

CASE FILE 26 / 237UAP00358

237UAP00358

Radar/correlation-focused public UAP report; score 66

NORMAL-OBJECT FAVORED

REPORT NO.	UAP-OM-26-237UAP00358	DISPOSITION	NORMAL-OBJECT FAVORED
PRIMARY CASE	237UAP00358	GENERATED	2026-05-20 18:32 UTC
REPORT TIME	2024-02-20T10:04:00+00:00	OBSERVER	27.74072, -85.23946
SOURCE CASE IDS	237UAP00358		

Abstract

This case file evaluates a reported UAP sighting against the available orbital-object layer. No compact same-launch group fully identifies the file by itself. The final disposition is assigned under a normal-object favored standard, where ordinary aerospace/orbital explanations are preferred when they reasonably fit the report.

This is a standalone independent analysis prepared from public-source records and public orbital datasets. It is not an official government determination, classification marking, or agency-authored report.

1. Executive Summary

237UAP00358 is assessed as normal-object favored because the available public evidence gives a case-specific ordinary-object candidate: strong ADS-B aircraft candidate N963AK B39M ad6755 at 53.7 km, azimuth 4.6 deg, elevation 11.02 deg, 2.61 min from report. Dense satellite presence alone is not treated as causation in this packet.

1.1 Key Findings

- Source score 66 based on: radar/primary-return language, high-altitude report, maneuvering/motion anomaly, UAP/UFO language.
- Report time used: 2024-02-20T10:04:00+00:00.
- External object layer used: Starlink.
- Disposition standard: NORMAL-OBJECT requires case-specific causal fit. Satellite density above the horizon is context only and cannot by itself resolve the report.
- Case-specific ordinary-object evidence: strong ADS-B aircraft candidate N963AK B39M ad6755 at 53.7 km, azimuth 4.6 deg, elevation 11.02 deg, 2.61 min from report.
- Non-causal context / rejection screens: substantial orbital-object sky background; context only, not causation; NASA/JPL known-small-body rejection screen present.
- Remaining hard features: hard maneuver language.
- Objects above horizon: 261; at/above 10 deg: 103.
- No compact same-launch/designator group survived the report threshold.
- No explicit Starlink/balloon wording was found in the source excerpt used for ranking.

1.2 Bottom Line

NORMAL-OBJECT FAVORED: A case-specific ordinary-object candidate exists from source language, orbital geometry, launch-object context, or compact trajectory grouping. Dense ordinary sky traffic alone is not treated as causation.

2. Source Control

The source-control table identifies the public report records reviewed for this case and lists public access links where available. The table is included so this PDF remains interpretable when distributed by itself.

CASE ID	REPORT DATE FIELD	FACILITY / TITLE	TEXT EXTRACT	PUBLIC PDF LINK
237UAP00358	10:04 02/20/2024 Callsign: AAL2054 Origin: PHX	ZJX Operator: AAL Operator Type: Commercial	text extract present	237UAP00358.pdf

3. Original Report Evidence

PRIMARY EXCERPT USED FOR MATCHING	Aircraft reported an unidentified aerial phenomenon off the left side while SE bound at FL370, 200 NM SSE of CEW. The unknown phenomenon was three white lights making tight spirals, at approximately FL450. The UAP was not observed on ATC facility radar system.
REPORT TIME USED	2024-02-20T10:04:00+00:00
OBSERVER COORDINATE USED	27.74072, -85.23946
OBSERVER SOURCE BASIS	aviation_offset:200 NM SSE of CEW (public text extract 237UAP00358)

4. Methodology

- Spacetime extraction.** The report time and observer coordinate were extracted from the public text report and normalized to UTC. Aviation fixes/radials were resolved during earlier preprocessing where applicable.
- External object dataset.** The object layer used historical Space-Track/TLE-derived Starlink element rows. The analytic mode for this case is historical Starlink element propagation and same-launch/designator sky grouping.
- Propagation.** Orbital elements were propagated to the report minute and observer location. For launch-object checks, samples around the report minute were retained. For Starlink group checks, objects above the horizon were clustered by sky position and filtered for same-launch groupings.
- Comparison.** The output was compared against the report's count of lights, direction cue, motion language, altitude/radar language, and whether the file itself already suggested a satellite explanation.
- Causation standard.** Mere object presence above the horizon is treated as background context only. A normal-object disposition requires a case-specific causal fit, such as a named launch object, a compact same-launch trajectory group, or source language that directly supports that object class.
- Disposition assignment.** *Identified* means a specific normal object fits the report spacetime and the hard reported features do not materially conflict. *Normal-object favored* means a case-specific ordinary aerospace/orbital candidate exists, but it is not a full named identification. *Insufficient* means the file is too thin to carry high anomaly value. *High-value unresolved* is used when radar, video, rapid maneuver, or multi-witness features remain after reasonable normal-object checks.

5. External Object Evidence

5.1 Search Volume and Density

This table is a screening layer only. Objects above the horizon show background opportunity; they do not establish causation unless a specific object or compact trajectory group matches the reported behavior.

STARLINK CATALOG IDS CONSIDERED	5458	HISTORICAL ELEMENT ROWS	5431
ABOVE HORIZON AT REPORT MINUTE	261	AT/ABOVE 10 DEG	103
LARGEST SAME-SKY CLUSTER	64		

No compact same-launch/designator group survived the report threshold. In this condition, satellite density remains context only and cannot by itself resolve a report with hard features.

5.2 Same-Launch / Same-Designator Candidate Groups

#	LAUNCH DATE	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS	MEMBERS
No same-launch group identified.						

5.3 Primary Group Members

OBJECT	NORAD	LAUNCH	AZ	EL	RANGE KM	APPARENT MOTION	ELEMENT AGE H
No members available.							

5.4 Bright-Sky Context: Top Starlink Objects by Elevation

OBJECT	AZ	EL	RANGE KM	APPARENT MOTION	LAUNCH DATE
STARLINK-30301	224.26	78.5	541.54	westward, setting	2023-08-22
STARLINK-2058	310.59	76.23	563.06	eastward, setting	2021-02-16
STARLINK-5711	95.43	66.26	606.66	eastward, setting	2023-02-02
STARLINK-30440	98.07	59.39	639.07	eastward, setting	2023-09-24
STARLINK-3723	302.88	57.07	634.03	eastward, setting	2022-03-19
STARLINK-6183	318.79	55.98	664.05	eastward, setting	2023-06-12
STARLINK-6202	170.55	52.88	685.41	westward, setting	2023-06-12
STARLINK-31193	212.89	50.27	619.15	westward, setting	2024-01-15
STARLINK-30997	331.71	48.38	727.2	eastward, setting	2023-12-03
STARLINK-5708	316.18	45.87	753.06	eastward, rising	2023-02-02
STARLINK-6357	100.9	44.78	785.55	eastward, setting	2023-05-31
STARLINK-31300	102.54	44.44	630.9	westward, setting	2024-01-29

5.5 Largest Sky Clusters

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
1	64	1.54-359.74 deg	10.2-34.96 deg	eastward, level, eastward, rising, eastward, setting, westward, level, westward, rising, westward, setting
2	8	212.89-228.23 deg	11.84-50.27 deg	eastward, rising, westward, rising, westward, setting
3	5	88.79-102.54 deg	38.8-44.78 deg	eastward, setting, westward, setting

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
4	5	119.83-139.53 deg	14.01-29.47 deg	eastward, setting, westward, setting
5	5	141.44-160.42 deg	10.98-18.98 deg	westward, level, westward, setting

5.6 Space-Track SATCAT Enrichment

Space-Track SATCAT metadata was pulled as a cached subset for NORAD catalog IDs appearing in this packet's evidence tables. This section adds owner/type/status context to the propagated object candidates.

PACKET SATCAT SUBSET ROWS	5370	FETCHED	2026-05-19T01:19:50+00:00
THIS CASE NORAD IDS CHECKED	30	SATCAT ROWS MATCHED	30
TOP OWNERS	US: 30		
OBJECT TYPES	PAYLOAD: 30		

5.7 Space-Track Metadata for Top Propagated Objects

NORAD	OBJECT NAME	TYPE	OWNER	LAUNCH DATE	DECAY DATE
57666	STARLINK-30301	PAYLOAD	US	2023-08-22	n/a
47667	STARLINK-2058	PAYLOAD	US	2021-02-16	2026-04-15
55471	STARLINK-5711	PAYLOAD	US	2023-02-02	n/a
57923	STARLINK-30440	PAYLOAD	US	2023-09-24	n/a
52138	STARLINK-3723	PAYLOAD	US	2022-03-19	n/a
56905	STARLINK-6183	PAYLOAD	US	2023-06-12	n/a
56896	STARLINK-6202	PAYLOAD	US	2023-06-12	n/a
58797	STARLINK-31193	PAYLOAD	US	2024-01-15	n/a
58482	STARLINK-30997	PAYLOAD	US	2023-12-03	n/a
55470	STARLINK-5708	PAYLOAD	US	2023-02-02	n/a
56783	STARLINK-6357	PAYLOAD	US	2023-05-31	n/a
58878	STARLINK-31300	PAYLOAD	US	2024-01-29	n/a

5.6 NASA/JPL Near-Earth Object Screen

This secondary object screen checks NASA/JPL close-approach objects near the report date and propagates their observer geometry through Horizons at the report coordinate. It is a known-object rejection layer, not a generic astronomy backdrop.

NASA/JPL CAD WINDOW	event date +/- 1 day, dist-max 0.2 au	COORDINATE USED	27.74, -85.24
CLOSE-APPROACH OBJECTS	25	ABOVE HORIZON	12
BRIGHT-ISH ABOVE HORIZON	0 using apparent magnitude <= 10 screen		

5.7 NASA/JPL Objects Above Horizon

OBJECT	CLOSE APPROACH UTC	DIST AU	H	AZ	EL	APP MAG
187026	2024-Feb-20 02:28	0.0968755746608615	17.37	269.61	22.39	12.99
2024 CB4	2024-Feb-20 15:38	0.0603064324189637	24.46	204.22	34.21	20.28
2024 DL1	2024-Feb-20 14:22	0.016540814478972	27.26	198.65	76.97	20.37
2024 EU1	2024-Feb-19 06:04	0.0688827444193074	25.15	256.00	9.50	20.49
2024 DN1	2024-Feb-19 04:34	0.0985031614805937	24.47	263.55	49.71	20.57

OBJECT	CLOSE APPROACH UTC	DIST AU	H	AZ	EL	APP MAG
2024 FE4	2024-Feb-19 05:39	0.089541760016417	24.60	254.70	58.83	20.75
2024 DP1	2024-Feb-20 18:57	0.10828693479969	24.40	256.54	61.64	21.04
2024 DC	2024-Feb-19 19:49	0.0320125650148167	26.72	350.09	80.12	21.36
2024 CC3	2024-Feb-19 13:45	0.194041426867505	24.28	271.81	17.64	21.75
2024 CP1	2024-Feb-19 06:30	0.106082201873913	25.78	264.18	43.24	21.85

5.8 NASA/JPL Bright-Candidate Result

OBJECT	AZ	EL	APP MAG
No above-horizon close-approach object met the apparent magnitude <= 10 screen.			

- NASA/JPL CAD listed 25 near-Earth close approaches in the event-date +/-1 day window within 0.2 au.
- Horizons placed 12 of those objects above the local horizon at the report coordinate/time.
- None of the above-horizon close-approach objects were remotely bright enough for naked-eye explanation using the mag<=10 screen.

5.9 NASA / NOAA / ADS-B Expansion Layer

This source layer adds free NASA context that was previously missing from most packet cases. It is contextual evidence; it does not replace aircraft, satellite, balloon, or radar causation tests.

HOUR UTC	2024022010
CLOUD AMOUNT	1.28%
PRECIPITATION	0.0 mm/hr
10 M WIND	3.69 m/s
TEMPERATURE	17.71 C
RELATIVE HUMIDITY	57.14%
DONKI +/-1 DAY	CME: unavailable; FLR: unavailable; GST: unavailable; HSS: unavailable; IPS: unavailable; MPC: unavailable; RBE: unavailable; SEP: unavailable; WSAEnlilSimulations: unavailable

5.10 Horizons Sky Geometry Context

OBJECT	AZ	EL	APP MAG
Sun	87.17	-29.51	-26.77
Moon	302.35	-2.20	-11.45
Venus	106.69	-10.12	-3.91
Mars	106.67	-11.24	1.27
Jupiter	356.98	-48.37	-2.23
Saturn	81.85	-35.73	0.98

- Sun elevation was -29.5 deg, so this was a dark-sky/nighttime sighting.
- Moon was below horizon at elevation -2.2 deg.
- No checked bright planets were above the horizon at the primary coordinate/time.
- NASA POWER cloud amount for the hour was 1.28%, with precipitation 0.0 mm/hr.

5.11 Free Source Availability and Remaining Work

LAYER	STATUS	CASE-SPECIFIC NOTE
ADSB.LOL HISTORICAL RELEASE LISTING	screened/present	planes-readsb-staging-0 1756.0 MiB; planes-readsb-prod-0 1758.0 MiB
ADSB TRACKS DOWNLOADED	not yet exhausted	

LAYER	STATUS	CASE-SPECIFIC NOTE
		Requires targeted extraction from large daily history archives before claiming aircraft exhaustion.
NOAA GOES IMAGERY	not yet exhausted	Needed for cloud/lightning visual context.
NOAA GOES ABI/GLM MANIFEST	screened/present	Public S3 object availability for the report hour.
NOAA NEXRAD WEATHER RADAR	not yet exhausted	Weather radar only; not ATC radar.
NOAA IGRA RADIOSONDE	screened/present	Needed for balloon drift plausibility.
ASOS/METAR WEATHER OBSERVATIONS	screened/present	Nearest station surface observations around report time.

- ADSB.lol historical: extract aircraft traces from adslol/globe_history_2024 for 2024-02-20, then filter +/-60 min and 250 nmi around 27.7407,-85.2395.
- NASA POWER/Horizons/DONKI: batch context for 237UAP00358 at 2024-02-20T10:04:00+00:00.
- NOAA GOES: pull nearest ABI/GLM products for the UTC hour and render cloud/lightning map.
- NOAA NEXRAD: select nearest radar stations and render Level-II/III weather radar sweep around event time.
- NOAA IGRA: find nearest radiosonde station launches bracketing the event and model wind drift for balloon-like descriptions.
- Space-Track gp_history/decay: fetch exact historical element rows and decay/reentry status for top candidate NORAD IDs.

5.12 Weather, Imagery, and Balloon Query Plan

This plan identifies the concrete free sources needed for the next case-specific weather and balloon checks. These are not treated as completed exclusions until the data are downloaded and plotted.

GOES SATELLITE	GOES16
GOES ABI PREFIX	https://noaa-goes16.s3.amazonaws.com/ABI-L2-CMIPF/2024/051/10/
GOES GLM LIGHTNING PREFIX	https://noaa-goes16.s3.amazonaws.com/GLM-L2-LCFA/2024/051/10/

5.13 Nearest Weather-Airport Candidates

STATION	NAME	DISTANCE KM	COORDINATE
KPIE	St. Petersburg Clearwater International Airport	251.70	27.91, -82.69
KPAM	Tyndall Air Force Base	261.00	30.07, -85.58
KTPA	Tampa International Airport	267.30	27.98, -82.53
KSRQ	Sarasota Bradenton International Airport	267.40	27.39, -82.55
KMCF	MacDill Air Force Base	267.70	27.85, -82.52

- KPIE: [IEM ASOS/METAR daily CSV query](#)
- KPAM: [IEM ASOS/METAR daily CSV query](#)
- KTPA: [IEM ASOS/METAR daily CSV query](#)

5.14 Nearest Radiosonde Stations

STATION	NAME	DISTANCE KM	COORDINATE
USM00072210	TAMPA BAY AREA; FL.	279.50	27.71, -82.40
USM00072214	TALLAHASSEE/MUN.; FL.	314.40	30.45, -84.30
USM00072221	VALPARAISO/EGLIN AFB; FL.	329.20	30.48, -86.52
USM00072206	JACKSONVILLE/INTNL.; FL.	459.50	30.48, -81.70
USM00074794	CAPE KENNEDY	467.00	28.47, -80.55

5.15 ASOS/METAR Surface Weather Observations

surface visibility ranged 10-10 statute miles; no precipitation was reported in the retained observations; no low broken/overcast cloud ceiling was evident in the retained station observations. Surface ASOS/METAR observations describe airport-level weather and visibility; they do not by themselves prove conditions at the sighting altitude or line of sight.

STATION	DISTANCE KM	NEAREST OBS UTC	VIS SM	SKY	WIND DEG/KT	METAR
KPIE	251.70	2024-02-20T09:53:00 +00:00	10.00	CLR, M, M, M	20.00 / 3.00	KPIE 200953Z AUTO 02003KT 10SM CLR 11/10 A3022 RMK AO2 SLP233 T01060100
KPAM	261.00	2024-02-20T09:55:00 +00:00	10.00	CLR, M, M, M	340.00 / 6.00	KPAM 200955Z AUTO 34006KT 10SM CLR 07/04 A3023 RMK AO2 SLP240 T00720036 FZFRANO \$
KTPA	267.30	2024-02-20T09:53:00 +00:00	10.00	CLR, M, M, M	30.00 / 3.00	KTPA 200953Z 03003KT 10SM CLR 09/06 A3022 RMK AO2 SLP234 T00890061

5.16 NOAA IGRA Radiosonde Wind Profile

Nearest sounding implies mean 0-12 km wind drift toward 119.0 deg at 14.83 m/s; a passive balloon could drift about 106.7 km in two hours under this crude layer-average model. Radiosonde winds are sparse station soundings; balloon drift remains approximate without launch time, ascent rate, object altitude, and exact line-of-sight bearing.

STATION	NAME	DISTANCE KM	SOUNDING UTC	MEAN DRIFT BEARING	MEAN SPEED M/S	2H DRIFT KM	MAX WIND
USM00072210	TAMPA BAY AREA; FL.	279.50	2024-02-20T12:00 :00+00:00	119.00	14.83	106.70	57.10 at 12090.00 m

5.17 NOAA GOES ABI/GLM Public File Manifest

GOES public S3 objects are listed for the report hour where available. This is an availability manifest, not yet a rendered satellite image.

SATELLITE	GOES16	BUCKET	noaa-goes16
ABI SAMPLE FILES	12	GLM SAMPLE FILES	12

ABI sample objects:

- [ABI-L2-CMIPF/2024/051/10/OR_ABI-L2-CMIPF-M6C01_G16_s20240511000205_e20240511009513_c20240511009566.nc](#)
- [ABI-L2-CMIPF/2024/051/10/OR_ABI-L2-CMIPF-M6C01_G16_s20240511010205_e20240511019513_c20240511019575.nc](#)
- [ABI-L2-CMIPF/2024/051/10/OR_ABI-L2-CMIPF-M6C01_G16_s20240511020205_e20240511029513_c20240511029573.nc](#)
- [ABI-L2-CMIPF/2024/051/10/OR_ABI-L2-CMIPF-M6C01_G16_s20240511030205_e20240511039513_c20240511039575.nc](#)

GLM lightning sample objects:

- [GLM-L2-LCFA/2024/051/10/OR_GLM-L2-LCFA_G16_s20240511000000_e20240511000200_c20240511000216.nc](#)
- [GLM-L2-LCFA/2024/051/10/OR_GLM-L2-LCFA_G16_s20240511000200_e20240511000400_c20240511000413.nc](#)
- [GLM-L2-LCFA/2024/051/10/OR_GLM-L2-LCFA_G16_s20240511000400_e20240511001000_c20240511001016.nc](#)
- [GLM-L2-LCFA/2024/051/10/OR_GLM-L2-LCFA_G16_s20240511001000_e20240511001200_c20240511001215.nc](#)

5.18 ADSB.lol Historical Aircraft Track Extraction

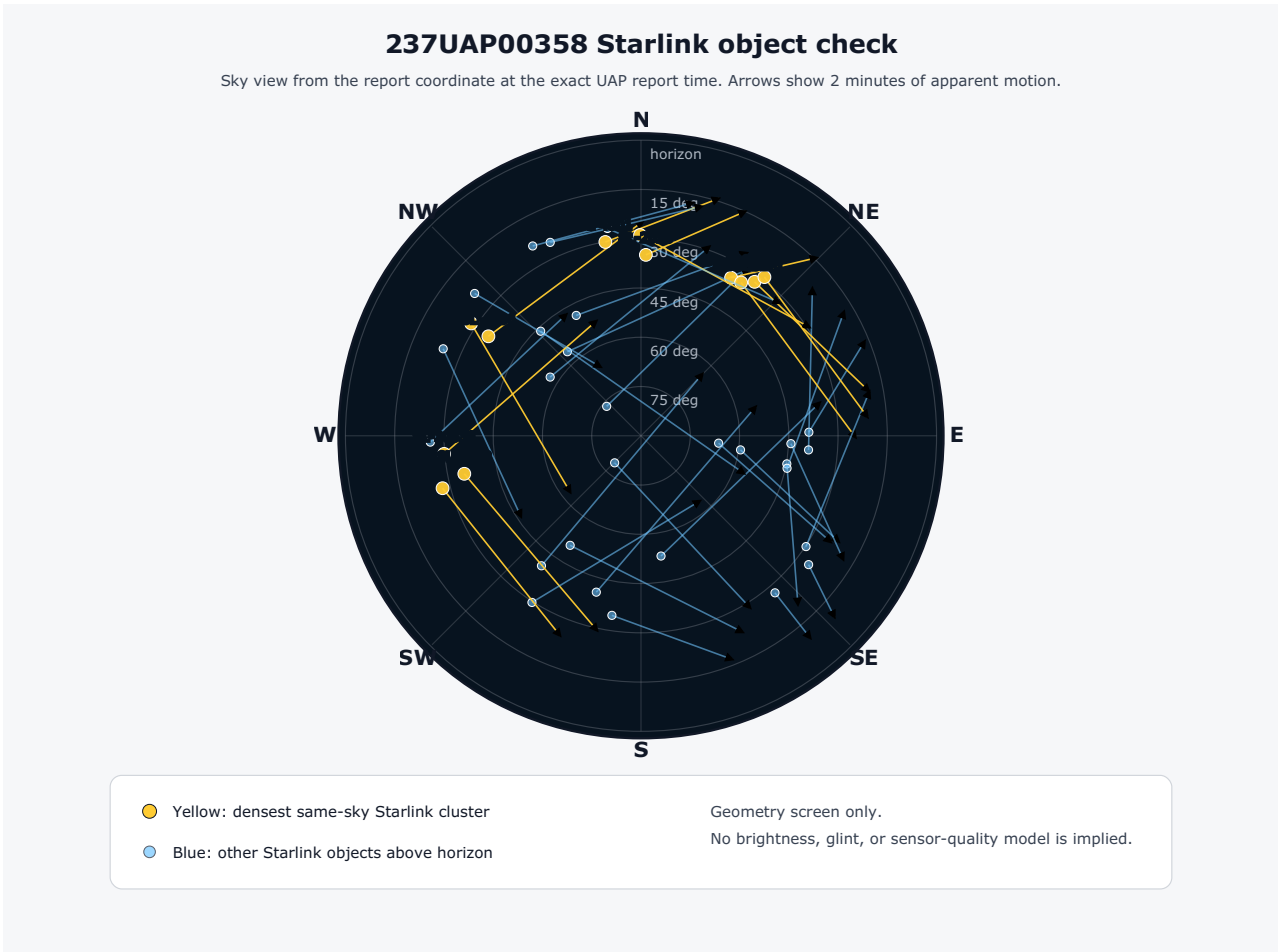
This layer uses the downloaded ADSB.lol daily history archive to test actual aircraft tracks near the report coordinate and minute. It is not treated as a primary-radar substitute; it is a transponder/receiver-derived aircraft screen.

ARCHIVE WINDOW	2024-02-20T09:04:00+00:00 to 2024-02-20T11:04:00+00:00	RADIUS	250.00 nmi
TRACE FILES SCANNED	54306	TRACKS RETAINED	161
SUPPORT STATUS	aircraft strong candidate present	BEST-CANDIDATE NOTE	ordinary-object favored if the report's count, color, direction, and motion can be reconciled with the candidate track(s).
STRONG CANDIDATES	6	PLAUSIBLE CANDIDATES	4
REPORTING-AIRCRAFT TRACKS EXCLUDED	0	WEAK CANDIDATES	29

5.19 Top ADS-B Candidate Tracks

AIRCRAFT	STATUS	SCORE	MIN DIST KM	NEAREST DT MIN	ALT FT	AZ	EL
N963AK B39M ad6755	strong aircraft candidate	73.68	50.60	0.02	35000	4.60	11.02
N181UW A321 a1463a	strong aircraft candidate	69.25	56.60	0.17	35000	350.00	9.24
N426AV A320 a511fd	strong aircraft candidate	68.99	52.60	0.13	33975	152.10	9.85
N507JT A320 a654cb	strong aircraft candidate	66.71	43.30	0.07	29675	30.90	11.61
N884DN B739 ac2d09	strong aircraft candidate	60.64	73.00	0.12	35000	59.00	7.32
N335RT B38M a3a9eb	strong aircraft candidate	58.27	18.70	3.10	37000	274.50	7.95
N66808 B739 a8d46a	plausible aircraft candidate	61.06	30.80	6.28	30000	228.00	14.94
N341RW B38M a3c291	plausible aircraft candidate	57.73	5.10	0.00	29350	127.20	29.04

6. Annotated Evidence Figure



Generated figure copied from the local evidence-plot output. It is included as an analytic visualization, not as original sensor imagery.

7. Analytic Comparison

CRITERION	REPORT EVIDENCE	ANALYTIC TREATMENT
TIME CONSTRAINT	2024-02-20T10:04:00+00:00	Directly used in propagation; this is a hard filter, not descriptive context.
LOCATION CONSTRAINT	27.74072, -85.23946	Directly used as observer point for azimuth/elevation/range computation.
COUNT / PATTERN	three-object/light language present	No compact same-launch count match; retained for unresolved report features.
MOTION LANGUAGE	not explicit	Apparent motion labels in the object table provide a plausible but not definitive comparison.
RADAR / OFFICIAL CHECK	not observed on ATC radar	No ATC radar return can be consistent with distant orbital objects or visual aircraft-light hypotheses, but it does not prove the match.
ANALYTIC DISPOSITION	normal-object	237UAP00358 is assessed as normal-object favored because the available public evidence gives a case-specific ordinary-object candidate: strong ADS-B aircraft candidate N963AK B39M ad6755 at 53.7 km, azimuth 4.6 deg, elevation 11.02 deg, 2.61 min from report. Dense satellite presence alone is not treated as causation in this packet.

8. Caveats, Limitations, and Collection Gaps

- No raw cockpit video, ATC replay, radar plot, or witness interview transcript was reviewed unless explicitly stated in the public source text.
- Aviation-derived coordinates can represent a nearby fix/radial or report point, not necessarily the actual line-of-sight intercept point.
- Starlink visibility depends on illumination, observer altitude, atmospheric conditions, and apparent brightness; this analysis tests geometry, not photometry. No brightness model is used unless explicitly stated elsewhere in the case file.
- TLE propagation is appropriate for screening and reconstruction but is not a substitute for authoritative operational ephemerides.
- When many satellites are above the horizon, generic presence is weak evidence and is not treated as causation. The report emphasizes named launch-object checks or compact same-launch trajectory groups.
- Normal-object favored is not the same as a perfect named-object identification; it requires a case-specific ordinary-object candidate stronger than simple object density.

Appendix A. Public Report Text Extracts

237UAP00358

SKYWATCH INCIDENT REPORT

PRIMARY CODE: UNIDENTIFIED AERIAL PHENOMENON

Date: 10:04 02/20/2024
Status: Closed
POD: DEN
Reporting Facility: ZJX

Callsign: AAL2054
Aircraft: B38M
Tail Number:
Operator: AAL

Origin: PHX
Destination: MIA
New Destination:
Operator Type: Commercial
Paged: YES

REMARKS

Aircraft reported an unidentified aerial phenomenon off the left side while SE bound at FL370, 200 NM SSE of CEW. The unknown phenomenon was three white lights making tight spirals, at approximately FL450. The UAP was not observed on ATC facility radar system.

Appendix B. Computational Evidence Digest

This appendix preserves the principal computed values used in the assessment, shortened to the fields most relevant to audit and review.

```
{
  "report_time_utc": "2024-02-20T10:04:00+00:00",
  "source_excerpt": "Aircraft reported an unidentified aerial phenomenon off the left side while SE bound at FL370, 200 NM SSE of CEW. The unknown phenomenon was three white lights making tight spirals, at approximately FL450. The UAP was not observed on ATC facility radar system.",
  "historical_starlink_element_rows": 5431,
  "observer": {
    "lat": 27.740717227338916,
    "lon": -85.23946490364978,
    "source": "aviation_offset:200 NM SSE of CEW (public text extract 237UAP00358)"
  },
  "case_id": "237UAP00358",
  "starlink_above_horizon_at_report_time": 261,
  "starlink_catalog_ids_considered": 5458,
  "largest_same-sky_cluster_count": 64,
  "starlink_at_or_above_10_deg": 103,
  "top_starlinks": [
    {
      "azimuth_deg": 224.26,
      "azimuth_plus_2m_deg": 147.6,
      "azimuth_plus_5m_deg": 143.71,
      "element_age_hours": 3.93,
      "element_epoch": "2024-02-20T14:00:01.000224+00:00",
      "elevation_deg": 78.5,
      "elevation_plus_2m_deg": 27.91,
      "elevation_plus_5m_deg": 4.74,
      "epoch_altitude_km": 538.43,
      "ground_track_bearing_deg": 140.58,
      "ground_track_label": "SE",
      "launch_date": "2023-08-22",
      "name": "STARLINK-30301",
      "norad_id": "57666",
      "range_km": 541.54,
      "sky_motion_label": "westward, setting",
      "subpoint_lat": 27.0951,
      "subpoint_lon": -85.9407
    },
    {
      "azimuth_deg": 310.59,
      "azimuth_plus_2m_deg": 32.54,
      "azimuth_plus_5m_deg": 38.25,
      "element_age_hours": 4.62,
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Appendix C. Source Exhaustion Checklist

This checklist records which source layers were actually applied to this individual report. It separates checked evidence from unexhausted collection gaps so the disposition is auditable when the PDF is read alone.

SOURCE LAYER	STATUS	CASE-SPECIFIC NOTE
NARA PUBLIC UAP/FAA REPORT	reviewed	Source IDs: 237UAP00358
TIME AND OBSERVER COORDINATE	extracted	2024-02-20T10:04:00+00:00 at 27.74072, -85.23946
ORBITAL OBJECT PROPAGATION	screened	Starlink
SPACE-TRACK SATCAT METADATA	screened	30 NORAD IDs checked; 30 matched in local SATCAT subset
LAUNCH-OBJECT/SUPGP LAYER	not applicable	not a launch-object case
NASA/JPL KNOWN SMALL-BODY LAYER	screened	CAD/Horizons secondary screen included when this case had NEO-relevant timing/geometry
NASA POWER/HORIZONS/DONKI CONTEXT	screened	Hourly weather, sky geometry, and space-weather context where local JSON is present
AIRCRAFT/ADS-B LAYER	screened	54306 trace files scanned; 161 tracks retained; aircraft strong candidate present
NOAA GOES IMAGERY LAYER	not exhausted	Cloud/lightning imagery layer for the report hour
NOAA GOES ABI/GLM MANIFEST	screened	Public S3 object listing for the report hour
NOAA/NEXRAD WEATHER RADAR LAYER	not exhausted	Weather radar only; not ATC/primary radar
NOAA IGRA RADIOSONDE LAYER	screened	Balloon drift plausibility layer
ASOS/METAR SURFACE WEATHER	screened	Nearest station visibility, cloud, wind, precipitation, and METAR observations
WEATHER/BALLOON SOURCE PLAN	planned	Nearest weather-airport, GOES, and radiosonde queries are listed where local plan JSON is present
FINAL ANALYTIC DISPOSITION	normal-object favored	Presence-only satellite density is context only; a stronger case-specific fit is required for normal-object disposition

References and Source Links

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2. National Archives and Records Administration. *Record Group 615: Unidentified Anomalous Phenomena Records Collection*. <https://www.archives.gov/research/topics/uaps/rg-615>
3. National Archives and Records Administration. *Bulk Downloads for Records Related to Unidentified Anomalous Phenomena (UAPs)*. <https://www.archives.gov/research/catalog/catalog-bulk-downloads/uap-bulk-download>
4. National Archives Catalog. *Records from the Federal Aviation Administration Relating to Unidentified Anomalous Phenomena, National Archives Identifier 493468575*. <https://catalog.archives.gov/id/493468575>
5. National Archives direct digital object. *237UAP00358.pdf, FAA UAP report record copied from RG 615 bulk digital objects*. <https://s3.dualstack.us-east-1.amazonaws.com/NARAprdstorage/lz/electronic-records/rg-615/493468575/237UAP00358.pdf>
6. Hugging Face dataset. *oxzoid/space-track-tle-history: historical TLE archive used for Starlink screening*. <https://huggingface.co/datasets/oxzoid/space-track-tle-history>
7. Space-Track.org. *Public source for the underlying U.S. Space Surveillance Network TLE distribution referenced by the historical TLE archive*. <https://www.space-track.org/>
8. Space-Track.org. *API documentation for SATCAT and catalog metadata classes used for local enrichment*. <https://www.space-track.org/documentation#/api>
9. NASA/JPL Solar System Dynamics. *Close-Approach Data API documentation for known small-body encounter screening*. <https://ssd-api.jpl.nasa.gov/doc/cad.html>
10. NASA/JPL Solar System Dynamics. *Horizons API documentation for observer geometry and apparent magnitude queries*. <https://ssd-api.jpl.nasa.gov/doc/horizons.html>
11. NASA POWER. *Hourly point API documentation for meteorological context*. <https://power.larc.nasa.gov/docs/services/api/temporal/hourly/>
12. NASA. *DONKI space weather API documentation*. <https://api.nasa.gov/>
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14. ADSB.lol. *Historical open-data release documentation*. <https://www.adsb.lol/docs/open-data/historical/>
15. OpenSky Network. *REST API documentation*. <https://openskynetwork.github.io/opensky-api/rest.html>
16. OpenSky Network. *Historical data via Trino documentation*. <https://openskynetwork.github.io/opensky-api/trino.html>
17. NASA GIBS. *Global Imagery Browse Services API documentation*. <https://nasa-gibs.github.io/gibs-api-docs/>
18. NASA Earthdata. *Common Metadata Repository search API documentation*. <https://cmr.earthdata.nasa.gov/search/site/docs/search/api.html>
19. NOAA / AWS Open Data. *GOES public dataset registry*. <https://registry.opendata.aws/noaa-goes/>
20. NOAA / AWS Open Data. *NEXRAD public dataset registry*. <https://registry.opendata.aws/noaa-nexrad/>
21. NOAA NCEI. *Integrated Global Radiosonde Archive*. <https://www.ncei.noaa.gov/products/weather-balloon/integrated-global-radiosonde-archive>
22. Iowa Environmental Mesonet. *ASOS/AWOS/METAR data download service*. <https://mesonet.agron.iastate.edu/request/download.phtml>
23. CelesTrak. *Spacetrack Report No. 3: Models for propagation of NORAD element sets*. <https://celestrak.org/NORAD/documentation/spacetrk.pdf>
24. CelesTrak. *Supplemental GP element sets documentation and current endpoint index*. <https://celestrak.org/NORAD/elements/supplemental/>