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Aviation Safety in America:  
Unidentified Aerial Phenomena  
And  
Under Reporting Bias

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National Aviation Reporting Center on Anomalous Phenomena

## **Abstract**

Science has validated the existence of several kinds of natural phenomena that are characterized by unusual aerial lighting displays. Some of these phenomena are not clearly understood and have been only recently documented. Additionally reliable observations from US government and official international sources include descriptions of airborne objects with uncommon characteristics. Some of these phenomena have electrical properties that can adversely effect safe aviation and appear to be very unusual to observers. Some of these phenomena represent a physical hazard that is documented in several US Government operated aviation incident-reporting systems. These poorly understood phenomena have not been given appropriate consideration for the potential hazards they may represent by the US aviation system. Though these observations and incidents do occur they are under reported. This under reporting bias is affecting aviation safety planning and mitigation with respect to unidentified aerial phenomena - UAP. The sources of this bias are found the unusual nature of UAP observations and incidents, the unfamiliarity of the US aviation system with unidentified aerial phenomena, and the efforts by the US military to resolve these events (see Appendix A). No official efforts to review these incidents and observations have been undertaken within the US aviation system. No steps have been taken to educate aviation professionals regarding these events. Information regarding these incidents and observations flows into the military and intelligence community and is not reviewed by safety administrators and aviation managers. There are no technical or procedural solutions in place or on the drawing board.

Analysis of audio recordings of UAP incidents acquired through the FOIA reveals that safety is compromised by confusion, fear and lack of initiative when aviation professionals are confronted with the presence of UAP (see Appendix B). These findings are discussed along with specific recommendations for the resolution of this problem.

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## Introduction

Science has validated the existence of several kinds of natural phenomena that are characterized by unusual airborne lighting displays, some are related to tectonic or geomagnetic activity, others are related weather induced electrical activity, solar and meteor activity, etc... Some of these phenomena are not clearly understood and have been only recently documented. These phenomena can have electrical properties that can effect avionics and electrical systems and can appear to be very unusual to observers. Some of these phenomena are quite dynamic and encounters are described as near mid-air collisions. Though these observations and incidents do occur they are under reported.

The issue of valid U.S. pilot reports of Unidentified Aerial Phenomena, UAP and the seeming lack of attention given to these reports by the aviation system is a complicated one. There is clearly a longstanding bias in place that severely inhibits the reporting and investigation of UAP incidents. This bias stifles open discussion of UAP amongst aircrews, management, safety administrators, and the researchers who try to acquire information on this important topic.

These incidents clearly affect aviation safety. Some UAP incidents include very close pacing, and close passes that are described by aircrews as near mid-air collisions. Some UAP incidents also include transient and/or permanent effects on avionics systems. The distraction to aircrews has a direct effect on cockpit resource management (CRM). In some cases, passengers and crew have been injured by emergency control inputs implemented by aircrews to avoid what is perceived as a potential collision with UAP. There are cases involving downed, or missing aircraft and crews.

Some UAP encounters involve ground-based radars that provide verification of the presence of uncorrelated targets near aircraft whose crews report observations of UAP. Often these observations and incidents go unreported even though these "radar/visual" events involve significant numbers of witnesses including aircrews and passengers, radar operators, air traffic controllers and supervisors.

The confusion surrounding these incidents and observations is evident in the air traffic control tapes that regularly record all transmissions and communication between the control tower, aircraft, and peripheral facilities. An analysis of an FAA audio recording of an air controller addressing a UAP observation is included in Appendix B.

Military pilots are supported by post-mission debriefings as well as specific radars that continually examine their activities and occasionally capture the presence of UAP. In turn, these observations are protected from public scrutiny by secrecy oaths taken by all military officers and enlisted men. Even so, through the Freedom of Information Act many of these incidents and observations have become public record. This information never travels directly back to the aviation safety planning community.

It is unreasonable to conclude that conservative, responsible individuals don't see

UAP. The image of conservative responsibility offered by the airlines may contribute to an environment that is not conducive to reporting unusual observations or incidents.

Some commercial and private pilots report incidents and observations to the various incident databases, but those incidents and observations are not actively examined for their effects upon aviation safety by the various government and civil organizations charged with aviation safety issues. In fact, when one reviews the various incident databases it becomes apparent that there is no allowance for reporting these types of incidents on the reporting forms or in the process. Reporters are left to their own devices to explain their experience.

This reluctance to report safety-related UAP incidents has its roots in several significant historical events (Appendix A). These events have served to create, or have significantly contributed to, an atmosphere of fear. Fear of ridicule, fear of having one's competence questioned, fear of losing one's career, fear of government reprisal, even fear of the phenomena itself are all cited as reasons why pilots are not officially reporting many observations, close pacing and near mid-air collisions with UAP. These fears are unknowingly amplified by the lack of attention given to these incidents and observations by the US aviation system.

These incidents are being reported globally. Private research into these phenomena is ongoing. Official efforts to investigate them are being conducted by several nations. Case files and analysis forwarded to NARCAP from the Civil Aviation Authority Safety Research Group of the UK, Center for the Study of Anomalous Aerial Phenomena or CEFAA of Chile, Service Expertise for Rare Atmospheric Phenomena or SEPRA of France as well as many other countries support the contention that from a global perspective these incidents occur frequently, *though frequency of occurrence should not be a factor in determining safety concerns*

### **Pilot Commentary Reflecting an Under-Reporting Bias**

NARCAP receives reports from pilots and aviation professionals via email and other sources. During one week in the summer of 2001 we received reports from a number of current and former pilots, the majority of whom were commercial airmen. A review of some of the commentary from these pilots who have seen UAP includes the following:

“...We didn't say anything. We figured nobody would believe us.”

Charter Pilot

“...Upon return to my domicile, JFK, I reported our sighting to the proper authorities. I was shortly visited by two federal investigators who evidently thought I was hallucinating for one of them stated he had seen spaceships while fishing in Great South Bay and was quite obviously trying to prove that I was a loony.”

Fmr. Captain, Pan Am

“... It must have been Huge! We were all due back at JFK about the same time two days later so I waited in the crew ready room to talk to them. None of them wanted to talk! They were afraid management would take them off of flying status and have them tested for booze and drugs. The story never came out!”

Fmr. Flight Engineer, TWA,

“...a group of lights in the air appeared at our 12o'clock position. I called departure control and asked them if they had any traffic in that area. When they came back and said NO, what do you see, I said no, just checking. For at that time when a pilot reported seeing a UFO he was in a lot of trouble.”

Capt. Ozark Airlines (ret)

“...I, and Flight crew saw something (in broad daylight) that did things that no known aircraft could do without killing any living thing inside. I will only give sketchy details to protect the privacy of the rest of the crew. If you are interested, and all information (is) kept anonymous, contact me. I will not present myself for public ridicule.”

Captain, NW, (ret)

Reports to NARCAP of UAP observations and incidents are riddled with this type of commentary. Over and over again conservative, responsible airmen are heard to say that they fear that their competency will be questioned, that their careers will suffer, that they will be humiliated for reporting their observations.

## **NARCAP Aircrew Survey**

Late in 2001 NARCAP conducted a survey of a US commercial air carrier. The results were published as NARCAP Technical Report 5, Haines and Roe, 2001. This paper presents the results of a confidential aircrew survey presented to 298 currently rated and flying commercial pilots employed by a U. S. airline. Remarkably, a total of 70 completed surveys (23.5%) were returned to NARCAP within a 35 day period suggesting a high degree of general interest in this subject. Twelve questions were asked, most of which dealt with the possibility of past sightings of unidentified aerial phenomena (UAP) and how these pilots dealt with the experience afterward. Forty respondents were Captains (mean = 9,130 flight hrs.) and thirty were First Officers (mean = 4,799 flight hrs.). A number of interesting things were learned from this survey. It was found that of the sixteen pilots (23% of total) who said they had seen something they could not identify in flight only four (25% of the sixteen) reported it to their company or to a government authority and only one of these pilots (a First Officer) who saw a UAP felt that it was a threat to aviation safety and he did not report it. A variety of reasons were given for not reporting their UAP sightings. They included: not knowing whom to report it to or how to do so, judging the event to be unimportant, judging the phenomenon to be a military test, and (being) just too strange to report.

## Review of Aviation Incident Databases for UAP data

The FAA, the NTSB and NASA maintain aviation safety related incident databases. A keyword search of the FAA Incident/Accident Database and the NTSB Near Mid-Air Collision database revealed many incidents using keywords words like “unidentified aircraft” or “unidentified object”.

Even more incidents are evident when one searches the NASA administrated Aviation Safety Reporting System Database. This is a voluntary, confidential database. It employs a rigorous identification system to validate the flying credentials of the reporter while protecting his/her identity from employers and the FAA. This database contains over 332 thousand incident reports. Below are the results of a keyword search using phrases that may mask a UAP encounter and the number of cases that carry those descriptions:

“near miss, unknown aircraft, unidentified object”.....	.5,053 cases
“Near miss, unknown aircraft, unknown object & primary problem area = flight crew human factors”.....	973
(This category can refer to difficulties caused by control inputs made by the Crew to avoid collision.)	
“In-flight encounter/other & “primary problem area+ aircraft and their subsystems”.....	125
(This can refer to transient or permanent component or system failures which are common effects of close encounters with UAP)	
“unidentified object”.....	.9
“unidentified traffic”.....	3
“UFO”.....	1
“Flying Saucer, flying disk”.....	0
“Unidentified Aerial Phenomena”.....	0

It is important to emphasis the 973 cases where problems arose in the “flight crew human factors” category under the keyword search “Near miss, unknown aircraft, unknown object” as well as the 125 cases involving aircraft subsystems. It is also important to acknowledge that over five thousand potential UAP cases were described as a “near miss”. **Have there been any cases involving these factors that the crew was unable to resolve and that resulted in catastrophe?**

Given that many encounters involve unidentified lights rather than unidentified objects and the reporting forms used by the ASRS do not have categories for unidentified light(s) or objects, it is entirely possible that some of this data is inaccurate and the cause of the incident is not being accurately reported. It is appropriate to modify these reporting systems to accommodate a variety of observations.

Though many of the incidents listed in the ASRS database are consistent with those referred to as UFO, aviation professionals are unlikely to choose the phrase UFO to describe their observation. After many interviews with pilots and other aviation professionals one has the definite impression that they prefer to use apparently less stigma-inducing words like “unidentified object, or unknown aircraft” even though the description of the incident itself is consistent with those commonly described as “UFO”. Given that the “object” in question was airborne one might argue that Unidentified Object and Unidentified Flying Object are the same thing. Whether one calls them UAP, UFO, Anomalous Aerial Phenomena, Rare Atmospheric Phenomena, Unidentified Object, Unknown Aircraft, etc... one is speaking of the same thing. Whatever it is, it is not known to the observer. Pilots choose their words carefully to avoid being associated with a UFO sighting even though that is exactly what they may have experienced. It is appropriate to ask “Why?”.

In the NASA ASRS data, potential UAP cases represent less than 1% of all cases reported. When one considers the results of the Aircrew Survey it is reasonable to expect that number to change if pilots are encouraged to report these incidents.

### **Historical Events Have Contributed to Under-reporting of UAP Incidents**

A major contributing factor to bias against reporting UAP incidents and observations is apparent in the history of attempts to address the UAP problem. UAP are considered a matter of intelligence and security by the US military and intelligence community and no data regarding UAP incidents has been made available to aviation professionals in the commercial aviation industry for over 50 years. Though detailed case files have been recently released by the US government, none of these cases has been reviewed within the context of aviation safety.

When the US Air Force was founded in Sept. of 1947 it immediately undertook an intelligence-gathering program to determine the nature of UFOs. To this end it established specific units within Air Tech. Intelligence Command to acquire data and evidence regarding UFOs and to sequester that data within ATIC, the CIA and the NSA.<sup>1</sup>

In July of 1952 there was a series of UFO manifestations over Washington D.C. and the restricted airspace over the White House and Capitol buildings. Thousands including military and commercial pilots and radar operators witnessed these incidents. The incidents were quite dramatic and persisted for nearly a week. The Air Force attempted to explain these observations as “spurious radar targets” caused by a temperature inversion. However the photographs of the “spurious radar targets” over the capitol building that were published that week in the Washington Post do not support that explanation. It has been since determined that the weather conditions at the time of the observations did not support the conclusions of the US Air Force.

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<sup>1</sup> AFR 200-2, 4602d ATIC squadron

Less than a year later, in 1953, the CIA convened the Robertson panel to review UFO reports. A panel of scientists and military experts reviewed several case files and films of UFOs. While they came to no definitive conclusions about the nature and source of UFOs, they did decide that the subject needed to be “stripped of its special status” to protect the public from “hysteria”. The result of this remarkable decision was a concentrated, 30-year campaign to, discredit and otherwise debunk UFO witnesses, reporters, researchers and to monitor, infiltrate and break up investigative organizations in the public domain.<sup>2</sup>

From Air Force Regulation 200-2, dated August 12, 1954 signed by General Nathan Twining –

Headquarters USAF will release summaries of evaluated data which will inform the public on this subject. In response to local inquiries, it is permissible to inform news media representatives on UFOB's when the object is positively identified as a familiar object.... *For those objects which are not explainable, only the fact that ATIC will analyze the data is worthy of release, due to the many unknowns involved.*

All UFO information was forwarded to the Commander, Air Defense Command; the nearest Air Defense Division; the Commander, Air Technical Intelligence Center; and the Director of Intelligence at Air Force Headquarters, and some cases were forwarded on to the CIA and the NSA.

In 1954 officials from the US military and from the Airline industry held a press conference announcing a Joint Army, Navy Air force publication (JANAP 146) outlining Communications Instructions for Reporting Visual Intelligence Sightings or CIRVIS. It is important to remember that until 1972, the US did not have the satellite capability to fly over the Soviet Union and provide advance warning of an impending attack. Commercial airline pilots were considered an integral part of a forward observation corps. JANAP 146 and CIRVIS were instituted as a mandatory reporting system that eventually included both American and Canadian commercial and general aviation. All unusual observations were to be forwarded through the CIRVIS system to the US Air Force. Once an observation had been reported, the reporting aviator was obligated not to disclose the report to the press or public under threat of fine and imprisonment. JANAP 146/CIRVIS was initiated to acquire intelligence related reports regarding unfamiliar aircraft, formations of unfamiliar aircraft, missiles, and UFOBs.

In 1958, 450 airline pilots signed a petition to publicly protest the JANAP 146 order. Many of these pilots claimed that the Air Force investigators had an agenda to debunk their reports and that they had been warned not to disclose their observations to the public under penalty of a prison term and a fine.

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<sup>2</sup> FOIA docs released from the CIA include intelligence summaries of NICAP and other research groups within the US

Concurrently, from 1947 to 1969 the Air Force conducted an investigation into UFOs under several code names including Projects Sign, Grudge and Bluebook. Reports of unusual observations, including military and civil aviation reports, were forwarded to Air Technical Intelligence Command for review by air force investigators and civilian contractors. Project Bluebook closed in 1969 with assurances that UFOs were not a threat to national security, that there was no evidence that they were extraterrestrial vehicles and that further research was unnecessary. The Condon Report, commissioned by the US Air Force and undertaken by the University of Colorado concurred. Since that time science and the US Air Force has acknowledged the existence of unusual atmospheric phenomena like sprites, blue sprites, ball lightning, blue jets, etc.... many of which were not known at the time of the Blue Book and Condon reports though they certainly were reported as UFOs. That acknowledgement seems to be contradictory to the conclusions of Blue Book and the Condon Report. In the face of well-documented incidents and observations of UAP that continue to this date, neither of these reports can be considered definitive.

In 1977, JANAP 146E was released. This version relaxed the mandatory reporting requirement and suggested instructions to report if the reporter felt that the observation represented a matter of national security.

Currently the US Air Force claims that it does not investigate UFOs. The USAF does receive UFO reports through CIRVIS, and through the ARTCC system and NORAD (Appendix B).

The fact is that from 1947 to 1977, even to the present, the data flowed directly away from civil aviation into the military/intelligence domain via JANAP 146 and the CIRVIS reporting system and projects Sign, Grudge and Blue Book.. When the JANAP 146 order was relaxed, commercial and private pilots found themselves with no specific instructions regarding these unusual incidents and observations. When the various databases of the FAA, NTSB and NASA were established, the categories of observation for UFO/UAP events were not included. Reasons for this may have included personal opinions and beliefs, a general lack of experience with the phenomena or even the lack of knowledge regarding the existence of unusual atmospheric phenomena, or perhaps it was the understandable conclusion that the matter was being handled elsewhere (i.e. the military/intelligence community). Popular culture and conspiracy theorists have muddied the waters by supporting an environment of fear that undoubtedly has stifled many honest, legitimate reports of UAP.

Most importantly, there has never been a formal inquiry into these observations and incidents by the US aviation system. The majority of the cases that have been declassified have been made available in the last decade and the information has simply not been compiled in a fashion that can be used by the aviation community.

There are probably very good reasons for the military and intelligence community to acquire and develop UAP data. However, the aviation community is directly affected by these phenomena. Those aviation professionals who witness UAP or experience safety

related UAP encounters deserve respect and support from all levels of the US aviation system and the scientific community.

## **Lack of Knowledge About UAP Characteristics Has Contributed to Under-reporting of UAP Incidents**

Perhaps the single most determinate factor affecting UAP reporting is the strangeness of UAP observations and incidents. The parameters of UAP observations are not clearly understood by aviation professionals. This lack of understanding combined with the strangeness of the experience itself and the current skeptical environment within the aviation community negatively effects reporting.

### **UAP Characteristics**

Types of observations include:

1. Visual observations of lights or objects *that are visible* to ground and/or air based radars as targets that do not display transponder codes.
2. Visual observations of lights or objects *that are not visible* on ground or air based radars.
3. Radar observations of objects *that are not visible* to the unaided viewer and that do not display transponder codes.

Types of incidents include:

1. Close pacing, sometimes very close. Occasionally erratic movements are reported.
2. Disruption of on-board avionics systems
3. High-speed passes at sometimes very close range
4. Near mid-air collisions
5. Problems (including injuries) resulting from control inputs to avoid near mid-air collisions
6. Mid-air collisions
7. Disruption of, electrical systems, lighting, and air traffic near aviation facilities.
8. Downed or Missing aircraft

Additional Characteristics:

UAP are described as lights or objects with unusual qualities.

UAP often appear as solid balls of white, blue, green, red, amber or orange light. Some will occasionally seem to display multicolored flashing lights, spotlights, colored beams, etc.... .

UAP have been reported to divide into two or more lights or objects, release smaller lights and/or objects and recover lights and/or objects.

UAP can appear as simple geometric forms; cones, triangles, cylinders, rectangles, oblate spheroids (discs) and tauroids (donuts). Some UAP are reported to have a bright metallic surface.

UAP can range in size from 6" to several hundred feet. Reliable radar/visual observations of very large lights and objects have been reported.

UAP reports can include more than one light or object

UAP are reported to move erratically and at great speed.

UAP observations can be accompanied by transient or permanent electrical/avionic system failures.

UAP can manifest directly over airport facilities creating a physical threat to aircraft, and can disrupt communications, lighting and other electrical systems.

Given these parameters it is easy to understand the stress these unusual observations can cause to those who witness them.

A lack of knowledge about UAP combined with the truly unusual qualities of these lights and objects can contribute to confusion and cause a situation to escalate, particularly if the incident occurs in close proximity to airports or other areas with dense aviation traffic.

While these observations can seem quite mysterious, it is appropriate to note that there are several kinds of rare and poorly understood natural phenomena that may be responsible for some of these observations and incidents. The physical properties of some of these phenomena are very unusual.

Though these events are not understood, they have occurred over nearly every nation and region on Earth. Regardless of whether or not we understand what is happening, it is appropriate to seek steps to mitigate safety related incidents and to gather more data.

### **Insensitivity To UAP Witnesses Within the Aviation System Has Contributed to Under-reporting of UAP Incidents**

Aircrews, Safety managers, ARTCC personnel, commercial airlines, unions and now, Aviation Security personnel are caught in a paradoxical situation. The image of conservative and responsible aviation professionals conducting serious work to save lives and improve aviation safety is threatened by reporting observations of, or expressing simple curiosity about UAP. There is no momentum within the aviation system to investigate these incidents and make appropriate recommendations.

NARCAP is aware of one airman who recently underwent two separate psychological evaluations within three months because he apparently expressed his interest in UAP to the “wrong” co-worker(s). The case was made that perhaps the pilot represented a threat to safety because he was too willing to share his opinion on this controversial topic. This pilot *has not* claimed to have seen UAP.

With respect to culpability, one can hardly consider the giving of attention to a conservative and responsible image to be negligent behavior. Questioning the mental health of personnel who have seen a UAP or are “overly” interested in the topic is consistent with what the US aviation system knows about UAP at this point in time.

However, aviation professionals who are confronted with these incidents and observations are facing enough difficulty as they try to cope with what they may have seen. Without a supportive and respectful structure in place to receive these reports with the seriousness they deserve, aviation professionals are underserved and even betrayed by their own profession. This situation is detrimental to morale and contributes directly to a bias against reporting any observation or incident involving UAP.

To be fair, NARCAP conducted an aircrew survey of an entire commercial airline in Sept. /Oct. 2001 (NARCAP Technical Report 5, Haines and Roe, 2001). There were no difficulties promoting our survey, gaining permission to conduct our study, or pursuing the actual study. The pilot who submitted our request for permission to conduct this study was not adversely affected. Clearly some commercial operations are more sensitive about the issue than others.

## **Recommendations**

The idea that UAP not only exist but are also a credible threat to safe aviation may make aviation executives and their insurers uncomfortable. While UAP related incidents may be rare, morally and ethically there is no other way to manage the issue than in the most honest and forthright manner possible. The current situation is stifling reporting, and research and is compromising safe aviation. The following suggestions for resolving this situation should be considered:

1. Implement a program to capture data across all aviation systems and bureaucracies. A straightforward reporting policy, contained within the day-to-day standards and practices manuals of those organizations and businesses directly affected by the phenomena is critical to minimizing stress within the aviation culture and developing base metrics.
2. Develop base metrics including Frequency of Occurrence to be used to identify procedural or technical solutions.
3. Implement a basic education program on the topic of UAP for managers and personnel across all aviation systems.

4. Train psychological specialists who are participating in corporate EAP programs to support the aviation community. This is an essential step for total management of the issue.
5. Change the taxonomy of the phenomena from Unidentified Flying Object or UFO to Unidentified Aerial Phenomena or UAP. Clearly aviation professionals prefer to use words other than UFO to describe their observation, and it is appropriate to accommodate them. This will facilitate discussion and commentary amongst the more conservative or skeptical personnel.
6. This organization should participate fully in all appropriate national and international forums where aviation safety is discussed.

## **Issues**

### **1. Credibility**

The FAA, the USAF, NASA and a great portion of the rest of the aviation/aeronautics community have taken great pains to avoid discussions regarding UFO/UAP. In some cases these responses to inquiries have been mild, in others examples the response from official sources regarding inquiries into UFO/UAP have been dismissive and derogatory. It is appropriate to note that popular culture is rife with claims of government-based obfuscation of the “truth”. So-called conspiracy theories regarding these phenomena reflect this lack of belief in government information on UAP. In the public eye these concerns are very real and are a source of instability to the relationship between the government and the people. It is unlikely that any research or commentary offered by any official government agency would be accepted as credible at this point in time.

An appropriate approach is to officially recognize an independent, public, transparent organization whose sole mission is to address aviation safety related issues with respect to UAP. This organization should be considered the central data point for all UAP reporting, investigations, and research across all US aviation administrations, bureaucracies, and businesses within the US aviation system. Further, this organization should handle all media issues, public inquiries, etc. , in a respectful conservative manner. The most appropriate candidate for this central data point is the nonprofit organization, NARCAP, the National Aviation Reporting Center on Anomalous Phenomena.

### **2. Risks**

Failure to address these issues on the part of the aviation community will result in:

1. Continued confusion on the part of those aviation professionals faced with these events.

2. As aircraft become more dependant on electrical systems, they become more vulnerable to electromagnetic interference. UAP generate unusual electrical fields that are capable of disrupting avionics systems.
3. UAP are unpredictable, uncorrelated targets that controllers and pilots do not seem to be able to communicate with. Confusion and the perception of a potential collision can result in injuries to passengers and crew.
4. Unresolved cases involving UAP and downed aircraft, as well as missing aircraft and crews do exist. If the issue is not addressed, it is reasonable to expect incidents including catastrophic failures and casualties.
5. Continued erosion of public trust.

### **3. Data Collection**

With respect to procedural or technical solutions, a specialized central data point is critical to data collection and analysis. This data point should be funded in a manner as to allow it to conduct investigations and research, participate in international research, present findings and conduct education and outreach within the aviation community. The existence of this data point should be widely promoted, and all witnesses of current or historical observation of UAP should be encouraged to report their information.

All relevant data sources should be made available to specialized investigators with allowances for appropriate security clearances. As security issues continue to evolve within the aviation system it is reasonable to expect that there will be overlapping concerns. All efforts should be made to promote access to UAP data by appropriate investigators.

Additionally, access and support should be provided with respect to radar data and analysis. Currently, radar data acquired through the FOIA is provided as encrypted code printed on hardcopy, making radar data reconstructions quite tedious.

Efforts to analyze US UAP data should be designed to dovetail with international efforts in this field. This central data point should participate in all appropriate aviation safety forums, and present its data at all appropriate conferences.

All completed research should be immediately published and released through traditional media outlets.

### **4. Education**

A rigorous effort should be undertaken to educate all US aviation professionals about the basic issue of UAP and aviation safety and the existence of an organization charged

with the analysis of observations and incidents. Managers should encourage reporters to contact this organization.

Within the US aviation system the matter of UAP and aviation safety should be expressed in terms reflecting that concern. Speculation regarding the nature and source of these lights and objects should be avoided. Emphasis should be placed on the analysis and resolution of the safety related conditions surrounding these events rather than on attempts to determine the exact nature and source of UAP.

In fall of 2001, NARCAP conducted a survey of a commercial airline with respect to UAP observations and related questions (NARCAP TR-5). Included in the questionnaire was the question:

*On a scale of 1 to 10 (10 is max.) about how interested are you in these phenomena? \_\_\_\_*

The majority of respondents scored their interest between 5 and 10. This seems to suggest that there is a large contingent of pilots who are receptive to information regarding UAP and would probably respond well to a basic educational program, perhaps implemented during their re-training programs.

The possible “shock” effect of the acknowledgement of these incidents should not be underestimated, yet as we will see in the French example, this “shock” can be minimized. “In house” psychologists should be educated to support personnel who are uncomfortable with the situation, or who witness UAP firsthand.

## **5. The French Model**

Internationally, there are examples of these approaches, however the US aviation system is the largest and most complex and will require specific considerations with respect to these recommendations. Perhaps the best active model is the French organization, SEPRA.

SEPRA is part of the official French space agency, CNES. SEPRA receives UAP reports from ARTCCs, French commercial airlines, the Gendarmerie, the National Police as well as the French Air Force. Reporting instructions and forms are found in all ARTCCs and aircrews are familiar with the reporting procedures. Air controllers receive course instruction from SEPRA as part of their general training. SEPRA is currently conducting a long-term study of radar/visual cases....

Direct and forthright discussions regarding these incidents at all levels of the aviation system will lay the groundwork for improving aviation safety and enhancing scientific knowledge.

## **National Aviation Reporting Center on Anomalous Phenomena**

Although there are no official organizations in the United States, these issues are being championed by the National Aviation Reporting Center on Anomalous Phenomena, NARCAP. This organization is a nonprofit, national organization focused on US aviation and staffed by competent aviation and aeronautics experts. NARCAP advisors are familiar with the issue and are experienced and respected members of the aviation community.

NARCAP operates a confidential reporting center and conducts investigations and performs outreach and education in the aviation community.

Internationally NARCAP is officially recognized by the official Chilean research group CEFAA and has a good relationship with the official French group, SEPRA. Additionally, NARCAP has affiliates in 14 nations and is participating in the development of data at the international level.

NARCAP is conducting research to develop base metrics regarding these incidents and continues to publish technical reports on this research. The Air Crew Survey Project is an ongoing survey of commercial pilots and serves the dual purpose of gathering data and educating pilots.

Clearly the correct approach is to educate both potential reporters and those who may potentially receive reports, to implement a safety related incident reporting and investigation program, and to develop a data collection and analysis project that dovetails with international efforts and normalizes data across borders.

NARCAP has undertaken this process directly through its Air Crew Survey Project, the ICAO project and its development of and participation in a global coalition of UAP/aviation safety research groups, both unofficial and official.

For more information contact: [www.narcap.org](http://www.narcap.org)

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## Appendix A

### A Brief Overview of the Recent History of UFO/UAP observations.

This section is intended to provide a sense of the scope of the UAP phenomena and to familiarize the uninitiated reader with the topic. It is appropriate to understand that a great deal of energy has been expended to resolve these unusual observations and incidents with no real success though the phenomena continue to manifest. No steps have been taken to educate the aviation community regarding these events and aviation safety is being compromised.

If UFO/UAP reports originated solely from the non-flying, uneducated, superstitious population it would be relatively simple to argue that the UFO/UAP problem lies with the inexperienced observer. However, the overwhelming number of reports received from respected, educated, credentialed observers, often while acting in official capacities, strongly suggest that UFOs are a real, external phenomena.

Those who are skeptical of the reports alleging sightings of unusual, airborne lights and objects often claim that the United States Air Force has proven there are no such objects. While these parties often cite the findings of the United States Air Force at the close of "Project Blue Book", they rarely quote the actual statement.

- 1) No UFO reported, investigated, and evaluated by the Air Force has ever given any indication of threat to our national security;
- 2) There has been no evidence submitted to or discovered by the Air Force that sightings categorized as "unidentified" represent technological developments or principles beyond the range of present-day scientific knowledge: and
- 3) There has been no evidence indicating that sightings categorized as "unidentified" are extraterrestrial vehicles....Since Project Blue Book was closed [1969], nothing has happened to indicate that the Air Force ought to resume investigating UFOs.

-U.S. Air Force, *Summary, Project Blue Book*

None of these conclusions acknowledges that there are legitimate reports of real phenomena that are clearly uncommon, possibly dangerous, and not at all understood that were reported as UFO. Additionally, the assertion that UFO's have not given any indication of a threat to national security and the validity of the Blue Book report is contradicted by this 1969 memo from Brigadier General Bolender regarding reports of UFOs that affect national security:

".....reports of unidentified flying objects which could affect the national security are made in accordance with JANAP 146 or the Air Force Manual 55-11, and are not part of the Blue Book System."

Another matter that skeptics simply avoid is that since the Air Force ceased public investigation of UFOs in 1969 many reports of encounters with unidentified flying objects have been declassified and released by the United States and many other governments of the world.

NARCAP Technical Report 4 – UAP Eighty Years of Pilots Sightings, Weinstein, 2001 is a catalogue of over 1300 cases of observations and incidents since 1916. NARCAP AIRCAT contains over 3500 aviation cases dating from the 1920's. As one reviews these incidents it is clear that these cases contain threads of commonalties that cannot be ignored.

Some of these commonalties are best described in the earliest report ever offered by the United States Air Force regarding the nature and description of these objects, Lieutenant General Nathan Twining's response to an inquiry by Brigadier General Schulgen of Air Intelligence concerning the "flying disks" dated Sept. of 1947. Clearly, UFOs were on the top priority list of the newly formed US Air Force.

"The phenomenon reported is something real and not visionary or fictitious.... There are objects probably approximating the shape of a disk, of such appreciable size as to appear to be as large a man-made aircraft.... The reported operating characteristics such as extreme rates of climb, maneuverability, (particularly in roll), and the actions which must be considered evasive when sighted or contacted by friendly **aircraft and radar**[emphasis added], lend belief to the possibility that some of the objects are controlled either manually, automatically or remotely."

General Twining's memo also offered these apparently common descriptive traits, including:

- 1) Metallic or light reflecting surface
- 2) Absence of trail, except in a few instances when the object apparently was operating under high performance conditions
- 3) Circular or elliptical in shape, flat on bottom, domed on top
- 4) Several reports of well-kept formation flights varying from three to nine objects
- 5) Normally no associated sound, except in three instances when a substantial rumbling roar was noted
- 6) Level flight speeds normally above 300 knots are estimated

Since this memo was written in 1947, many witnesses describe several other sizes and shapes of UFOs. These are often simple geometric forms, cones, triangles, cylinders, rectangles and oblate spheroids (discs) and tauroids (donuts). They can range in size from 6" in diameter to several thousand feet in length. It is also important to note that since the closure of Project Blue Book in 1969, there have been literally thousands of reports of UFOs, worldwide.

Additionally many UFO/UAP are reported as *lights* rather than objects. Several types of unusual airborne lighting displays have been discovered since the US Air Force closed Project Blue Book. Research is ongoing.

Britain, France, Chile, Peru, and Uruguay all have official investigative organizations to examine reports of UAP. All of these countries are particularly attentive to aviation reports of UAP, and most are specifically focused upon aviation safety related incidents. Britain officially receives and investigates UAP reports through the Ministry of Defense and UAP incidents involving commercial aviation are tracked by the Civil Aviation Authority Safety Research Group.. The French organization, SEPRA (formerly GEPAN) is part of CNES, the French Space Agency and collects reports across all bureaucracies including the French aviation system. Its director teaches courses about UAP at the air traffic control school in Bordeaux. The Chilean organization CEFAA, is based in the Air Technical School of the Chilean Air Force and is primarily focused on aviation safety issues. The Peruvian organization OIFAA is part of the Peruvian Air Force and is also concerned with aviation safety matters. The unofficial US organization National Aviation Reporting Center on Anomalous Phenomena, NARCAP, has affiliates in 14 additional countries and serves as a reporting center and database for US aviation.

### **UAP and Aviation: Radar/Visual Cases**

It is clear that the best UAP reports come from military and commercial pilots, air traffic controllers and radar operators. Often UFO cases involve all three and are referred to as “radar/visual” cases. French researcher Dominique Weinstein has compiled a catalogue of 489 documented and recognized aeronautical sightings of UFOs/UAP from around the world.

- 1) One hundred and one of these 489 cases or nearly 20% are “radar/visual cases.
- 2) Of 363 aviation cases included from Project Blue Book, 76 are radar/visual cases.
- 3) Of the 68 aviation cases reported to Project Blue Book in 1952, 16 are radar/visual cases.
- 4) Thirty of the sixty countries listed as reporting aviation related sightings of UAP also reported “radar/visual” cases.

An example of this type of case occurred during the night of 18-19 Sept. 1976, seven years after Project Blue Book was closed. This report was acquired from the Defense Intelligence Agency (DIA) through the Freedom of Information Act. The description below is condensed from the DIA report.

After receiving several reports from citizens of an unidentified object over Tehran, the lead air traffic controller, Hussein Perouzi, also saw the strange object. He described

it as a rectangular shape, possibly a cylindrical shape, with two large white lights, one at each end, and a small red light circling its midsection. Perouzi reported the sighting to the Iranian Imperial Air Force. General Youssefi observed the lights from his balcony. He then authorized a Phantom F-4 to investigate using air controller Perouzi to give directions. When the F-4 approached within 45km of the object, its flight instruments and radios ceased to function. When the pilot broke off the pursuit, the equipment returned to normal.

General Youssefi ordered the launch of a second F-4 that soon *acquired the object on its radar screen* and advised that the object was comparable in size to a Boeing 707. As the second Phantom F-4 approached, an object/light exited the UFO and headed straight for the F-4. The pilot tried to fire a sidewinder missile at it *but his fire control console as well as his radio became inoperable*. As the F-4 initiated a bank and dive to evade, the object/light pursued the F-4 for a time, then returned to and re-entered the UFO.

As the second F-4 circled the UFO at a distance, an object/light again exited the UFO and set down on the desert floor and lit up an area estimated at 2-3km in diameter. Whenever the F-4 entered a certain distance from the UFO and the object/light on the ground, it would lose radio communications. A passing commercial airliner also reported transient problems with radios and navigation equipment.

An attachment to this case, from the DIA, offered the following comments:

“An outstanding report. This case is a classic which meets all the criteria necessary for a valid study of the UFO phenomenon.”

- a. The object was seen by multiple witnesses from different locations...
- b. The credibility of many of the witnesses was high (an Air Force General, qualified aircrews, and experienced radar operators.
- c. Visual sightings were confirmed by radar.
- d. Similar electromagnetic effects (EME) were reported by three separate aircraft.
- e. There were physiological effects on some crew members (i.e. loss of night vision due to the brightness of the object
- f. An inordinate amount of maneuverability was displayed by the UFOs.”

Observations of very similar events, including transient and permanent avionics and/or weapons system failures have been reported and documented by military and civil authorities worldwide.

NARCAP Chief Scientist Dr. Richard F. Haines<sup>3</sup> has developed a catalogue of aviation related UFO sightings that contains well over 3500 cases. Included are many

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<sup>3</sup> Richard F. Haines, Ph.D. Former Senior Research Scientist, NASA Ames Research Center, Former Chief Space and Human Factors, Who's Who in America, Janes Who's Wo in Aviation and Aerospace,

observations by commercial aircrews, radar operators, air traffic controllers and military aircraft. This catalogue is called AIRCAT and contains reports of UFOs by aviators dating back to the 1920's. As Dr. Haines reviewed these reports it became apparent that some of these cases clearly represented aviation safety issues because the alleged UFO was occasionally reported to disrupt aircraft electrical systems, and because a significant percentage of cases were also described as near mid-air collisions. Several cases in AIRCAT describe actual mid-air collisions. Based upon these conclusions he wrote a paper "Aviation Safety in America – A Previously Neglected Factor" NARCAP Technical Report 1. This document examines the relationship between UAP and aviation safety.

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American Men and Women of Science, author of over 75 scientific and technical articles, and author of over 30 UFO related articles, as well as books on both aviation and UFOs.

## Appendix B

### **Analysis of an Audio Recording of a UAP incident for Evidence of Under-reporting bias**

On June 20, 1995 a UFO reporting hotline operated by the television series *Sightings* received a report from a controller at Albuquerque Air Route Traffic Control Center. The controller stated that an America West pilot had spotted an unidentified flying object over eastern New Mexico on 26May1995.

The transcript of the control tower tape recording of that incident provides a fascinating insight into the mindset of aviation professionals regarding very real and potentially dangerous observations of UAP. The tape was acquired by Dr. Richard F. Haines from the FAA through the Freedom of Information Act.

The pilot reporting this incident, America West 564 - call sign Cactus 564 is flying a 757 at FL390 (39,000ft), 2200L(10 pm local time) westbound over eastern New Mexico.

America West: Albuquerque Center, Cactus 564

Alb. ARTCC: Cactus 564, go ahead.

America West: Yeah, off to our, uh, three o'clock, Got some strobes out there. Could you tell us what it is?

Alb. ARTCC: I'll tell you what, that's some, uh, right now I don't know what it is. There is a restricted area that's used by the military out there in the daytime.

America West: Yes, it's pretty odd.

Alb. ARTCC: Hold on, Let me see if anybody else knows around here.

Pause

Alb. ARTCC: Fort Worth Center reporting nothing more than occasional light chop in that area.

America West: 564. Did you tape that object at all on your radar?

Alb. ARTCC: Cactus 564, no, I don't and talking to the three or four guys around here, no one knows what that is. Never heard about that.

America West: But nobody's painting it at all?

Alb. ARTCC: Hey Cactus 564, say again?

America West: There's nothing on their radar on the other centers at all? On that particular area, that object that's up there?

Alb. ARTCC: its up in the air?

America West: Affirmative.

Alb. ARTCC: No. No one knows anything about it. What's the altitude about?

America West: I don't know. Probably right around 30,000 or so, and it's, uh, the strobe, it starts going counterclockwise and the length is unbelievable.

Pause

**Alb. ARTCC controller contacts Cannon AFB**

Alb. ARTCC: Cannon 21

Cannon AFB: Cannon. Go ahead.

Alb. ARTCC: Hey, do you guys know if there was anything like a tethered balloon or anything released that should be above Taiban [the town of Taiban, NM?

Cannon AFB: No we haven't heard anything about it.

Alb. ARTCC: Okay, (uneasy laugh) Guy at 39,000 says he sees something at 30,000 that, uh, the length is unbelievable and it has a strobe on it. This is not good (nervous laugh).

Cannon AFB: What does it mean?

Alb. ARTCC: I don't know. It's a UFO or something. It's that Roswell crap again.

Cannon AFB: Where's it at right now?

Alb. ARTCC: He says it's right in Taiban.

Cannon AFB: He's right...it's right in Taiban?

Alb. ARTCC: No, we haven't seen nothing like that.

Alb. ARTCC: Okay, keep your eyes open

Pause

Alb. ARTCC controller unsuccessfully attempts to have second aircraft verify observation. Subsequent review of the incident indicates that the controller gave incorrect instructions to the second aircraft and it did not see the object in question. During this exchange Cactus 564, the original witness offers the following description:

America West: You know, we're all huddled up and talking about it. When it lighted, you could see a dark object. It was like a cigar shape from the outlook that we could see it. And the length is what got us sort of confused because it looked like it was about 300 to 400 feet long. So I don't know if it's a wire with a strobe on it, but the strobe starts from left and goes right, counterclockwise. And it was a pretty eerie looking sight. But, uh-

Pause

The controller is then heard discussing with other controllers the possibility of high altitude military test being scheduled, this possibility is ruled out.

**Then, the controller contacts NORAD.**

Alb. ARTCC: Bigfoot. Albuquerque, sector 87.

NORAD: Bigfoot's on.

Alb. ARTCC: Yeah, I've got something unusual, and I was wanting to know if you all happen to know of anything going on out here around Tucumcari, New Mexico, north of

Cannon. I had a couple of aircraft report something 300 to 400 foot long, cylindrical in shape, with a strobe flashing off to the end of it, at 30,000feet.

NORAD: Okay. Hang on a second.

Alb. ARTCC: Yeah, I didn't know if you happened to know of anything going on out there. No balloons in the area? Nothing reported?

NORAD: Okay. Where is this at again?

Alb. ARTCC: It's in Tucumcari, New Mexico. That's about 150 miles to the east of Albuquerque.

NORAD: Okay, how far is it from Holloman?

Alb. ARTCC: Holloman. It looks like it's off to 030 of Holloman for about 220 miles.

NORAD: Okay. It's kind of hard for us to see here. 030 for about 200. Um, we don't have anything going on up there that I know of.

Alb. ARTCC: Yeah, I didn't know if\_ we tried everybody else and nobody else is- this guy definitely saw it run all the way down the side of the airplane. Said it was a pretty interesting thing out there.

NORAD: Okay, it was at 30,000feet. Do you know what the shape –

Alb. ARTCC: It's right out of the *X-Files*. I mean, it's definitely a UFO or something like that. But. I mean-

NORAD: oooh, you are serious about this (laughs)?

Alb. ARTCC: Yeah. He's real serious about it, too, and he looked at it, saw it. No balloons are reported tonight? Nothing in the area?

NORAD: And it was strobing out in front?

Alb. ARTCC: I think the strobe is off the tail end of it. He said it was kind of – well, it was dark, but

NORAD: How long did he think it was?

Alb. ARTCC: He said it was 300 to 400 feet long.

NORAD: Holy smokes!

Alb. ARTCC: Yeah, and we don't have any air carriers out there that are strobing along?

NORAD: The only thing that I can – I wonder if any of our aerostats got loose or something? 'Cause we don't have any aerostats out there.

Alb. ARTCC: Yeah, not that far to the north.

NORAD: I mean, to me, it would sound like an aerostat, but I don't know. I don't think ours are that big, though.

Alb. ARTCC: No, they're more like a blimp rather than this sounded like some sort of flying hot dog or something.

NORAD: And did he say how big around it was?

Alb. ARTCC: No, he didn't really have an idea of how big around it was.

NORAD: Kind of like a plane without wings?

Alb. AARTCC: Yeah, sort of like that. We didn't know if there's a cruise missile somebody maybe fired one out here or something?

NORAD: Hmmmm. Let's see. White Sands missile range is to the south. Did he say how large it was or anything like that? Could he get an idea of that?

Alb. ARTCC: Just 300 to 400 feet long, but that's it.

NORAD: Okay. Well, what we could do is kind of like maybe monitor that area. But you know we pick up everything that you all pick up.

Alb. ARTCC: Yeah, I know. We're not seeing anything out here at all so we was just wondering if you happened to know if anything was going on.

NORAD: and did he know what the speed was?

Alb. ARTCC: No. He didn't give us any indication of that. He was opposite direction.

NORAD: Okay. So this guy was up in an air- he was in a jetliner?

Alb. ARTCC: Yeah, America West.

NORAD: It's hard for us to determine if it was a plane unless it was like at 30,000feet and in our radar coverage, and it disappeared or something.

Alb. ARTCC: Right. Okay. Thanks, I appreciate it.

NORAD: Okay, then. Bye.

Pause

**NORAD contacts the ARTCC controller**

NORAD: Yes, uh, we had someone call here earlier about a pilot spotting an unidentified flying object.

Alb. ARTCC: Yep, that's us.

NORAD: Okay. Well hey, we're tracking a search-only track kind of up where that might have been.

Alb. ARTCC: Okay. Can you give me a radial?

NORAD: Okay. Off of Holloman, it is 038 for 283. I mean, that's about ten degrees off of what you gave me before and about eighty miles off. It's tracking about 390knots. We've been tracking it for about three, four minutes know. I mean, to be going that fast, it's got to be up kind of high.

Alb. ARTCC: Yeah, And we got no code on it?

NORAD: Nope. It's search only. Off of Holloman 037 for 280.

Alb. ARTCC: Okay, I'll see whether I can look up there and see anything.

NORAD: Okay, then. Bye.

Alb. ARTCC: Thanks.

Pause

### **Cactus 564 contacts Alb. ARTCC**

In the final section the Cactus 564 crew sign off with the following:

America West: Albuquerque 564 It's the last time. Just for our notes so we can take a message. Was that in a restricted area that was just basically south of Tucumcari when we reported it?

Alb. ARTCC: Okay, uh, the way you went through, the restricted area is on your south side. Nothing to the north side.

America West: (exclamatory) Huh!

Alb. ARTCC: And those areas are inactive. There shouldn't be anything going on.

### **Incident Summary: Air Controller and ARTCC**

The fact that this report was made by an air controller to a *television show* nearly a month after the incident is ample evidence of an under-reporting bias within the aviation community. It seems that these incidents are, at best, perceived as a novelty to be shrugged off. At worst, these experiences are considered to be threatening to one's career and credibility and are not even mentionable. This perception is a core cause of under reporting incidents or observations of UAP. If no part of the aviation system addresses these matters then supervisors, safety managers, pilots and air controllers are left to their own strengths or weaknesses regarding the decision to report these events. This avenue compromises safety for ego and is not be acceptable in any other type of aviation safety related situation or event. This is a design for disaster.

Our controller is interested in pursuing this observation. Other controllers might be less accommodating, less motivated, or less educated. Clearly this controller knows that there are historic examples of UFO reports, and that the topic is controversial. He is obviously nervous about presenting the observation to other facilities. Yet, he subjects himself to the incredulity of the Air Force controllers at Cannon AFB and at NORAD. It should be noted here that the controller mentions "its that Roswell crap, again". Is he referring to other UAP observations that he is aware of? It is also worth noting that he is not alone in the ARTCC facility and is, in fact, dialoguing with fellow controllers who are aware of the situation. He tries unsuccessfully to coordinate a validating observation from a second aircraft. Finally he is rewarded for his efforts by NORAD with a confirmation of a large object, without an FAA mandated transponder, at 28,000feet near the location of the original observation, which he then watches on his own radar.

In fact, if we carefully review the controllers' actions, it is clear that his motivation **does not** rise out of concern for his fellow aviation professionals or his professional judgment. In his commentary to the Cannon AFB controller he says something unusual.

Alb. ARTCC: Okay, (uneasy laugh) Guy at 39,000 says he sees something at 30,000 that , uh, the length is unbelievable and it has a strobe on it. This is not good (nervous laugh).

It seems that our controller is afraid of the phenomena.

The controller knows that there is no protocol for this type of observation. He is monitoring the UAP the way a swimmer warily watches a shark's fin. Whether this is a result of past experience and observations, influence of popular culture, or some other factor is unclear.

#### Obstructed Communication

The controllers' discomfort with the situation is apparent in his dialogue with the controller at Cannon AFB and at NORAD. In both cases, the controller approached the topic obliquely.

To the Cannon AFB controller he comments, “: Hey, do you guys know if there was anything like a tethered balloon or anything released that should be above Taiban [the town of Taiban, NM]?” though he knows the object reported by Cactus 564 is at 30,000feet and 300 to 400 ft in length.

To the NORAD controller he says “Yeah, I've got something unusual, and I was wanting to know if you all happen to know of anything going on out here around Tucumcari, New Mexico, north of Cannon. I had a couple of aircraft report something 300 to 400 foot long, cylindrical in shape, with a strobe flashing off to the end of it, at 30,000feet.” thereby inflating the number of reporting aircraft in an apparent effort to improve his credibility and gain the NORAD controllers attention.

In neither case does he open the commentary by simply saying he was pursuing a UFO report with the expectation that the other controller will automatically take him seriously though he does seem to expect the NORAD controller might be more familiar with the object being described. This is an important clue to the pervasive nature of the bias surrounding these incidents. The Alb. ARTCC controller is not suffering a communication deficiency, he is trying to discuss something that he feels is very difficult to talk about and he feels that his peers in the AF and NORAD will not take him seriously if he is overly direct about the incident. So he approaches the topic obliquely and attempts to “warm up” the other controllers to the issue before trying to address it directly. Not all observations and incidents have this luxury of time to expend talking around the subject and this type of faltering communication could have catastrophic results.

Later in the conversation with the NORAD controller we hear the ARTCC controller directly defending his credibility as he continues to pursue the observation by Cactus 564.

Alb. ARTCC: It's right out of the *X-Files*. I mean, it's definitely a UFO or something like that. But. I mean-

NORAD: ooooooh, you are serious about this (laughs)?

Alb. ARTCC: Yeah. He's real serious about it, too, and he looked at it, saw it. No balloons are reported tonight? Nothing in the area?

Professionalism and service are the watchwords of the US ARTCC system, and in almost every other situation the calm and capable skills of air traffic controllers contribute to one of the safest aviation systems in the world. Yet, there is a glaring inconsistency in the ability of air controllers to deliver that high level of service when confronted with UAP observations and incidents.

#### Radar Confirmation - No Action Taken

The difficulties facing our controller at every turn are obvious. Fortunately he is in an environment that is empathetic, or at least indifferent, to his pursuit of verification. He still has to overcome the skepticism of other controllers in other facilities and gain their interest and cooperation. Then he has to stick with the problem until he gets resolution. In today's busy control centers, this can be a challenging task. However, this is where the situation becomes dangerous. **Once the presence of the object is confirmed on both the ARTCC and NORAD radars, uncorrelated and tracking 038 at 283 and 390 knots and well within the operating altitudes of commercial aircraft, there was no warning offered to other pilots or ARTCC facilities by either the ARTCC supervisors or NORAD. There was no NOTICE TO AIRMAN (NOTAM) issued.**

It is remarkable that supervisors at the ARTCC did not act upon this observation. Why did they decide to remain inactive and not advise other facilities of the presence of something large and fast, moving through US air lanes without a transponder or flight plan? It is important to emphasize that this is not a result of a bad work ethic, it is an issue of personal defense based upon the detection of a real threat to *all* aspects of the well being of the individual witnesses. The fact that these matters aren't officially discussed or even acknowledged compounds the situation thereby creating a dangerous operating condition.

#### Aircrew

The observation was clearly unusual to the B757 crew. They were distracted by its unusual qualities. The pilot is heard to comment, "We are all huddled up and talking

about it.” This distraction can be considered the first indicator of a safety related incident.

Obviously the pilot did not feel that the object was something familiar. He did not refer to it as an aircraft. He described as an “object” as “cigar shaped” and “300 to 400 ft long, with a strobing light flashing down its length.

### Obstructed Communication

The UAP was unusual enough to try to report it. In his initial communication to the ARTCC, the pilot did not say “I am seeing a UFO” with the expectation he would be taken seriously by the ARTCC. He referred to it obliquely by indirectly describing some lights and asking the controllers if they could see anything.

The pilot did not seem to want to be the first to suggest that the observation was unusual. Clearly he was hoping the ARTCC would paint the target and then the pilot would be free to talk about the object as something that was visible to both of them. When ARTCC responded that they didn’t have a radar target he became confused. The pilot was seeing an object, a large airborne object, that wasn’t appearing on ground radar. At this point and for the first time he directly refers to the UAP and uses the word “object” not “aircraft” to describe his observation.

The controller did not initially take the pilot seriously, possibly because of the pilot’s understatement of the observation. It is reasonable to suspect that many observations and incidents have not gone beyond the cockpit for fear of precisely this response.

In the last transmission the pilot confirms the location of the observation for “our notes” and the tape ends. One is inclined to ask “ To whom did he plan on reporting it to and what could they possibly do about it?”

## **Bias Compromises Safety**

The bias against acknowledging these incidents compromised safety in this situation in the following ways:

- a. Communication: Both pilot and controller could not directly address the issue and expect a direct response.
- b. The team aspect of the ARTCC completely broke down. The controller was pursuing the matter on his own, out of fear. No manager or supervisor accepted responsibility and escalated the matter. The potential hazard was not communicated to other facilities in the path of the northbound UAP.

- c. Cockpit Resource Management (CRM) was compromised by distraction, unfamiliarity with the phenomena and the extra time and thought and motivation required to report the observation to the ARTCC.
- d. No data regarding this incident was forwarded to the ASRS or the FAA/NTSB Incident database or to any organization charged with ensuring safety in American skies. Instead, nearly a month later the incident was reported to a television show.
- e. These incidents and the lack of official responsibility for them contributes to a continued erosion in trust and moral amongst both aviation personnel and the public who may also witness such events as passengers, citizens within airport facilities or simply as citizens making ground based observations of UAP.

Although the B757 had a crew of three and the air controller had “3 or 4” fellow controllers present, *neither the aircrew nor the controllers have allowed themselves to be publicly identified with this incident.* It is remarkable that the confirmed observation of a real uncorrelated flying object on two radars is something that neither the aircrew nor the controllers are willing to be professionally or publicly associated with. Indeed the fear of public ridicule and career impairment are often cited as reasons for not reporting UAP incidents.

It is equally remarkable that a radar/visual observation of a flying object lacking a transponder code and larger than any known fixed-wing aircraft, twice the length of a B747, and hurtling through controlled US airspace at 390knots could be managed so casually.

A review of 1300 reports in NARCAP Technical Report 4 *UAP Eighty Years of Pilot Sightings* reveals many incidents and observations that are very similar to this one including reports of large cylindrical objects and corresponding radar observations dating back to the 1940’s. The America West 564 case should be considered a “text book” example of this type of radar/visual incident, as is the Tehran, Iran incident described in Appendix A. Yet, after 80 years of these observations and incidents there are no reporting protocols and these events are still not being investigated as safety related.

***In fact, these incidents aren’t officially investigated at all.***