

## 3.3.1

Analysis of Ground Witness Sightings of Spherical UAP Approaching  
Airplanes and Airplanes Approaching Spherical UAP

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#### Abstract

This paper presents the results of an analysis 127 sighting reports made by one or more eye witnesses on the ground. Most were made within the past seven years. Every incident involved one or more spherically shaped UAP and one or more airplanes seen flying in the same airspace. These witnesses reported seeing either an airplane being approached, followed, (or otherwise interacted with) by one or more spherically shaped UAP (these are called Type I incidents and included 87 separate cases) or one or more airplanes seen chasing, seeking, or otherwise pursuing one or more UAP (these 37 cases are referred to here as Type II incidents). Both situations point to potential flight safety concerns whatever these UAP turn out to be. When airplanes are seen pursuing an unidentified object(s) the airplanes are almost always identified as military jets. These incidents raise serious questions concerning aviation safety and perhaps even national security.

#### Introduction

While most of the reports in the present document of which this report is a part were generated by pilot witnesses during flight (see 3.1 and 3.2) this chapter assumes a different vantage, namely eye witnesses who are on the ground.<sup>1</sup> The number of cases presented here is large enough to include people who possess a wide range of observational capabilities and reasons to report strange aerial events. Because of the presence of a stable visual environment around them<sup>2</sup> they are in a good position to judge the relative motion of the airplane and the UAP over time. That is, they are not very likely to misperceive what is happening above them although they may not know why it happening. On the other hand, poor visibility conditions, low ambient lighting, and the

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<sup>1</sup> Also see 3.3.2 for other incident reports (Ed.).

<sup>2</sup> This is true except for some witnesses who were in moving vehicles at the time.

sometimes large viewing distances between the witness on the ground and the unidentified aerial object(s) make it harder for them to accurately discriminate its shape, color, size, and proximal relations as we will see reflected in the data below.

#### Type I Incidents.

Here we define Type I incidents as any report of one or more spherical UAP seen approaching, pacing, following, leading, or interacting with an airplane over some reasonably long period of time. The airplane clearly must be the “focus of attention” of the UAP in order to be included. These kinds of incidents are important because they may not only suggest a possible interference or distraction of the airplane’s flight crew (and thus a flight safety issue) during the encounter but also may suggest the presence of a phenomenon possessing superior flight performance than that of the airplane(s) being paced. In view of the information on the relatively poor “flight” characteristics of spheres presented in 2.1 these data raise some interesting and controversial questions. Indeed, these spheres must possess some means of self-propulsion, differential lift, and flight guidance and control in order to perform the maneuvers that are described of them.

#### Type II Incidents.

Type II incidents are arbitrarily defined as any report of one or more airplanes that are seen approaching or otherwise trying to pursue one or more UAP. These kinds of reports are of interest because they suggest that the (mostly military) airplanes are pursuing the UAP deliberately probably because the object(s) cannot be identified, otherwise why would air force interceptors be involved in the first place? Thus, the objects are very unlikely to be weather balloons or unmanned aerial vehicles (UAV) (4.2) for a number of reasons. At the declaration of DEFCON 1, 2 or 3 the North American Air Defense Command ( NORAD) has the responsibility to positively identify all radar tracks, regardless of speed, within two minutes or less of their initial contact.<sup>3</sup> This is accomplished on the basis of their flight plan (should they be commercial or private airplanes), radio communication with the unidentified “vehicle”, or visual contact and subsequent identification.

#### The Database and its Organization

The present data came from a wide variety of sources whose reliability, in many cases, could not be verified. Many of the reports were obtained from internet sources such as the National UFO Reporting Center (NUFORC), the Mutual UFO Network (MUFON), Filer’s Files (<http://ufofiler.com>), and others (all in English)<sup>4</sup> with the remainder obtained from books, articles, and the pilot reports contained in the air-catalogue (AIRCAT) research files of Richard F. Haines. The majority of the reports were made after 2003.

These data may be biased by the fact that all sighting months and years were not researched exhaustively but only as sighting reports of interest were discovered. Again,

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<sup>3</sup> Identification of Air Traffic, NORAD Instruction 10-15, Para. 2.2.6, 1 December 1999.

<sup>4</sup> NARCAP thanks these organizations for the use of these reports for research purposes (Ed.).

no attempt was made to review all years or all available reports; this would have been a nearly impossible task considering the diversity and large number of sources extending back many years. Nevertheless, the present sample size is large enough to suggest some interesting trends.

I began this research by collecting, cataloguing, and analyzing reports from eye witnesses on the ground where an airplane and UAP were seen flying within the same airspace. I reviewed a total of 482 reports (at the time of this writing) involving all UAP shapes.<sup>5</sup> However, the present report deals with only 127 reports where a spherically shaped UAP was seen (26 percent).

Sighting data were inserted on an Excel Spreadsheet with each row containing a separate sighting event. Type I events spanned the period October 24, 1949 to June 14, 2009. Type II events spanned the period July 14, 2005 to October 1, 2009.<sup>6</sup> Table 1 presents the factors that were quantified across the 29 columns. Because these reports were made by untrained observers on a ad lib, voluntary basis many data cells were empty.

Table 1

## Data Matrix Column Designations

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1.	Line number
2.	Sighting type (I or II)
3.	Event time (24 hr. clock)
4.	Event date
5.	Reference or data source
6.	Location (state or country) where sighting took place
7.	State (within USA)
8.	Airplane type
9.	Airplane Designation (P = private; C = commercial; M = military; U = unknown)
10.	Probable or possible military scramble
11.	Number of airplanes involved (seen)
12.	Number of UAP involved (seen)
13.	Number of eye witnesses.
14.	Which object altered course (Type II only)
15.	Self-luminous (L); Reflective (R)
16.	Reported size of UAP (mainly Type II events)
17.	Reported color, size, and shape of UAP
18.	Basic shape category (S = sphere; D = disc; C = cigar; T = triangle; O = other)

<sup>5</sup> Considering the 482 reports of UAP of all shapes, there were 183 incidents of Type I and 299 incidents of Type II. They will be reported elsewhere.

<sup>6</sup> Time did not permit the data entry of a larger number of Type II reports occurring before 2005 that were available.

19. Basic UAP characteristics/description
  20. UAP location relative to airplane
  21. Other comments
  22. Sighting time (D = day; N = night)
  23. Reported duration of UAP involvement with airplane
  24. Any apparent relationship between Day/Night and duration of pacing or encounter
  25. Reported flight maneuvers (airplane and UAP)
  26. How did UAP disappear from sight?
  27. Commonalities among witnesses
  28. Appearance of UAP versus its flight maneuvers
  29. Observations by NARCAP investigators
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#### Definition of the Term “Sphere”

Any report that referred to the UAP as a “sphere,” “globe,” or an “orb” was included here while the terms “round,” “circle,” and “point,” “star,” or “light” (etc.) were not included unless other details in the report clarified them as being spherical. For example, a “flaming fireball” was categorized as a sphere.

#### Results

Table 2 presents a comparison of various findings for Type I and II incidents.

Table 2

#### Comparison of Type I and II Results (Spherical UAP only)

Factor	Type I UAP chases A/C	Type II A/C chases UAP
Number of Reports	87	37
Most Recent Report	5-21-09	5-17-09
Airplane Designation		
Military	22 (25%)	26 (70%)
Commercial	39 (45%)	3 (8%)
Private	7 (8%)	1 (3%)
Other	0	1 (3%)
Not specified	19 (22%)	6 (16%)
Number of airplanes involved (min.; max.)	116 (1; 8)	67 (1; 10)
mean no./report	1.3	1.8
Number of military aircraft involved (est. only)	23	4
Number of non-U.S. witness reports	17 (20%)	5 (14%)
Total number of UAP involved	135	85
min.	1	1
mean	1.6	2.3

	max.	10	12
Number of spheres/orbs seen		145	85
	mean/report	1.7	2.3
Number of witnesses	max.	7	60 (1 case)
	mean	1.7	2.1
	min	1	1
Mean viewing duration across both types of reports		6.8 min.	
Viewing duration <sup>7</sup>	total	345.4 min	294.8 min.
	min.	4 sec.	1 min.
	mean	4.0	8.0
	max.	90 min.	45 min.
Number of sightings during the Daytime		21	5
	Nighttime	15	14
	Not specified	53	17

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There is no reason to expect most of the numbers in these two columns to be different from one another if UAP are known, man-made objects with known flight performance characteristics and are operated under authorized flight conditions. For example about the same number of eye witnesses report Type I incidents as Type II incidents which suggests that UAP and airplane(s) involved possess the same degree of conspicuity as they would be expected to have. Purposeful stealth capability might be implicated otherwise. No deliberate sampling bias was imposed during data selection.

The above data show that: 1. More airplanes are seen when UAP are chasing them than when UAP are allegedly chasing airplanes, 2. More UAP are seen when UAP are chasing airplanes than vice versa even though the maximum number of UAP involved is about the same for Type I versus Type II events, 3. The maximum viewing duration was twice as long when the UAP was seen chasing the airplane than the opposite. This is interesting because one might think that the witnesses would spend about the same average amount of time watching something strange happening in the sky regardless of which object (UAP or airplane) was chasing which. Nevertheless, these witnesses were willing to watch about twice as long when the airplane(s) was in pursuit of the UAP. Apparently they found it more interesting for some reason. 4. The finding that there were twenty-three possible military pursuits in Type I incidents and only four in Type II is provocative but would seem to be counterintuitive. Indeed, one would think the opposite would be true. 5. The largest number of jet interceptors seen during any Type II incident was ten.

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<sup>7</sup> These durations are: 1) Poorly documented, 2) More an estimate of how long the witness was willing to watch the event than how long the event actually lasted, and 3) Probably in error by a rather large factor.

### Time of Day Results

Forty five percent of all Type I events involved commercial airplanes. It is not surprising then that the sightings took place fairly regularly (spaced) between midnight and 6 am with small increases in frequency of occurrence between 2 pm and 6 pm. Indeed, U. S. commercial airplanes fly over much of the twenty-four hour day. Twenty five of the 87 Type I reports provided no time at all. The twenty two military aircraft associated with Type I events were, likewise, spread over all hours of the day and nighttime as might be expected. For some unknown reason, time of day was not cited in enough of the Type II reports to make any summary valid.

### UAP Shape

Regarding a comparison of the spherical UAP and all other reported shapes the following can be said:<sup>8</sup> 1. Eighty six of the four hundred eighty two total cases (18 %) involved spheres, 2. A total of twenty five different shape names were used. However, Type I incidents accounted for almost twice as many shape names being used as did Type II incidents (69 versus 38, respectively).

### UAP Color and Size

The reported colors of the apparently self-luminous spherical UAP were: white, silver, gray, red, red-orange, orange, black, blue, blue-green, green, grayish. Many witnesses described the sphere as possessing orange, yellow-red, or other “fireball” colors. The estimated size (diameter) of the spherical UAP was provided in only four Type I reports (viz., “1/3<sup>rd</sup> length of an airplane,” “small,” “20 meters,” “large”). The Type II reports included eleven size estimates of the UAP as follows: (“huge,” “dime,” “bb,” “football,” “large,” “not large,” “1/3,” “1/3<sup>rd</sup> of an airplane,” big,” “large,” “big.”) Clearly, these kinds of estimates are almost useless and mix absolute and angular size references without including adequate definitions or referents for comparison.

### Sighting Duration

This analysis showed that the longer an air intercept lasted the more likely it was that the UAP was able to somehow evade the pursuing airplane(s). The shortest reported duration of how long the reporter watched these Type I pursuits was four seconds, mean duration = 4 minutes, and maximum = 90 minutes. Likewise, the minimum reported duration of how long the reporter watched Type II pursuits was one minute, mean duration = 8 minutes, and maximum = 45 minutes. In many instances the airplanes and UAP flew out of sight (probably) leading the witness to stop looking into the sky. It isn't possible to comment on whether the airplane pursuits were successful in identifying these particular UAP.

If all of these (Type II) UAP chases by airplanes involved a balloon(s) of some kind one would expect that their identification would be speedy and would not involve an

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<sup>8</sup> These data relate to the larger study from which these spherical data were drawn are discussed in greater detail in 4.2.

average of eight minutes (maximum = 45 minutes) viewing time to accomplish. Of course some pursuit airplanes might have been farther away from the UAP at the start of the sighting.

**Airplane Models Reported**

A rather large number of airplane models were reported although it is impossible to verify whether the witnesses could correctly identify them. Nevertheless, Table 2 lists these airplane models and/or descriptions.

Table 2

Airplane Models Reported

Military	<b>Type I Incidents</b> (n = 93)		
	Commercial	Private	Unspecified
B-29 (1)	MD-80 (2)	Cessna (2)	airplane (2)
B-47 (1)	B-737-800 (1)	small plane (1)	jet (4)
B-58 (1)	B-747 (1)	light plane (1)	helicopter (6)
C-130 (1)	B-727 (1)	unknown (3)	unspecified (3)
Transport (1)	Learjet (1)		
Thunderbird (1)	jet (8)		
F-104G (1)	airliner, airplane (6)		
F-14 or F-15 (6)	unspecified (24)		
F-117 (1)			
Blackhawk (1)			
Stealth (1)			
military jet (2)			
large (1)			
unspecified (4)			
jet (4)			
Military	<b>Type II Incidents</b> (n = 38)		
	Commercial	Private	Unspecified
F-16 (1)	plane (1)	unspecified (1)	unspecified (3)
F-18 (1)	unspecified (3)		
Fighter (1)			
jet(s) (6)			
helicopter (5)			
plane (1)			
stealth (1)			
Blackhawk (1)			
unspecified (13)			

### Air Force Scrambles:

According to official U.S. Air Force information the North American Air Defense (NORAD) monitors about 40,000 flights a day and can alert one hundred or more jet interceptors to scramble within ten minutes notice. Of this number about 7,000 involve international flights arriving in U. S. territory. (Slobodian, 2001). While accurate statistics on the number of unknown aero-vehicles detected by radar and other means every year are imprecise one source (op cit.) has suggested as many as three or four deliberate scrambles occur each day in America.

“From the time the FAA senses that something is wrong, “it takes about one minute” for them (FAA) to contact NORAD who can scramble fighters “within a matter of minutes to anywhere in the United States.” (op cit.) The Air Force said an F-15 routinely goes from the scramble order to 29,000 feet altitude in two and one-half minutes and can travel at about 1,800 mph thereafter.

### Conclusions and Summary

This analysis has provided support for the assertion that the same or very similar UAP are being seen both from the ground as from the air (of course not necessarily at the same time); indeed, they possess the same colors, details, and flight performance capabilities when seen from either vantage.

The relatively long (viewing) times and high speeds of the spherical UAP that are reported raise the question of their means of propulsion and ability to maintain aerodynamic lift over such long periods of time (see 2.1). Further, their high degree of maneuverability raises the question of energy management and precise trajectory control, all relative to the airplane flying nearby. It is one thing for an airplane to pass by a passive, free-floating balloon that will appear from the cockpit to slide smoothly by the airplane. It is quite another for the spherical UAP to remain stationary off one wing of an airplane that is flying many hundreds of miles an hour for ten minutes (or more) only to suddenly veer to a different position (e.g., behind the airplane) and remain there for some time and then to dart forward again and quickly assume the same forward speed as the airplane before accelerating away into the distance. In this same regard almost all of the UAP in Type I incident reports accelerated to the locale of the airplane and then very suddenly slowed to its speed. How (or why) this is accomplished is not yet known.

From the perspective of aviation safety, the Type I incidents are particularly provocative because in many cases it is unclear whether the aircrew were aware of the presence of the UAP.<sup>9</sup> Further, the potential for transient or permanent effects on electrical systems caused by emissions by the UAP should not be overlooked.

Finally, the question must be raised why such a large proportion of the military jet airplanes appeared to be unable to get near the UAP they were pursuing? In approximately eight of the 37 Type II incidents (22%) the UAP was seen to simply

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<sup>9</sup> Two examples of this situation are found in the sighting of July 3, 2005 near Palo Alto, California and discussed with Figures 1 – 3 in 3.1.6 and also in case 6 of 3.3.2 (Ed.).

disappear when one or more jets were converging upon it and then reappear when they withdrew. In the other cases the UAP simply accelerated to another spot in the sky leaving the jets without a “target, out maneuvered the airplane(s), or disappeared at great speed over the horizon. How they do this is also a mystery.

The assertion that the reports made by ground witnesses are not reliable and should not be accepted at all is unsupportable. Indeed, eye witness testimony is admissible as evidence in courts of law given certain legal qualifications.

#### Reference

Slobodian, L., NORAD on Heightened Alert: Role of Air Defence Agency Rapidly Transformed in Wake of Sept. 11 Terrorist Attacks. The Calgary Herald, October 13, 2001.