

Introduction to official UAP and UFO studies, investigations, hearings, analyses and reports in the United States - Version: 09 December 2025

This introduction includes updated draft extracts from the **Prologue** and from **Chapter 1 (How alien aerospace craft fly)** plus **Chapter 3 (Alien craft)** of the forthcoming *Edition 1.9* of [Time of Contact](#). Among the updates: most of the hyperlinks to online copies of the United Kingdom journal *Flying Saucer Review* have been changed to those that are available at no additional charge as [Amazon Kindle](#) books with [Kindle Unlimited membership](#); copies of [Flying Saucer Review Case Histories](#) and [Special Issues](#) are also available as *Amazon Kindle* books. Compilations are for sale on the [Flying Saucer Review](#) website and individual issues of *Flying Saucer Review* may be freely available online via websites such as [Scribd](#):

In the twenty-first century politicians in the United States revived official and publicly-known efforts to collect and study reports of alien craft; their actions included holding public hearings and legislating to create the [All-domain Anomaly Resolution Office \(AARO\)](#) within the [Office of the Secretary of War](#). The most recent public hearing at the date of writing was on Tuesday, 9 September 2025, titled [Restoring Public Trust Through UAP Transparency and Whistleblower Protection](#); the hearing was held by the House of Representatives' [Task Force on the Declassification of Federal Secrets](#) a subcommittee of the House [Committee on Oversight and Government Reform](#).

Among those giving evidence to the subcommittee was Mr. Dylan Borland, who spoke and wrote of his encounter with an alien craft “at approximately 0130” hours on an early morning in the Summer of 2012 at [Langley Air Force Base \(Joint Base Langley-Eustis\)](#) located just north of [Hampton](#), in the state of Virginia. In the video of the hearing titled [Restoring Public Trust Through UAP Transparency and Whistleblower Protection](#) Mr. Borland described his encounter beginning at 53 minutes, and at 1 hour and 6 minutes, into the 2 hours and 52 minutes long video file; further information is available in Mr. Borland’s written [Whistleblower Statement for the House of Representatives Task Force](#).

Mr. Borland first observed a “white light” which travelled towards him; it then appeared to be an airborne alien craft looking like “an approximately 100-foot long [equilateral triangle](#)” and hovered about 100 feet away from him at an altitude of about 100 feet. The sides of the craft intersected its triangular base at an angle of “90 degrees” (i.e. the sides were vertical and not sloped or curved) and the hull was about “1 to 2 storeys thick” i.e. approximately 12 to 24 feet in height. Mr. Borland “never saw the top of it” but as far as he could see the craft seems to have been shaped like a [triangular prism](#); Mr. Borland’s mobile telephone became “extremely hot” and stopped working.

Mr. Borland stated: “There were 4 lights (on the craft) in total, one light on each corner and a larger light in the centre, two to three times the size of the corner lights”. The craft’s hull had the appearance of “black metallic flight paint” and “on top of the craft was this gold lava/[plasma](#) - some type of fluid going over and around the craft”. After two to three minutes “the centre light flashes two to three times – no sound – (the craft) immediately shoots up (ascended) to commercial jet level, minimum” and then hovered once more; the craft’s centre light resembled a star at this time, suggesting that it was then at an altitude of several tens of thousands of feet (the cruising altitude of commercial jet airliners is from about 30,000 to 40,000 feet). The craft then moved eastwards over the [Atlantic Ocean](#); Mr. Borland

stated that the alien craft “*displayed zero kinetic disturbance, sound, or wind displacement*” and that his entire encounter lasted approximately 15 minutes.

After the craft ascended Mr. Borland felt what may have been [static electricity](#) caused by an [electric field](#) and smelled what may have been [ozone](#) caused by an [electromagnetic field](#) that [ionized](#) the molecules of [atmospheric gases](#) close to the craft; the fields may have been radiated by the craft’s propulsion, energy generation or hull protection systems. As discussed throughout *Time of Contact* alien craft may radiate powerful [gamma ray](#) or [X-ray](#) frequency electromagnetic fields that direct and focus their synthetic acceleration propulsion and hull, systems and users’ protection force fields; the craft may also radiate powerful magnetic fields to protect their hulls, systems and users against [charged particles](#) while travelling in space or against weapons that radiate charged particles. Powerful electric fields may possibly be used to help protect alien craft, but probably only while they are travelling in [interstellar space](#); therefore, the electric field experienced by Mr. Borland may have had another purpose or cause, for example, it may have been caused by the generation of a synthetic acceleration force field: [Shielding Space Travelers](#), by [Professor Dr. Eugene N. Parker](#), published by [Scientific American](#) magazine, [March 2006](#), Volume 294, Number 3, *pages 22 – 29*, at *page 29*, and [Unconventional Flying Objects: a scientific analysis](#), by [Professor Paul R. Hill](#), Section XX (Summary and Conclusions), Part 15 (Speculative Theories of the Force Field – What Is It?), *pages 330 - 331* of the paperback edition published in 1995.

Decades earlier, during an encounter in Norway that is discussed in detail in **Chapter 2 (Alien technology)** a young businessman, Herr Reidar Salvesen saw a “*blue-white*” light that faded to reveal an airborne alien craft shaped like an [ellipsoid](#) with protrusions from the upper and lower surfaces of its hull, rather than a *triangular prism*; that craft also hovered for a time before it ascended, and was silent: [Unconventional Flying Objects: a scientific analysis](#), by Professor Hill, Section VII (Direct Evidence of Force Field Propulsion), Part B (The Evidence), Example VII-B1 (Man knocked down), *pages 98 & 99*, and Section VIII (Force Field Evaluation: Which Type?, *page 111*, of the paperback edition published in 1995, referring to the article entitled *UFO-Car Encounter in Norway*, [The A.P.R.O. Bulletin, January – February, 1971](#), *page 7*; a detailed report titled *Strange Norwegian Encounter near Helleland*, by [Herr Anders Liljegren](#), was published in [Flying Saucer Review Case Histories, Supplement No. 4, April 1971](#), *pages 4 – 7*.

[Mr. George Knapp](#), an investigative journalist was also among those invited to speak at the subcommittee hearing on Tuesday, 9 September 2025: [Restoring Public Trust Through UAP Transparency and Whistleblower Protection](#) and [For the Record of the Committee on Oversight and Accountability, Hearing on “Unidentified Anomalous Phenomena”, September 9th, 2025](#). Mr. Knapp presented the documentary [Investigation Alien](#) in 2024 and has appeared in other programmes including [UFOs: The Best Evidence](#) (1989).

In the first decade of the twenty-first century senior U.S. politicians were evidently encouraged by the American businessman and space entrepreneur [Mr. Robert Bigelow](#) to create the publicly-funded [Advanced Aerospace Threat Identification Program \(AATIP\)](#) under which reports of unfamiliar craft made by military pilots and other service personnel were collected; the *AATIP* lasted officially from 2007 to 2012. Mr. Bigelow had earlier founded the [National Institute for Discovery Science \(NIDSci\)](#) and can be seen and heard speaking about alien craft and aliens in extracts from a [CBS 60 Minutes video documentary](#)

dated 28 May 2017. The *AATIP* was apparently begun within the United States [Defense Intelligence Agency \(DIA\)](#) an organisation that is not affiliated to any particular military service organisation and is responsible to the [Secretary of War](#).

In the third decade of the twenty-first century, two official and publicly-known programs were established in the United States to study reports of what may be alien craft; one was the military [All-domain Anomaly Resolution Office \(AARO\)](#) mentioned earlier and the other was the [Unidentified Anomalous Phenomena Independent Study](#) within the [National Aeronautics and Space Administration \(NASA\)](#). These programs were the successors to the [Scientific Study of Unidentified Flying Objects](#); the [Final Report of the Scientific Study of Unidentified Flying Objects conducted by the University of Colorado under contract to the United States Air Force](#) was published in January 1969; its [Case studies during the term of the project](#) may also be available online from the [U.S. Defense Technical Information Center](#).

Earlier and formerly secret official U.S. military programs, studies, reports or analyses included: [AMC Opinion Concerning “Flying Discs”](#) (originally classified “Secret”) from the then [Lieutenant-General Nathan F. Twining](#) commanding Air Materiel Command (AMC) based at Wright Field (now part of [Wright-Patterson Air Force Base](#)) in the state of Ohio, addressed to [Brigadier General George F. Schulgen](#), Chief, Air Intelligence Requirements Division, Washington, D.C., dated 23 September 1947, and [Air Intelligence Report No. 100-203-79, Analysis of Flying Object Incidents in the U.S., Air Intelligence Study No. 203, dated 10 December 1948](#), Directorate of Intelligence, Headquarters, [United States Air Force](#) (some of the Directorate’s functions may now be performed by the [16th Air Force](#)) and [Office of Naval Intelligence](#), Navy Department, originally classified “Top Secret” and declassified on 5 March 1985.

The [All-domain Anomaly Resolution Office \(AARO\)](#) (pronounced “aero” as in “aeroplane”) was established as required by law on 15 July 2022: [National Defense Authorization Act \(NDAA\) for Fiscal Year 2022 \(FY 2022\)](#), Section 1683, *pages 578 – 583* of the PDF file, and [NDAA FY 2023](#), Section 6802, *pages 1192 – 1199* of the PDF file. The AARO comprises the re-named and expanded [Airborne Object Identification and Management Synchronization Group \(AOIMSG\)](#) that was established in 2021.

The AARO is led by [Dr. Jon T. Kosloski](#); an online video is available of his testimony before the [United States Senate Committee on Armed Services, Subcommittee on Emerging Threats and Capabilities](#), in Washington, D.C., on Tuesday, 19 November 2024.

The AARO was led initially by [Professor Sean M. Kirkpatrick](#); he and [Professor Avi Loeb](#) co-authored the paper [Physical Constraints on Unidentified Aerial Phenomena](#), draft version March 7, 2023. A [video of Professor Kirkpatrick](#) is available online making a presentation and answering questions from [Senator Kirsten Gillibrand](#) and [Senator Joni Ernst](#) plus [Senator Jacky Rosen](#) at an open session (following closed hearings) of the [United States Senate Committee on Armed Services](#), Subcommittee on Emerging Threats and Capabilities, in Washington, D.C., Wednesday, 19 April, 2023.

[Professor David Nathaniel Spergel](#) led the [Unidentified Anomalous Phenomena Independent Study](#) that produced the [NASA Unidentified Anomalous Phenomena Independent Study Team Report](#) dated 13 September 2023, discussed in the [Media Briefing Unidentified](#)

[Anomalous Phenomena Independent Study Report](#) from [ScienceAtNASA](#), 14 September 2023.

The other members of the NASA [Unidentified Anomalous Phenomena Independent Study \(UAPIST\)](#) were: [Professor Anamaria Berea](#), [Professor Federica Bianco](#), [Professor Paula S. Bontempi](#), [Dr. Reggie Brothers](#), [Dr. Jennifer Buss](#), [Dr. Nadia Drake](#), [Mr. Michael Gold](#), [Dr. David H. Grinspoon](#), [Captain Scott Joseph Kelly](#), [Dr. Charles Mattias \(“Matt”\) Mountain](#) FRAS, [Mr. Warren Randolph](#), [Dr. Walter S. Scott](#), [Professor Joshua Semeter](#), [Dr. Karlin Toner](#), and [Professor Shelley Wright](#).

The UAPIST’s members (with the exception of Dr. Mountain) can be seen and heard when they attended [NASA’s Unidentified Anomalous Phenomena \(UAP\) Meeting](#) on 31 May 2023 (at which Professor Kirkpatrick also made a presentation). Presentation and remarks’ transcripts and other information are available via [NASA Science for researchers – UAP](#). In addition, the UAPIST’s members may be viewed individually online in other videos or listened-to on audio files, where they were participating in discussions or making presentations, for example, Professor Spergel’s lecture: [The Cosmic Microwave Background and the Case for non-Baryonic Dark Matter](#).

In 2023 [Mr. Mark A. McNerney](#) was appointed as NASA’s *Director of UAP Research*: [NASA shares Independent UAP Study Report; Names Director](#), 14 September 2023.

NASA was earlier directed to “search for (alien) *technosignatures*”: [NASA renews interest in SETI](#) (*Search for Extraterrestrial Intelligence*), by [Dr. David H. Grinspoon](#) (mentioned above as a member of NASA’s *Unidentified Anomalous Phenomena Study Team*), 4 January 2019, published online by [Sky & Telescope](#) and [NASA and the search for technosignatures – a report from the NASA Technosignatures Workshop](#), 28 November 2018.

In June 2021 the United States published its first public, official report in over 50 years that dealt with reports of what may have been alien craft: the [Office of the Director of National Intelligence \(ODNI\)](#) published the [Preliminary Assessment: Unidentified Aerial Phenomena](#) dated 25 June 2021 required by [Report 116 – 233](#), section headed “*Committee Comments - Advanced Aerial Threats*” at pages 11 & 12, “*accompanying the Intelligence Authorization Act (IAA) for Fiscal Year 2021*” “*to deliver an unclassified report on unidentified flying objects to Congress ... compiling what the government knows about UFOs rocketing around over American airspace*”: [What’s inside the Pentagon’s long-awaited UFO Report?](#) by [Mr. Matt Stieb](#), and Mr. Chas Danner, published by the [New York Intelligencer](#), 25 June 2021.

In 2024 the AARO published its [Fiscal Year 2024 Consolidated Annual Report on Unidentified Anomalous Phenomena – Information Cut Off: June 1, 2024](#); this report was preceded by the ODNI’s and the [U.S. Department of War’s Fiscal Year 2023 Consolidated Annual Report on Unidentified Anomalous Phenomena](#) “*cleared for open publication*” on 17 October 2023, and the ODNI’s [2022 Annual Report on Unidentified Aerial Phenomena](#). A comparison of the lists of the numerous official offices and organisations with which these reports and the earlier *Preliminary Assessment* were “*coordinated*” (links are provided to most of their websites later in this section) may suggest that the AARO is collecting and collating data, and undertaking (and possibly also outsourcing or contracting-out) investigation and analysis.

The [U.S. intelligence community](#) (overseen by the ODNI), the Department of War, and NASA have huge resources that include extensive relationships with many other official and private organisations. Nevertheless, due to the exceptional nature, long history and large number of reports of observations of and encounters with alien craft or their users *“there is, however, something lost when many authors (and arguably also organisations) co-operate. If there is any unity in the movement of history, if there is any intimate relation between what goes before and what comes later, it is necessary, for setting this forth, that earlier and later periods should be synthesized in a single mind”*: [History of Western Philosophy](#), by the philosopher and mathematician [Bertrand Russell](#), elected a [Fellow of the Royal Society \(FRS\)](#) in 1908, third [Earl Russell](#) (1931), awarded the [Order of Merit \(OM\)](#) in 1949 and the [Nobel Prize in Literature 1950](#), first published in 1946, Preface, page 7.

Therefore, if or when the U.S. official study programs expand or evolve to deal with historical reports by private individuals as well as by military personnel, law enforcement officers, etc. that include many detailed accounts of close encounters with alien craft or their users, they may wish to utilise the syntheses already provided by experienced, independent individuals, for example, [Dr. Jacques Vallée](#) a computer scientist, astronomer, entrepreneur, investigator, researcher, and author, and [Mr. John A. Keel](#) a journalist, investigator, researcher, and author.

The [NDAA FY 2023](#), Section 6802 included a requirement (at page 1196 of the PDF file version) for a *“Historical Record Report”* that shall *“focus on the period beginning on January 1, 1945”*. i.e. for the last 80 years. The AARO published online its [Report on the Historical Record of U.S. Government Involvement with Unidentified Anomalous Phenomena \(UAP\), Volume I, February 2024](#), cleared for Open Publication Mar(ch) 06, 2024, Department of War, [Office of Prepublication and Security Review](#).

The AARO also made available online a [U.S. Government UAP-Related Programs or Activities Reporting Form](#) that is *“intended as an initial point of contact with AARO”*, to enable it to accept *“reports from current or former U.S. Government employees, service members, or contractor personnel with direct knowledge of U.S. Government programs or activities related to UAP dating back to 1945*”*. *These reports will be used to inform AARO’s congressionally directed Historical Record Report”*.

The *U.S. Government UAP-Related Programs or Activities Reporting Form* has a different purpose from official forms that enable military personnel to report their recent observations of what were once officially called “Unidentified Flying Objects (UFO or UFOs)”, for example, early forms included Air Force Regulation No. 200-2 (AFR 200-2) that was referred to in [UFOs SERIOUS BUSINESS](#), published in [The Inspector General ... United States Air Force TIG brief, Number 26, Volume XI, 24 December 1959](#), and addressed to U.S. AIR FORCE Operations and Training Commands by the Acting Inspector General, [Major General Richard E. O’Keefe](#). Various versions of [AFR 200-2, for example, dated 5 February 1958](#) are available online.

The General’s characterisation of *“UFO sightings”* as *“serious USAF business”* supplied part of the title of the book [Flying Saucers – Serious Business](#), by [Mr. Frank Edwards](#) that surveyed reports of alien craft or their users from ancient times to the mid-1960s. In 2023, *Flying Saucers – Serious Business* was mentioned by [The Honorable Glenn S. Grothman](#), a United States lawmaker, starting at about 19 minutes and 30 seconds into an online video of

an official hearing that he chaired: [Unidentified Anomalous Phenomena, Implications on National Security, Public Safety, and Government Transparency, United States House Committee on Oversight and Accountability, Subcommittee on National Security, the Border & Foreign Affairs, 26 July, 2023](#) that is discussed later in this section.

Over seventy years ago, historical reports were collected and analysed officially in the United States. In the early 1950s a U.S. Air Force team led by [Captain Edward J. Ruppelt](#) collected and analysed not only contemporary reports of alien craft but also reports made towards the end of the nineteenth century: in 1896 and 1897 U.S. newspapers published many articles (often accompanied by illustrations) about a large “wave” of observations of, or encounters with what appeared to be “[airships](#)” and in several cases mostly (but not exclusively) human-looking entities that claimed or seemed to be, their inventors, crews or passengers.

It seems probable that the craft that were observed or encountered in 1896 and 1897 were alien aerospace craft disguised as or that simulated the appearance, of advanced human-made airships. The engineer, researcher, investigator, and author [Monsieur Aimé Michel](#) concluded that “*During the Wave of 1896-97 (in the United States), the objects seen on the ground seem to have been arrived at by hybridization between Renard and Krebs’ dirigible balloon ... (La France which first flew in 1884) and a small locomotive of the Far West (see [Flying Saucer Review, July - August 1966, Vol. 12, No. 4](#), cover illustration): [The Humanoids](#), published in 1969, *The Problem of Non-Contact*, by [Monsieur Aimé Michel](#), pages 249 – 256, at page 256, and *The Problem of Non-Contact*, by Monsieur Aimé Michel, published in [Flying Saucer Review, Special Issue, October – November 1966, The Humanoids – A Survey of World-Wide reports of landings of unconventional aerial objects and their alleged Occupants](#), pages 67 – 70.*

Several of the newspaper articles published during the “airship wave” of 1896 - 1897 included details of conversations with whoever or whatever impersonated the supposed inventors, crews or passengers of the “airships”: [Operation Trojan Horse \(Why UFOs\)](#), by Mr. John A. Keel, copyright 1970, edition published by Manor Books, Inc. in 1976 digitised by the [Internet Archive](#), Chapter 5, pages 69 – 93, and Chapter 6, pages 94 – 111. Nevertheless, they may have made at least one major error in what they said (or omitted to say) initially, which however they took care to correct in subsequent encounters, as discussed in **Chapter 4 (Aliens)**.

Our own [Artificial Intelligence \(AI\)](#) systems are already capable of impersonating the speech or written language of real people; for example, [The Infinite Conversation](#) available online appears to be a conversation between two intellectuals but is completely synthetic ([Coqui TTS](#) was the speech-synthesis software used): [What an endless conversation with Werner Herzog can teach us about AI](#), printed publication title *Chatbots Talking*, by [Giacomo Miceli](#), published by [Scientific American](#) magazine, [April 2023](#), Volume 328, Number 4, pages 64 – 67.

At least one of our humanoid robots can converse with a human being in a reasonably natural manner and perform tasks in response to spoken orders: [Figure Status Update - Open AI Speech-to-Speech Reasoning](#), 13 March 2024. However, we cannot yet make physical, mobile, completely plausible simulations of real people like, for example, the “airships” users that were observed or encountered in the U.S. in 1896 and 1897 (if we

assume that they were humanoid robots or androids; of course, they may have been biological, non-human beings in disguise or possibly human beings who may have pretended to be the airships' users because they were being paid or compelled to do so).

Captain Ruppelt's U.S. Air Force team studied "*hundreds of newspaper accounts*" of the 1896 - 1897 "airship wave". Captain Ruppelt concluded that the "*first documented reports of sightings similar to the UFO (Unidentified Flying Object) sightings as we know them today appeared in the newspapers of 1896. In fact, the series of sightings that occurred in that year and the next (1897) had many points of similarity with the reports of today*". [Chapter Sixteen \(The Hierarchy Ponders\)](#) of [The Report on Unidentified Flying Objects](#) by Captain Ruppelt, published in 1956, at pages 214 & 215, freely available online including from the [National Investigations Committee on Aerial Phenomena \(NICAP\) Online books](#).

According to the astronomer, consultant to the U.S. Air Force, investigator, and author [Professor Dr. J. Allen Hynek](#), Captain Ruppelt directed the U.S. Air Force's [Project Blue Book](#) from March 1952 to February 1953, and from July 1953 to May 1954: [The Hynek UFO Report](#), by Professor Dr. Hynek, first published in the United Kingdom in 1978, Chapter 1 (Blue Book Is Not a Book), page 25.

Captain Ruppelt may be heard speaking on an audio file: [49 Capt. Edward J. Ruppelt 1st Director of Project Blue Book](#), that may be available on the [UFOLOGY A Primer in Audio 1939 - 1959](#) web page on the [Internet Archive](#) website. The quality of the audio file is poor but might be improved using modern audio processing software. Professor Dr. Hynek was portrayed in [Project Blue Book](#), a television series based on selected *Project Blue Book* investigations that was first broadcast in January 2019.

The wave of observations and encounters in 1896 and 1897 began on the west coast of the United States in 1896, but in 1897 many reports were from further east. We are fortunate that many reports in historic newspapers like those mentioned by Captain Ruppelt may now be instantly viewed online, for example: *Strange Craft of the Sky*, [The San Francisco Call, Thursday Morning, November 19, 1896, Volume LXXX.-No. 172, page 1, columns 1 – 3](#); *A Winged Ship In The Sky*, [The San Francisco Call, Monday Morning, November 23, 1896, Volume LXXX.-No. 176, page 1, columns 5 & 6](#); and [page 2, columns 4 – 7](#), *The Airship in Texas – Seen in Milam County – Cast its Shadow over the Convicts while at work.*, Cameron, Tex. (Texas), (Sunday) April 18 (1897), [The Galveston Daily News, Monday, April 19, 1897, 56th year – No. 26, page 2, columns 1 – 3](#); *Was Aboard An Airship – The First Description Of The Modern Invention to Be Published. A San-Francisco-New York Line – Travel to Be Revolutionized Within Two Years-Speed of 1000 Miles in Eight Hours.*, [The Galveston Daily News, Wednesday, May 5, 1897, 56th year – No. 42, page 7, columns 2 & 3](#) (the encounter occurred at about noon [midday] on Monday, 19 April, 1897); *Inspected The Air Ship - Beaumont Man Saw the Mystery at Close Range – Conversed With The Travelers – Says It Is Propelled by Four Huge Wings, Electricity Being the Power Used*, Beaumont, Texas, April 20, [Houston Daily Post newspaper, Wednesday Morning, April 21, 1897, page 2, column 7](#); *The Airship In West Texas – Landed In The Town of Uvalde. Sheriff Baylor Interviewed The Men. It Started From Goshen, New York. And Is on a trial Trip-Navigator Wilson Left a Message for His Friend Akers.* Uvalde, Tex.(as), (Thursday) April 22 (1897), [The Galveston Daily News, Saturday, April 24, 1897, 56th year – No. 31, page 3, column 5](#); and *Supplies for Airship - A Rockland Man Helped The Aerial Navigators. Purchased Chisels and Lubricating Oil for "Smith," the Man With the Mysterious Machine*, Rockland, Texas,

(Friday) April 23 (1897), [Houston Daily Post newspaper, Sunday Morning, April 25, 1897, page 13, column 3.](#)

In the later nineteenth century the alien crafts' operators or users may have been engaged in similar activities to those that were reported for their counterparts from about the later twentieth century onwards, discussed in **Chapter 4 (Aliens)** and **Chapter 7 (Health, Security & Safety)**. Information in personal letters and diaries, medical records, police and other confidential reports and records, as well as in newspapers may support this idea. For example, in 1887 "The Phillipsburg Dispatch" a newspaper based in [Phillipsburg](#) in the state of Kansas in the United States, reported that Mr. John Miller (a farmer) had a testicle surgically removed during a two hour period of time that he could not account for, nor could he recall what had happened to him.

Mr. Miller remembered nothing of what happened between his entering the door of his barn to feed his "team" (probably working [horses](#) that could be used, for example, to pull farm implements or machinery such as [ploughs](#) or wheeled transportation vehicles such as [buckboards](#)) and when he "stepped (back) into the kitchen (of his house) and discovered he had been injured". The Phillipsburg Dispatch newspaper report (which was published on Thursday, 1 September 1887) stated that the encounter occurred "last Wednesday" at "12 o'clock" (probably midday or noon, during daylight hours). Wednesday, 24 August 1887 may have been meant as the day of the encounter because the report would probably have stated "yesterday" if it had occurred on Wednesday, 31 August 1887. The location of the encounter was "five miles east of this city" i.e. probably Phillipsburg, Kansas: *A Mysterious Affair – John Miller meets with an experience as mystical* (*sic*: "mysterious" may have been meant) *as it is diabolical*, The Phillipsburg Dispatch, a newspaper based in Phillipsburg, Phillips County, Thursday, 1 September 1887, Volume I, Number L, column 3, *page 4*, available on the subscription website [Newspapers.com](#) and discussed in more detail in **Chapter 4 (Aliens)** and **Chapter 7 (Health, Security & Safety)**.

Encounters with aliens or their surrogates during which people underwent what seemed to be involuntary medical tests, procedures or experiments were reported and investigated from the later twentieth century onward; please refer to, for example, the summaries of the *Allagash* and *Kentucky* encounters later in this section.

Official investigations and studies of some of the reports in 1896 and 1897 may possibly have been undertaken by contemporary national security services, for example, the [United States Marshals Service](#) or the [United States Secret Service](#). It is possible that any detailed official study (even one made in the nineteenth century) could have identified anomalies in what the crafts' ostensible inventors or users said, as well as the very high performance of some of their craft compared with what could be expected of an advanced airship then or now.

Contemporary investigators may have included other U.S. Federal or State officials, the military, or police services, which may have been assisted by scientists that they consulted or employed. Private investigative organisations that were possibly contracted by Federal or State officials may have included the [Pinkerton National Detective Agency](#) which performed national security duties for the Union government during the [American Civil War of 1861 - 1865](#); the *Pinkerton National Detective Agency* was also used by the U.S. government after

the war. However, government-funded, private investigations may have been restricted by the [Anti-Pinkerton Act of 1893](#).

Selected newspaper articles from the late nineteenth century are discussed in **Chapter 3 (Alien craft)** and **Chapter 4 (Aliens)** together with reports from the eastern United States in 1909 of alien craft that were disguised as or simulated the appearance (and sometimes the sounds) of our aircraft of the period; alien craft that again simulated airships were also observed or encountered in the United Kingdom and New Zealand in 1909. The alien “aircraft” and “airships” in 1909 sometimes used powerful [searchlights](#) as did some of the “airships” that were observed or encountered in 1896 and 1897 and other alien craft reported later in the twentieth century.

Mr. Wallace E. Tillinghast, a businessman based in [Worcester](#), in the state of Massachusetts, United States, appears to have acted as a press spokesman for the “aircraft’s” operators similarly to the way two San Francisco lawyers were used by the operators of the “airships” in 1896 at the beginning of the “airship” wave of 1896 – 1897. Mr. Tillinghast claimed to have flown in the “aircraft”: *He Flew, So He Says – Remarkable Story By Worcester Man – Claims His Aeroplane Flew to [New York](#) and Then to [Boston](#) on September 8*, by telegraph, Worcester, December 12, [New York Tribune, Monday, December 13, 1909, Volume LXIX No. 23,038, page 1](#), column 5, and *Tells of Marvellous Flight – Worcester To New York, Then to Boston, And Back Home*, Worcester, Mass., Dec. 12, [The Sun, New York, Monday, December 13, 1909, Vol. LXXVII. – No. 104, page 3](#), columns 1 & 2, plus *He Makes A Great Flight – Airship With Two Men Aboard Hovers Over Worcester at Night*, by United Press Wire, Worcester, Mass., Dec. 23, [The Marion Daily Mirror, Thursday, December 23, 1909, Volume XVIII – Number 110, page 1](#), column 7, and *Airship Now At Hub – Seen Flying Over the City – Pulsation of Engines Heard and Its Hull Outlined Against the Sky, Tillinghast Talks. Said to Have Told Partner About Wednesday Flight, Seen at [Willimantic](#), Airship with Powerful Light Passes Over City*, [New York Tribune, Friday, December 24, 1909, Volume LXIX No. 23,049, page 1](#), column 3.

The following year (1910) Mr. Tillinghast displayed a static “aircraft” located in a “hidden workshop” privately to a journalist and a local business leader: *Tillinghast Aeroplane – The Mysterious Monoplane Has Been Found at Last*, by telegraph, Worcester, Mass., July 12, [New York Tribune, Wednesday, July 13, 1910, Volume LXX No. 23,250, page 3](#), column 5. The simulated “aircraft” and Mr. Tillinghast were discussed in [Operation Trojan Horse \(Why UFOs\)](#), by Mr. John A. Keel, copyright 1970, edition published by Manor Books, Inc. in 1976 digitised by the [Internet Archive](#), Chapter 6, pages 101 - 120 (A New “Secret” Inventor & The Mysterious Shed).

A wave of simulated aircraft occurred during the 1930s in Scandinavia: reports of what were called the “ghost fliers” were summarised and discussed in the following articles: *Mystery Aeroplanes of the 1930s - Part 1*, [Flying Saucer Review, May - June 1970, Vol. 16, No. 3](#), pages 10 – 13, *Mystery Aeroplanes of the 1930s – Part 2*, [Flying Saucer Review, July – August 1970, Vol. 16, No. 4](#), pages 9 – 14, *Mystery Aeroplanes of the 1930s Part III – The Landings*, [Flying Saucer Review, July – August 1971, Vol. 17, No. 4](#), pages 17 – 19, *Mystery Aeroplanes of the 1930s Part IV*, [Flying Saucer Review, September - October 1971, Vol. 17, No. 5](#), pages 20 - 22, & 28, all by Mr. John A. Keel. The *ghost fliers* were also discussed in [Operation Trojan Horse \(Why UFOs\)](#), by Mr. John A. Keel, copyright 1970, edition published

by Manor Books, Inc. in 1976 digitised by the [Internet Archive](#), Chapter 7, pages 116 – 125 (The Mystery Planes of 1934 & Radio Signals from Nowhere).

During the [Second World War of 1939 – 1945](#) military aircrews reported observing or encountering a wide variety of different sizes and shapes of alien craft generally called [foo fighters](#). During the so-called [Battle of Los Angeles](#) what was probably an alien craft was fired upon by ground-based anti-aircraft guns in the early morning of 25 February 1942. Again, what were probably alien craft flew over (and sometimes appeared to crash) in Scandinavia in 1946: these were called [ghost rockets](#). These observations and encounters are discussed in more detail towards the end of **Chapter 4 (Aliens)**.

Airborne alien craft that simulated or were disguised as our aircraft, aerospace craft, helicopters or [Unmanned Aerial Vehicles \(UAVs\)](#) or “drones” were encountered or observed during the twentieth and twenty-first centuries, for example:

1950s: On Sunday, 20 April 1952 at between “2115 to 2240 hours” (presumably local time and at a location within the United States) “a naval aviation student” and several other people observed multiple airborne craft fly over, that “were shaped like conventional aircraft” except that they were each surrounded by a red-coloured “light glow” with a “fuzzy area” that extended back from behind the “wings”: *Case II (Serial 4508.00)*, [Project Blue Book, Special Report No. 14 \(Analysis of Reports of Unidentified Aerial Objects\)](#), [Project No. 10073](#), 5 May 1955, Air Technical Intelligence Center (now the [National Air and Space Intelligence Center](#)), [Wright-Patterson Air Force Base](#), Ohio (United States), Copy No. 35, at pages 78 & 79 (pages 89 & 90 of the PDF format file). Other copies of *Special Report No. 14* may be available online, for example, from the [Internet Archive](#).

1960s: One or more airborne alien craft were observed or encountered beginning at about 1100 hours local time on Wednesday, 6 April 1966, near to *Westall High School* (now [Westall Secondary College](#)) in [Clayton South](#)) “and the adjacent *Westall State School*” ([Westall Primary School](#)), south-east of the city of [Melbourne](#) in the state of Victoria, Australia. At least one of the alien craft landed or hovered at a low altitude, and what were described variously as “many private aircraft, mainly Cessna”, “light aircraft” or “small planes” were also observed. However, neither the “aircraft” nor any of their pilots were identified publicly.

A description of the “aircraft” and of one of the alien craft “written by a boy from the *Westall High School*” appeared in the article *Scoop! Flying Saucer over Westall*, published in *The Clayton Calendar*, reproduced in the [Australian Flying Saucer Review, Victorian edition, July 1966](#), pages 13 & 14, with an afterword by Ms. Judith Magee. Other reports include the video [Westall 1966: A Suburban UFO Mystery](#) (2009) and another video entitled [50 years of Melbourne UFO mystery](#) (2016), that may be available online. The encounter is discussed in the book [Contact Down Under](#) by Ms. Moira McGhee, published in April 2016 by the [Independent Network of UFO Researchers \(INUFOR\)](#) of Australia, *Chapter Nine (Victoria and Tasmania)*, Schools and children, Westall, East Melbourne, 6 April 1966, pages 137 – 139.

An airborne alien craft was observed over the [Wanaque Reservoir](#) in the state of New Jersey, United States on Tuesday, 11 October 1966; what appeared to be “seven helicopters” and “ten or twelve jet airplanes” were observed at the scene after the alien

craft's departure. The "*helicopters*" and "*jet airplanes*" arrived so quickly at the scene and there were so many of them operating so closely together, that it seems unlikely that they were real helicopters and aircraft belonging to U.S. military or security services: [Operation Trojan Horse \(Why UFOs\)](#), by Mr. John A. Keel, published in 1970, Chapter 7 (Unidentified Airplanes), Mystery Helicopters, *pages 127 & 128*, and [The Official Guide to UFOs](#), compiled by the editors of *Science & Mechanics* magazine, published in 1968, Chapter 5 – What Happened at Wanaque, N.J.? (An Objective Look At UFOs), by Mr. Lloyd Mallan, who was a member of what is now the [American Institute of Aeronautics and Astronautics](#) as well as what is now the *Aviation/Space Writers Association*, and the [British Interplanetary Society](#).

1970s: Airborne alien craft that approximately simulated or were disguised as military transport aircraft with a [twin tail boom](#) configuration were observed in the United Kingdom and the United States: *Bizarre "Boxcar" over Preston* (United Kingdom), by [Mr. Ray Rimell](#), "a World War 1 aero historian, illustrator and modeller", published in [Flying Saucer Review, June 1978, Vol. 24, No. 1, page 22](#), [Operation Trojan Horse \(Why UFOs\)](#), by Mr. John A. Keel, published in 1970, Chapter 7 (Unidentified Airplanes), Mystery "Cargo Planes", *pages 115 & 116*, and [Visitors from Space \(The Mothman Prophecies\)](#), also by Mr. Keel, published in 1975, Chapter Ten, Part IV, *pages 136 - 139* (the simulated craft in this U.S. report resembled "*big gray 'flying boxcars'*" i.e. [Fairchild C-119 Flying Boxcar](#) military transport aircraft).

1980s: Beginning "*shortly before*" 2100 hours local time on Monday, 29 December 1980 in southern Texas in the United States, an alien craft was encountered that appeared to be accompanied by numerous "helicopters" which resembled [Boeing CH-47 Chinooks](#) used primarily by military services to transport people, supplies and equipment. The alien craft and the "helicopters" were encountered by Mrs. Betty Cash, Mrs. Vickie Landrum and Mrs. Landrum's 7 year-old grandson Colby as they travelled south on the [Huffman-Cleveland Road](#) in a 1980 model [Oldsmobile Cutlass Supreme](#) car.

The alien craft descended "*directly in front of them, settling swiftly between the trees just ahead of them and above the highway.*" Mrs. Cash (who was driving) experienced a "*panicky impulse*" to accelerate and drive under the craft "*to get away from it*" but instead stopped the car at Mrs. Landrum's urging. The distance from the stopped car to the craft was later variously estimated to have been from approximately 100 feet to "*less than 150 feet*", and the altitude of the craft was reported as "*60 – 80 feet above the road*": [The Cash Landrum Incident](#), copyright © 1998/2022, by [Mr. John F. Schuessler](#), an aerospace engineer who was the Deputy Director of the [Mutual UFO Network \(MUFON\)](#) and the encounter's "*primary investigator*", Chapter 1 (The Encounter), *pages 16 – 18*, and Addendum, *pages 248, 251, 252, 255, and 257*.

The car stopped at a location slightly north of the junction with [Inland Road](#), which runs south-east from the *Huffman-Cleveland Road*. A simplified map of the roads where the encounter occurred that includes the position of the car when it stopped and the flight path of the alien craft, is contained in the article: *Burns Follow UFO Incident*, [The A.P.R.O. Bulletin, Vol. 29, No. 8](#), published in 1981, *page 3*. The area where the encounter occurred is to the north of [Lake Houston](#) and about 60 kilometres northeast of the [Gulf of Mexico](#) (renamed the "Gulf of America" by President Trump's [Executive Order 14172](#)). In the A.P.R.O. report referenced above the *Huffman-Cleveland Road* was referred to as the Huffman-New Caney

Road; it was referred to as State Farm Road FM (Farm-to-Market-Road No.) 1485 in *The Cash Landrum Incident*, for example, in Chapter 1 (The Encounter), at page 16.

As there were so many “helicopters” observed flying so close to one another and the alien craft it seems unlikely that they were real helicopters. In addition, Mrs. Cash, Mrs. Landrum, and Colby received injuries from their encounter that were consistent with exposure to strong [X-ray](#), [ultraviolet](#) and [infra-red](#) electromagnetic radiation; such radiation might have adversely affected the systems of real helicopters and the health of their human crews. The injuries received by Mrs. Cash, Mrs. Landrum, and Colby and the investigations into the possible origin, etc. of the “helicopters” they observed are among the issues connected with the encounter that were covered in detail in *The Cash Landrum Incident*, which may be available in public libraries or purchased online. For example, in 2025 the paperback version of the book was available via [Amazon UK](#) for £11.35 including free delivery in the United Kingdom; the book may also be available via other websites such as the [AFU Shop](#) or [AbeBooks](#), etc. Mr. Schuessler can be seen and heard in video documentaries that are referenced towards the end of this section.

Mrs. Cash, Mrs. Landrum and Colby seem to have received their injuries when they got out of the stopped car to observe the craft. Mrs. Cash’s injuries were the most severe, probably because she stayed outside the car longer than Mrs. Landrum and Colby. Relatively speaking, Colby’s physical injuries seem to have been the least severe (he spent the least amount of time outside of the car) although he like Mrs. Cash and Mrs. Landrum subsequently suffered serious and ongoing health problems and was also emotionally traumatised by the encounter.

The physical injuries suffered by Mrs. Cash, Mrs. Landrum and Colby seem to support a hypothesis proposed by [Professor Paul R. Hill](#), a United States, NASA aerospace scientist and engineer, that “*the propulsive waves* (the synthetic acceleration propulsion force fields that may be radiated by alien craft to enable them to hover and fly) *and the ionizing waves* (see below) *are two separate entities that (more or less) go out together*” (from the hull of an alien craft): [Unconventional Flying Objects: a scientific analysis](#), by Professor Hill, Section X (Propulsion Oddities), Part B. (Saucer Rings), Example X-B3. Pressure Rings, page 140, and Part C. Discussion, pages 141 – 144, of the paperback edition published in 1995.

Professor Hill concluded that the “*ionizing waves*” were probably X-ray or [gamma ray](#) frequency electromagnetic fields. These powerful electromagnetic fields may possibly direct and focus an alien craft’s synthetic acceleration propulsion and hull protection force fields or be associated with the generation of these force fields. Ultraviolet radiation may also be produced below or around an alien craft when the electromagnetic fields it radiates make the surrounding air produce “*ionized atmospheric nitrogen* (that) *radiates very strongly in the ultraviolet frequencies*”: [Unconventional Flying Objects: a scientific analysis](#), by Professor Hill, Section III (Illumination), Part B (Sample Data on Colors and Illumination), page 59. These issues are discussed in more detail elsewhere in *Time of Contact* including in **Chapter 2 (Alien technology)**.

The [Mutual UFO Network \(MUFON\)](#), the [Aerial Phenomenon Research Organization \(A.P.R.O.\)](#) and the [J. Allen Hynek Center for UFO Studies \(CUFOS\)](#) “*all cooperated in a responsible manner to assist the Houston-based Project VISIT (Vehicle Internal Systems Investigation Team) to conduct the (Cash-Landrum encounter) investigation by providing*

consultants, recommendations, and data pertaining to similar cases.” A.P.R.O. stated that they were first notified of the encounter on 2 February 1981.

Reports and analyses of the *Cash-Landrum encounter* include: *Physical Effects, Helicopters and a Fiery UFO*, [International UFO Reporter \(IUR\), May – June 1981, Vol. III, no. 4, pages 13 & 14](#), *Burns Follow UFO Incident*, [The A.P.R.O. Bulletin, Vol. 29, No. 8](#), published in 1981, pages 1 – 4, *Follow-Up*, by Mrs. Coral E. Lorenzen, [The A.P.R.O. Bulletin, Vol. 29, No. 10](#), published in October 1981, page 8, *Radiation Injuries from UFO*, by [Mr. Richard H. Hall](#), published in the [MUFON UFO Journal, April 1981, No. 158, page 3](#), *Cash-Landrum Radiation Case*, by Mr. John F. Schuessler, [MUFON UFO Journal, November 1981, No. 165, pages 3 – 6](#), *Pentagon Investigates Cash-Landrum Case*, by Mr. John F. Schuessler, [MUFON UFO Journal, October 1982, No. 176, pages 3 – 6](#), *Technical Review of Radiation Evidence in Cash-Landrum Case*, by Mr. Paul Stowe (with comments by Dr. Peter Rank), [MUFON UFO Journal, December 1982, No. 178, pages 8 & 9](#), *Radiation UFO Injuries*, by Dr. Richard C. Niemtzow, M.D., [MUFON UFO Journal, January 1983, No. 179, pages 14 & 15](#), *Cash-Landrum Case, Investigation of Helicopter Activity*, by Mr. John F. Schuessler, [MUFON UFO Journal, September 1983, No. 187, pages 3 – 7](#), and the book [The Cash Landrum Incident](#), by Mr. John F. Schuessler, copyright © 1998/2022.

Video documentaries that contain interviews with Mrs. Cash, Mrs. Landrum, Colby and Mr. Schuessler may be available online, including: [The UFO Experience 1982 Documentary](#), beginning at about 14 minutes into the video file, and an episode of [Unsolved Mysteries with Robert Stack, Season 3, Episode 18](#), first released on 30 January, 1991, beginning at about 18 minutes into the video file. A list of video programmes about or that include the *Cash-Landrum encounter* is available on the [IMDb database](#). The *Cash-Landrum encounter* is also discussed in **Chapter 7 (Health, Security, & Safety)**.

1990s: there were several reports of what was possibly an alien aerospace craft that simulated or was disguised as an “aircraft” that resembled the obsolete [North American Aviation XB-70 Valkyrie](#). One observer reported how the craft flew and manoeuvred at a slow speed and low altitude over [Doylestown](#), in the state of Pennsylvania, United States in 1993. Another, similar “aircraft” was observed “flying over [Salt Lake City](#)” in the state of Utah at 1435 hours local time on Sunday, 4 October 1998; it had what appeared to be a smaller aircraft or aerospace craft attached to its underside: [Two-Stage-to-Orbit ‘Blackstar’ System Shelved at Groom Lake?](#) and [Spaceplane ‘Mothership’ Resembles 1960s’ XB-70 Bomber Prototypes](#), by Mr. William B. Scott, published in [Aviation Week & Space Technology](#), 6 March 2006, pages 48 & 52.

21st century: Unidentified airborne craft that news and other reports, articles and video documentaries, etc. often referred to as “drones” ([Unmanned Aerial Vehicles or UAVs](#)) were observed over military facilities and “critical infrastructure” such as water reservoirs and nuclear power stations, etc. during the twenty-first century, for example, the craft that were observed over nuclear power stations in France and Belgium in the last quarter of 2014 and in early 2015. The craft observed in France were described as being “something much more complex and expensive” than ordinary “drones” with “a triangle of three white lights, a larger red light and a searchlight, possibly linked to a camera, which throws intermittent beams of light on the ‘target’”: [French government on high alert after unexplained drone flights over nuclear power stations](#), published by [The Independent](#) online newspaper, Sunday, 9

November 2014 and [Drone spotted over Belgium nuclear plant](#), published by [SBS News](#), Sunday, 21 December 2014.

The “drones” may have been alien craft that were monitoring the integrity of nuclear reactors which were defective or vulnerable to sabotage or other attacks, and therefore were potentially very dangerous: [Police call for witnesses to identify man suspected of sabotaging nuclear reactor](#), published in [The Brussels Times](#), Wednesday, 6 November 2019 and [Belgium’s neighbors fear a nuclear Incident](#), by [Mr. Dave Keating](#), published by [Forbes](#), updated Monday, 5 February 2018.

In the United States in late 2019 and early 2020 there was a “wave” or “flap” of reports of unidentified airborne craft that may have surveyed U.S. nuclear missiles and associated systems and facilities in the states of [Colorado](#) and [Nebraska](#). These craft possibly came from a much larger alien craft that had recently arrived in our solar system and were performing their first survey of these missiles, systems and facilities, or perhaps updating a database they had brought with them or were able to access. Alternatively, the craft may have been deployed by longer term visiting (or resident) aliens engaged in similar activities: [A night on the plains: Chasing the mysterious drones of eastern Colorado](#), by [Mr. Sam Tabachnik](#), and [Mysterious drones flying nighttime patterns over northeast Colorado leave local law enforcement stumped](#), by [Ms. Shelly Bradbury](#), published by [The Denver Post](#) on Monday, 23 December 2019 and Friday, 3 January 2020, [‘It’s creepy’: unexplained drones are swarming by night over Colorado](#), by [Mr. Mitch Smith](#), published by [The New York Times](#) on Wednesday, 1 January 2020, plus [Wikipedia – 90th Missile Wing LGM-30 Minuteman Missile Launch Sites](#) in the states of Colorado, Nebraska and [Wyoming](#).

Reports from Nebraska included those near [County Road R](#), outside [Mead](#), [Grand Island](#), the [Hastings Municipal Airport](#), [Juniata](#), and Westbrook: *‘Mystery drones’ spotted over eastern Nebraska* (including video), published by [KTIV.COM](#) on Wednesday, 8 January 2020, and [Authorities investigate mysterious drone sightings in Nebraska](#), by [KSNB](#), published by [WVLT8](#) on Monday, 6 January 2020.

It is possible that the craft’s controllers were aware of an accident with a nuclear missile in 2014 at the facility *“designated Juliet-07 and placed among wheat fields and wind turbines west of [Peetz](#), Colorado. The silo, one of 10 in a cluster that straddles the Colorado-Nebraska border, is controlled by launch officers of the 320th Missile Squadron and administered by the 90th Missile Wing at [F.E. Warren Air Force Base](#) in Wyoming”*: [US airmen damage nuclear missile as ‘troubleshooting’ mission goes wrong](#), published by [The Guardian](#) newspaper, Saturday, 23 January 2016. It is possible that in the future, alien craft may be observed surveying other United States land-based missile launch sites: those of the [341st Missile Wing](#) in the state of [Montana](#), north of Wyoming, and of the [91st Missile Wing](#) in the state of [North Dakota](#) north-east of Wyoming.

Reports of alien craft that seemed to survey or interfere with ballistic missiles or other military systems and facilities during the twentieth century were discussed in papers and journal articles, for example: [Remarkable Reports from the Missile Field](#), by Mr. Robert L. Hastings, [International UFO Reporter \(IUR\) Volume 32, number 1 \(August 2008\)](#), pages 8 – 27 and other papers and articles referenced in **Chapter 4 (Aliens)**.

Beginning in late 2024 news reports, articles, online videos, etc. were published about a “wave” of unidentified airborne craft some of which may have been alien craft that simulated or were disguised to resemble our fixed wing UAVs or [quadcopter](#) drones, and usually flew at night over “critical infrastructure like reservoirs” and over many other locations. The earliest reports may have been of craft observed near [Morris County](#), in the state of New Jersey, United States on Monday, 18 November 2024. Subsequent reports included observations of unidentified craft over [Wright-Patterson Air Force Base](#) north-east of [Dayton](#) in the state of Ohio (beginning late on Friday, 13 December, 2024).

Some observers reported seeing relatively large craft (for example, the size of a “car” or a “bus”) or reported there was no sound made by some of the craft. There have been many articles, reports and online videos published about this wave, including: [Drones continue to buzz over US bases. The military isn’t sure how or why to stop them](#), by [Ms. Haley Britzky](#), published by [CNN News](#), Monday, Saturday, 21 December 2024, [Key US Air Force base closes airspace amid drone sightings](#), by [Mr. Brad Lendon](#) and [Ms. Hanna Park](#), and [What we know about mysterious drone sightings](#), by [Ms. Zoe Sottile](#), [Mr. Josh Campbell](#) and [Ms. Artemis Moshtagian](#), both articles published by [CNN News](#), Monday, 16 December, 2024.

Beginning on or about Wednesday, 20 November 2024 unidentified airborne craft were observed over and in the vicinity of four bases used by the United States military in the United Kingdom: [Royal Air Force \(RAF\) \(station\) Mildenhall](#) and the adjacent base [RAF Lakenheath](#) in the county of [Suffolk](#) in the region of East Anglia, in England, plus [RAF Feltwell](#) in the county of [Norfolk](#), East Anglia, and [RAF Fairford](#) in the county of [Gloucestershire](#).

The craft observed over the village of [Beck Row](#) near to and over *RAF Mildenhall* itself were described as “*brightly lit aerial vehicles*”; one was described by the person who observed it as “*triangle-shaped*” with a hull that was “*a grey, dark colour*”. Other reports from residents of *Beck Row* described “*a big orange light in the sky*”, “*very large (craft) with bright lights*” and “*a big, big light*”. One observer “*could not detect a noise*” (from the craft). The craft were initially reported over the *East Anglian* bases “*between (Wednesday) 20 and (Friday) 22 November, and the aircraft has since reappeared*”: [Are mystery drones above US bases in England something sinister?](#) by [Mr. Matt Precey](#) and [Ms. Alice Cunningham](#), published by [BBC News, Suffolk](#), (Saturday) 30 November, 2024.

The wave that began in November 2024 suggests that an alien expedition may recently have arrived in our solar system and began a routine survey of our nuclear weapons and military bases, critical infrastructure, etc. Alternatively, the deployment of alien craft may have been a warning by visiting or resident aliens to us about the danger that the [war in Ukraine](#) could develop into a much wider and more destructive war involving the use of nuclear weapons. The last-mentioned idea is supported by the apparent correlation between the appearance of the alien craft and the reported launch by [Russia](#) on Thursday, 21 November 2024 of an [Oreshnik ballistic missile](#) at a target in the city of [Dnipro](#) in Ukraine. This type of missile can carry nuclear weapons and although in this case it may not have carried any weapons at all, the very high speed with which it probably struck meant that it evidently still caused casualties and damage.

If a missile known to be capable of carrying nuclear weapons was launched accidentally or deliberately on a trajectory terminating in a country which was, for example, a member of the

[North Atlantic Treaty Organization \(NATO\)](#) the result might be the launch of nuclear weapons at targets in Russia: [Putin says Russia hit Ukraine with new intermediate-range ballistic missile](#), published by [BBC News](#), (Thursday) 21 November, 2024.

Unidentified and possibly alien airborne craft were observed over [Denmark](#) during the week beginning Monday, 22 September 2025; their presence may have constituted a further warning about the dangers of the war in Ukraine: [Drones seen over Danish military bases in latest air disruption](#), by [Mr. Ian Aikman](#), published on Saturday, 27 September 2025 by [BBC News – Europe](#); the observations preceded international meetings about support for Ukraine and the defence of Europe during the following week in [Copenhagen](#), the capital of Denmark: [Informal meeting of heads of state or government](#), on Wednesday, 1 October 2025 and [Meeting of the European Political Community](#) on Thursday, 2 October 2025.

Later in October 2025 and during November 2025, there were more reports of unidentified airborne craft over military bases and airports in Europe. The craft were possibly surveying nuclear weapons contained in storage facilities, or their presence was a further warning of the dangers posed by the Ukraine war, or was intended to encourage efforts to end the war: [Dutch air force fails to intercept unknown drones over Volkel Air Base](#), by [Clement Charpentreau](#), published by [AeroTime](#), (Monday) 24 November 2025 and [Drones spotted over Belgian military base for third night in a row](#), by [Evelyn Ann-Marie Dom](#), published by [Euronews](#), (Sunday) 2 November 2025.

The controllers of the unidentified, possibly alien airborne craft may also have been warning of the danger posed by war damage to the protective shell over the [Chernobyl nuclear power station's](#) reactor number 4: [Chernobyl radiation shield has stopped working after Russian drone strikes](#), by [Mr. Ben Munster](#), published by [Politico](#), (Saturday) 6 December 2025.

During 1989 and 1990 observations of and encounters with alien craft over [Belgium](#) (where NATO has its headquarters) may have constituted a similar but earlier warning. This was the time when NATO's primary adversary the Eurasian [Soviet Union](#) (the Union of Soviet Socialist Republics, or USSR or CCCP controlled by Russia) was disintegrating, beginning in 1989; the *Soviet Union* existed from December 1922 to December 1991. The craft's controllers may have been warning NATO not to take advantage of the USSR's disintegration militarily, or were highlighting the dangers its disintegration posed, for example, possible loss of control over the USSR's nuclear weapons: [Observations récentes - 7 novembre 1989, Esneux \(Belgique\); 29 novembre 1989, région nord-est de Verviers \(Belgique\)](#) and [6 Décembre 1989, Battice \(Belgique\)](#), published in [Lumières Dans La Nuit \(LDLN\), Novembre – Décembre 1989, No. 300, pages 28 – 36](#), and articles published in [Lumières Dans La Nuit \(LDLN\), Janvier/Février 1990, No. 301](#) (an online version of this edition of the journal may also, possibly, be available but the author of *Time of Contact* has not yet discovered it).

Translations into English of the above-mentioned LDLN reports appeared subsequently as the articles *Belgium Haunted for Months Past by Huge Low-Flying Triangular Craft - B. The UFO "Wave" November/December 1989 over Eastern Belgium*, by Monsieur Joël Mesnard and the Editorial Committee of [Lumières dans la Nuit \(LDLN\)](#), translated into English by [Mr. Gordon Creighton](#) and published in [Flying Saucer Review, June Quarter 1990, Vol.35, No. 2, pages 1 – 10](#), and *Belgium Haunted by Huge Triangular craft: Part II*, by Monsieur Joël Mesnard and the Editorial Committee of LDLN; the article *A UFO On the F-16's Radar*, by

Ms. Marie-Thérèse de Brosses was published in [Paris-Match, No. 2145 \(Paris\), July 5, 1990](#) and translated into English by Mr. Gordon Creighton, [Flying Saucer Review, December Quarter 1990, Vol.35, No. 4, pages 2 – 11](#). Selected observations of and encounters with alien craft from the *Belgian Wave* are discussed in **Chapter 1 (How alien aerospace craft fly)** and **Chapter 3 (Alien craft)**.

A still-earlier international crisis may possibly have caused alien craft to survey nuclear weapons belonging to the United States that may have been stored in the county of Suffolk in the East Anglian region of England, in the United Kingdom. Observations of, or encounters with alien craft occurred at the end of 1980 and involved U.S. military personnel as well as civilians and English police officers: they began over, near to or in the [Rendlesham Forest](#) north-east of the river [Deben](#) on the evening of Thursday, 25 December 1980 (Christmas night). An encounter that may have occurred about one kilometre (1 km) west of [Butley Abbey](#) may have involved, possibly, direct contact between the users of an alien craft and a [U.S. Air Force](#) officer.

A recommended starting point is the summary of the encounter with an alien craft in the *Rendlesham Forest* reported by the then Staff Sergeant Jim Penniston of the U.S. Air Force, who was on the evening of Thursday, 25 December 1980 the “on-duty flight chief” at [RAF Woodbridge](#) a military base then used by the U.S. Air Force; he had arrived at another, adjacent U.S. base, [RAF Bentwaters](#) located a few kilometres north-east of *RAF Woodbridge “in the summer of 1980”*. The reason for selecting Staff Sergeant Penniston’s report is that according to the businesswoman, investigator and author [Ms. Georgina Bruni](#) (who contacted many people in the course of her investigation into the *Rendlesham Forest* observations or encounters) he was “a most reliable witness”. Staff Sergeant Penniston made drawings to help illustrate his encounter, that included an alien craft: [You Can’t Tell the People](#), by Ms. Bruni, published in 2000, chapter titled [The Evidence of Jim Penniston](#), pages 164 - 175 of the [Internet Archive](#) online edition and Staff Sergeant Penniston’s drawings reproduced in [Appendix III \(Letters, Statements and Drawings\)](#), pages 371 – 373 of the Internet Archive online edition.

Filmed or video documentaries about or dramatisations of the *Rendlesham Forest* observations or encounters include: [Capel Green](#), which premiered in *Suffolk* on Friday, 27 June 2025. Journal articles that were published relatively soon after the observations or encounters included: *Military Contact Alleged at Airbase*, by Ms. Jenny Randles, published in [Flying Saucer Review, Volume 26, Number 6, March 1981](#), cover page iii, *The Rendlesham Forest Mystery*, by Ms. Jenny Randles, published in [Flying Saucer Review, Volume 27, Number 6, June 1982](#), pages 4 – 8, and *UFO Update*, by Mr. Eric Mishara, published in [OMNI magazine, March 1983](#), page 115.

If, during an encounter in the *Rendlesham Forest*, an alien craft’s users actually communicated with a U.S. Air Force officer we may speculate that the aliens may have issued instructions or expressed their concern about the danger of a nuclear war; at this time there was a possibility that the Eurasian [Soviet Union](#) (the Union of Soviet Socialist Republics or USSR, or CCCP controlled by [Russia](#)) would invade [Poland](#) to suppress growing opposition there to its rule: [The Soviet Non-Invasion of Poland in 1980/81 and the End of the Cold War](#), by [Vojtech Mastny](#), Working Paper No. 23, dated September 1998 published by the Woodrow Wilson International Center for Scholars (now called [The Wilson Center](#)) and [You Can’t Tell the People](#), by Ms. Bruni, chapter titled [A Little Piece of American](#)

[Pie](#), pages 46 - 48 of the Internet Archive online edition, plus [Left at East Gate](#), by Mr. Larry Warren and Mr. Peter Robbins, published in 1997, [Chapter 1 \(The Bentwaters Incident\)](#), page marked 40 of the Internet Archive online edition.

At least one possible witness to an encounter in the *Rendlesham Forest* evidently stated that “aliens were busily repairing their crashed spacecraft” and another that two aliens were “floating around (outside) as if inspecting (their craft)”: [You Can't Tell the People](#), by Ms. Bruni, chapters titled [The Mysterious Steve Roberts](#), page 67 of the Internet Archive online edition, and [The Larry Warren Story](#), page 88 of the Internet Archive online edition.

As discussed in **Chapter 4 (Aliens)** there are detailed reports of aliens or their surrogates ostensibly inspecting, repairing or maintaining their landed or low-hovering craft, for example: *New York state: 1964 – UFO repair reported*, [Skylook, The UFO Monthly, Official Publication of the Mutual UFO Network, Inc., Number 92, July 1975](#), pages 1, and 3 – 12, by Mr. Ted Bloecher and Mr. Everett C. Brazie. Occasionally, aliens or their surrogates have asked people they encountered to procure tools or supplies for them that appeared to be for use in repairing or maintaining their craft, probably to try to portray the craft as human-made with contemporary mechanical or electrical components, for example: *Supplies for Airship - A Rockland Man Helped The Aerial Navigators. Purchased Chisels and Lubricating Oil for “Smith,” the Man With the Mysterious Machine*, [Rockland](#), in Tyler County, in the state of Texas, United States, April 23 (1897), [Houston Daily Post newspaper, Sunday Morning, April 25, 1897, page 13, column 3](#), discussed in detail in **Chapter 4 (Aliens)**.

The author of *Time of Contact* has concluded that elements of observation or encounter reports where aliens ostensibly inspect, repair or maintain their craft, or ask for tools and supplies with which to do so, probably reflect alien [disinformation](#). This view is based in part on the opinion of the space pioneer [Professor Dr. Hermann Oberth](#) who wrote that, “Observations suggest that Flying Saucers (disc-shaped alien craft) are able to suppress the force of gravity ... The safe working of the U.F.O.s – in conjunction with the long history of reports – seem to suggest a very old invention which has long since disposed of its [teething troubles](#) (i.e. alien craft would be unlikely to require inspection, repair or maintenance). Having weighed all the pros and cons, I find the explanation of flying discs from outer space the most likely one”: *They Come from Outer Space* (The Unexplained Nine Per Cent, paragraphs 2, 3(c), 4 and 5), by Professor Dr. Oberth, [Flying Saucer Review, May - June 1955, Vol. 1, No. 2](#), pages 12 – 15, at page 14.

It is also possible that the alien craft observed or encountered over or in the *Rendlesham Forest* were primarily interested in, or were also surveying the twin nuclear reactors of the [Sizewell A](#) power station located about 15 km north-east of [Butley Abbey](#), which operated between 1966 and 2006; as mentioned earlier, alien craft have been observed over or near to nuclear power stations, for example, the craft that were observed in France and Belgium in the last quarter of 2014 and in early 2015. *Sizewell A* is presently being decommissioned, while the [Sizewell B](#) nuclear power station which started generating electricity in 1995 remains operational and may be joined or replaced in the future by a planned [Sizewell C](#) nuclear power station.

On a personal note, the author of *Time of Contact* has often travelled to the area north of the river *Deben* to lunch at the [Ramsholt Arms](#) public house by the river Deben, or to visit the site of an ancient ship burial at [Sutton Hoo](#) whose discovery was dramatised in the film

(movie) [The Dig](#), or the attractive small towns of [Woodbridge](#) (where a [replica of the Sutton Hoo ship](#) is being constructed) and [Aldeburgh](#).

Despite the numerous reports of alien craft that have simulated or were disguised as human-made airships, aerospace craft, aircraft, helicopters, or UAVs, drones, etc., many other reports described craft that did not resemble our craft or were not accompanied by craft that resembled any of ours. Detailed reports of what may be the real appearance of some alien craft as well as of their manoeuvres, any sounds they made, or any effects on animals, people, vegetation, shrubs and trees, natural or human-made surfaces, cars, trucks, building roofs, etc. may help us to understand the evidently highly advanced science and technology on which they are based. If an alien craft's users are encountered too, we may learn from their reported appearance and behaviour and from what (if anything) they communicate to people.

On the evening of Thursday, 26 August 1976 another alien craft that did not resemble any of our craft, together with its users, were encountered by four young men (Mr. Jim Weiner, his twin brother Mr. Jack Weiner, Mr. Chuck Rak and Mr. Charlie Foltz) while they were travelling in their [canoe](#) (a watercraft 16 feet long which they propelled manually) on [Eagle Lake](#) in the [Allagash Wilderness Waterway](#), located in the state of Maine in the far north-east of the United States. Their reported observations included: details of the appearance, patterns and movement of what may have been plasma on or around the craft's exterior caused by its propulsion, hull protection, or energy generation systems, the way the craft moved, and the appearance of the exterior and some of the interior of the craft. The men's descriptions of the appearance and operation of a system used to transport them and some of the craft's users up to and down from the craft are discussed in more detail together with other, similar reports in **Chapter 2 (Alien technology)**. The men also provided detailed descriptions of the appearance and behaviour of the craft's users.

The encounter was investigated beginning in 1988 after Mr. Jim Weiner personally approached [Mr. Raymond E. Fowler](#), the Director of Investigations for the [Mutual UFO Network \(MUFON\)](#). The investigation concluded that the men had been subjected to non-consensual, intrusive medical examinations, procedures or experiments by the alien craft's users for perhaps two or three hours. The men had all studied art and made illustrations of their encounter that were included in a book: [The Allagash Abductions: Undeniable Evidence of Alien Intervention](#) by Mr. Fowler, first edition published in 1993. In addition, a graphics-based book about the encounter was created by two of the men who experienced it: [The Allagash Incident](#), by Mr. Charles Rak and Mr. Jack Weiner, also published in 1993.

The *Allagash encounter* is discussed in **Chapter 4 (Aliens)** and further information is available in the following articles, videos and book: *The Allagash Abductions*, by Mr. Fowler, [Flying Saucer Review, Winter 1993, Vol. 38, No. 4, pages 2 – 5](#), and *The Allagash Abductions*, [MUFON UFO Journal, April 1993, No. 300](#), also by Mr. Fowler, *pages 3 – 6*; the video documentaries [The Allagash Incident of 20 August 1976 \(History Channel\), Part 1](#) and [Part 2, The Allagash Abductions – an openminds.tv documentary](#), attributed to Ms. Amanda McDonald and published on 15 March 2016, and [The Allagash Abductions: Undeniable Evidence of Alien Intervention](#) by Mr. Fowler, first edition published in 1993, which provides a great deal of information about the encounter. *The Allagash Abductions: Undeniable Evidence of Alien Intervention* may be available online or in public libraries, or purchased via websites such as the [AFU Shop](#) (where it was available for US\$25.00 excluding postal

charges in 2025) or [Amazon](#) (£27.04 excluding delivery charges in the United Kingdom, in 2025) or [AbeBooks](#), etc.

Another encounter that is discussed in **Chapter 4 (Aliens)** occurred earlier in 1976: Ms. Mona Stafford, Ms. Louise Smith and Mrs. Elaine Thomas were travelling in a 1967 model [Chevrolet Nova](#) car late at night on Tuesday, 6 January 1976 when their encounter began “about one mile south of [Stanford](#)” on Highway (number) 78 that runs south-west towards [Hustonville](#) (their destination was [Liberty](#)) in the state of Kentucky, United States. The *Kentucky encounter* seems to have become known initially through reports in the media and was then investigated by the [Aerial Phenomenon Research Organization \(A.P.R.O.\)](#), the [J. Allen Hynek Center for UFO Studies \(CUFOS\)](#), and the [Mutual UFO Network \(MUFON\)](#).

The *Kentucky encounter* may have lasted for over an hour; the women reported they were subjected to non-consensual, intrusive medical examinations, procedures or experiments. When they were interviewed by investigators the women were still recovering from physical injuries and other trauma caused during the encounter: *The Kentucky Abduction*, [The A.P.R.O. Bulletin, October 1976, Vol. 25, No. 4](#) (evidently mis-titled on its first page as Vol. 24, No. 6), *pages 1 & 3 – 6*, that refers to the newspaper article: *Possible UFOs? Strange objects seen in sky in Lincoln County*, by Brenda Edwards, Area Editor, [Kentucky Advocate](#), published in Danville, Kentucky, Vol. 110, No. 189, Sunday, February 1, 1976, columns 1 – 3, *page 28*, available via the subscription website [Newspapers.com](#).

Other contemporary reports included: *Kentucky women report close encounter*, [Skylook, April 1976, Number 101](#), *pages 3 & 4* (a sketch of the exterior of the alien craft by one of the women is at the top of *page 3*), based on an article in the [Casey County News](#) newspaper published in Liberty, Kentucky, Thursday, 12 February 1976, and 3 – *Progress Reports, The Kentucky Abduction*, [International UFO Reporter, Vol. 2, No. 3, March 1977](#), at *pages 6 & 7*. A later article, entitled *Casey woman recalls UFO encounter in 1976*, by Bobbie Curd, was published by the [Central Kentucky News-Journal](#), 24 September 2010, that may be (or may become) available, online.

The *Kentucky encounter* was also discussed in the book [Situation Red – The UFO Siege](#), by [Mr. Leonard H. Stringfield](#), also published in 1977, Chapter X (Confrontation!), *pages 198 – 212*, and *Appendix III (Observations and Conclusions regarding the Investigation of the UFO Experience of Ms. Smith, Ms. Stafford, and Mrs. Thomas, by R. Leo Sprinkle, Ph.D.)*, *pages 216 – 221*. *Situation Red – The UFO Siege* may be freely available online or at public libraries, or may be purchased online, for example, in 2025 the paperback version was available via [Amazon UK](#) as an [Amazon Audible Audiobook](#), and in [Amazon Kindle](#) and printed paper book formats, or via websites such as the [AFU Shop](#) or [AbeBooks](#), etc.

Summaries of, and comparisons among other similar encounters may be freely available online, for example, [UFO Abductions: The Measure of a Mystery, Volume 1: Comparative Study of Abduction Reports](#), and [UFO Abductions: The Measure of a Mystery, Volume 2: Catalogue of Cases](#) both by Mr. Thomas E. Bullard, for the [Fund for UFO Research \(FUFOR\)](#), published in 1987. Mr. Bullard provided references to the original, more detailed reports of such encounters published in, for example, [The MUFON UFO Journal](#), the publications of the [Aerial Phenomenon Research Organization \(A.P.R.O.\)](#) and the [Flying Saucer Review](#), etc. which may also be available from websites such as the [Archives for Unexplained \(AFU\)](#) and Amazon UK.

U.S. lawmakers have held hearings about *Unidentified Aerial Phenomena (UAP or UAPs)*: [Unidentified Anomalous Phenomena: Exposing the Truth, United States House Committee on Oversight and Accountability, Joint Hearing of the Subcommittees on Cyberspace, Information Technology and Government Innovation and National Security, the Border and Foreign Affairs, Washington D.C., Wednesday, 13 November, 2024](#). Oral and written testimony was provided by [Dr. Timothy Cole Gallaudet](#), Rear Admiral, United States Navy (Retired), [Mr. Luis Daniel Elizondo](#), [Mr. Michael Gold](#), and [Mr. Michael D. Shellenberger](#).

Earlier hearings included the [Unidentified Anomalous Phenomena, Implications on National Security, Public Safety, and Government Transparency, United States House Committee on Oversight and Accountability, Subcommittee on National Security, the Border and Foreign Affairs, Washington D.C., Wednesday, 26 July, 2023](#) to which reports of observations of or encounters with evidently alien craft were provided, including by former U.S. Navy Lieutenant [Mr. Ryan Graves](#), Executive Director, [Americans for Safe Aerospace](#) and U.S. Navy Commander (CDR) [David Fravor](#) (Retired), whose encounter is discussed in **Chapter 2 (Alien technology)** and in [A Forensic Analysis of Navy Strike Group Eleven's Encounter with an Anomalous Aerial Vehicle, dated March 2019](#) introduced later in this section.

Mr. David Grusch, a “former National Reconnaissance Office Representative, *Unidentified Anomalous Task Force, Department of Defense*” (now called the Department of War) also testified. An [interview with Mr. Grusch on NewsNation](#) may be available online.

Videos of the public, unclassified parts of the [Unidentified Aerial Phenomena \(Open and Closed \[hearings\]\), 117th Congress \(2021 – 2022\), House Intelligence \(Permanent\) Committee on Counterterrorism, Counterintelligence, and Counterproliferation](#) may be available online: [CNET highlights - 17 May 2022](#).

Hearings about what were then called “Unidentified Flying Objects” or “UFOs” were held over fifty years earlier: [Symposium on Unidentified Flying Objects, Hearings before the Committee on Science and Astronautics, U.S. House of Representatives, Ninetieth Congress, Second Session, July 29, 1968 \[No. 7\]](#).

The classified status of many U.S. military radar systems and other sensors and detectors means that it is unlikely that full details of the observations or encounters on which, for example, the [Preliminary Assessment: Unidentified Aerial Phenomena](#), published in 2021, was based, will be made public for many years to come. However, since the *Preliminary Assessment: Unidentified Aerial Phenomena* included reports beginning in “November 2004” that data probably included visual, radar and multi-sensor observations made by U.S. military personnel in that same month and year, that are discussed in **Chapter 2 (Alien technology)** and have already been independently reported or investigated and analysed, for example, [Navy pilots describe encounters with UFOs](#), a CBS 60 minutes video published on 16 May 2021, [Navy pilot who filmed the “Tic Tac” UFO speaks: ‘It wasn’t behaving by the normal laws of physics’](#), by Mr. Matthew Phelan, published by the [New York Intelligencer](#), 19 December 2019, [The Nimitz encounters updated](#) by Mr. Dave Beatty, published on 29 August 2019, and [A Forensic Analysis of Navy Strike Group Eleven's Encounter with an Anomalous Aerial Vehicle, dated March 2019](#).

Some of the unidentified airborne objects that flew close to or over U.S. Navy vessels, for example, the [USS Paul Hamilton](#) in 2019 may have been alien craft that simulated the

appearance of our “[quadcopter](#)” drones: [Swarmed Navy destroyer had its bridge illuminated by mysterious drones \(and other articles dated 2021 and 2022\)](#), by Mr. Adam Kehoe and Mr. Marc Cecotti, published in [The Warzone \(The Drive\)](#), and *Mirages or Martians?* by [Mr. Rob Coppinger](#), published by [Air International](#), March 2023, pages 68 – 72.

Older reports based on now-obsolete radar and other systems about which more information is publicly available may provide more data in some respects than modern reports, for example, the visual and radar observations of several airborne alien craft reported by the crew of a [Boeing B-29](#) bomber aircraft of the [United States Air Force](#), flying over the [Gulf of Mexico](#) (renamed the “Gulf of America” by President Trump’s [Executive Order 14172](#)) on 6 December 1952. These observations are discussed in detail in **Chapter 1 (How alien aerospace craft fly)** based on the following reports: [National Investigations Committee on Aerial Phenomena \(NICAP\) – Gulf of Mexico case, Dec. 6, 1952](#), that reproduced the contemporary account which is contained in the book [Flying Saucers from Outer Space](#) by [Major Donald E. Keyhoe](#), published in 1953 and freely available on the [NICAP](#) website, [Chapter IX \(The Utah Pictures\)](#), pages 161 – 167, and [UFO’s: A History 1952: November – December](#), by Mr. Loren E. Gross, copyright 1986, page 59 (page 65 of 126 of the PDF file).

The U.S. [Office of the Director of National Intelligence \(ODNI\)](#) “prepared (the [Preliminary Assessment: Unidentified Aerial Phenomena](#)) for the Congressional Intelligence and Armed Services Committees” (the [U.S. House of Representatives Permanent Select Committee on Intelligence](#) and the [House Armed Services Committee](#)) and the report was “drafted” by the [Unidentified Aerial Phenomena \(UAP\) Task Force \(UAPTF\)](#) and the *National Intelligence Manager (NIM) for Aviation* of the ODNI.

There were inputs from the [United States Under Secretary of War for Intelligence and Security \(OUSW\(I&S\)\)](#), the [Defense Intelligence Agency \(DIA\)](#), the [Federal Bureau of Investigation \(FBI\)](#), the [National Reconnaissance Office \(NRO\)](#), the [National Geospatial-Intelligence Agency \(NGA\)](#), the [National Security Agency \(NSA\)](#), the [United States Air Force \(USAF\)](#), the [United States Army](#), the [Office of Naval Intelligence \(ONI\)](#) of the [United States Navy](#), the [Defense Advanced Research Projects Agency \(DARPA\)](#), the [Federal Aviation Administration \(FAA\)](#), the [National Oceanic and Atmospheric Administration \(NOAA\)](#), the [ODNI/National Intelligence Manager \(NIM\)-Emerging and Disruptive Technology](#), the [ODNI/National Counterintelligence and Security Center](#), and the [ODNI/National Intelligence Council: Preliminary Assessment: Unidentified Aerial Phenomena](#), Scope and Assumptions – Scope, page 2.

Other U.S. government organisations that are not mentioned as having input to the *Preliminary Assessment: Unidentified Aerial Phenomena* have collected and may also have investigated or analysed reports of observations of or encounters with alien craft. For example, a video recording was made of first one and then two alien craft from a [United States Customs and Border Protection](#) aircraft in [Puerto Rico](#): video file [2013 Aguadilla Puerto Rico UAP/USO](#) and the paper [2013 Aguadilla Puerto Rico UAP- the detailed analysis of an Unidentified Anomalous Phenomenon captured by Department of Homeland Security](#), dated 13 August 2015, discussed in **Chapter 2 (Alien technology)**. In addition, the [Central Intelligence Agency \(CIA\)](#) collected reports, for example, a detailed report by a military pilot of two alien craft flying over a part of Africa which is especially rich in mineral resources including uranium, discussed in **Chapter 3 (Alien craft)**: [DOC 0000015463 entitled Flying Saucers over Belgian Congo Uranium Mines](#) and a detailed report of a close encounter with

an alien craft and its users in Germany: [DOC 0000015464](#) entitled “Flying Saucers” in East Germany, both dating from 1952 and available in the online [CIA Electronic Reading Room](#).

The Director, UAPTF was “the accountable official for ensuring the timely collection and consolidation of data on UAP” in the brief (9 pages) [Preliminary Assessment: Unidentified Aerial Phenomena](#). It was reported that [Mr. Brennan McKernan](#) was the Director, UAPTF: ‘We’ve got to get an answer’: UFOs catch Congress’ interest, by [Mr. Andrew Desiderio](#), published in [Politico](#), 23 June 2021.

The *Preliminary Assessment: Unidentified Aerial Phenomena*’s “dataset ... is currently limited primarily to U.S. Government reporting of incidents occurring from November 2004 to March 2021” and “144 reports originated from USG (i.e. ‘U.S. military and other U.S. Government personnel’) sources. Of these, 80 reports involved observations with multiple sensors.” It concluded that “Most of the UAP reported probably do represent physical objects given that the majority of UAP were registered across multiple sensors, to include radar, infrared, electro-optical, weapon seekers, and visual observations”: *Preliminary Assessment: Unidentified Aerial Phenomena*, pages 2, 3, & 4.

“In 18 incidents, described in 21 reports, observers reported unusual UAP movement patterns or flight characteristics. Some UAP appeared to remain stationary in winds aloft, move against the wind, maneuver abruptly, or move at considerable speed, without discernible means of propulsion. In a small number of cases, military aircraft systems processed radio frequency (RF) energy associated with UAP sightings. The UAPTF holds a small amount of data that appear to show UAP demonstrating acceleration or a degree of signature management”: *Preliminary Assessment: Unidentified Aerial Phenomena*, And a handful of UAP appear to demonstrate advanced technology, page 5.

The report made a number of recommendations for increasing the scope of the work and stated that while the “majority of UAP data is from U.S. Navy reporting ... efforts are underway to standardize incident reporting across U.S. military services and other government agencies to ensure all relevant data is captured with respect to particular incidents and any U.S. activities that might be relevant. The UAPTF is currently working to acquire additional reporting, including from the U.S. Air Force (USAF) and has begun receiving data from the Federal Aviation Administration (FAA). ...The UAPTF is looking for novel ways to increase collection of UAP cluster areas when U.S. forces are not present **One proposal is to use advanced algorithms to search historical data captured and stored by radars** ... The UAPTF has indicated that additional funding for research and development could further the future study of the topics laid out in this report. Such investments should be guided by a UAP Collection Strategy, UAP R&D Technology Roadmap, and a UAP Program Plan”: *Preliminary Assessment: Unidentified Aerial Phenomena*, Explaining UAP will require analytic, collection and resource investment, pages 6 & 7.

Radar data (**highlighted** above) that might provide information about alien craft (for example, direction of flight, altitude, manoeuvres, acceleration and speed, size, etc.) may however be filtered, suppressed, or deleted by our radar systems. This is because the primary mission of these systems is probably to detect and characterise human-made aircraft, aerospace, and space craft. However, in early 2023 [North American Aerospace Defense Command \(NORAD\)](#) was reported to have “adjusted velocity and altitude

restrictions on radars", i.e. North American military radar systems were evidently reconfigured to better detect balloon-type objects that may travel much more slowly and higher than most aircraft, and may possibly also hover and ascend and descend vertically (alien craft have also performed these types of manoeuvres): [F-16 downs another unidentified object, 4th in 8 days](#), by [Mr. Brian Everstine](#), published by [Aviation Week Network](#), 13 February 2023.

Decades earlier, a former FAA aircraft traffic controller explained to an investigator that *"Most non-aircraftlike radar targets are automatically siphoned off the controllers' screens"*, in the context of a discussion about whether there would be any radar data about an alien craft that was observed or encountered on 6, 11 and 12 January 1975 near to or in [James J. Braddock North Hudson Park](#) in the state of New Jersey, in the United States. The former FAA controller also stated that the data would have been *"automatically eliminated ... and no controller would have seen it on his screen"*: [Missing Time: A Documented Study of UFO Abductions](#), by [Mr. Budd Hopkins](#), originally published in 1981, Chapter 2 (The Landing in North Hudson Park), *pages 43 & 44, Digging holes in the ground – Occupants sighted in New Jersey*, [Skylook, March 1976, No. 100](#), investigated by [Mr. Ted Bloecher](#), Mr. Budd Hopkins, and Mr. Jerry Stoehrer, *pages 3 – 7*, and *The "Stonehenge" Incidents of January 1975, Part 1: The Investigations*, [Flying Saucer Review, October 1976, Vol. 22, No. 3](#), *pages 3 – 7*, plus *The "Stonehenge" Incidents of January 1975, Part 2: The Events*, [Flying Saucer Review, November 1976, Vol. 22, No. 4](#), *pages 5 – 11, & 31*, both by Mr. Ted Bloecher.

The *Preliminary Assessment: Unidentified Aerial Phenomena* originated from the [Office of the Director of National Intelligence](#); please refer also to the [Statement by Pentagon Press Secretary John Kirby on Unidentified Aerial Phenomena Assessment](#), a [U.S. Department of War Newsroom Release](#), 25 June 2021.

The AARO's [Fiscal Year 2024 Consolidated Annual Report on Unidentified Anomalous Phenomena – Information Cut Off: June 1, 2024](#) stated that *"as of October 24, 2024, there are 1652 reports in total. This report covers UAP reports from May 1, 2023 to June 1, 2024 and all UAP reports from any previous time periods that were not included in an earlier report."*

The AARO drafted its report *"in coordination with:"* the [United States Under Secretary of War for Intelligence and Security \(OUSW\(I&S\)\)](#); [ODNI \(Office of the Director of National Intelligence\)](#)'s National Intelligence Manager for Military Integration (NIM-MIL); [ODNI's National Intelligence Council \(NIC\)](#); the [United States Army](#), the [United States Navy \(USN\)](#); the [United States Marine Corps \(USMC\)](#); the [United States Air Force \(USAF\)](#); the [United States Space Force \(USSF\)](#); the [Air Force Research Laboratory \(AFRL\)](#); the [Defense Intelligence Agency \(DIA\)](#); the [DoD Joint Staff \(JS\)](#); the [Department of Energy \(DoE\)](#); the [Federal Bureau of Investigation \(FBI\)](#); the [Missile and Space Intelligence Center \(MSIC\)](#); the [National Aeronautics and Space Administration \(NASA\)](#); the [National Air and Space Intelligence Center \(NASIC\)](#); the [National Geospatial-Intelligence Agency \(NGA\)](#); the [National Ground Intelligence Center \(NGIC\)](#); the [National Oceanic and Atmospheric Administration \(NOAA\)](#); the [National Reconnaissance Office \(NRO\)](#); the [National Security Agency \(NSA\)](#); the [Naval Criminal Investigative Service \(NCIS\)](#); the [Nuclear Regulatory Commission \(NRC\)](#); the Office of the Assistant Secretary of War for Homeland Defense and Hemispheric Affairs; the [Office of the Assistant to the Secretary of War for Public Affairs](#); the [Office of the Deputy Assistant Secretary of War for Nuclear Matters](#); the [Office of the](#)

[General Counsel of the Department of War](#); the [Office of Naval Intelligence/National Maritime Intelligence Center](#); and the [Office of the Principal Deputy Assistant Secretary of War for Nuclear, Chemical and Biological Defense Programs](#); the [Fiscal Year 2024 Consolidated Annual Report on Unidentified Anomalous Phenomena – Information Cut Off: June 1, 2024](#), I. Executive Summary, *page 2*, and II. Scope, *pages 2 - 4*.

Offices or organisations that were not mentioned as co-ordinating with this report were: the [ODNI \(Office of the Director of National Intelligence\)’s](#) NIM (National Intelligence Manager) - Economic Security and Emerging Technology; [ODNI’s National Counterintelligence and Security Center](#); the [Federal Aviation Administration \(FAA\)](#); and the [Oak Ridge National Laboratory](#) that were mentioned in the [Fiscal Year 2023 Consolidated Annual Report on Unidentified Anomalous Phenomena](#), introduced below, I. Executive Summary, *pages 2 & 3*, and II. Scope and Assumptions – Scope, *page 4*.

The ODNI’s and DoD’s [Fiscal Year 2023 Consolidated Annual Report on Unidentified Anomalous Phenomena](#) “covers unidentified anomalous phenomena (UAP) reports from 31 August 2022 to 30 April 2023, and all UAP reports from previous time periods that were not included in an earlier report. The ... AARO ... received a total of 291 UAP reports during this period, consisting of 274 that occurred during this period and another 17 that occurred during previous reporting periods from 2021-2022, but had not been conveyed in previous submissions”.

The 2023 Consolidated Annual Report “was drafted by AARO and ODNI’s National Intelligence Manager for Military Integration (NIM – MIL) and co-ordinated with:” the [United States Under Secretary of War for Intelligence and Security \(OUSW\(I&S\)\)](#); the Office of the Assistant Secretary of War for Homeland Defense and Hemispheric Affairs; the [Office of the Principal Deputy Assistant Secretary of War for Nuclear, Chemical and Biological Defense Programs](#); the [Office of the Deputy Assistant Secretary of Defense for Nuclear Matters](#); the [Office of the General Counsel of the Department of War](#); the Office of the Assistant to the Secretary of War for Public Affairs; [ODNI \(Office of the Director of National Intelligence\)’s](#) NIM (National Intelligence Manager) -Economic Security and Emerging Technology; [ODNI’s National Counterintelligence and Security Center](#); [ODNI’s National Intelligence Council](#); the [Department of Energy \(DoE\)](#); the [Nuclear Regulatory Commission \(NRC\)](#); the [National Aeronautics and Space Administration \(NASA\)](#); the [National Security Agency \(NSA\)](#); the [Defense Intelligence Agency \(DIA\)](#); the [National Geospatial-Intelligence Agency \(NGA\)](#); the [DoD Joint Staff](#); the [National Ground Intelligence Center \(NGIC\)](#); the [Missile and Space Intelligence Center \(MSIC\)](#); the [Office of Naval Intelligence/National Maritime Intelligence Center](#); the [Federal Bureau of Investigation \(FBI\)](#), the [Federal Aviation Administration \(FAA\)](#); the [National Reconnaissance Office \(NRO\)](#); the [National Oceanic and Atmospheric Administration \(NOAA\)](#), the [Air Force Research Laboratory \(AFRL\)](#); the [National Air and Space Intelligence Center \(NASIC\)](#); the [Oak Ridge National Laboratory](#); the [Naval Criminal Investigative Service \(NCIS\)](#); the [United States Army](#); the [United States Navy](#); the [United States Marine Corps](#); the [United States Air Force \(USAF\)](#); and the [United States Space Force \(USSF\)](#); the [Fiscal Year 2023 Consolidated Annual Report on Unidentified Anomalous Phenomena](#), I. Executive Summary, *pages 2 & 3*, and II. Scope and Assumptions – Scope, *page 4*.

The earlier [2022 Annual Report on Unidentified Aerial Phenomena](#) was drafted by ODNI’s National Intelligence Manager (NIM) for Aviation and the AARO. The 2022 Annual Report

stated that *“In addition to the 144 UAP reports covered during the 17 years of UAP reporting included in the ... (Preliminary Assessment: Unidentified Aerial Phenomena) ... there have been 247 new reports and another 119 that were either since discovered or reported after the preliminary assessment’s time period. This totals 510 UAP reports as of 30 August 2022. It includes input from ...”* the [United States Under Secretary of War for Intelligence & Security](#), the [Defense Intelligence Agency \(DIA\)](#), the [Federal Bureau of Investigation \(FBI\)](#), the [National Reconnaissance Office \(NRO\)](#), the [National Geospatial-Intelligence Agency \(NGA\)](#), the [National Security Agency \(NSA\)](#), the [United States Air Force \(USAF\)](#), the [United States Army](#), the [United States Navy](#), the [United States Marine Corps](#), the [Defense Advanced Research Projects Agency \(DARPA\)](#), the [Federal Aviation Administration \(FAA\)](#), the [National Aeronautics and Space Administration \(NASA\)](#), the [National Oceanic and Atmospheric Administration \(NOAA\)](#), the [Department of Energy \(DoE\)](#), the [ODNI/National Intelligence Manager \(NIM\)-Emerging and Disruptive Technology \(NIM-EDI\)](#), the [ODNI/National Counterintelligence and Security Center \(NCSC\)](#), and the [ODNI/National Intelligence Council \(OSI/NIC\)](#): the [2022 Annual Report on Unidentified Aerial Phenomena](#), Executive Summary, *page 2*, and Scope and Assumptions – Scope, *page 3*.

Please also refer to remarks by, for example, [The Honorable Ronald S. Moultrie](#), formerly the United States Under Secretary of Defense for Intelligence & Security, during the [Unidentified Aerial Phenomena \(Open and Closed \[hearings\]\)](#), 117th Congress (2021 – 2022), House Intelligence (Permanent) Committee on Counterterrorism, Counterintelligence, and Counterproliferation, contained in the [Open Transcript, Hearing Record, Tuesday, 17 May 2022](#). Additional information may be available in videos of the public, unclassified parts of the hearings, for example, [CNET highlights - 17 May 2022](#) and advertisements that sought staff, for example, [The DoD’s Unidentified Aerial Phenomena Office was recently hiring](#), by [Mr. Tim McMillan](#), published by [The Debrief](#), 6 May 2022.

When the AARO was established, the UAPTF was dis-established and there was to be an *“orderly transition of the UAPTF, including the transfer of any data, analysis, or other relevant material, to the AARO”*: [Memorandum from the Deputy Secretary of Defense – Establishment of the All-domain Anomaly Resolution Office](#), 15 July 2022. The UAPTF appears to have been based in the [Office of Naval Intelligence \(ONI\)](#) within the U.S. Navy: *“The [Department of the Navy](#), under the cognizance of the [Office of the Under Secretary of War for Intelligence and Security](#), will lead the UAPTF”*: [Establishment of Unidentified Aerial Phenomena Task Force](#), 14 August 2020; *“The Pentagon is forming a new task force to investigate UFOs that have been observed by US military aircraft, according to two defense officials. Deputy Secretary of Defense (now the Deputy Secretary of the Department of War) [David Norquist](#) will help oversee the task force...”*: [Pentagon to launch task force to investigate UFO sightings](#), by [Mr. Ryan Browne](#), contributed to by [Mr. Michael Conte](#), and published online by [CNN](#), 14 August 2020.

Public concern in the United States following many reports of alien craft, their users and activities in the mid-1960s and consequent political pressure, may have contributed to the decision by the [United States Air Force](#) to commission an official study from the [University of Colorado at Boulder, Colorado](#) in October 1966: [News Releases from the Office of House Minority Leader Gerald R. Ford, March 25 & 28, & April 3 & 21, 1966 and Air Force Selects University of Colorado to investigate Unidentified Flying Object reports, Office of Assistant Secretary of Defense \(Public Affairs\) News Release, No. 847- 44, October 7, 1966](#). The

report of the [Scientific Study of Unidentified Flying Objects](#) directed by [Professor Dr. Edward U. Condon](#) was published in January 1969; its case studies and other data may also be available online from the [U.S. Defense Technical Information Center](#).

The report of the *Scientific Study of Unidentified Flying Objects* was the subject of a [Review by a Panel of the U.S. National Academy of Sciences in 1969](#). Commentaries by experienced investigators, analysts, and authors included, for example, [UFOs and the Condon Report: A Dissenting View](#), by [Professor Dr. James E. McDonald](#), Institute of Atmospheric Physics, [The University of Arizona](#), presented to the Pacific Missile Range Section, [American Institute of Aeronautics and Astronautics](#), Point Magu, California, 18 February 1969, and *Comments on Condon*, by Mr. Charles Bowen and *Review of the Final Report of Dr. Edward U. Condon*, by Mr. John A. Keel, [Flying Saucer Review, March – April 1969, Vol. 15, No. 2](#), page 31 onwards.

As mentioned earlier, public, official hearings on reports of alien craft and related issues were also conducted by lawmakers in the United States in 1968: [Symposium on Unidentified Flying Objects, Hearings before the Committee on Science and Astronautics, U.S. House of Representatives, Ninetieth Congress, Second Session, July 29, 1968 \[No. 7\]](#); in the twenty-first century U.S. lawmakers held new hearings, for example, [Unidentified Anomalous Phenomena, Implications on National Security, Public Safety, and Government Transparency, United States House Committee on Oversight and Accountability, Subcommittee on National Security, the Border & Foreign Affairs, 26 July, 2023](#).

The conclusions of the Director's report of the *Scientific Study of Unidentified Flying Objects* and its *Review by a Panel of the U.S. National Academy of Sciences* seem to have provided the justification for the U.S. Air Force to withdraw from dealing publicly with reports by citizens of alien craft, aliens or their activities: *Official News Release from the United States, Office of Assistant Secretary of Defense (Public Affairs) dated December 17, 1969* titled: [Air Force to terminate Project "Blue Book"](#). However, some U.S. officials continued to collect reports as discussed below and elsewhere in *Time of Contact*, including **Chapter 7 (Health, Security & Safety)**.

Under the [Advanced Aerospace Threat Identification Program \(AATIP\)](#) mentioned at the beginning of this section (that heralded a revival of official and (eventually) publicly-known studies of reports of alien craft in the United States) reports of unfamiliar aerospace craft made by military pilots and other service personnel were collected: [Glowing Auras and 'Black Money': The Pentagon's Mysterious U.F.O. Program](#) and [2 Navy airmen and an object that 'accelerated like nothing I've ever seen'](#), both by [Ms. Helene Cooper](#), [Ms. Leslie Kean](#) and [Mr. Ralph Blumenthal](#), published by the [New York Times](#) newspaper on 16 December 2017. [Videos](#) that appear to display high performance, unfamiliar airborne craft were released officially by the [Department of War](#) of the United States: [Statement by the Department of Defense on the Release of Historical Navy Videos, April 27, 2020](#).

The former director of the AATIP became a member of the private *To the Stars Academy of Arts and Science*, whose publications included analyses of the [GOFAST](#) plus [GIMBAL](#) and [FLIR1](#) videos mentioned earlier in this section, that were released officially by the U.S. Department of War.

Further reports in the *New York Times* newspaper about observations of, or encounters with unfamiliar aerospace craft by U.S. Navy service personnel included: [‘Wow, What is That?’ Navy pilots report unexplained flying objects](#), by [Ms. Helene Cooper](#), [Ms. Leslie Kean](#) and [Mr. Ralph Blumenthal](#), and a video file titled [‘Look at that thing’: Footage shows pilots spotting unknown objects](#), both published on 26 May 2019.

Official organisations in selected countries other than the United States that collect and study reports of alien craft, their users and their activities are introduced in **Chapter 7 (Health, Security & Safety)**.

On 6 December 1952, the crew of a U.S. Air Force [Boeing B-29](#) bomber aircraft detected airborne alien craft using their aircraft's [radar](#) system, probably a version of either the [AN/APQ-13](#) or [AN/APQ-23](#) bombing, search, or navigation radar systems that are discussed in more detail later in this section. The B-29 was "returning to its base ([Randolph Air Force Base](#) close to the city of [San Antonio](#)) in (the US state of) [Texas](#)" from a "training flight" at an altitude of 18,000 feet above what was then called the [Gulf of Mexico](#) (renamed the "Gulf of America" by President Trump's [Executive Order 14172](#)) and was flying towards, and was "190 miles from [Galveston](#) (in Texas) and about 100 miles south of the (state of) Louisiana coast".

The B-29's radar systems were originally developed during the [Second World War \(1939 – 1945\)](#) and were widely-used and continuously improved. *"While radar has been responsible for the development of sensitive wide band [microwave](#) receivers, nothing as important as the discovery of the resonant [cavity magnetron](#) (a compact, high-power, very short wavelength microwave generator) has resulted. The most notable advances have been in [crystal mixers](#), low voltage [klystrons](#), [disc seal triodes](#) and miniature [pentodes](#) and [triodes](#) suitable for high gain wide band amplifiers": [A Textbook of Radar, edited by E. G. Bowen, A Collective Work by the Staff of the Radiophysics Laboratory, C.S.I.R.O. Australia](#), Second Edition, originally published in 1954, reprinted in paperback format in 2015, Chapter X (Receivers), by L. L. McCready, page 341. Other contemporary articles, books and papers include: *Radar Technique – I.E.E. Convention*, published in [Wireless World Radio and Electronics, May 1946](#), pages 146 – 158, and Volumes 1 – 28 of the [Massachusetts Institute of Technology Radiation Laboratory Series](#), published in the 1940s.*

The early radar systems' relatively minimal signal processing and simplicity (by comparison with modern digital radar systems) may have been advantageous for detecting and characterising alien craft. An analogy is that constructing a [magnetometer](#) from individual components is recommended by the author of *Time of Contact* to try to detect the powerful magnetic fields that may be radiated by alien craft, rather than using a modern integrated circuit with inbuilt filters that could suppress or eliminate valid data: **Chapter 6 (Search for Extraterrestrial Intelligence (SETI))**. Nevertheless even early radar systems processed the data they handled to some extent, for example, adding circuitry so that *"reflections from all distances should give approximately equal responses on the [C. R. tube](#)" (the cathode ray tube display screen). In addition, "over-compensation can be applied to remove 'clutter' from fixed local objects near the origin" and "Automatic gain control is often employed where it is desired to keep a constant level of background [noise](#)": *Radar Technique – I.E.E. Convention*, published in [Wireless World Radio and Electronics, May 1946](#), Transmitters and Receivers, at page 155.*

It is possible that the processing and filtering of signals received by airborne [Raytheon AN/APG-73](#) radar systems that equipped United States Marines McDonnell Douglas [F/A-18C Hornet](#) and United States Navy Boeing [F/A-18F Super Hornet](#) aircraft which encountered an alien craft in 2004 (discussed in more detail in **Chapter 2 (Alien technology)**) were among the reasons why their crews evidently found it difficult to detect, follow (track) and characterise the alien craft using their radar systems.

However, former U.S. Navy Lieutenant [Mr. Ryan Graves](#), Executive Director, [Americans for Safe Aerospace](#) testified that during 2014 when he flew a Boeing F/A-18F Super Hornet in the [US Navy Strike/Fighter Squadron \(VFA\) 11 \(Red Rippers\)](#): *"After upgrades were made to our jets' radar systems we began to detect unknown objects operating in our airspace"*. Further information about the upgrades and in particular any changes that were made to how the radars may have processed or filtered data might be helpful: [Unidentified Anomalous Phenomena, Implications on National Security, Public Safety, and Government Transparency, United States House Committee on Oversight and Accountability, Subcommittee on National Security, the Border and Foreign Affairs, Washington D.C., Wednesday, 26 July, 2023](#) , beginning at about 44 minutes into the 2 hour 34 minutes long video.

At least two members of the B-29's crew briefly observed three of the smaller alien craft visually as they travelled past. At least one and possibly two larger alien craft were detected on the radar system towards the end of the encounter, which lasted for ten minutes. The average speeds of some of the smaller craft, and of the larger craft were calculated from radar data by members of the crew. The alien craft travelled at high supersonic speeds except when some of the smaller craft reduced their speeds and travelled behind the bomber, matching its speed for ten seconds (the cruising speed of a B-29 was about 220 miles per hour). The speed of sound is approximately 707 miles per hour or 1,138 kilometres per hour at 20,000 feet and a temperature of minus 24.6 degrees Celsius: [Speed of Sound at Different Altitudes and Temperatures](#).

According to the investigator and author [Major Donald E. Keyhoe](#) this B-29's radar system had at least *"three scopes"* or *"radarscopes"* or *"screens"* (officially called [plan position indicators](#) or just "indicators") that each provided a visual display of radar returns from anything that reflected the electromagnetic radiation transmitted by the radar system. A *"main radarscope"* was viewed by the B-29's radar officer and the flight engineer, there was an *"auxiliary scope in the cockpit"* viewed by the pilot, and a third radarscope was viewed by the navigator.

Beginning at 0525 hours several unidentified airborne craft were detected by the B-29's radar system and observed for ten minutes, until 0535 hours. In what was asserted to be *"the clearest and most complete (official) statement in the (U.S. Air Force) [Project Blue Book](#)"*, 1st Lt. (First Lieutenant) Norman Karas reported that he had turned on the radar system when *"the flight engineer finished transferring fuel"*. Karas *"noticed an unidentified object approaching our aircraft at a terrific rate of speed. I timed it as best I could with my [stopwatch](#) over a known distance and the instructor flight engineer computed the speed at 5,240 mph (miles per hour). I alerted the entire crew to look for the object visually and some flashes of light were noticed. The closest the objects came were approximately 20 miles. I saw about twenty objects in all, sometimes as much as two and three on the scope at one time. I re-calibrated the (radar) set (system) and there was no change. The object was small and possibly round, with the exception of a very large return shaped as follows: 'C' – moved as arrow indicated. I also noticed a large return come up to within 40 miles of our tail from behind, and then disappeared. To the best of my knowledge, I believe that this object was real and not a set malfunction or optical illusion ... His crewmate, 1st. Lt. William W. Naunann, had this to add: 'Contact was broken off at 0535 after a group of the blips (radar returns) merged into a ½ inch curved arc about 30 miles from our a. c. (aircraft) at 320*

degrees and proceeded across the scope and off at a computed speed of over 9,000 mph (miles per hour)”: [UFO’s: A History 1952: November – December](#), by Mr. Loren E. Gross, copyright © 1986, Freemont, California, page 59 (page 65 of 126 of the PDF file).

In endnotes 185 & 186 at *page 114 of 126* of the PDF file, Mr. Gross attributed his information to an “Air Intelligence Information Report,” by Lt. R. A. Reed, [3510th Flying Training Wing](#), (possibly 3510th Pilot Training Wing was meant) based at [RAFB \(Randolph Air Force Base\)](#), Texas (now [Joint Base San Antonio](#) located east-northeast of [San Antonio](#)), 10 December 1952, in the Air Force BLUE BOOK Files. Mr. Gross was a U.S. Air Force radar operator during the 1950s: [Dialogue with Loren Gross](#).

In a report of the observations by Major Keyhoe he stated that the first detection of an alien craft occurred at 0525 hours, when the radar officer observed *“the blip of some unknown object appeared at one edge of the screen. When the sweep made its next revolution ... In that brief moment the unknown craft had gone thirteen miles”*. If we assume that the B-29 was equipped with a version of the [AN/APQ-23](#) radar system (see below for further information) and we also assume the *“brief moment”* means the antenna was set to rotate at one of its higher rates, for example 21 revolutions per minute in “search mode” the alien craft would be detected every 2.86 seconds as the antenna rotated. The average speed of a craft which travelled 13 miles in 2.86 seconds would be approximately 4.54 miles per second or 16,344 miles per hour.

Another craft was detected on the same radarscope by the radar officer travelling towards the B-29 and the radar officer and flight engineer *“computed the unknown’s speed”* using a stopwatch. It was travelling at *“5,420 miles an hour”*. Two more alien craft were then reported on the same radarscope by the flight engineer and were also seen by the navigator on his radarscope. The radar officer recalibrated the radar system and by the time he finished doing this *“the blips of four UFOs were racing across his screen”* i.e. the radar officer’s radarscope, and the screens of the other two radarscopes.

The captain of the B-29 reported that one of the craft was approaching the aircraft on the right-hand side and this was seen visually by the flight engineer from the *“right waist blister”* of the B-29 as *“a blue-white blur”*. The B-29 had three “blisters” or viewing stations one on each side of the aircraft *“just behind the wing”* to watch for attacking aircraft, and another blister on the top of the B-29: [Defending the Superbomber: The B-29’s Central Fire Control System](#), by [Mr. Christopher Moore](#), Aeronautics Department, [Smithsonian National Air and Space Museum](#), 12 August 2020.

Another group of craft was then viewed on all three radarscopes approaching the B-29 *“from almost dead ahead”* and travelling at *“over 5,000 miles an hour”*. Several minutes after the first alien craft was detected, another group of craft that were travelling at high supersonic speed was detected by the radar system. Two of the craft travelled past the right side of the B-29 and another crewman saw them as *“blurs of blue-white light”* from his position in the waist blister. The captain of the B-29 viewed five craft on his radarscope *“racing behind the bomber, cutting across its course”*. The craft then changed direction towards the B-29 which they would reach in *“three seconds”*. However, the craft reduced their velocity to match that of the B-29 and remained behind it for ten seconds. They then changed direction to *“one side”* and on his radarscope the captain viewed *“a huge blip – a half inch spot on the scope”*. The radar images of the smaller craft then *“merged with the large machine”* which then

(according to the radar officer) moved away at “over 9,000 miles an hour” equivalent to 150 miles per minute or 2.5 miles per second. The observations ended at 0535 hours.

The radar officer also stated that *“the objects were small and possibly round, with exception of one very large return shaped as follows, one-half inch curved arc. I also noticed a large return come up to within forty miles of our tail from behind and then disappear”*.

Online reports of the B-29’s encounter include [NICAP – Gulf of Mexico case, Dec. 6, 1952](#), that reproduced the contemporary account which is contained in the book [Flying Saucers from Outer Space](#) by [Major Donald E. Keyhoe](#), published in 1953 and freely available on the NICAP website: [Chapter IX \(The Utah Pictures\)](#), pages 161 – 167, and [UFO’s: A History 1952: November – December](#), by Mr. Loren E. Gross, copyright © 1986, page 59 (page 65 of 126 of the PDF file). Major Keyhoe evidently used pseudonyms to protect the anonymity of the aircrew involved, as the names of the crew in the *Air Intelligence Information Report* mentioned earlier do not appear in Major Keyhoe’s report.

[Professor Paul R. Hill](#), a NASA aerospace scientist and engineer discussed the B-29’s encounter, prefacing it with the comment that *“Two of the best sources of speed data are Maj. (actually Captain) Edward J. Ruppelt’s [Report on Unidentified Flying Objects](#) and Maj. Donald E. Keyhoe’s [Flying Saucers from Outer Space](#) because they present the early speed data measured by the Air Force radar before such data was classified by [JANAP \(Joint Army, Navy, Air Force Publication\) 146](#) and [AFR \(Air Force Regulation prohibiting data release\)](#), 200-2: [Unconventional Flying Objects: a scientific analysis](#), by Professor Hill, Section II (Performance), Part B (Speed), pages 41 – 43 of the paperback edition published in 1995.*

In June 2021 it was stated officially that *“No standardized reporting system existed until the Navy established one in March 2019. The Air Force subsequently adopted that mechanism in November 2020, but it remains limited to USG (i.e. ‘U.S. military and other U.S. Government personnel’) reporting”*: [Preliminary Assessment: Unidentified Aerial Phenomena](#) dated 25 June 2021, published by the [Office of the Director of National Intelligence](#). Earlier, it was reported that the latest official military regulations might include *“new guidelines for pilots and other personnel to report encounters with ‘unidentified aircraft’”*: [U.S. Navy drafting new guidelines for reporting UFOs](#), by [Mr. Bryan Bender](#), published by [Politico](#), 23 April 2019.

The B-29 that encountered the alien craft in 1952 may have been equipped with one or more of the following radar systems: [AN/APQ-7](#), [AN/APQ-13A](#), or [AN/APQ-23A](#) bombing, search, or navigation systems, or the [AN/APG-15B](#) gun laying radar: Standard Aircraft Characteristics – B-29B Superfortress, published by authority of Commanding General, Air Materiel Command, U.S. Air Force, and dated 19 April 1950.

It seems likely that by 1952 the B-29 was equipped with a version of either the [AN/APQ-13](#) or [AN/APQ-23](#) bombing, search, or navigation radar systems, rather than the earlier AN/APQ-7. The [AN/APQ-13](#) (manufactured by [Western Electric](#)) was described officially as *“an airborne radar system designed for navigation and high altitude bombing ... It provides 4, 10, 20, 50 and 100 nautical miles ranges of operation.”* The AN/APQ-13 had a peak power output of 40 kilowatts and its radarscopes were *“Indicator ID-41/APQ-13 or ID-41A/APQ-13”*:

[MIL-HDBK-162A](#), 15 December 1965, Volume 1, Section 2, *pages 806 - 808 of 1531* of the PDF file.

The [AN/APQ-23](#) (also manufactured by Western Electric) comprised “essentially the [APQ-13](#) search radar combined with the new CP-16 computer ... (and) was installed in B-29s and B-50s ... Improved models saw service in the Korean fighting” (the Korean War lasted from 25 June 1950 to 27 July 1953): [Development of Airborne Armament 1910 - 1961, Volume 1 Bombing Systems, AFSC Historical Publications Series 61 – 52 -1](#), *pages I-27 & I-28*.

The [AN/APQ-23D](#) was described officially as “identical to the [AN/APQ-13](#) Series Radar Sets with the exception of Modification Kit MX-344/ APQ” which improved its functionality in several ways. The AN/APQ-23D radar system operated at a frequency of 9,375 MHz or 3.2 centimetres ([X-band](#)) plus or minus 40 MHz in radar mode or 9,310 MHz (3.22 centimetres) plus or minus 3 MHz in beacon mode. In radar mode it had a pulse repetition rate of 1,350 pulses per second and a pulse duration of 0.5 microseconds (radar mode: 4, 10, and 20 mile ranges), or a pulse repetition rate of 675 pulses per second and a pulse duration of 0.75 microseconds (radar mode: 50 and 100 mile ranges) or a pulse duration of 2.25 microseconds for “all beacon ranges”. Theoretically the system had a range of 300 nautical miles when used in beacon mode.

The radar antenna was a “center fed feedhorn with a full parabolic reflector” that scanned horizontally in “continuous” or “search” mode through 360 degrees or in “sector scan” mode through an arc of 40 to 50 degrees in a sector 70 degrees either side of “dead ahead”. The antenna could be tilted 10 degrees above and 30 degrees below the horizontal. The antenna scan speed was 20 to 27 revolutions per minute (rpm) in “continuous” mode, 13 to 21 rpm in “search” mode or 50 to 60 scans per minute in “sector scan” mode. The system’s peak power output was 35 kilowatts and it had a beam width of 3 degrees. Its radarscopes were “Indicator (Auxiliary) ID-41/APQ-13 and Indicator (Main) ID-41G/APQ-13”: [MIL-HDBK-162A](#), 15 December 1965, Volume 1, Section 2, *pages 811 – 813 of 1531* of the PDF file, [Integrated Publishing – radar maintenance and parts manuals](#) and [radartutorial-eu](#). More detailed information may be available, for example, the [Radar Observers’ Bombardment Information File](#), Section Two * Radar Equipment, sections 2-1 to 2-5 (AN/APQ-13) dated July 1945 and [Handbook – Maintenance Instructions, Radio Sets AN/APQ-13 to AN/APQ-13D, reference AN 16-30APQ13-4 revised 15 October 1952](#) which may viewable online for a monthly subscription or purchased as a download.

One or more B-29s were evidently used to test new radar systems in the late 1940s, for example, the AN/APQ-24 Bombing - Navigational System using the Western Electric APS-23 search radar, a “high resolution, high altitude radar using the best features of the APS-22 and incorporating the common 360-degree scan ...” intended for newer aircraft like the [Boeing B-50](#), the [Consolidated Vultee \(Convair\) B-36](#) and the [North American Aviation B-45](#): [Development of Airborne Armament 1910 - 1961, Volume 1 Bombing Systems, AFSC Historical Publications Series 61 – 52 -1](#), beginning at *page I-30*.

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An airborne alien craft manoeuvred in the vicinity of a [Boeing RB-47H-1-BW](#) military reconnaissance aircraft flying over the southern United States on a training mission between about 0430 and 0640 hours [Central Daylight Time \(CDT\)](#) on Wednesday, 17 July 1957. The RB-47H, serial number 53-4305, was assigned to the United States Air Force's 55th Strategic Reconnaissance Wing and was based at [Forbes Air Force Base \(AFB\)](#) south of [Topeka](#) in the U.S. state of Kansas.

Electromagnetic transmissions from the alien craft were received by the RB-47H; the alien craft was detected by a search and navigation radar system on the RB-47H and by a ground-based radar system. Visible light radiated by or from around the craft was seen by the pilot and co-pilot of the RB-47H. The alien craft was described as *"large, metallic, rapidly maneuvering airborne source of powerful [S-band](#) radarlike signals and visible light"*: [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998 – illustration entitled RB-47 Flight Path and Sighting Circumstances, and Conclusions, pages 766 and 790. A [Third Edition of the UFO Encyclopedia](#) was published in 2019. **It is recommended to keep the illustration at page 766 to hand while reading the report. This will assist in understanding the times, durations, and sequence of events, and the people, equipment and facilities involved.**

The RB-47H aircraft was *"designed for ECM (Electronic Counter-Measures) and electronic and communications intelligence collection"* (Electronic Intelligence - ELINT and Communications Intelligence - COMINT are jointly called [Signals Intelligence – SIGINT](#)): [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998, *Training flight*, at pages 764 – 765, and *RB-47 turns again to pursue UFO*, at page 784.

The RB-47H departed *Forbes AFB* at about 2300 hours CDT on 16 July 1957 *"to conduct gunnery, celestial navigation and electronic warfare exercises"* and was returning *"from the long flight over the gunnery range at [Matagorda Island AFB](#) (on [Matagorda Island](#)), Texas, and the [Gulf of Mexico](#) (renamed the "Gulf of America" by President Trump's [Executive Order 14172](#)) before turning northward over Mississippi"*: [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998, *Training flight*, page 764 and Gulfport "upscope" incident, page 767.

The RB-47's pilot was Major Lewis D. Chase, the co-pilot was First Lieutenant James H. McCoid, and the navigator was Captain Thomas H. Hanley. The three ECM/SIGINT officers or "Ravens" were Captain John J. Provenzano, the *"No. 1 monitor"*, Captain Frank B. McClure, the *"No. 2 monitor"* and Captain Walter A. Tuchscherer, the *"No. 3 monitor"*: [Air Force Observations of an Unidentified Object in the South-Central U.S., July 17, 1957](#), by [Professor Dr. James E. McDonald](#), published in [Astronautics & Aeronautics Journal, July 1971, Volume 9, Issue 7](#), Introduction, page 66.

At about 0430 hours CDT on 17th July 1957 the RB-47H was flying in a northerly direction to the east of [Gulfport](#), a coastal city by the Gulf of Mexico (renamed the "Gulf of America" by President Trump's [Executive Order 14172](#)) in the U.S. state of Mississippi when Captain McClure detected a transmission (signal) from an airborne alien craft with his ELINT equipment. The signal was vertically polarised, had a frequency of 2.995 to 3 GigaHertz

(GHZ), with a pulse width of 2.0 micro-seconds, a pulse repetition frequency of 600 cycles per second, and a sweep rate of 4 revolutions per minute (RPM). The output power of the alien craft's transmitter was later estimated to be approximately 40 kilowatts (kW): [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998, *History of investigations*, page 762 and *Gulfport "upscope incident"*, pages 767 - 768.

The transmission from the alien craft was anomalous compared with a normal radar transmission from the ground because the source of the transmission initially appeared to partially circle the aircraft in a counter-clockwise direction beginning at an initial position behind and to the right of the aircraft. In addition, the alien craft's signal only simulated about half of the characteristics of one type of transmission from [General Electric AN/CPS-6B](#) and AN/FPS-10 ground-based radar systems, i.e. the transmission "*was similar to only one of the six different beams emitted by the CPS-6B and FPS-10, namely the Vertical-Center (VC) Beam, and even then it imitated only 4 or 5 of its 8 distinguishing features, and one of them was definitely at variance from a normal VC Beam*": [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998, *History of investigations*, page 764.

The AN/CPS-6B and AN/FPS-10 radar systems were designed to provide distance or [range](#), direction or [azimuth](#) and [elevation](#) information (which can be used to calculate height) about airborne targets which reflected some of the electromagnetic energy from the radar systems' powerful transmissions in the [S-band](#) portion of the electromagnetic spectrum (2 – 4 GHz).

The alien craft's transmission was subsequently detected again by Captain McClure's ELINT equipment and by Captain Provenzano's ELINT equipment: [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998, *UFO "upscoptes" again, then veers off to Fort Worth-Dallas*, pages 778 – 779.

The alien craft was also detected by Major Thomas Hanley, the RB-47's navigator, using his AN/APS-23 radar system: [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998, *RB-47 turns again to pursue UFO*, pages 784 & 785. Information on the AN/APS-23 radar system may be available online, including in the [Development of Airborne Armament 1910 - 1961, Volume 1 Bombing Systems, AFSC Historical Publications Series 61 – 52 -1](#), pages I-29 – I-36.

Visible light which may have been radiated by (or from the air around) an airborne alien craft was seen by the RB-47H's pilot and co-pilot: [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998, *First steady UFO visual sighting*, pages 777 – 778, and *UFO "upscoptes" again, then veers off to Fort Worth-Dallas*, page 778, plus *UFO suddenly stops – RB-47 overshoots near Fort Worth*, page 781.

The ELINT equipment used by Captain McClure included "*an (AN/)ALA-6 DF (direction-finder) receiver with back-to-back antennas in a housing on the belly (undersurface) of the RB-47 near the tail (rear of the RB-47) spun at 150 or 300 rpm (revolutions per minute) as it scanned in azimuth (i.e. horizontally)...* Inside the aircraft, the signals from the (AN/)ALA-6 were processed in an (AN/)APR-9 radar receiver and an (AN/)ALA-5 pulse analyzer": [Air Force Observations of an Unidentified Object in the South-Central U.S., July 17, 1957](#), by Professor Dr. James E. McDonald, published in [Astronautics & Aeronautics Journal, July 1971, Volume 9, Issue 7](#), Introduction, page 67. A block diagram may be available online

illustrating how the AN/APR-9 radar receiver was connected to the antennae and an AN/ALA-6 direction finder and an AN/ALA-5 pulse analyser: [The Silent War: Electronic Spying](#), by Mr. John M. Carroll, Managing Editor, [Electronics](#) magazine, published on 20 April 1964. Further details of the equipment are provided towards the end of this summary.

Captain Provenzano viewed the signal from the alien craft on the scope (display or monitor) of his [AN/APD-4](#) system which enabled him to detect signals on the same frequency that Captain McClure's system could detect: [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998, *UFO "upscoopes" again, then veers off to Fort Worth-Dallas*, page 779.

The alien craft encountered by the RB-47 "disappeared" and "re-appeared" as viewed by ground radar and visual observations from the RB-47, and the simulated radar transmission from the alien craft transmitted was similarly intermittent: [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998, *UFO suddenly stops – RB-47 overshoots near Fort Worth*, page 781.

Possibly, the alien craft's visual appearances and disappearances may have been caused by the air molecules around the craft becoming ionized and excited as the craft's propulsion, hull protection, or other systems throttled up or down, and the loss and reacquisition of the craft by the ground radar could have been caused by the craft moving very rapidly out of radar range, and then returning to within range. Alternatively, the simulated radar transmission from the alien craft could have been turned on and turned off by the craft (if it was autonomous), or its users or remotely-located operators. Another possibility is that optical and radar stealth or "cloaking" technologies that are introduced in **Chapter 2 (Alien technology)** may have been used intermittently by the alien craft.

Information about the encounter is available in a number of publications, including: [RB-47 Radar/Visual Case](#), by Mr. Brad Sparks, UFO Encyclopedia, 2nd Edition, published in 1998, pages 761 – 790, [Science in Default: 22 Years of Inadequate UFO Investigations](#), by [Professor Dr. James E. McDonald](#), presented at the 134th Meeting of the [American Association for Advancement of Science \(AAAS\)](#), 27 December, 1969 (an audio file containing a recording of Professor Dr. McDonald's presentation, filename [27. Profiles 27](#), may be available via the [Profiles in Ufology: Major Donald E. Keyhoe, Dr. James E. McDonald & Frank Edwards Guide](#) on the [Internet Archive](#) website), *The 1957 Gulf Coast RB-47 Incident*, also by Professor Dr. McDonald, [Flying Saucer Review, May - June 1970, Vol. 16, No. 3, pages 2 – 6](#), and [Air Force Observations of an Unidentified Object in the South-Central U.S., July 17, 1957](#), again by Professor Dr. McDonald, published in [Astronautics & Aeronautics Journal, July 1971, Volume 9, Issue 7](#), pages 66 – 70.

Photographs of AN/ALA-5 pulse analysers and AN/ALA-6 direction-finders installed in a [Douglas RB-66C Destroyer](#) aircraft may be available online together with a block diagram mentioned earlier illustrating how the AN/APR-9 radar receiver was connected to the aircraft's antennae and an AN/ALA-6 direction finder and an AN/ALA-5 pulse analyser: [The Silent War: Electronic Spying](#), by Mr. John M. Carroll, Managing Editor, [Electronics](#) magazine, published on 20 April 1964. Detailed photographs of an [AN/APA-17](#) direction finder, which along with the AN/APA-17B direction finder was described as "similar to" the AN/ALA-6 may also be available online: [AAFRadio](#) and [Antenna Catalog, Volume IV, Aircraft Antennas, October 1960, prepared for the Electronics Research Directorate, Air Force](#)

[Cambridge Research Laboratories by Georgia Institute of Technology Engineering Experiment Station](#), at page 126 (page 131 of 325 of the PDF document).

The RB-47's AN/ALA-6 direction-finder's antennae may have been type AS-656/ALA-6 which were designed to operate over a frequency range from 1 GHz to 5 GHz; further details including the antennas' gain, etc. may be available in the [Antenna Catalog, Volume IV, Aircraft Antennas, October 1960, prepared for the Electronics Research Directorate, Air Force Cambridge Research Laboratories by Georgia Institute of Technology Engineering Experiment Station](#), at page 127 (page 132 of 325 of the PDF document).

The RB-47's encounter was awarded first place and discussed at the end of a video documentary entitled [Best Evidence: Top 10 UFO Sightings](#) (2007) by [Mr. Paul Kimball](#), that may be freely available online. An extract from a video interview with Professor McDonald is included in the television documentary [Westall 1966: A Suburban UFO Mystery](#) (2009), beginning at 30 minutes and 16 seconds, that may be available online. Further audio files are available online of Professor McDonald speaking: file names 21 – 27 available via the [Profiles in Ufology: Major Donald E. Keyhoe, Dr. James E. McDonald & Frank Edwards Guide](#) on the [Internet Archive](#) website. More information about Professor Dr. McDonald and his work was provided in the book [Firestorm – Dr. James E. McDonald's Fight for UFO Science](#), by [Ms. Ann Druffel](#) published in 2003".