being an element of the survey itself.

In addition, the pattern analysis reveals the possibility of transitions in public domain intentions over the study period. While activities related to visibility and recognition dominate the early years, a shift occurs towards activities suggestive of first some intention towards contact beginning in the late 1950s to mid-1960s, followed by activities more closely associated with basic behavioral studies by the 1970s.

Given the transition in types of UAP activities over time, the possibility that a significant change in intentions related to the public domain may have occurred. Activities during the earliest period, 1945-1964 were characterized as high visibility with a probable element of inferential messaging, highly anomalous technology, intelligent focus and action, even direct interest in observers by UAPs as seen in both aircraft encounters and engagements. During the 1950s instances of electronic transmissions, even coded transmissions, could be interpreted as a limited effort to initiate communications.

Yet activities during the final decade of the study are of a different nature, with more incidents involving small groups of observers, longer observations during UAP loitering, and a series of close approaches to small numbers of observers, not in aircraft but isolated at ground level. The incidents involved in those activities do not appear to comport with what would be acceptable contact protocols, in numerous instances interpreted by observers as being aggressive or even threatening. To that extent the activities appear to suggest aspects of very basic human behavioral studies rather than steps towards contact or communications.

7.1. Expected Progression of Observed Behavior

When gathering information to assess if 'decisive' action is necessary based on the capability and intent of an unknown actor, movement should progress from an early neutral clandestine approach, as they seek to understand the operational environment and assess risk, to a more overt and either positive, neutral, or negative perception which is dependent on the intention scenario (FM 3-0 US Army Unified Land Operations).[43]

Unilateral exploitation would likely involve a more negative interaction early on than other scenarios, which require more time for display activities and actions that demonstrate the lack of hostility to avoid misunderstanding and conflict.

Unilateral assistance can be perceived as either positive or negative especially early on when we may not understand the nature of their assistance. There may be a confusing mixture of both perceived negative and positive interactions.

Behavioral studies – Behavioral studies can be either clandestine to avoid disturbing the subject, or more overt if the subject's awareness of the observer is not a critical factor to the observation or action. During the early part of this study, UAP appear to be conducting high visibility activities suggesting an early intention of recognition, so a move to a more clandestine behavior suggests either a change in study interest or a transition to a more focused intention beyond simple observation.

Recognition, contact, communication and collaboration form the paths along which a contact protocol should progress. A contact protocol should start with neutral behaviors, and as recognition is established, actions should progress toward overt contact with positive effects based on mutual perception.

Figure 7-1 shows the expected progression from a neutral clandestine position to a more overt position through the various possible intention scenarios.

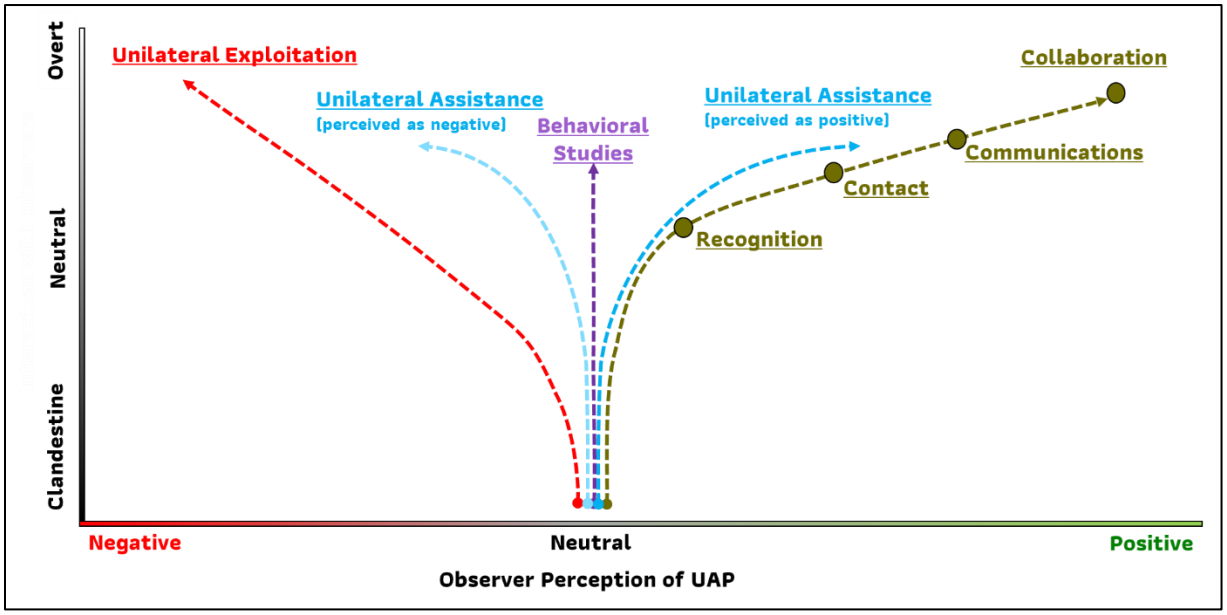

Figure 7-1 Intention scenario development, overt/clandestine vs observer perception negative and positive

7.2. What is observed during the study period is opposite to the expected progression.

What might be expected in a progression activity extending from an intention of recognition as unknown but intelligent actors towards intentions of contact and communications (possibly in respect to an even longer-term goal of collaboration) appears to have stalled, as illustrated in Figure 7-2.

The combination of elevated activities for interactive flight, radical flight, loitering, close approach, and aircraft engagement, support a primary intention of recognition. The combination of elevated activities for loitering, close approach, and aircraft engagement, support a primary intention of Behavioral Studies. The data showed a shift in activities from military engagements during the day to public encounters during the night. The level of broad UAP visibility during the early years of the study suggested Recognition, while the close approaches to a small number of observers public encounters during later years of the study suggested Human Behavioral Studies.

Rather than an expected progression of UAP becoming more overt (either negative, neutral, or positive), UAP have become more clandestine, and our perception of their activity has become more negative. While Running through the whole study period is military interference and intrusions occurring at key strategic times of the development and deployment of atomic weapons.

One challenge with evaluating intentions, based on activity, is the perception of UAP behavior. An example is the 1967 Malmstrom incident where a UAP disabled several missile silos. This action can be perceived as either assistance or exploitative. It could be perceived that the disabling of nuclear warheads was intended to assist with the prevention of a nuclear disaster. On the other hand, this same action can be perceived as an act to assert dominance or prepare for an aggressive action.

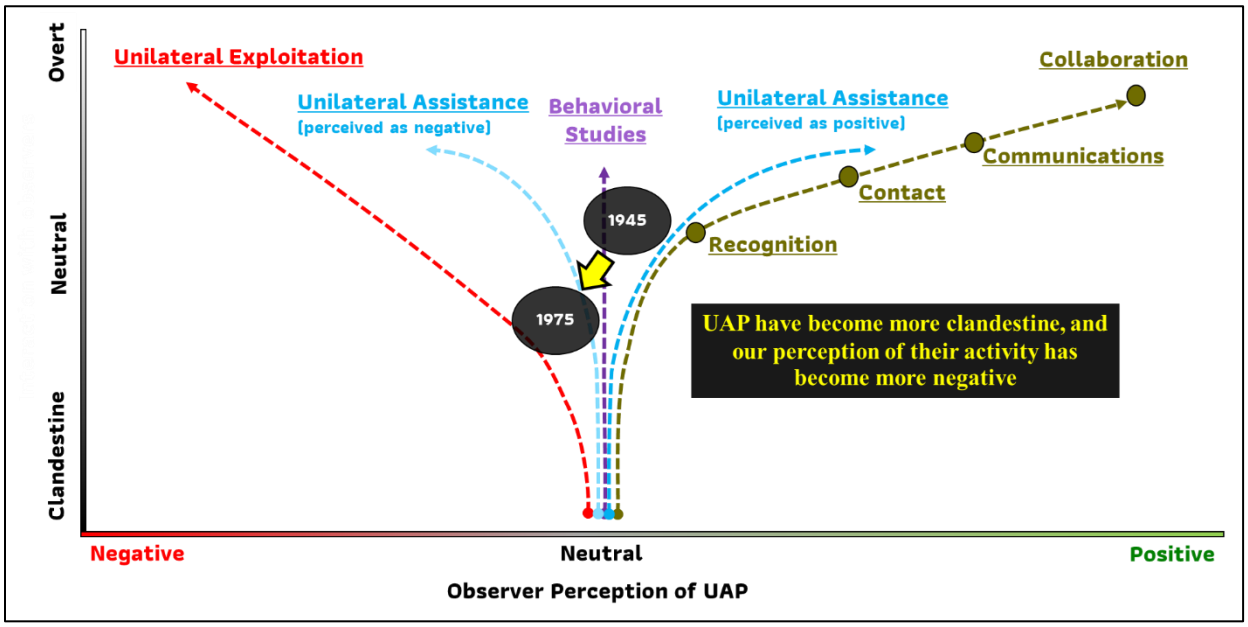

Figure 7-2 Movement during the study period from slightly overt and positive to slightly clandestine and negative.

7.3. Most Probable Intention Scenario

This study found the most probable UAP intentions scenarios for the military and public domains for the period 1945 – 1975 to include a Military Survey of Atomic Weapons capabilities, Recognition of UAPs as intelligent actors possessing advanced technology, and Human Behavioral studies. While Recognition appears to have been a constant, we note a shift in emphasis from military survey to behavioral studies occurred over time.

A scenario of Recognition is supported by the ongoing demonstration of UAP radical flight and interactive maneuvers while Survey is indicated by a focused, non-random pattern of activity related to an evolving focus on the developing elements of the atomic warfare complex. A non-random pattern of activity is also observed in regard to indicators suggestive of Behavioral Studies specifically to observer physical reactions, with a clear transition over time in indicators such as extended UAP loitering and directed, close approaches to small groups of observers.

With respect to the other intentions scenarios assessed in the study, there are instances of possible inferential messaging related to UAPs being intelligent actors and of possible instances of basic electronic signaling. Those could be interpreted as the first stage in an intention of Contact. However, there are no corroborated reports of UAP messaging at the level of either symbolic or verbal communications and no indication of any effort to establish higher level, bilateral communications at the level of written or verbal language. If intentions of either Contact or extended Communications existed, it appears not to have progressed beyond inferential messaging and basic signaling – possibly due to the lack of any response directed back to the UAPs.

The intentions scenarios of Communications and Contact cannot be excluded based on the limits of our study period and data, however we cannot assess them as having the highest probability. In contrast, given the lack of Contact and Communications, we assess a low probability for any immediate intention of Collaboration or Unilateral Assistance. It is possible that Unilateral Assistance might be an intention (related to an weapons survey), however that would be a subjective inference simply based on an apparent UAP capability for such an action.

In respect to the scenario of Unilateral Exploitation, there was insufficient data to support aggression or detriment to the environment based any activities examined for this study. The assessments for activities under this study are subject to available data, which requires further study.

8. Limitations and Other Studies

A limitation for this study is the data is restricted to incidents related to the United States for the period 1945 to 1975, and therefore the results of this research apply strictly to the U.S. Similar patterns and intentions identified in this study should be reflected in other geographic regions but may be offset in time due to the different levels of advancement and timing for technological developments in those regions.[36]

Further study is required to determine whether the patterns identified in this study are consistent with similar observations made globally and beyond 1975. Data compiled by the Aerial Phenomena Research Organization (APRO)[44] is another data repository that can be used to compare findings for future data analyses. Global efforts for data collection and analysis will improve intelligence assessments for the intention of advanced non-human intelligence and inform a strategic approach to NHI contact.

The patterns also suggest we should continue to see periodic UAP incidents clustered in time around any significant new developments in the atomic warfare complex or other significant military technology developments.

9. Credit Author Statement

L. J. Hancock: Conceptualization, Methodology, Investigation, Data Curation, Writing - Original Draft, Writing - Review & Editing, Supervision. **I. M. Porritt**: Conceptualization, Methodology, Formal Analysis, Writing - Original Draft, Writing - Review & Editing, Visualization. **S. Grosvenor**: Conceptualization, Methodology, Investigation, Data Curation, Writing - Original Draft, Writing - Review & Editing., **L. Cates:** Conceptualization, Methodology, Investigation, **J. Pierson**: Methodology, Writing - Original Draft, Writing - Review & Editing.

10. Acknowledgments

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11. Data Repository

The 597 incidents used in the study necessary to reproduce these reported findings is available at https://doi.org/10.5281/zenodo.14647871

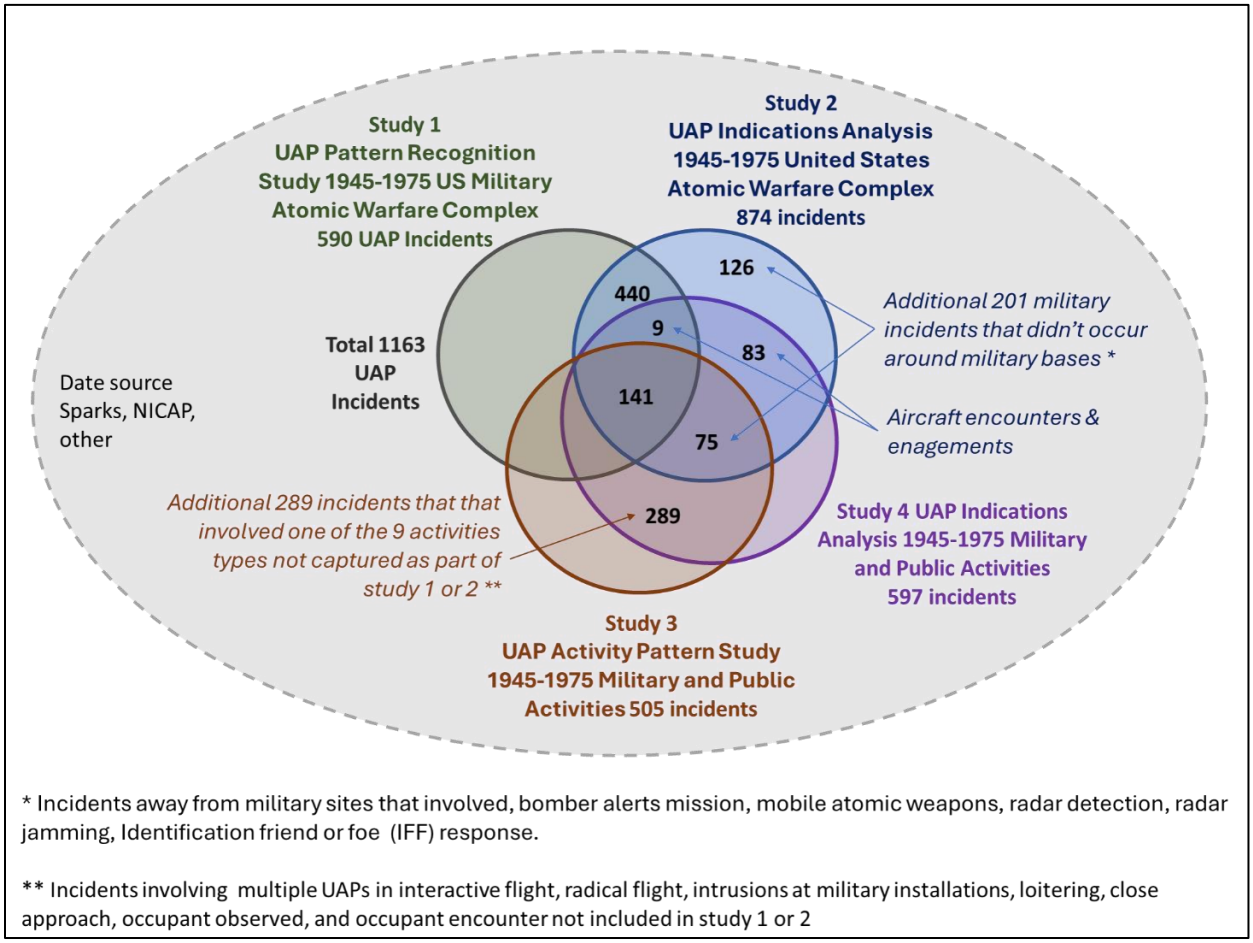
Appendix

Appendix 1 – Related studies

The SCU Intentions study team addressed a series of questions related to UAP activities and intentions during the period of 1945-1975. The first two studies involve an examination of activity patterns within the military domain, and a related examination of military intentions scenarios developed from those patterns.[2,3]

A second set of two studies examines and compares activity patterns within the military and public domains.[3] This paper evaluates those patterns in association with a set of intentions scenarios for the military and public domains. All four studies cover the same study period 1945-1975 and use reports from a common data source (section 3.1). Reports for each study are selected based on the specific focus of that study.

Study 1 included reports related to specific military facilities as well as related control sites, study 2 included additional military reports to provide a wider military context and study 3 includes reports on specific UAP activity, including in the public domain. Details on the specifics of military site selection are included in studies 1 and 2. Overall 1,163 incidents are used in the initial three studies (Appendix 1). Inclusion of the reports for each study was based on the question being addressed in each individual study.



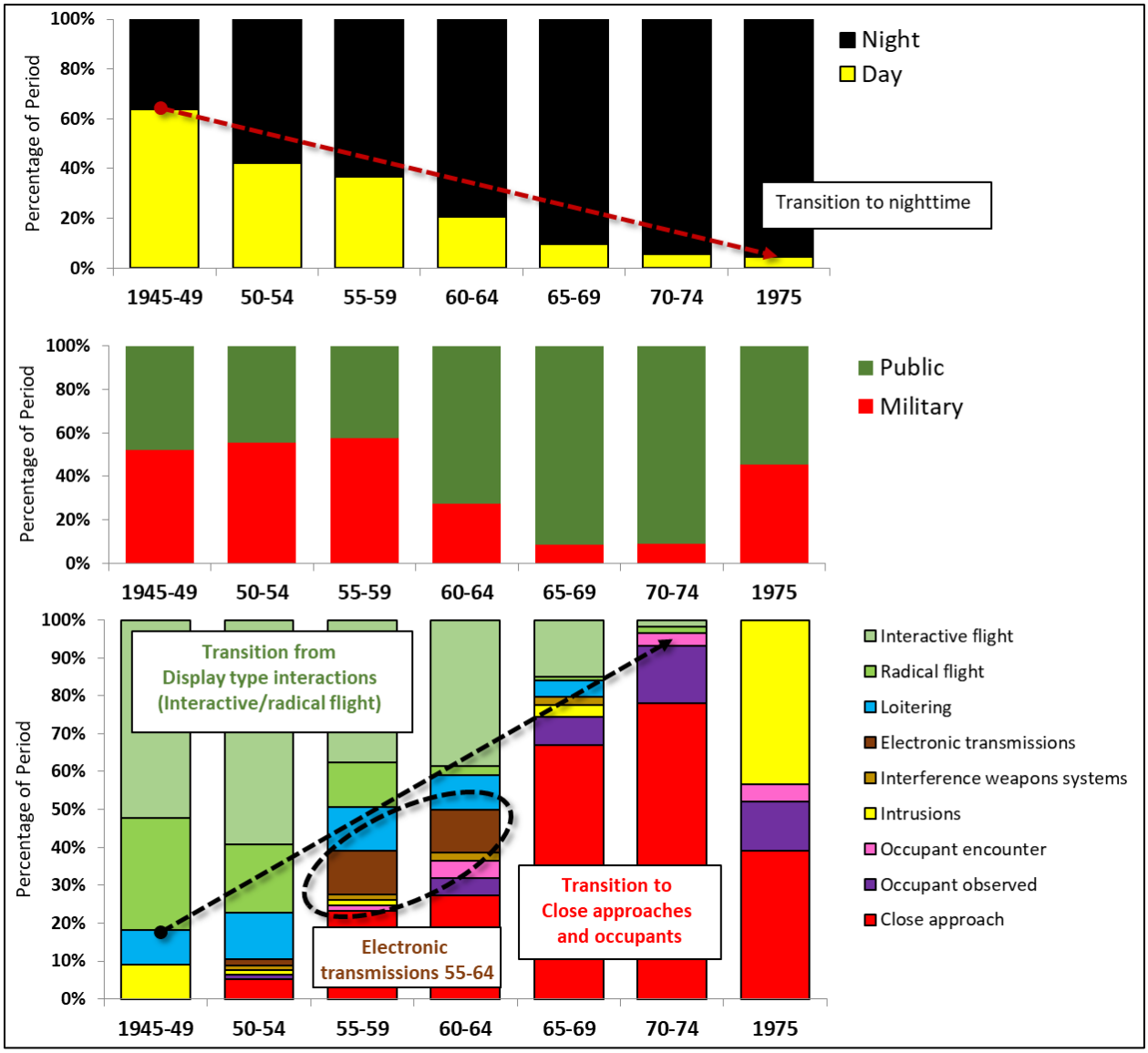
* Incidents away from military sites that involved, bomber alerts mission, mobile atomic weapons, radar detection, radar jamming, Identification friend or foe (IFF) response.

** Incidents involving multiple UAPs in interactive flight, radical flight, intrusions at military installations, loitering, close approach, occupant observed, and occupant encounter not included in study 1 or 2

Appendix 1 - Total number of incidents used in all four studies and how the number of incidents overlap between the Four studies. [1,2,3]

Appendix 2 – Identified Patterns

Appendix 2 identified high level patterns from the SCU UAP Activity Pattern Study 1945-1975 Military and Public Activities. The patterns show trends for daytime vs. nighttime, military vs. public, specific activities observed for UAP. Data presented in five-year blocks show a transition from daytime to nighttime activities, with a corresponding shift from military display activities to interactions with the public.



Appendix 2 - High Level Patterns from UAP Activity Pattern Study 1945-1975 Military and Public Activities study.[1]

References

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Observations and Inferences/Comparative Methods Modern Cultural Anthropology, Comparative Methods. Cultural anthropology deals with the evolution of human behavior, belief s system and enculturation (acquisition of the characteristics and norms of a culture or group by individuals) as well as the evolution of social structures within the culture being studied – none of which can be explored without a solid working knowledge of the verbal and symbolic elements involved in group messaging and communications.
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The non-human involved in that paper was a Humpback whale, a member of a species studied at length because of their apparent intelligence and complex interspecies communication - "Humpback whales are extremely intelligent, have complex social systems, make tools - nets out of bubbles to catch fish -, and communicate extensively with both songs and social calls," (Dr. Fred Sharpe, Alaska Whale Foundation).
In December 2023 a team of scientists a team of scientists was transmitting what is known to be a humpback greeting call into the sea via an underwater speaker. In an apparent response, a humpback approached and circled the team's boat, responding in a conversational style with his own series of greeting signals. Over a period of 20 minutes the team transmitted the greeting signal with different intervals of time between the transmissions. In each instance the whale responded with the greeting, matching the signaling timing from the scientists. in time and duration. Whales responded to each signal from the team, with the whale 'greeting signal. The lead author of the paper on the encounter writes "We believe this is the first such communicative exchange between humans and humpback whales in the in the humpback language.
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Summary of Anthropologists/Ethnologists/Contact stages

- Observe and determine what are considered as safe "fight/flight" distances.
- what is the relationship between physical proximity and an aggression/fight response.
- Minimize any appearance of threat.

- Observe and determine "no threat" patterns of approach (mimic observed non-threat contacts)
- Avoid direct physical contact.
- Minimize gesturing and body movements.
- Model gifting behaviors
- Exchange gift objects

Military/Contact stages:

- If possible, gain attention at considerable distance with lights or EM signaling.
- If contact is at close range gain attention with minimal signaling, limited to physical movements, while maintaining a distance
- Avoid direct contact even if those approach move directly towards you (you may be perceived as a threat) – leave area immediately if it appears a fight response has been triggered.
- Avoid escalation of contact – do not move directly towards them (no collusion course)
- Do not go covert, leave lights on, no smoke screen, decoys, etc. which suggest you consider yourself under attack.
- No aggressive, engagement type maneuvers
- No active tracking via radar or other EM tools such as radar, laser, IR etc.
- Use only passive sensors.
- No broadband EM transmissions (jamming)
- Any further EM signaling should be omnidirectional so as not to suggest targeting or impeding attack.
- No approach unless given a reply in some form confirming receipt of initial signals.
- No proximity approach unless unknown mimics your own passive actions (as above)

[17] Organization of American States, InterAmerican Commission on Human Rights. Indigenous Peoples in Voluntary Isolation and Initial Contact in the Americas. Rights, Organization of American States. https://www.oas.org/en/iachr/indigenous/docs/pdf/report-indigenous-peoples-voluntary-isolation.pdf, Accessed 8 Aug 2024. A lack of response and return messaging is not unknown in contact attempts during ethnological field work with indigenous groups. Rejection of messaging and contact efforts is, in some instances, considered as a survival strategy by indigenous groups choosing to avoid cultural assimilation.

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[20] Santiago Castro Zaballa, 2019, https://medium.com/predict/how-complex-is-dolphins-communication-9b77065e313d, Accessed 9 Aug 2024. Some researchers argue that at least one species of Dolphins language is open and hierarchically organized like ours. Their work posits that bottlenose dolphins use a form of language which is 'open and hierarchically organized', of similar complexity to human language. If true that suggests that like in human language, bottlenose dolphins can speak about any topic and describe any situation.

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Given the challenge of translation, NASA used a symbolic/graphic approach in preparing a communications device (plaque) carried by the first space probes which had the escape velocity to leave our solar system – the Pioneer 10 and 11 spacecraft. That approach was extended on the device (record) developed for the Voyager spacecraft launched in 1977 and anticipated to leave the solar system. Both the plaque and record were prepared to introduce human intelligence to any non-human who might ultimately encounter these spacecrafts. They relied on a combination of pictorial information containing both what was hoped to be universal scientific information (physical constants) and imaging of a human male and female as well as the Earth's position within our solar system. The Voyager records extended the imaging to carry 116 photographs and a variety of recorded sounds including samples of 55 languages, all intended to reveal and characterize human life on Earth.

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