

CASE FILE 91 / 237UAP00517

237UAP00517

Multiple-witness public UAP report; score 30

NORMAL-OBJECT FAVORED

REPORT NO.	UAP-OM-91-237UAP00517	DISPOSITION	NORMAL-OBJECT FAVORED
PRIMARY CASE	237UAP00517	GENERATED	2026-05-20 18:32 UTC
REPORT TIME	2023-06-10T06:26:00+00:00	OBSERVER	24.69434, -81.08622
SOURCE CASE IDS	237UAP00517		

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

237UAP00517 is assessed as normal-object favored because the available public evidence gives a case-specific ordinary-object candidate: strong ADS-B aircraft candidate 9H-VDL A320 4d246d at 43.8 km, azimuth 342.9 deg, elevation 9.03 deg, 2.24 min from report. Dense satellite presence alone is not treated as causation in this packet.

1.1 Key Findings

- Source score 30 based on: multiple aircraft/facility witnesses, UAP/UFO language.
- Report time used: 2023-06-10T06:26:00+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 9H-VDL A320 4d246d at 43.8 km, azimuth 342.9 deg, elevation 9.03 deg, 2.24 min from report.
- Non-causal context / rejection screens: substantial orbital-object sky background; context only, not causation.
- Remaining hard features: multiple witnesses/facilities.
- Objects above horizon: 152; at/above 10 deg: 58.
- 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
237UAP00517	6/10/2023 2:26:00 AM (-04 EDT)	CMP404 UFO-UAP ACTIVITY 06-10-2023	text extract present	237UAP00517.pdf

3. Original Report Evidence

PRIMARY EXCERPT USED FOR MATCHING	Washington Operations Center Date: 6/10/2023 2:26:00 AM (-04 EDT) Title: CMP404 UFO-UAP ACTIVITY 06-10-2023 Latitude: 24.694342559999999 Latitude: -81.086220740000002 DESCRIPTION PRELIM INFO FROM FAA OPS: MARATHON, FL/UFO-UAP ACTIVITY/0226E/MIAMI ARTCC ADVISED PANAMA REGISTERED COPA 404, B738, PANAMA CITY, PANAMA (MPTO) - IAD, REPORTED AN UNIDENTIFIED AERIAL PHENOMENON FROM THE 12 O'CLOCK POSITION WHILE N BOUND AT FL370 3.1 SW THE FLORIDA KEYS MARATHON INTL ARPT(MTH). THE UNKNOWN PHENOMENON WAS A STATIONARY WHITE LIGHT THAT TURNED ON AND OFF PERIODICALLY. MULTIPLE ACFT ALSO REPORTED SIMILAR SIGHTINGS IN VCNTY. NO EVASIVE ACTION REPORTED. NO IMPACTS TO OPERATIONS REPORTED. WOC 7-3333 MO/JW
REPORT TIME USED	2023-06-10T06:26:00+00:00
OBSERVER COORDINATE USED	24.69434, -81.08622
OBSERVER SOURCE BASIS	(public text extract 237UAP00517)

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	4217	HISTORICAL ELEMENT ROWS	4217
ABOVE HORIZON AT REPORT MINUTE	152	AT/ABOVE 10 DEG	58
LARGEST SAME-SKY CLUSTER	18		

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-1893	91.31	64.81	600.17	eastward, setting	2020-10-24
STARLINK-4495	308.47	51.66	673.45	eastward, setting	2022-08-19
STARLINK-4378	75.2	44.09	781.03	westward, setting	2022-08-12
STARLINK-3707	222.29	42.14	769.61	eastward, rising	2022-03-19
STARLINK-4769	93.4	41.19	782.44	eastward, setting	2022-09-19
STARLINK-2092	287.78	37.37	848.45	eastward, setting	2021-01-20
STARLINK-1545	13.98	37.02	854.79	eastward, setting	2020-08-18
STARLINK-1148	157.29	34.03	904.57	westward, setting	2020-01-29
STARLINK-5015	37.81	33.02	914.1	eastward, setting	2022-09-24
STARLINK-2009	204.93	32.71	931.14	westward, rising	2021-02-16
STARLINK-1360	90.79	32.24	940.81	westward, setting	2020-04-22
STARLINK-1448	236.16	29.92	989.8	eastward, rising	2020-06-04

5.5 Largest Sky Clusters

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
1	18	1.82-359.18 deg	10.36-33.02 deg	eastward, rising, eastward, setting, westward, setting
2	8	194.36-235.02 deg	13.94-32.71 deg	eastward, rising, westward, rising, westward, setting
3	8	287.78-327.5 deg	10.68-37.37 deg	eastward, setting, westward, rising
4	8	119.01-168.49 deg	10.02-26.17 deg	

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
				eastward, setting, westward, rising, westward, setting
5	5	75.2-93.4 deg	11.21-44.09 deg	eastward, setting, 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
46786	STARLINK-1893	PAYLOAD	US	2020-10-24	n/a
53552	STARLINK-4495	PAYLOAD	US	2022-08-19	n/a
53476	STARLINK-4378	PAYLOAD	US	2022-08-12	n/a
52133	STARLINK-3707	PAYLOAD	US	2022-03-19	n/a
53843	STARLINK-4769	PAYLOAD	US	2022-09-19	n/a
47373	STARLINK-2092	PAYLOAD	US	2021-01-20	n/a
46156	STARLINK-1545	PAYLOAD	US	2020-08-18	n/a
45052	STARLINK-1148	PAYLOAD	US	2020-01-29	2025-07-28
53931	STARLINK-5015	PAYLOAD	US	2022-09-24	2025-11-27
47633	STARLINK-2009	PAYLOAD	US	2021-02-16	2025-04-07
45588	STARLINK-1360	PAYLOAD	US	2020-04-22	2025-12-31
45665	STARLINK-1448	PAYLOAD	US	2020-06-04	n/a

5.9 NASA / NOAA / ADS-B Expansion Layer

NASA POWER/Horizons/DONKI batch context had not yet been written for this case at packet build time.

5.11 Free Source Availability and Remaining Work

LAYER	STATUS	CASE-SPECIFIC NOTE
ADSB.LOL HISTORICAL RELEASE LISTING	screened/present	planes-readsb-staging-0 1036.6 MiB; planes-readsb-prod-1 1036.6 MiB; planes-readsb-prod-0 1036.6 MiB
ADSB TRACKS DOWNLOADED	not yet exhausted	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 adsblol/globe_history_2023 for 2023-06-10, then filter +/-60 min and 250 nmi around 24.6943,-81.0862.

- NASA POWER/Horizons/DONKI: batch context for 237UAP00517 at 2023-06-10T06:26:00+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/2023/161/06/
GOES GLM LIGHTNING PREFIX	https://noaa-goes16.s3.amazonaws.com/GLM-L2-LCFA/2023/161/06/

5.13 Nearest Weather-Airport Candidates

STATION	NAME	DISTANCE KM	COORDINATE
KMTH	Florida Keys Marathon International Airport	5.00	24.73, -81.05
KNQX	Naval Air Station Key West/Boca Chica Field	62.30	24.58, -81.69
KEYW	Key West International Airport	69.80	24.56, -81.76
KX51	Miami Homestead General Aviation Airport	104.30	25.50, -80.55
07FA	Ocean Reef Club Airport	107.70	25.33, -80.27

- KMTH: [IEM ASOS/METAR daily CSV query](#)
- KNQX: [IEM ASOS/METAR daily CSV query](#)
- KEYW: [IEM ASOS/METAR daily CSV query](#)

5.14 Nearest Radiosonde Stations

STATION	NAME	DISTANCE KM	COORDINATE
USM00072201	KEY WEST/INT.; FL	72.70	24.55, -81.79
USM00072202	MIAMI; FL (72202-0)	137.00	25.75, -80.38
USM00072210	TAMPA BAY AREA; FL.	359.60	27.71, -82.40
USM00074794	CAPE KENNEDY	422.80	28.47, -80.55
CJM00078384	OWEN ROBERTS AIRPORT GRAND CAY	601.10	19.29, -81.36

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
KMTH	5.00	2023-06-10T06:53:00+00:00	10.00	CLR, M, M, M	0.00 / 0.00	KMTH 100653Z AUTO 00000KT 10SM CLR 24/23 A2984 RMK AO2 SLP102 T02440233
KNQX	62.30	2023-06-10T06:53:00+00:00	10.00	FEW02900, M, M, M	260.00 / 4.00	KNQX 100653Z AUTO 26004KT

STATION	DISTANCE KM	NEAREST OBS UTC	VIS SM	SKY	WIND DEG/KT	METAR
						10SM FEW029 A2984 RMK AO2 SLP105 \$
KEYW	69.80	2023-06-10T06:53:00 +00:00	10.00	CLR, M, M, M	0.00 / 0.00	KEYW 100653Z AUTO 00000KT 10SM CLR 28/22 A2984 RMK AO2 SLP111 T02780222

5.16 NOAA IGRA Radiosonde Wind Profile

Nearest sounding implies mean 0-12 km wind drift toward 333.6 deg at 7.44 m/s; a passive balloon could drift about 53.6 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
USM00072201	KEY WEST/INT.; FL	72.70	2023-06-10T12:00 :00+00:00	333.60	7.44	53.60	36.00 at 13.00 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/2023/161/06/OR_ABI-L2-CMIPF-M6C01_G16_s20231610600219_e20231610609527_c20231610609580.nc](#)
- [ABI-L2-CMIPF/2023/161/06/OR_ABI-L2-CMIPF-M6C01_G16_s20231610610219_e20231610619527_c20231610619594.nc](#)
- [ABI-L2-CMIPF/2023/161/06/OR_ABI-L2-CMIPF-M6C01_G16_s20231610620219_e20231610629527_c20231610629595.nc](#)
- [ABI-L2-CMIPF/2023/161/06/OR_ABI-L2-CMIPF-M6C01_G16_s20231610630219_e20231610639527_c20231610639595.nc](#)

GLM lightning sample objects:

- [GLM-L2-LCFA/2023/161/06/OR_GLM-L2-LCFA_G16_s20231610600000_e20231610600200_c20231610600218.nc](#)
- [GLM-L2-LCFA/2023/161/06/OR_GLM-L2-LCFA_G16_s20231610600200_e20231610600400_c20231610600414.nc](#)
- [GLM-L2-LCFA/2023/161/06/OR_GLM-L2-LCFA_G16_s20231610600400_e20231610601000_c20231610601019.nc](#)
- [GLM-L2-LCFA/2023/161/06/OR_GLM-L2-LCFA_G16_s20231610601000_e20231610601200_c20231610601216.nc](#)

5.18 ADSB.lol Historical Aircraft Track Extraction

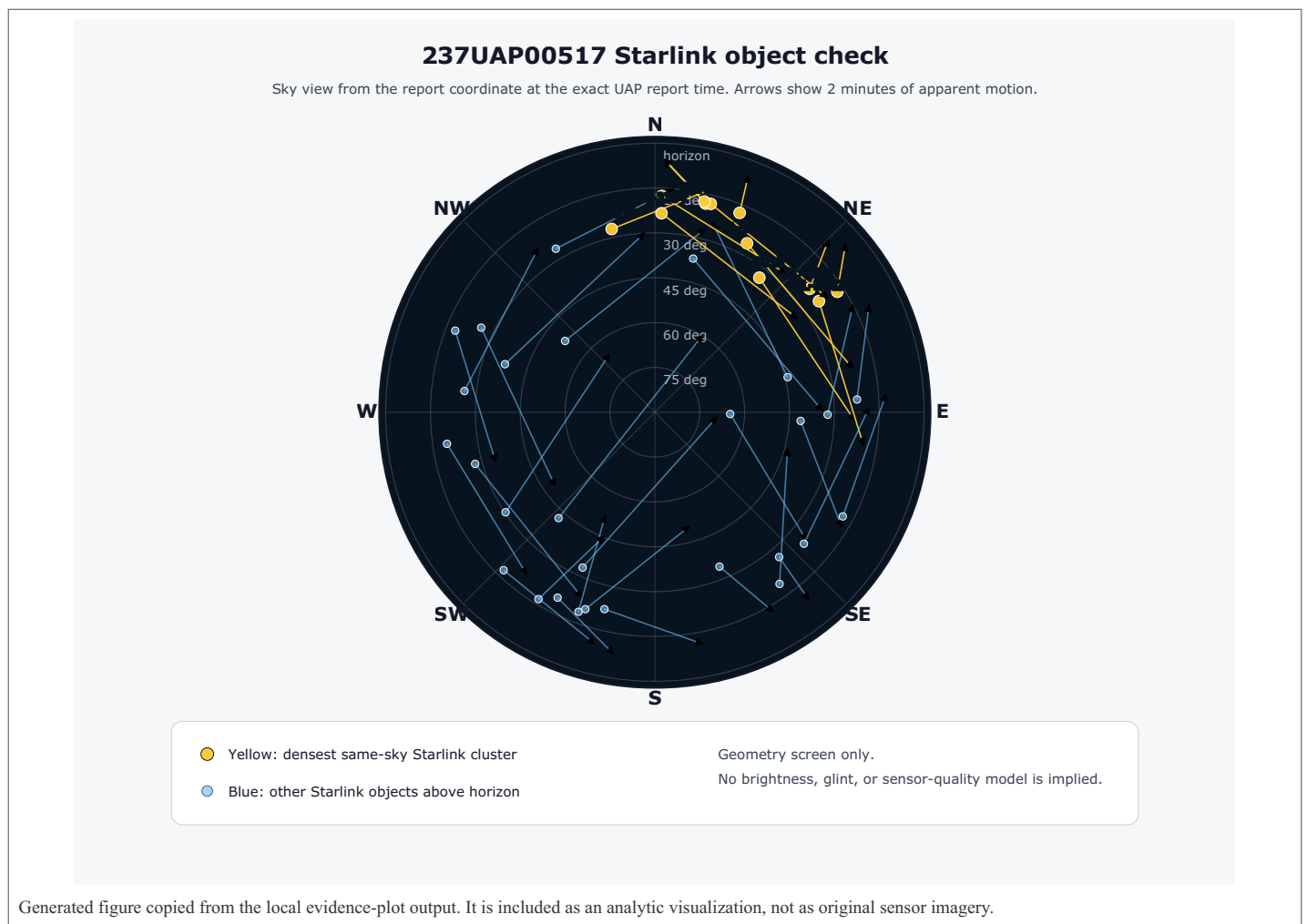
This layer uses the downloaded ADSB.lol daily history archive to test actual aircraft tracks near the report coordinate and minute. It is not treated as a primary-radar substitute; it is a transponder/receiver-derived aircraft screen.

ARCHIVE WINDOW	2023-06-10T05:26:00+00:00 to 2023-06-10T07:26:00+00:00	RADIUS	250.00 nmi
TRACE FILES SCANNED	42241	TRACKS RETAINED	81
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	1	PLAUSIBLE CANDIDATES	10
REPORTING-AIRCRAFT TRACKS EXCLUDED	0	WEAK CANDIDATES	12

5.19 Top ADS-B Candidate Tracks

AIRCRAFT	STATUS	SCORE	MIN DIST KM	NEAREST DT MIN	ALT FT	AZ	EL
9H-VDL A320 4d246d	strong aircraft candidate	68.15	43.80	2.24	23275	342.90	9.03
N441PC LJ35 a54f9c	plausible aircraft candidate	35.03	178.90	0.07	ground	31.40	-0.81
N996JL A321 ade9c0	plausible aircraft candidate	34.93	180.00	0.04	ground	31.60	-0.81
N554JB A320 a70f11	plausible aircraft candidate	34.71	179.80	0.19	ground	31.60	-0.81
N590JB A320 a79e31	plausible aircraft candidate	34.63	179.80	0.23	ground	31.60	-0.81
N760JB A320 aa4252	plausible aircraft candidate	33.64	179.80	0.81	ground	31.60	-0.81
N9372H C172 ad0250	plausible aircraft candidate	26.85	168.20	6.20	500	31.00	-0.71
N465WN B737 a5ae2f	plausible aircraft candidate	24.12	165.80	0.06	27950	358.90	0.38

6. Annotated Evidence Figure



7. Analytic Comparison

CRITERION	REPORT EVIDENCE	ANALYTIC TREATMENT
TIME CONSTRAINT	2023-06-10T06:26:00+00:00	Directly used in propagation; this is a hard filter, not descriptive context.
LOCATION CONSTRAINT	24.69434, -81.08622	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	stationary	Apparent motion labels in the object table provide a plausible but not definitive comparison.
RADAR / OFFICIAL CHECK	not specified	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	237UAP00517 is assessed as normal-object favored because the available public evidence gives a case-specific ordinary-object candidate: strong ADS-B aircraft candidate 9H-VDL A320 4d246d at 43.8 km, azimuth 342.9 deg, elevation 9.03 deg, 2.24 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.

237UAP00517

PRELIM INFO FROM FAA OPS: MARATHON, FL/UFO-UAP ACTIVITY/0226E/MIAMI ARTCC ADVISED PANAMA REGISTERED COPA 404, B738, PANAMA CITY, PANAMA (MPTO) - IAD, REPORTED AN UNIDENTIFIED AERIAL PHENOMENON FROM THE 12 00CLOCK POSITION WHILE N BOUND AT FL370 3.1 SW THE FLORIDA KEYS MARATHON INTL ARPT(MTH). THE UNKNOWN PHENOMENON WAS A STATIONARY WHITE LIGHT THAT TURNED ON AND OFF PERIODICALLY. MULTIPLE ACFT ALSO REPORTED SIMILAR SIGHTINGS IN VCNTRY. NO EVASIVE ACTION REPORTED. NO IMPACTS TO OPERATIONS REPORTED. WOC 7-3333 MO/JW

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": "2023-06-10T06:26:00+00:00",
  "source_excerpt": "Washington Operations Center\n\n\n\nDate: 6/10/2023 2:26:00 AM (-04 EDT)\nTitle: CMP404 UFO-UAP ACTIVITY\n06-10-2023\nLatitude: 24.694342559999999\nLatitude: -81.086220740000002\n\n\n\nDESCRIPTION\nPRELIM\nINFO FROM FAA OPS: MARATHON, FL/UFO-UAP ACTIVITY/0226E/MIAMI ARTCC ADVISED PANAMA\nREGISTERED COPA 404, B738, PANAMA CITY,\nPANAMA (MPTO) - IAD, REPORTED AN UNIDENTIFIED AERIAL\nPHENOMENON FROM THE 12 O'CLOCK POSITION WHILE N BOUND AT FL370 3.1 SW THE\nFLORIDA KEYS MARATHON\nINTL ARPT (MTH). THE UNKNOWN PHENOMENON WAS A STATIONARY WHITE LIGHT THAT TURNED ON AND\nOFF\nPERIODICALLY. MULTIPLE ACFT ALSO REPORTED SIMILAR SIGHTINGS IN VCNTY. NO EVASIVE ACTION REPORTED.\nNO IMPACTS TO\nOPERATIONS REPORTED. WOC 7-3333 MO/JW",
  "historical_starlink_element_rows": 4217,
  "observer": {
    "lat": 24.69434256,
    "lon": -81.08622074,
    "source": "(public text extract 237UAP00517)"
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  "case_id": "237UAP00517",
  "starlink_above_horizon_at_report_time": 152,
  "starlink_catalog_ids_considered": 4217,
  "largest_same-sky_cluster_count": 18,
  "starlink_at_or_above_10_deg": 58,
  "top_starlinks": [
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      "azimuth_plus_2m_deg": 130.14,
      "azimuth_plus_5m_deg": 136.28,
      "element_age_hours": 2.25,
      "element_epoch": "2023-06-10T04:11:02.413536+00:00",
      "elevation_deg": 64.81,
      "elevation_plus_2m_deg": 23.82,
      "elevation_plus_5m_deg": 3.63,
      "epoch_altitude_km": 553.7,
      "ground_track_bearing_deg": 141.72,
      "ground_track_label": "SE",
      "launch_date": "2020-10-24",
      "name": "STARLINK-1893",
      "norad_id": "46786",
      "range_km": 600.17,
      "sky_motion_label": "eastward, setting",
      "subpoint_lat": 24.6277,
      "subpoint_lon": -78.7624
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      "azimuth_plus_2m_deg": 15.18,
      "azimuth_plus_5m_deg": 30.89,
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      "element_epoch": "2023-06-10T09:27:44.285184+00:00",
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      "elevation_plus_5m_deg": 5.09,
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      "ground_track_label": "NE",
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      "name": "STARLINK-4495",
      "norad_id": "53552",
      "range_km": 673.45,
      "sky_motion_label": "eastward, setting",
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      "subpoint_lon": -84.1207
    },
    {
      "azimuth_deg": 75.2,
      "azimuth_plus_2m_deg": 17.21,
      "azimuth_plus_5m_deg": 359.82,
      "element_age_hours": 4.91,
      "element_epoch": "2023-06-10T01:31:09.474240+00:00",
      "elevation_deg": 44.09,
      "elevation_plus_2m_deg": 24.05,
      "elevation_plus_5m_deg": 4.05,
      "epoch_altitude_km": 569.03,
      "ground_track_bearing_deg": 348.42,
      "ground_track_label": "NNW",
      "launch_date": "2022-08-12",
      "name": "STARLINK-4378",
      "norad_id": "53476",
      "range_km": 781.03,
      "sky_motion_label": "westward, setting",
      "subpoint_lat": 25.8004,
      "subpoint_lon": -76.1121
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  "azimuth_plus_5m_deg": 37.79,
  "element_age_hours": 6.24,
  "element_epoch": "2023-06-10T12:40:29.680320+00:00",
  "elevation_deg": 42.14,
  "elevation_plus_2m_deg": 59.99,
  "elevation_plus_5m_deg": 12.38,
  "epoch_altitude_km": 546.27,
  "ground_track_bearing_deg": 37.11,
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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: 237UAP00517
TIME AND OBSERVER COORDINATE	extracted	2023-06-10T06:26:00+00:00 at 24.69434, -81.08622
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	not selected	CAD/Horizons secondary screen included when this case had NEO-relevant timing/ geometry
NASA POWER/HORIZONS/DONKI CONTEXT	not exhausted	Hourly weather, sky geometry, and space-weather context where local JSON is present
AIRCRAFT/ADS-B LAYER	screened	42241 trace files scanned; 81 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. *237UAP00517.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-615/493468575/237UAP00517.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. ADSB.lol. *Interactive API documentation and OpenAPI definition*. <https://api.adsb.lol/docs>
10. ADSB.lol. *Historical open-data release documentation*. <https://www.adsb.lol/docs/open-data/historical/>
11. OpenSky Network. *REST API documentation*. <https://openskynetwork.github.io/opensky-api/rest.html>
12. OpenSky Network. *Historical data via Trino documentation*. <https://openskynetwork.github.io/opensky-api/trino.html>
13. NASA GIBS. *Global Imagery Browse Services API documentation*. <https://nasa-gibs.github.io/gibs-api-docs/>
14. NASA Earthdata. *Common Metadata Repository search API documentation*. <https://cmr.earthdata.nasa.gov/search/site/docs/search/api.html>
15. NOAA / AWS Open Data. *GOES public dataset registry*. <https://registry.opendata.aws/noaa-goes/>
16. NOAA / AWS Open Data. *NEXRAD public dataset registry*. <https://registry.opendata.aws/noaa-nexrad/>
17. NOAA NCEI. *Integrated Global Radiosonde Archive*. <https://www.ncei.noaa.gov/products/weather-balloon/integrated-global-radiosonde-archive>
18. Iowa Environmental Mesonet. *ASOS/AWOS/METAR data download service*. <https://mesonet.agron.iastate.edu/request/download.phtml>
19. CelesTrak. *Spacetrack Report No. 3: Models for propagation of NORAD element sets*. <https://celestrak.org/NORAD/documentation/spacetrk.pdf>
20. CelesTrak. *Supplemental GP element sets documentation and current endpoint index*. <https://celestrak.org/NORAD/elements/supplemental/>