

SUNlite

Shedding some light on UFOlogy and UFOs

I have found that solving UFO “mysteries” is often like putting together a jigsaw. Finding enough of the pieces to see the whole picture is a major part of the challenge. Getting as close as possible to original sources and/or getting further information from witnesses is key.

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Front: This exposure shows the milky way and a pair of intruders. The two streaks are a satellite pair that was visible after 11PM in early September. The one satellite flared to the brightness of Venus. The other was about fourth magnitude. Ted Molczan identified the pair as USA 264.

Left: This image is from the Archives for the Unexplained website, showing their collection of books. The AFU is part of an ambitious effort to create digital collection of UFO documents (see below).

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A world-wide UFOlogical library?

Since the early 1950s, UFOlogy has been a collection of various individuals and organizations carving out their own piece of the UFO pie. This usually resulted in a one-sided presentation of the subject instead of an objective presentation of the facts from source materials. Because these source materials often resided in private collections, it was difficult to evaluate the accuracy of the claim. What was needed was a form of UFO library, which contains all these materials that was easily accessible to everyone. Several incomplete attempts have been made in the past but thanks to [Isaac Koi](#) (a pseudonym) and the [AFU \(Archives for the unexplained\)](#), this long desired resource is becoming a reality.

[What Koi/the AFU has collected to date is excellent but is far from finished.](#) Some of my observations so far are:

- The book collection is limited. This has to do with getting permissions from publishers and authors. Personally, I would love to see Hendry's UFO Handbook become available. I have my own copy (including a digital scan) but, in my opinion, this book should be freely available to anybody interested in the UFO problem. It is out of print and should be required reading.
- A lot of periodical UFO articles have been made available. Not only are UFO bulletins and magazines present but one can also find mainstream magazine UFO articles from Life, True, The Saturday Evening Post, and many others. Many of them are very pertinent to UFO historians and I have always found it frustrating when a UFO list references one of these, often obscure, articles. Having them all in one location will make research on the subject much easier.
- The UFO newsletter section is very good. The two notable items missing are a collection of MUFON journals and International UFO reporter/Journal for UFO studies. I suspect this is a financial thing. The Center for UFO studies (CUFOS) sells the latter on their website (the entire IUR is available for a reasonable \$100). The MUFON journals did exist at one point on the Black Vault Website but that was taken down after a year or two. MUFON is selling copies but, at \$7.99 an issue (\$5 if purchasing five or more), having a complete collection is very expensive.
- There is also a large collection of government UFO documents from various countries. The Blue Book collection has the microfilm copies that used to be available at the Blue Book archive. They are unredacted but not all the Blue Book files are there. Additionally, the collection are separate pages that are not indexed. Finding a specific case is going to be difficult. It would have been better if the entire collection was placed in searchable pdf files. Still, having the unredacted files available at all is a positive thing. Missing from the government files are the documents from MOD. One can find random copies of individual files scattered about the Internet but the full collection can only be found at the National Archives. According to Isaac, he can't present the collection publicly because of the UK's Crown Copyright rules. If you want to see a specific file, and can't find it on the internet, you will have to pay to get a copy.
- I think the biggest hurdle for library will be the release of UFO case files that have been contained in the files of various individuals/organizations. There seems to have been a serious effort to scan and release them all. Exactly what files have been scanned is hard to say but there was much discussion about how to publicly release the ones that are available. The biggest concern are the names of the witnesses and if it is necessary to redact them. Unfortunately, if they need to be redacted, the files will not be available anytime soon. Redaction will take a lot of time and may not happen at all.

This effort is exceptional and could develop into a collection that will be a significant resource for all UFO investigators/historians. One can only hope that the library continues to grow and reaches its intended goal.

WEEDING OUT THE WEINSTEIN CATALOGUE

December 3, 1967 - Kamenny Cape, USSR¹

67.12.03		USSR	Kamenny Cape	P	test-flight crew + passengers (scientists)	a very bright object following the plane of the Soviet Civil Aviation Scientific Institut				325
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The source of this information is from Vallée's "UFO Chronicles of the Soviet Union". There are no other additional sources listed.

Source information

In Jacques Vallée's "UFO chronicles of the Soviet Union", there is one short paragraph describing the incident:

*Beams of light were also reported in a case involving the crew and passengers of a test flight for the State Scientific Institute for Civil Aviation. The date was December 3, 1967, and the plane was at 2,700 feet altitude in the region of Cape Kamenny when an intensely luminous object began following them. Witnesses saw the object for ten minutes before it flew away.*²

There is not a lot to go on here but further searching revealed that James Oberg wrote about this event as well. He mentioned that William Moore had additional information.

*"On December 3, [1967] at 3:04 p.m.," wrote Moore, several crewmen and passengers of an IL-18 aircraft on a test flight for the State Scientific Institute of Civil Aviation sighted an intensely bright object approaching them in the night sky." Moore reported that the object "followed" the evasive turns of the aircraft.*³

So, we now have a time for the event as well as a date. Oberg also noted that he had determined that the flight was near the city of Vorkuta. This adds a specific location for the event instead of a general area like Cape Kamenny.

Analysis

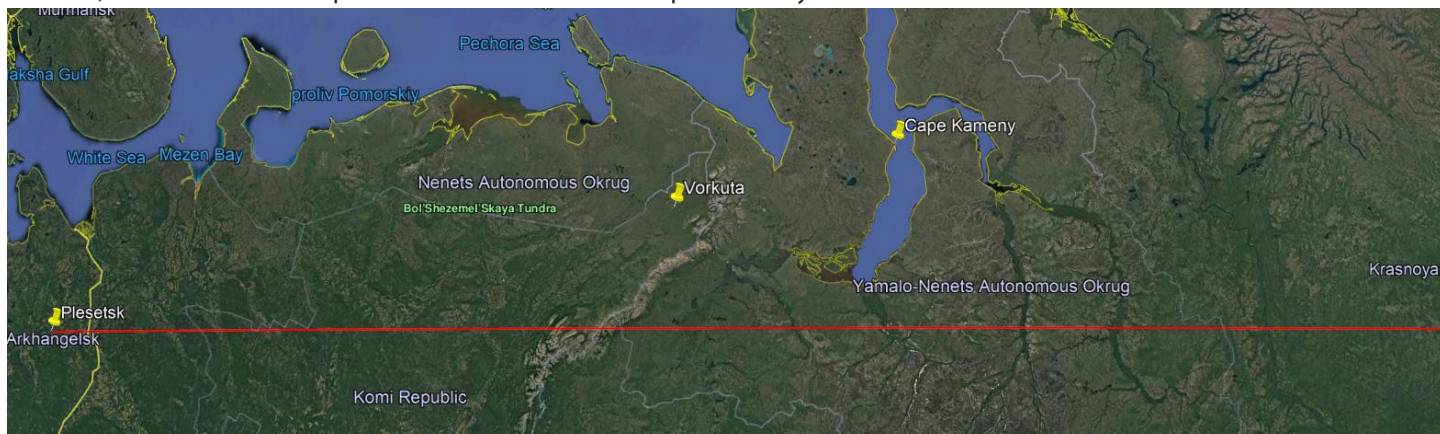
I think it is important at this point that James Oberg has already identified this case in his writings as the launch of a Kosmos-194 spy satellite from Plesetsk. This analysis will verify if his identification has merit.

A check of the Astronautix website indicates that the Kosmos 194 launch was at 1200 GMT using a Voskhod 11A57 booster.⁴ Like many Soviet/Russian rockets, it had four strap-on boosters that gave it a unique appearance. However, it is not only the boosters that produce effects during a rocket launch. A phenomenon called the "twilight effect" is often seen in rocket launches that are made about 30-60 minutes before sunrise or after sunset.^{5,6} Depending on latitude and time of year, this is between the end of civil and nautical twilight. The rocket plume of the first and second stages become illuminated by the sun that is below the horizon. This illumination of the exhaust trail with the darkening sky background, results in quite spectacular displays for observers.



It just so happens that the time given by Moore indicated that the sighting was at 1204 GMT (Vorkuta time zone is GMT+3), which was only four minutes after the recorded launch time. Additionally, 3:04 PM was near the end of Nautical twilight. Therefore, the rocket launch probably produced the “twilight effect” for those in the region if the rocket’s trajectory was near Vorkuta.

The inclination of the launch and latitude of the launch site determines the launch azimuth. In this case, the inclination was 65.60 degrees and the latitude was 62.9 degrees, which indicates a launch in roughly an East-Northeast direction (around 65 degrees azimuth). The resultant track passes close to Vorkuta and Cape Kamenny.



Conclusion

Assuming all the information available is correct, then I agree with Oberg on this conclusion. This sighting was produced by the launch of the Kosmos-194 satellite. The rocket plume, as well as staging/side booster drop-offs, probably produced the effects reported by the observers. This case does not belong on the list since it has an acceptable explanation.

Notes and references

1. Weinstein, Dominique F. Unidentified Aerial Phenomena: Eighty years of pilot sightings. NARCAP. February 2001. P. 46
2. Vallée, Jacques. UFO Chronicles of the Soviet Union: A cosmic samizdat. Ballantine Books New York 1992 P. 138
3. Oberg, James. “Soviet Saucers”. Omni magazine April 1994. P. 75.
4. “Space History Chronology 1967”. Astronautix. Available WWW: <http://www.astronautix.com/1/1967chronology.html>
5. Patowary, Kaushik. “Atmosphere Plays Light Tricks As Rocket Launches Over Russia.” Amusing planet. January 27, 2011. Available WWW: <https://www.amusingplanet.com/2011/01/atmosphere-plays-light-tricks-as-rocket.html>
6. Primal Space. “Why do some rocket launches look like this?” Youtube. November 5, 2018. Available WWW: <https://www.youtube.com/watch?v=Y1Hfirwgys>

An observation

I was under the impression that Jacques Vallée was one of the more thorough UFO researchers. However, this case makes me wonder about his methodology. How can one indicate that this case was something extraordinary worth studying when one does not have a time, a specific location, direction of observation, or direction of travel? This appears to be more rumor and second-hand information than actually talking to the witness and asking for the pertinent details. Either Dr. Vallée did not talk to any of the witnesses, he did but did not bother to ask for the information, or they could not give any details whatsoever. In the first two cases, it is sloppy work. In the latter instance, Vallée should have rejected the case as “insufficient data”. A final possibility is that Dr. Vallée had all of this information but chose not to present it. All of these scenarios paint a very disappointing picture about his work. Does this mean that Dr. Vallée is just another one of those UFO researchers who is more than willing to pad his book/list with bad cases just to fill pages and sensationalize the subject? This is the same problem I have with the Weinstein catalog. The bottom line is one has to be skeptical of any extraordinary claim no matter who the source is.

November 5, 1957 Aiken, Georgia

This case is listed in the November 1957 “flap” chronology, which states:

Bright yellowish cigar-shaped object observed twice, finally disappeared over horizon.¹

There is no reference and the only time listed is as “night”. Despite this limited information, one can find more details from other sources

Blue Book file

Project Blue Book had a case file for this incident. It seems that NICAP got the city correct but Aiken is actually in South Carolina. Loren Gross also has a newspaper clipping from the Augusta Chronicle in his UFO history for the time period.² It was an AP article so I also found it on the front page of the Florence, SC newspaper of November 6. Unfortunately, many of the particulars are missing in both versions. The incident described came from a witness by the name of J.T. James:

J. T. James of near Aiken told the Chronicle's Bureau there that he saw the object twice tonight.

James also described it as “cigar-shaped.” He said it appeared to be hovering about 15 miles south of Aiken the first time he saw it. Looking on with him, he added, were his wife, their children and two or three neighbors.

James said the object would appear “very bright, then change to amber color and go out completely occasionally.”

He said the second time he viewed it, the object had changed its position entirely and appeared to be in the direction of Augusta.

He said he and his family used a set of binoculars, watching the object until it disappeared over the horizon.³

Fortunately, the ATIC file contains additional information that allows a proper analysis of the incident⁴:

- The weather was 5/10ths coverage
- The two times of observation were 1830-1900 and 1910-2007.
- The first observation was with the naked eye and the second was with five-power binoculars.
- The observer stated it was clear during the first observation but broken clouds during the second.
- The observer described the object as cigar-shaped and the size of a pea.
- It was bright white (like a neon light) and changed to red, followed by amber as it disappeared.
- There were two bright white spots on the side of the object when viewed with binoculars.
- The observer described a long tail, which were three blue streaks about the same size as the object itself. The witness thought they were flames coming from the object.
- First observation: 45 degrees elevation 210 degrees azimuth.
- Second observation: 30 degrees elevation 210 degrees azimuth.
- The object was mostly stationary but appeared to make radical and darting movements.

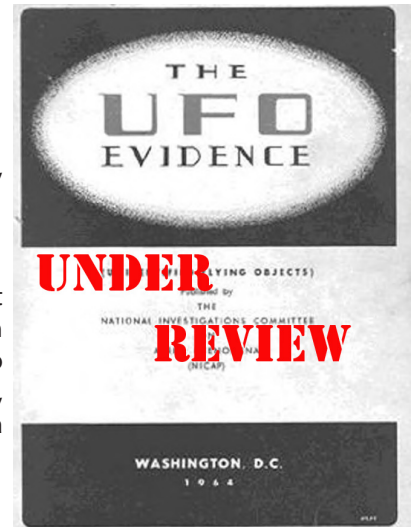
Analysis

The Blue Book file appears to have the same witness and they determined it to be the planet Venus. On the date in question, Venus was an evening sky object, was magnitude -4.4, and was 22” of arc across (55% illuminated). Therefore, it is a prime candidate for the UFO. The witness did not mention seeing Venus nearby and his UFO disappeared about the same time Venus set.

Time	Azimuth	Elevation
1830	222	16
1900	227	11.5
2007	237	1

We don’t know the quality of the binoculars used by the witness or if they knew how to focus them properly. Witnesses have been known to describe planets and stars in this manner even when using optics. The fact that there was some cloud cover that night explains why the witness lost sight of it for ten minutes between the first and second observation.

As for the azimuth and elevation differences, these are not that significant. The witness even admitted the object disappeared over the horizon at the end of the second observation indicating his elevation was probably an overestimation. Venus set shortly after he lost sight of his UFO. The witness also stated that the object was seen in the direction of Augusta during his second observation. The line of sight from downtown Aiken to the center of Augusta was an azimuth of 250 degrees. Therefore, his azimuth estimate of



210 was probably not very accurate and more in line with the direction of Venus.

Conclusion

I can see no reason to reject the Venus explanation for this case. All of the positional data is a reasonable match with Venus. Additionally, the witness never reported seeing Venus near his UFO. This case should be classified as "Probably Venus" and removed from the "UFO evidence" category.

Notes and references

1. Hall, Richard M. (Ed.) The UFO evidence. The National Committee on Aerial Phenomena (NICAP). New York: Barnes and Noble. 1997. P. 130
2. Gross, Loren The Fifth Horseman of the Apocalypse - UFOs: A History 1957 November 3rd-5th. Fremont, CA. 1997. P. 87
3. "Red ball hovers over H-bomb plant ". Florence Morning News. Florence, South Carolina. November 6, 1957. P. 1
4. "Case file - November 5, 1957 - Aiken, South Carolina". Fold 3 web site. Available WWW: <https://www.fold3.com/image/7230745>

Venus

Type: planet
Magnitude: -4.42 (reduced to -3.95 by 3.68 Airmasses)
Absolute Magnitude: -5.18
RA/Dec (J2000.0): 18h02m34.78s/-26°39'37.2"
RA/Dec (on date): 17h59m57.64s/-26°39'34.9"
HA/Dec: 3h03m42.40s/-26°36'51.6" (apparent)
Az./Alt.: +221°51'07.3"/+15°41'51.3" (apparent)
Gal. long./lat.: +3°51'43.4"/-2°04'53.5"
Supergal. long./lat.: -170°26'19.6"/+45°45'28.1"
Ecl. long./lat. (J2000.0): +270°34'38.1"/-3°13'20.5"
Ecl. long./lat. (on date): +269°59'28.2"/-3°13'00.7"
Ecliptic obliquity (on date): +23°26'34.2"
Mean Sidereal Time: 21h03m49.1s
Apparent Sidereal Time: 21h03m49.7s
Rise: 10h40m
Transit: 15h27m
Set: 20h13m
Parallactic Angle: +38°27'13.0"
IAU Constellation: Sgr
Hourly motion: +0°02'40" towards 90.8°
Hourly motion: $da=+0^{\circ}02'59"$ $db=-0^{\circ}00'02"$
Elongation: +46°46'41.2"
Phase angle: +83°28'49.8"
Illuminated: 55.7%
Distance from Sun: 0.727 AU (108.748 M km)
Distance: 0.761 AU (113.886 M km)
Light time: 0h06m19.9s
Orbital velocity: 34.847 km/s
Sidereal period: 224.70 days (0.615 a)
Synodic period: 583.92 days (1.599 a)
Apparent diameter: +0°00'21.92"
Equatorial diameter: 12103.6 km
Sidereal day: 5832h28m48.4s
Mean solar day: 2802h00m52.5s
Albedo: 0.770



SW

Date and Time	
Date and Time	Julian Day
1957 - 11 - 5	18 : 31 : 0

Earth, Aiken, 161 m FOV 60° 18.7 FPS 1957-11-05 18:31:00 UTC-05:00

THE 701 CLUB: CASE 8654: 16 DECEMBER, 1963

PACIFIC

Don Berliner's list describes the case as follows:

*Dec. 16, 1963; 800 miles north of Midway Island (40° N., 175° 54' W.). 5:05 p.m. Witness: unspecified persons aboard a military aircraft. One white light blinked 2-3 times per second as it moved very fast across the sky for 15 seconds*¹

Brad Sparks has no additional information.²

The Blue Book file

The Blue Book file only contains the CIRVIS report, which contains only seven lines of information. The only additional information beyond what Berliner wrote is that the light went from west to east. The record card states:

*....Reports of this nature listing alt as unknown are interpreted to mean that the obj is at considerable height, usually in the atmosphere, at least they are a considerable distance above the reporting a/c. Such items as intensity and manner of disappearance are omitted from the CIRVIS format. Were these items included there is a slight possibility that an evaluation might be made, however, a light blinking a few times a second crossing a considerable segment of the sky in 15 sec when it is assumed that the obj is far away does not fall into any known category of sightings....*³

Analysis

Project Blue Book was not correct in their evaluation of the sighting. There is one category that can apply to this type of sighting. A bright meteor can appear to "blink" as it varies in brightness and fifteen seconds is not excessively long for a bright meteor. There seems to be little reason to reject this possibility but, for some reason, Blue Book did.

Conclusion

In my opinion, this case can be listed as "possible" meteor and should be removed from the list of Blue Book unknowns.

Notes and references

1. Berliner, Don. "The Bluebook Unknowns". NICAP Available WWW: <http://www.nicap.org/bluebook/unknowns.htm>
2. Sparks, Brad. Comprehensive Catalog of 1,700 Project Blue Book UFO Unknowns: Database Catalog Not a Best Evidence List -NEW: List of Projects & Blue Book Chiefs Work in Progress Version 1.30. Jan. 26, 2020. P. 296
3. "Case file - December 16, 1963 - 800 miles north of Midway Island". Fold 3 web site. Available WWW: <https://www.fold3.com/image/9738379>

Project Blue Book case review: January - June 1964

This is the latest edition of the Project Blue Book case review covering January through June 1964. Like the previous evaluations, I tried to examine each case to see if the conclusion had merit. I added comments to help clarify the explanation or if I felt it was not correct or adequate.

January 1964

Date	Location	BB explanation	My evaluation
Jan-11 Feb	Deford, MI	Unreliable report	Agreed. Single letter with witness describing various UFO incidents with no specific details.
1	Pacific	Meteor	Agreed
5-6	Dayton, OH	Insufficient data	Agreed. No date given.
6	Crossville, TN	Meteor	Agreed
7	Sacramento, CA	Insufficient data	Possible meteor
19	Huntington, WV	Satellite	Agreed. Echo 1
22	Lincoln Park, MI	Insufficient data	Sketch indicates he was observing Jupiter.
22	Pacific	Satellite Decay	Meteor
22	Red Bluff, CA	Venus	Agreed
24	Idaho-Mexico	Missile	Agreed. Actual date of Minuteman launch from Vandenberg was 23 January local time. Reports came from news media accounts the following day.
24	Shark River, NJ	Insufficient data	Possible meteor
26	Pacific	Satellite	Agreed Echo 2
26	Gainesville, FL	Aircraft	Agreed
27	Newtown, OH	Meteor	Agreed
28	Bournnais, IL	Meteor	Agreed. Duration listed as 2 minutes but other reports gathered by Northwestern University confirmed meteor observation.
28	Pacific	Meteor	Agreed
29	Frankfort, KY	Insufficient data	Agreed. No time, duration, or direction of travel.
29	Huntington, WV	Satellite	Agreed. Echo 1
30	Pacific	Satellite	Agreed. Echo 2

February 1964

Date	Location	BB explanation	My evaluation
2	Ely, MN	Meteor	Agreed
3	Atlantic	Satellite	Agreed. Echo 2
4	Atlantic	Satellite	Agreed. Echo 2
5	Montgomery, AL	Venus and Jupiter	Agreed
5	Corvalis, OR	Meteor	Agreed
8	Albany, OR	Meteor	Agreed
9	Riversville, WV	Conflicting data	14-year old sighting. Possible aircraft.
11	Brooklyn, NY	Insufficient data	Agreed. Duration missing making it difficult to determine potential explanations.
12	Germantown, OH	Aircraft	Agreed
13	Los Angeles, CA	Aircraft	Possible balloon
14	Honolulu, HI	Police Sirens	Agreed on sound component. Visual sighting could have been meteor or fireworks from Chinese new year celebration.

14-13 Mar	Spain	Insufficient data	Venus and Jupiter were probably likely sources for sightings centered around 2100Z. Stars Capella and Procyon could be source of sightings on times after midnight.
15	Dallas, TX	Aircraft	Agreed
18	Pacific	Meteor	Agreed
19	Philippines	Satellite	Agreed. Atlas Centaur Rocket body
20	Pepperrell AFB, Newfoundland	Contrails	Agreed.
20	Ogden, UT	Meteor	Agreed
20	Pacific	Satellite	Agreed. Echo 1.
21	Waupaca, WI	Aircraft	Agreed
23	Atlantic	Satellite decay	Meteor
23	Philadelphia, PA	Insufficient data	Possible meteor
24	California - Oregon	Missile	Agreed Minuteman launch. Note: the record card mentions reports later in the day from another launch. There was no launch for that time (25/1830Z) and there are no reports for this time in the file to evaluate. Additionally, all the messages originated from Adair AFS and have the GMT/Z time incorrect by one hour (Launch 0130Z/reported time around 0230Z).The 1830Z may have been a local time derived from the 0230Z time given in the reports. Verified launch time from Astronautix with time in reports from newspaper archives.
24	Greenville, OH	Venus and Jupiter	Agreed
26	Trenton, MI	Conflicting data	14-year old sighting. Echo1 satellite for first sighting. Witness then reported a second object moving in opposite direction 15 minutes after the first sighting. This probably was an aircraft.
27	Marshall, MI	Star	Agreed. 15-year old sighting. Possibly Capella.
28	Manchester, NH	Venus and Jupiter	Agreed. Photograph just shows out of focus blobs of light and cannot be evaluated. Venus and Jupiter were in conjunction and explains visual sighting.
28	Pacific	Insufficient data	Possible Ferret 3 Satellite sighting

March 1964

Date	Location	BB explanation	My evaluation
1	Middleboro, MA	Unreliable Report	Agreed. Report made almost three months later by 15-year old. Details are confusing. It is possible the witness saw Echo 1 and several other satellites during the time period.
3	Mariette, OH	Venus	Agreed
4	Beavercreek, OH	Venus	Agreed
6	Pacific	Satellite	Agreed. Echo 1
6-7	Dayton, OH	Insufficient data	Possible aircraft
13	Pacific	Missile	Agreed. Titan missile launch to Kwajalein.
14	Pacific	Insufficient data	Echo 1 Satellite
14	Silver Springs, MD	Aircraft	Agreed
15	Dallas, TX	Satellite	Agreed. Echo 1. Note: BB determined it was not Echo 1 because witness stated magnitude was +6 (which is probably an inaccurate estimate). Echo 1 fits the described path and it is probable the witness underestimated the magnitude or was describing the object fading to +6 when it went into earth's shadow.

15	Kings Mountain, NC	Aircraft	Insufficient data. Photos but no case file. Photos look like contrails.
15	Miami, FL	Insufficient data	There is a Miami sighting for 13 or 14 Mar in the Kansas City case file, which was submitted on a post card. The witness became confused about the date. This was seen in the direction of Miami airport and displayed all the characteristics of an aircraft. Possible aircraft.
16	Lakewood, CA	Meteor	Agreed
16	Pacific	Satellite	Agreed. Echo 1.
16-17	Orange, CT	Insufficient data	Agreed. No time or direction of observation.
20	Shelton, CT	Psychological	No case file
21	Roswell, NM	1. Chemical drop on film 2. Insufficient data	1. Agreed 2. Agreed. Information about sighting appears to be second hand and very limited.
23	Barbourville, KY	Venus	Agreed
29	Atlantic	Flares	Agreed
29	Kansas City, KS	Venus	Agreed

April 1964

Date	Location	BB explanation	My evaluation
1	Plattsburg, NY	Satellite	Meteor
1	Pacific	Satellite	Agreed. Echo 2.
2	Lakeview, SC	Aircraft	Agreed
3	Minticello, WI	UNIDENTIFIED	UNIDENTIFIED
4	Baltimore, MD	Psychological	Agreed. Witness seeing UFOs in television set interference.
8	AZ, NM, TX	Meteor	Agreed
8	CO, NM, WY	Meteor	Agreed. Appears to be same meteor as AZ, NM, TX.
9	Oak Lawn, IL	Insufficient data	Possible aircraft.
9	Pacific	Insufficient data	Possible meteor
9	Ardmore, OK	Insufficient data	Unreliable report. Report made 3 months after event. Witness felt it might have been aerial advertising after suggestion of such by Blue Book in responding letter.
10	Merced, CA	Balloon	Agreed
10	Not Reported	Insufficient data	Agreed. No location given. This may have been a joke of some kind. The report stated a gray object passed over Uranus (Left of Regulus). Uranus was located east of Regulus but Uranus is not normally visible to the unaided eye.
10	Atlantic	Balloon	Agreed
11	Homer, NY	UNIDENTIFIED	UNIDENTIFIED
12	Baltimore, MD	Satellite	Agreed. Echo 2.
13	Provo, UT	Satellite	Agreed. Echo 2.
15	Pacific	Satellite	Agreed. Echo 1.
17	Fallon AFS, NV	Radar inversion	Insufficient data. No temperature data available. No identification of which radar produced results.
17	Norfolk, VA	Insufficient data	Wallops Island Nike-Cajun Aeronomy launch.
18	Manassas, VA	Research activity	Agreed. Possibly Wallops Island Nike-Cajun Aeronomy launch of 17 April. Envelope in file is dated 18 April indicating event was seen on 17 April. Time and description indicate he saw the rocket launch from Wallops Island.

19	Dayton, OH	Searchlight	Possible aircraft
19-25	Terry, MT	Insufficient data	Agreed. Two sightings during the week of 19-25 Apr. No times or directions.
20	Big Bend National Park, TX	Satellite	Agreed. Echo 2.
21	Greenland	Satellite	Agreed. Echo 2.
22	Mosinne, WI	Satellite	Agreed. Possibly Ferret 3 satellite. Report made five days after event by teens. If time is off by one hour, it would have been Echo 2.
22	Astoria, OR	Venus	Agreed
24	Socorro, NM	UNIDENTIFIED	UNIDENTIFIED
25	North Platte, NE	Meteor	Agreed
25	Socorro, NM	Ground light	Insufficient data. No specific location, direction, or time.
25	Grants, NM	Aircraft	Agreed. No photograph in file.
26	La Madera, NM	Fire in dump	Agreed
26	Las Vegas, NV	Birds	Agreed
27	Sarasota, FL	Aircraft	Agreed
27	Edgewood, NM	Hoax	Unreliable report. Witness fired 12 shots at UFO, claiming he hit it six times. Record card states he was intoxicated.
28	Albuquerque, NM	Imagination	Agreed. 12-year old girl claimed to be burned by alien ray guns at school recess.
28	Minot AFB, ND	1. Aircraft 2. Insufficient data	1. Agreed. (Radar target unrelated to visual sighting) 2. Agreed. Visual sighting appears to be just a light that was visible below the aircraft and appeared to be pacing the aircraft. No other information was provided. Plane's flight path not specific enough to evaluate possible sources for light.
28	Miamisburg, OH	Stars/planets	Agreed. Probably Venus but no azimuth reported.
28-30	San Jose, CA	1. Aircraft 2-3. Stars/planets	1-2. Balloon 3. Venus
28-29	Coshocton, OH	Meteor	Agreed
29	Pacific	Satellite	Agreed. Echo 2.
30	Canyon Ferry Reservoir, MT	Hoax	Agreed.

May 1964

Date	Location	BB explanation	My evaluation
May	Newark, NJ	Insufficient data	Unreliable report. Letter two years after the event.
May	Munhall, PA	Meteor	Agreed. Description matches meteor. Witness reporting 6 months after event.
1	Pacific	Satellite	Agreed. Echo 1.
1	Mehlville, MO	Venus/Jupiter	Daylight sighting of Venus (one witness thought they saw two objects but other saw only one)
1	North Carver, MA	Venus	Agreed
1	Las Vegas, NV	Balloon	Agreed
3	Pacific	Satellite	Agreed. Echo 1.
3	Canberra, Australia	1. Satellite 2. Star	1. Agreed. Echo 2. 2. Agreed. Possibly Saturn.
4	Des Plaines, IL	Aircraft	Agreed
4	Boise, ID	Flare	Agreed
4	Cannon AFB, NM	Venus	Agreed

5	Savannah, GA	Aircraft	Agreed
5	Middletown, OH	Venus	Agreed
5	Outlook, MT	Insufficient data	Possible aircraft
5	Toledo, OH	Star/planet	Agreed. Probably Venus
5	Pacific	Satellite	Agreed. Echo 1.
DR6	Yellow Springs, OH	Part of B-57	Agreed
8	Red Feather Lakes, CO	Satellite	Agreed. Echo 1. (Note: conversion to GMT was incorrect. Colorado did not observe DST in 1964. 2230MST = 0530Z)
9	Huntsville, AL	Conflicting data	Report by 14-year old. Possible Echo 1 sighting.
9	Ashville, NC	Misinterpretation of conventional objects	Insufficient data. Report by several students of multiple sightings. Many appear to be Venus. Directions and durations missing. Main sighting on May 9 appears to be Echo 1 satellite.
9	Chicago, IL	UNIDENTIFIED	UNIDENTIFIED
10	Warrensville Heights, OH	Satellite	Agreed. Echo 1.
11	Kettering, OH	Aircraft	Agreed
11	Pacific	Flares	Agreed
13	Newman, TX/Carlsbad, NM	Betelgeuse	Capella. Betelgeuse fits one description of location but other aspects (duration before setting and location given for when it set) indicate the most likely culprit was Capella.
13	Denver, CO	Insufficient data	Echo 1 satellite
14	Dayton, OH	Venus	Aircraft
15	Dayton, OH	Balloon	Agreed
15	Dayton, OH	Satellite	Agreed. Echo 1.
15	Salem, OR	Insufficient data	Report by 11-year old. Possible aircraft.
16	Dayton, OH	Aircraft	Agreed
16	Brownsville, TX	Satellite	Agreed. Echo 2.
16	Heber City, UT	Insufficient data	Agreed. Direction given was towards a mountain but no specific direction or location. Duration was also not given.
16	Dayton, OH	Insufficient data	Agreed. Witness made phone call to WP AFB stating they saw something in the sky. No further information.
17	Atlantic	Insufficient data	Echo 1 satellite
17-21	Camden, NJ	Aircraft	Agreed. Sighting only gives one specific date but record card gives range of dates.
17	New York, NY	Satellite	Agreed. Echo 1.
17	Canton-Akron, OH	Aircraft	1. Possibly Echo 1 satellite. 2. Agreed. Possible aircraft.
17	Wilmington, OH	Misinterpretation of conventional objects	Probably Echo 1 satellite
17	Tipton, IN	Satellite	Agreed. Echo 1.
17	Pacific	Satellite	Agreed. Echo 1.
18	Far East	Aircraft	Agreed
18	Mt. Vernon, VA	UNIDENTIFIED	UNIDENTIFIED
18	Woodburn/Hubbard, OR	Unreliable report	Agreed. Report made by 10-year old of craft rising from a field.
18	Kokomo, IN	Satellite	Agreed. Echo 1.
19	Indianapolis, IN	Satellite	Agreed. Echo 1.
20	Andover, MA	Aircraft	Duration too short for aircraft. Possible balloon

20	Lansing, MI	Insufficient data	Agreed. Second hand information with only times of three observations.
20	Macon, GA	Aircraft	Agreed. First observation gave no direction for light. Second observation indicates North to South direction. Echo 1 making pass from west to east. First observation possibly Echo 1 or aircraft. Second observation probably aircraft since Macon is underneath airway from Atlanta going south. BB explanation of KC-135s assumed observation was in error by 30 minutes.
20	Glasgow AFB, MT	Venus/Regulus	Just Venus. Regulus included because witnesses gave initial observation of angle of elevation of 30 degrees in SW moving to NW. Venus moved from W to NW during observation.
20-23	Hartford, IN	Venus	Agreed
20-25	Lansing, MI	Aircraft	Insufficient data. There is no record card for this entry and it appears to be a reference to all the sightings from the time period.
21	Lansing, MI	Siren and flasher	Agreed
21	Altus, OK	1. Insufficient data 2. Satellite	1. Agreed. This sighting may be a merging of the second sighting. It happened about the same time but the information is limited. 2. Agreed. Echo 2.
21	Marion, IN	Aircraft	Agreed
21	Ontario, Canada	Aircraft	Agreed
22	Lansing, MI	Meteor	Agreed
22	Elmhurst, IL	Insufficient data	Agreed. No positional data or duration.
23	East Lansing, MI	Meteor	Agreed
23-4	Budd Lake, NJ	Satellite	Agreed. Both observations of Echo 1.
23	Clovis, NM	Venus	Agreed
23	Clearfield, UT	Satellite	Agreed. Echo 1.
23	Pacific	Satellite	Agreed. Echo 1.
24	Washington DC	Insufficient data	Possibly Echo 1.
24	Millinocket, ME	Ball Lightning	Unreliable report. Second hand story about a ball of fire and a stalled car. Primary witness did not report.
25	Bay City, MI	Satellite	Agreed. Possibly Echo1 with time error of 30 minutes. Description of flight path, duration, and going into shadow matches Echo 1.
25	Ansted, WV	Meteor	Agreed
26	Cambridge, MA	UNIDENTIFIED	UNIDENTIFIED
26	East Lansing, MI	Meteor	Agreed
26	Lansing, MI	Unreliable report	Agreed that witness suffers from reliability issues. First sighting was probably Echo 1. Other sightings appear to be aircraft observations.
26	Pleasantview, PA	UNIDENTIFIED	Venus. See SUNlite 10-3
27	Lansing, MI	Venus	Agreed
28	Thibodaux, LA	Aircraft	Agreed
28	Los Angeles, CA	Searchlights	Agreed
29	Cagetown, New Brunswick	Insufficient data	Aircraft
29	Pacific	Insufficient data	Agreed. Possibly Echo 2 sighting but missing direction of observation.
29	Palmetto, FL	Bird	Agreed
30	New York World's fair	No classification	File with single photo that looks like a hole in a negative or chemical defect.

30	Far East	Meteor	Agreed
30	Dorchester, MA	Satellite	Agreed. Echo 1.
30	COMANVSUP Antarctica	Insufficient data	Agreed. No date or time. Observers suspected it was Apollo rocket stage. NASA suspected Echo 2.
30	Orangevale, CA	Satellite	Insufficient/conflicting data. Time reported as 1550Z but also mentions sighting at night. Unable to identify satellite without time frame.
31	Wheaton, MD	Balloon	Agreed. Winds support explanation. It is also possible that this was a sighting of Echo 1 with error in direction of travel by witness. Echo 1 went in opposite direction at time of sighting and matches duration of sighting.

June 1964

Date	Location	BB explanation	My evaluation
Summer	Chatham, NJ	Insufficient data	Unreliable report. 15-year old reporting one year after the event.
Summer	Willingboro, NJ	Psychological	Unreliable report. Submitted one year after the event
June	Mulberry, FL	Insufficient data	Agreed. No date. Could have been aircraft or satellite.
1 (about)	Elkhart, IN	Meteor	Agreed. Witness did not know date but other information indicates a meteor as source.
1	Crystal Lake, MI	Aircraft	Agreed.
1	Paducah, KY	Plastic Bottle	Agreed
1	Chicago, IL	Aircraft	Agreed. Probably contrail observations.
5	Middleboro, MA	1. Meteors 2. Insufficient data	4 observations. 3 were probably meteors. The fourth was probably an aircraft. Witness sketch of fourth object showed red on one side with blinking light.
5	Lansing, MI	Aircraft	Agreed
5	Texarkana, TX	Moon	Agreed
6	Atlantic	Vega	Possible Echo 1 sighting
6	Galveston, IN	1. Arcturus 2. Aircraft	Agreed
DR9	Westfield, WI	Natural Copper	Agreed
9	Kansas City, KS	Satellite	Agreed. Echo 1.
9	Kokomo, IN	Aircraft	Agreed
10	Clayton, OH	Unreliable report	Agreed. Witness mentioned seeing object in infrared glasses and on his own radar screen. Difficult to believe that he had anything this high tech in 1964. Phone call report. Interviewer thought witness was teenager.
10	Bastrop, TX	Insufficient data	Possible meteor
11-12	Sarasota, FL	Aircraft	Insufficient data. Witness could not determine date and reported incident four months later.
13	Toledo, OH	UNIDENTIFIED	UNIDENTIFIED
13	Grand Ledge, MI	Reflection of lights on fog	Agreed. Witnesses were two teen girls in car at night on road when they encountered light.
14	Dale, IN	Hoax	Agreed
15	St. George De Bouce, PQ Canada	Lightning Arrestor	Agreed
16	Washington DC	Insufficient data	Antares. BB dismissed this explanation because witness described it as bright as the full moon. Witness was a 14-year old in a drive-in. It seems likely his estimate of magnitude was exaggerated. All other characteristics match Antares.

18	O'Neill, NE	Insufficient data	Possible daylight meteor sighting
19	San Jose, CA	Insufficient data	Possible meteor
22	Gulf of Mexico	Munitions Test	Insufficient data. Witness reported seeing a "mushroom cloud" in the gulf that lasted 10 minutes. CG and local craft could not locate any sign of explosion. BB concluded it was a munitions test by Eglin AFB but did not verify.
23	Big Pine Key, FL	Aircraft	Agreed
23	Binghamton, NY	Insufficient data	Possible aircraft
25	Poulson, MT	1. Satellite 2. Aircraft	1. Agreed. Echo 2. 2. Agreed.
25	El Paso, TX	Balloon	Agreed
26	Dayton, OH	Aircraft	Agreed
26	Clairton, PA	1. Insufficient data 2. (photo) Insufficient clarity	1. Bursting weather balloon. Witness saw object through telescope and description matches balloon with data package. Subsequent bursting explains description of object separating into multiple objects and then disappearing. 2. Agreed. Witness attempted to take photograph with box camera through telescope eyepiece. Image appears to show a fraction of the eyepiece FOV and the object is not visible.
27	Cincinnati, OH	Satellite	Agreed. Echo 2 for two sightings. Ferret 5 for other sighting.
27	Pacific	Satellite	Agreed. Echo 2.
27	Maupin, OR	Meteor	Agreed
28	Anderson, SC	Ball Lightning	Insufficient data. Witness did not report duration or direction of travel. Checks for radiation on vehicle revealed none (this was disputed by witness but could have been witness interpreting background as evidence of radiation).
28	Richmond, MO	Aircraft	Unreliable report. 14-year old reporting sighting one year later.
Jun/Jul	Spencer, IN	Insufficient data	Agreed. No date given. Witness could not even tell direction of travel. They only heard a noise pass over the house.

Reclassification

I evaluated 227 cases in the Blue Book files from January through June 1964. In my opinion, 60 were improperly classified (about 26.4%). 28 (about 12% of the total number of cases/46.7% of the reclassifications) of these were listed as "insufficient data". This table describes these cases and how I felt they should have been classified.

Date	Location	Reclassification	Reason
1/7	Sacramento, CA	Insufficient data	Possible meteor
1/22	Lincoln Park, MI	Insufficient data	Sketch indicates he was observing Jupiter.
1/22	Pacific	Satellite Decay	Meteor
1/24	Shark River, NJ	Insufficient data	Possible meteor
2/9	Riversville, WV	Conflicting data	14-year old sighting. Possible aircraft.
2/13	Los Angeles, CA	Aircraft	Possible balloon
2/14-13 Mar	Spain	Insufficient data	Venus and Jupiter were probably likely sources for sightings centered around 2100Z. Stars Capella and Procyon could be source of sightings on times after midnight.
2/23	Atlantic	Satellite decay	Meteor
2/23	Philadelphia, PA	Insufficient data	Possible meteor
2/26	Trenton, MI	Conflicting data	14-year old sighting. Echo1 satellite for first sighting. Witness then reported a second object moving in opposite direction 15 minutes after the first sighting. This probably was an aircraft.

2/28	Pacific	Insufficient data	Possible Ferret 3 Satellite sighting
3/6-7	Dayton, OH	Insufficient data	Possible aircraft
3/14	Pacific	Insufficient data	Echo 1 Satellite
3/15	Kings Mountain, NC	Aircraft	Insufficient data. Photos but no case file. Photos look like contrails.
3/15	Miami, FL	Insufficient data	There is a Miami sighting for 13 or 14 Mar in the Kansas City case file, which was submitted on a post card. The witness became confused about the date. This was seen in the direction of Miami airport and displayed all the characteristics of an aircraft. Possible aircraft.
4/1	Plattsburg, NY	Satellite	Meteor
4/9	Oak Lawn, IL	Insufficient data	Possible aircraft.
4/9	Pacific	Insufficient data	Possible meteor
4/9	Ardmore, OK	Insufficient data	Unreliable report. Report made 3 months after event. Witness felt it might have been aerial advertising after suggestion of such by Blue Book in responding letter.
4/17	Fallon AFS, NV	Radar inversion	Insufficient data. No temperature data available. No identification of which radar produced results.
4/17	Norfolk, VA	Insufficient data	Wallops Island Nike-Cajun Aeronomy launch.
4/19	Dayton, OH	Searchlight	Possible aircraft
4/25	Socorro, NM	Ground light	Insufficient data. No specific location, direction, or time.
4/27	Edgewood, NM	Hoax	Unreliable report. Witness fired 12 shots at UFO, claiming he hit it six times. Record card states he was intoxicated.
4/28-30	San Jose, CA	1. Aircraft 2-3. Stars/planets	1-2. Balloon 3. Venus
May	Newark, NJ	Insufficient data	Unreliable report. Letter two years after the event.
5/1	Mehlville, MO	Venus/Jupiter	Daylight sighting of Venus (one witness thought they saw two objects but other saw only one)
5/5	Outlook, MT	Insufficient data	Possible aircraft
5/9	Huntsville, AL	Conflicting data	Report by 14-year old. Possible Echo 1 sighting.
5/9	Ashville, NC	Misinterpretation of conventional objects	Insufficient data. Report by several students of multiple sightings. Many appear to be Venus. Directions and durations missing. Main sighting on May 9 appears to be Echo 1 satellite.
5/13	Newman, TX/Carlsbad, NM	Betelgeuse	Capella. Betelgeuse fits one description of location but other aspects (duration before setting and location given for when it set) indicate the most likely culprit was Capella.
5/13	Denver, CO	Insufficient data	Echo 1 satellite
5/14	Dayton, OH	Venus	Aircraft
5/15	Salem, OR	Insufficient data	Report by 11-year old. Possible aircraft.
5/17	Atlantic	Insufficient data	Echo 1 satellite
5/17	Canton-Akron, OH	Aircraft	1. Possibly Echo 1 satellite. 2. Agreed. Possible aircraft.
5/17	Wilmington, OH	Misinterpretation of conventional objects	Probably Echo 1 satellite
5/20	Andover, MA	Aircraft	Duration too short for aircraft. Possible balloon
5/20	Glasgow AFB, MT	Venus/Regulus	Just Venus. Regulus included because witnesses gave initial observation of angle of elevation of 30 degrees in SW moving to NW. Venus moved from W to NW during observation.

5/20-25	Lansing, MI	Aircraft	Insufficient data. There is no record card for this entry and it appears to be a reference to all the sightings from the time period.
5/24	Washington DC	Insufficient data	Possibly Echo 1.
5/24	Millinocket, ME	Ball Lightning	Unreliable report. Second hand story about a ball of fire and a stalled car. Primary witness did not report.
5/26	Pleasantview, PA	UNIDENTIFIED	Venus. See SUNlite 10-3
5/29	Cagetown, New Brunswick	Insufficient data	Aircraft
5/30	New York World's fair	No classification	File with single photo that looks like a hole in a negative or chemical defect.
5/30	Orangevale, CA	Satellite	Insufficient/conflicting data. Time reported as 1550Z but also mentions sighting at night. Unable to identify satellite without time frame.
Summer	Chatham, NJ	Insufficient data	Unreliable report. 15-year old reporting one year after the event.
Summer	Willingboro, NJ	Psychological	Unreliable report. Submitted one year after the event
6/5	Middleboro, MA	1. Meteors 2. Insufficient data	4 observations. 3 were probably meteors. The fourth was probably an aircraft. Witness sketch of fourth object showed red on one side with blinking light.
6/6	Atlantic	Vega	Possible Echo 1 sighting
6/10	Bastrop, TX	Insufficient data	Possible meteor
6/11-12	Sarasota, FL	Aircraft	Insufficient data. Witness could not determine date and reported incident four months later.
6/16	Washington DC	Insufficient data	Antares. BB dismissed this explanation because witness described it as bright as the full moon. Witness was a 14-year old in a drive-in. It seems likely his estimate of magnitude was exaggerated. All other characteristics match Antares.
6/18	O'Neill, NE	Insufficient data	Possible daylight meteor sighting
6/19	San Jose, CA	Insufficient data	Possible meteor
6/22	Gulf of Mexico	Munitions Test	Insufficient data. Witness reported seeing a "mushroom cloud" in the gulf that lasted 10 minutes. CG and local craft could not locate any sign of explosion. BB concluded it was a munitions test by Eglin AFB but did not verify.
6/23	Binghampton, NY	Insufficient data	Possible aircraft
6/26	Clairton, PA	1. Insufficient data 2. (photo) Insufficient clarity	1. Bursting weather balloon. Witness saw object through telescope and description matches balloon with data package. Subsequent bursting explains description of object separating into multiple objects and then disappearing. 2. Agreed. Witness attempted to take photograph with box camera through telescope eyepiece. Image appears to show a fraction of the eyepiece FOV and the object is not visible.
6/28	Anderson, SC	Ball Lightning	Insufficient data. Witness did not report duration or direction of travel. Checks for radiation on vehicle revealed none (this was disputed by witness but could have been witness interpreting background as evidence of radiation).
6/28	Richmond, MO	Aircraft	Unreliable report. 14-year old reporting sighting one year later.

Summary

The cases during this time period was populated with a lot of young witness observations. One of the witnesses was a 10-year old. Another involved a 12-year old girl that claimed to have been burned by a UFO during school recess. As I have previously noted, some of these youths file some pretty good reports but the rest appear to be more exaggeration than accurate reporting. It must have been frustrating for personnel at Blue Book to deal with some of these reports.

With the launch of the Echo-2 satellite, the two Echos produced many UFO reports. They were involved in 50 of the sightings (22%). The ever increasing number of satellites and rocket bodies is making it difficult to identify the satellites involved in some of these sightings. Luckily, there is a great Two-line element database at Jonathan McDowell's space home page.

While there were some interesting cases during this time period, nothing stood out. There was a rash of sightings in Lansing Michigan in late May. It appears that the source of the original sighting was a new police siren, which witnesses reported to the local news media. This resulted in all sorts of follow-up reports as witnesses started going outside and seeing "unusual lights" in the sky. Most of the events had explanations. It also introduced me to an investigator that appeared to be helping Dr. Hynek. William Powers, who was a systems engineer at Hynek's Dearborn observatory, was involved in investigating this series of sightings. He also was named in several other cases.

Next issue, I will perform a check of the second half of 1964.

References

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2. Project Blue Book archive. Available WWW:<http://bluebookarchive.org/> (Note: This website is no longer active but some of my files come from this location. It may become active again in the future.)
3. National Oceanic and Atmospheric Administration (NOAA). NOAA/ESRL Radiosonde Database. Available WWW: <https://ruc.noaa.gov/raobs/>
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