

CASE FILE 41 / 237UAP00321

237UAP00321

Radar/correlation-focused public UAP report; score 54

NORMAL-OBJECT FAVORED

REPORT NO.	UAP-OM-41-237UAP00321	DISPOSITION	NORMAL-OBJECT FAVORED
PRIMARY CASE	237UAP00321	GENERATED	2026-05-20 18:32 UTC
REPORT TIME	2023-11-24T00:12:00+00:00	OBSERVER	28.09897, -79.31362
SOURCE CASE IDS	237UAP00321		

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

237UAP00321 is assessed as normal-object favored because the available public evidence gives a case-specific ordinary-object candidate: strong ADS-B aircraft candidate N923NK A20N acca85 at 2.7 km, azimuth 244.9 deg, elevation 76.05 deg, 7.34 min from report. Dense satellite presence alone is not treated as causation in this packet.

1.1 Key Findings

- Source score 54 based on: radar/primary-return language, negative official correlation, UAP/UFO language.
- Report time used: 2023-11-24T00:12:00+00:00.
- External object layer used: public LEO catalog objects.
- 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 N923NK A20N acca85 at 2.7 km, azimuth 244.9 deg, elevation 76.05 deg, 7.34 min from report.
- Non-causal context / rejection screens: very dense orbital-object sky background; context only, not causation.
- Objects above horizon: 1051; at/above 10 deg: 505.
- 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
237UAP00321	00:12 11/24/2023 Callsign: FFT31 Origin: MDSD	ZMA Operator: FFT Operator Type: Commercial	text extract present	237UAP00321.pdf

3. Original Report Evidence

PRIMARY EXCERPT USED FOR MATCHING	Aircraft reported an unidentified aerial phenomenon off the left side while NW bound at FL 370, 70 NM E of MLB. The unknown phenomenon was straight lights appearing like a Christmas ornament, stationary and reported much higher than FL 370. The UAP was not observed on ATC facility radar system.
REPORT TIME USED	2023-11-24T00:12:00+00:00
OBSERVER COORDINATE USED	28.09897, -79.31362
OBSERVER SOURCE BASIS	aviation_offset:70 NM E of MLB (public text extract 237UAP00321)

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 public LEO catalog objects element rows. The analytic mode for this case is historical public LEO catalog objects 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.

PUBLIC LEO CATALOG OBJECTS CATALOG IDS CONSIDERED	19594	HISTORICAL ELEMENT ROWS	19594
ABOVE HORIZON AT REPORT MINUTE	1051	AT/ABOVE 10 DEG	505
LARGEST SAME-SKY CLUSTER	505		

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 public LEO catalog objects Objects by Elevation

OBJECT	AZ	EL	RANGE KM	APPARENT MOTION	LAUNCH DATE
NORAD 12110	247.6	80.81	1463.72	westward, setting	80102D
NORAD 58087	192.9	78.56	528.81	westward, setting	23160N
NORAD 6216	111.52	74.64	956.67	eastward, setting	70025NE
NORAD 23412	287.33	73.64	1591.66	eastward, setting	94078B
NORAD 26118	26.65	72.97	774.92	westward, setting	99057E
NORAD 40678	99.53	72.09	814.28	westward, setting	95015FS
NORAD 42848	220.14	70.71	615.52	westward, setting	17042Z
NORAD 21270	181.33	68.87	1531.3	eastward, setting	75052F
NORAD 31002	333.64	68.78	1011.1	eastward, setting	99025BCU
NORAD 31891	2.22	67.62	1051.12	westward, setting	99025CKS
NORAD 22496	159.75	66.97	1029.49	eastward, setting	92093GF
NORAD 22080	59.97	66.95	851.69	eastward, setting	92053A

5.5 Largest Sky Clusters

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
1	505	0.06-359.9 deg	10.02-80.81 deg	eastward, level, eastward, rising, eastward, setting, nearly fixed azimuth, rising, nearly fixed azimuth, setting, westward, level, westward, rising, 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	29
TOP OWNERS	US: 12, PRC: 9, CIS: 6, TBD: 1, UK: 1		
OBJECT TYPES	DEBRIS: 19, PAYLOAD: 7, ROCKET BODY: 2, UNKNOWN: 1		

5.7 Space-Track Metadata for Top Propagated Objects

NORAD	OBJECT NAME	TYPE	OWNER	LAUNCH DATE	DECAY DATE
12110	COSMOS 1231	PAYLOAD	CIS	1980-12-23	n/a
58087	STARLINK-30557	PAYLOAD	US	2023-10-18	n/a
6216	THORAD AGENA D DEB	DEBRIS	US	1970-04-08	n/a
23412	SL-14 R/B	ROCKET BODY	CIS	1994-11-29	n/a
26118	CZ-4 DEB	DEBRIS	PRC	1999-10-14	n/a
40678	DMSP 5D-2 F13 DEB	DEBRIS	US	1995-03-24	n/a
42848	OBJECT Z	UNKNOWN	TBD	2017-07-14	n/a
21270	DELTA 1 DEB	DEBRIS	US	1975-06-12	n/a
31002	FENGYUN 1C DEB	DEBRIS	PRC	1999-05-10	n/a
31891	FENGYUN 1C DEB	DEBRIS	PRC	1999-05-10	n/a
22496	SL-16 DEB	DEBRIS	CIS	1992-12-25	n/a
22080	COSMOS 2208	PAYLOAD	CIS	1992-08-12	n/a

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.

HOURL UTC	2023112400
CLOUD AMOUNT	55.83%
PRECIPITATION	0.65 mm/hr
10 M WIND	3.62 m/s
TEMPERATURE	23.38 C
RELATIVE HUMIDITY	75.87%
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	258.72	-24.03	-26.77
Moon	120.83	53.37	-11.72
Venus	302.88	-53.02	-4.23
Mars	259.65	-25.56	1.37
Jupiter	97.83	41.51	-2.86

OBJECT	AZ	EL	APP MAG
Saturn	198.68	47.28	0.83

- Sun elevation was -24.0 deg, so this was a dark-sky/nighttime sighting.
- Moon was above horizon at azimuth 120.8 deg / elevation 53.4 deg.
- Planets above horizon: Jupiter (41.5 deg), Saturn (47.3 deg).
- NASA POWER cloud amount for the hour was 55.83%, with precipitation 0.65 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 1214.0 MiB; planes-readsb-prod-0 1215.0 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 adslol/globe_history_2023 for 2023-11-24, then filter +/-60 min and 250 nmi around 28.0990,-79.3136.
- NASA POWER/Horizons/DONKI: batch context for 237UAP00321 at 2023-11-24T00:12:00+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/2023/328/00/
GOES GLM LIGHTNING PREFIX	https://noaa-goes16.s3.amazonaws.com/GLM-L2-LCFA/2023/328/00/

5.13 Nearest Weather-Airport Candidates

STATION	NAME	DISTANCE KM	COORDINATE
KVRB	Vero Beach Regional Airport	119.20	27.66, -80.42
KFPR	Treasure Coast International Airport	123.60	27.50, -80.37
KCOF	Patrick Space Force Base	128.00	28.23, -80.61
KXMR	Cape Canaveral SFS Skid Strip	129.40	28.47, -80.57
KMLB	Melbourne Orlando International Airport	130.20	28.10, -80.64

- KVRB: [IEM ASOS/METAR daily CSV query](#)
- KFPR: [IEM ASOS/METAR daily CSV query](#)
- KCOF: [IEM ASOS/METAR daily CSV query](#)

5.14 Nearest Radiosonde Stations

STATION	NAME	DISTANCE KM	COORDINATE
USM00074794	CAPE KENNEDY	127.80	28.47, -80.55
USM00072202	MIAMI; FL (72202-0)	281.90	25.75, -80.38
USM00072210	TAMPA BAY AREA; FL.	306.50	27.71, -82.40
USM00072206	JACKSONVILLE/INTNL.; FL.	352.00	30.48, -81.70
USM00072201	KEY WEST/INT.; FL	465.00	24.55, -81.79

5.15 ASOS/METAR Surface Weather Observations

surface visibility ranged 10-10 statute miles; no precipitation was reported in the retained observations; low/broken/overcast cloud layers were present in at least one observation. 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
KVRB	119.20	2023-11-24T00:53:00 +00:00	10.00	CLR, M, M, M	340.00 / 3.00	KVRB 240053Z 34003KT 10SM CLR 17/15 A3005 RMK AO2 SLP175 T01670150
KFPR	123.60	2023-11-24T00:53:00 +00:00	10.00	CLR, M, M, M	0.00 / 0.00	KFPR 240053Z 00000KT 10SM CLR 18/16 A3004 RMK AO2 SLP172 T01780161
KCOF	128.00	2023-11-24T00:55:00 +00:00	10.00	CLR, M, M, M	350.00 / 7.00	KCOF 240055Z AUTO 35007KT 10SM CLR 19/15 A3003 RMK AO2 SLP174 T01880147 \$

5.16 NOAA IGRA Radiosonde Wind Profile

Nearest sounding implies mean 0-12 km wind drift toward 82.9 deg at 18.24 m/s; a passive balloon could drift about 131.3 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
USM00074794	CAPE KENNEDY	127.80	2023-11-24T00:00 :00+00:00	82.90	18.24	131.30	41.70 at 12360.00 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/2023/328/00/OR_ABI-L2-CMIPF-M6C01_G16_s20233280000208_e20233280009516_c20233280009568.nc](#)
- [ABI-L2-CMIPF/2023/328/00/OR_ABI-L2-CMIPF-M6C01_G16_s20233280010208_e20233280019516_c20233280019573.nc](#)
- [ABI-L2-CMIPF/2023/328/00/OR_ABI-L2-CMIPF-M6C01_G16_s20233280020208_e20233280029516_c20233280029560.nc](#)
- [ABI-L2-CMIPF/2023/328/00/OR_ABI-L2-CMIPF-M6C01_G16_s20233280030208_e20233280039516_c20233280039565.nc](#)

GLM lightning sample objects:

- [GLM-L2-LCFA/2023/328/00/OR_GLM-L2-LCFA_G16_s20233280000000_e20233280000200_c20233280000218.nc](#)
- [GLM-L2-LCFA/2023/328/00/OR_GLM-L2-LCFA_G16_s20233280000200_e20233280000400_c20233280000416.nc](#)
- [GLM-L2-LCFA/2023/328/00/OR_GLM-L2-LCFA_G16_s20233280000400_e20233280001000_c20233280001017.nc](#)
- [GLM-L2-LCFA/2023/328/00/OR_GLM-L2-LCFA_G16_s20233280001000_e20233280001200_c20233280001216.nc](#)

5.18 ADSB.lol Historical Aircraft Track Extraction

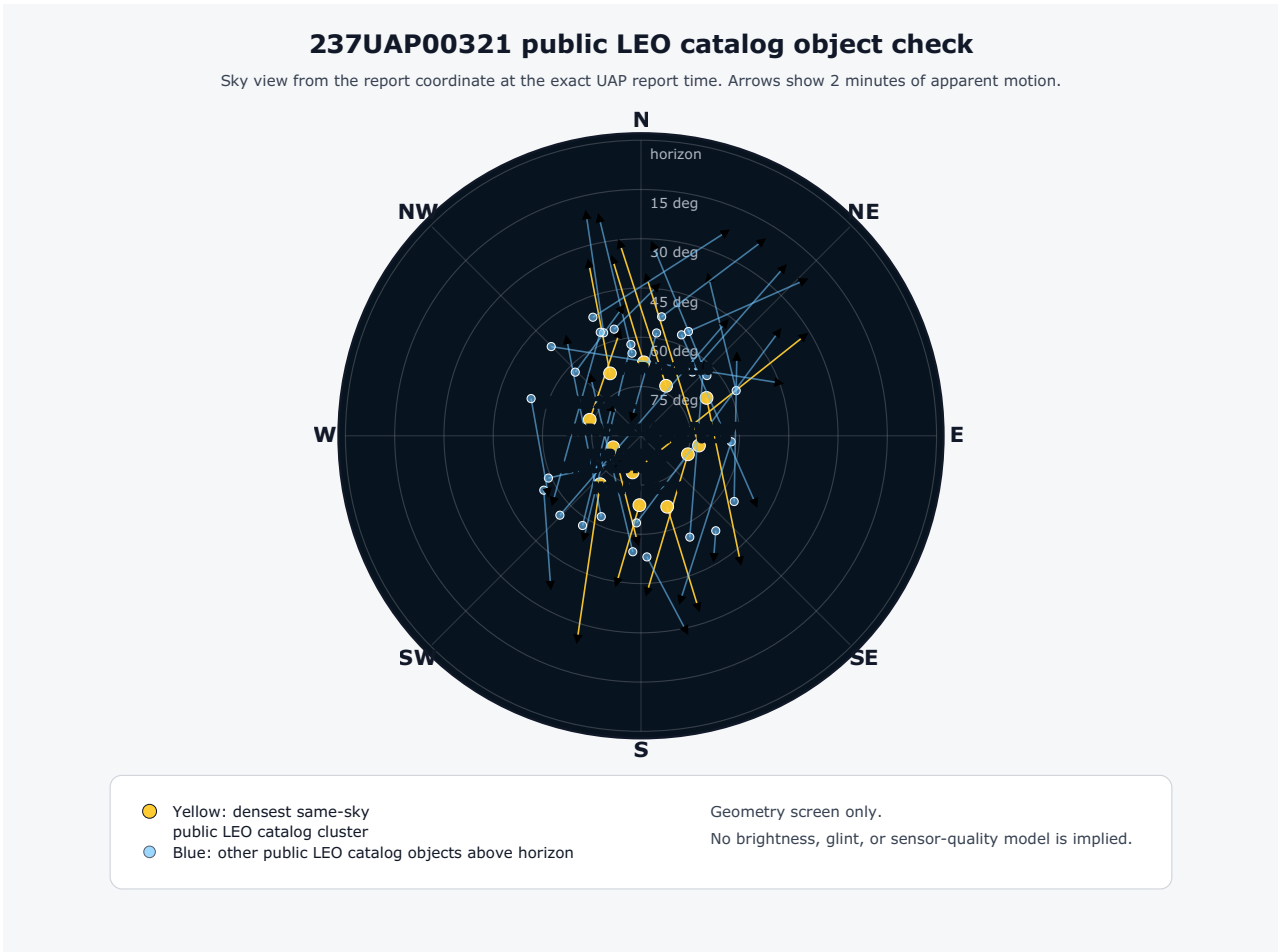
This layer uses the downloaded ADSB.lol daily history archive to test actual aircraft tracks near the report coordinate and minute. It is not treated as a primary-radar substitute; it is a transponder/receiver-derived aircraft screen.

ARCHIVE WINDOW	2023-11-23T22:57:00+00:00 to 2023-11-24T01:27:00+00:00	RADIUS	300.00 nmi
TRACE FILES SCANNED	43042	TRACKS RETAINED	400
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	47
REPORTING-AIRCRAFT TRACKS EXCLUDED	0	WEAK CANDIDATES	107

5.19 Top ADS-B Candidate Tracks

AIRCRAFT	STATUS	SCORE	MIN DIST KM	NEAREST DT MIN	ALT FT	AZ	EL
N923NK A20N acca85	strong aircraft candidate	86.47	2.70	0.05	24425	244.90	76.05
N846QS C700 ab9792	strong aircraft candidate	83.43	26.30	0.08	31700	299.60	18.46
C-FYXF A321 c041bc	strong aircraft candidate	82.92	2.40	0.04	33975	7.60	36.22
N608JB A320 a7e5c1	strong aircraft candidate	71.00	48.50	0.11	32000	264.30	10.26
N359FR A20N a406c9	strong aircraft candidate	68.10	26.60	0.16	37000	354.20	14.51
N447FX E545 a56531	strong aircraft candidate	57.47	26.30	0.05	43000	352.80	7.42
N813NW A333 ab15c2	plausible aircraft candidate	75.90	4.30	0.05	32000	210.10	66.01
C-GEZJ A321 c051cc	plausible aircraft candidate	68.52	82.70	0.10	32000	85.20	6.18

6. Annotated Evidence Figure



7. Analytic Comparison

CRITERION	REPORT EVIDENCE	ANALYTIC TREATMENT
TIME CONSTRAINT	2023-11-24T00:12:00+00:00	Directly used in propagation; this is a hard filter, not descriptive context.
LOCATION CONSTRAINT	28.09897, -79.31362	Directly used as observer point for azimuth/elevation/range computation.
COUNT / PATTERN	not explicit	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 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	237UAP00321 is assessed as normal-object favored because the available public evidence gives a case-specific ordinary-object candidate: strong ADS-B aircraft candidate N923NK A20N acca85 at 2.7 km, azimuth 244.9 deg, elevation 76.05 deg, 7.34 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

237UAP00321

SKYWATCH INCIDENT REPORT

PRIMARY CODE: UNIDENTIFIED AERIAL PHENOMENON		
Date: 00:12 11/24/2023	Callsign: FFT31	Origin: MDSD
Status: Closed	Aircraft: A20N	Destination: ATL
POD: DEN	Tail Number:	New Destination:
Reporting Facility: ZMA	Operator: FFT	Operator Type: Commercial
		Paged: YES

REMARKS

Aircraft reported an unidentified aerial phenomenon off the left side while NW bound at FL 370, 70 NM E of MLB. The unknown phenomenon was straight lights appearing like a Christmas ornament, stationary and reported much higher than FL 370. 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": "2023-11-24T00:12:00+00:00",
  "source_excerpt": "Aircraft reported an unidentified aerial phenomenon off the left side while NW bound at FL 370, 70 NM E of
  MLB. The unknown phenomenon was straight lights appearing like a Christmas ornament, stationary and reported much higher than
  FL 370. The UAP was not observed on ATC facility radar system.",
  "historical_starlink_element_rows": 19594,
  "observer": {
    "lat": 28.098966216840882,
    "lon": -79.31361658363528,
    "source": "aviation_offset:70 NM E of MLB (public text extract 237UAP00321)"
  },
  "case_id": "237UAP00321",
  "starlink_above_horizon_at_report_time": 1051,
  "starlink_catalog_ids_considered": 19594,
  "largest_same-sky_cluster_count": 505,
  "starlink_at_or_above_10_deg": 505,
  "top_starlinks": [
    {
      "azimuth_deg": 247.6,
      "azimuth_plus_2m_deg": 181.61,
      "azimuth_plus_5m_deg": 173.2,
      "element_age_hours": 2.14,
      "element_epoch": "2023-11-23T22:03:48.477312+00:00",
      "elevation_deg": 80.81,
      "elevation_plus_2m_deg": 57.08,
      "elevation_plus_5m_deg": 28.65,
      "epoch_altitude_km": 1413.25,
      "ground_track_bearing_deg": 166.15,
      "ground_track_label": "SSE",
      "launch_date": "80102D",
      "launch_designator": "80102D",
      "name": "NORAD 12110",
      "norad_id": "12110",
      "range_km": 1463.72,
      "sky_motion_label": "westward, setting",
      "subpoint_lat": 27.4325,
      "subpoint_lon": -81.0959
    },
    {
      "azimuth_deg": 192.9,
      "azimuth_plus_2m_deg": 58.49,
      "azimuth_plus_5m_deg": 55.79,
      "element_age_hours": 2.2,
      "element_epoch": "2023-11-23T22:00:00.999936+00:00",
      "elevation_deg": 78.56,
      "elevation_plus_2m_deg": 30.95,
      "elevation_plus_5m_deg": 5.68,
      "epoch_altitude_km": 524.41,
      "ground_track_bearing_deg": 53.34,
      "ground_track_label": "NE",
      "launch_date": "23160N",
      "launch_designator": "23160N",
      "name": "NORAD 58087",
      "norad_id": "58087",
      "range_km": 528.81,
      "sky_motion_label": "westward, setting",
      "subpoint_lat": 27.2461,
      "subpoint_lon": -79.5323
    },
    {
      "azimuth_deg": 111.52,
      "azimuth_plus_2m_deg": 178.05,
      "azimuth_plus_5m_deg": 187.22,
      "element_age_hours": 11.0,
      "element_epoch": "2023-11-24T11:11:57.067008+00:00",
      "elevation_deg": 74.64,
      "elevation_plus_2m_deg": 41.66,
      "elevation_plus_5m_deg": 13.57,
      "epoch_altitude_km": 619.29,
      "ground_track_bearing_deg": 193.98,
      "ground_track_label": "SSW",
      "launch_date": "70025NE",
      "launch_designator": "70025NE",
      "name": "NORAD 6216",
      "norad_id": "6216",
      "range_km": 956.67,
      "sky_motion_label": "eastward, setting",
      "subpoint_lat": 27.3514,
      "subpoint_lon": -77.2333
    }
  ],
}
```

```

{
  "azimuth_deg": 287.33,
  "azimuth_plus_2m_deg": 348.69,
  "azimuth_plus_5m_deg": 5.35,
  "element_age_hours": 12.06,
  "element_epoch": "2023-11-24T12:15:45.755136+00:00",
  "elevation_deg": 73.64,
  "elevation_plus_2m_deg": 57.45,
  "elevation_plus_5m_deg": 30.84,
  "epoch_altitude_km": 1474.9,
  "ground_track_bearing_deg": 15.04,
  "ground_track_label": "NNE",
  "launch_date": "94078B",
  "launch_designator": "94078B",
  "name": "NORAD 23412",
  "norad_id": "23412",
  "range_km": 1591.66,
  "sky_motion_label": "eastward, setting",
  "subpoint_lat": 29.0239,
  "subpoint_lon": -82.8561
},
{
  "azimuth_deg": 26.65,
  "azimuth_plus_2m_deg": 353.57,
  "azimuth_plus_5m_deg": 349.63,
  "element_age_hours": 8.68,
  "element_epoch": "2023-11-23T15:31:26.654592+00:00",
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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: 237UAP00321
TIME AND OBSERVER COORDINATE	extracted	2023-11-24T00:12:00+00:00 at 28.09897, -79.31362
ORBITAL OBJECT PROPAGATION	screened	public LEO catalog objects
SPACE-TRACK SATCAT METADATA	screened	30 NORAD IDs checked; 29 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	screened	Hourly weather, sky geometry, and space-weather context where local JSON is present
AIRCRAFT/ADS-B LAYER	screened	43042 trace files scanned; 400 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

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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. *237UAP00321.pdf, FAA UAP report record copied from RG 615 bulk digital objects*. <https://s3.dualstack.us-east-1.amazonaws.com/NARAprodstorage/lz/electronic-records/rg-615/493468575/237UAP00321.pdf>
6. Hugging Face dataset. *oxzoid/space-track-tle-history: historical TLE archive used for public LEO catalog objects screening*. <https://huggingface.co/datasets/oxzoid/space-track-tle-history>
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9. NASA POWER. *Hourly point API documentation for meteorological context*. <https://power.larc.nasa.gov/docs/services/api/temporal/hourly/>
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>
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12. ADSB.lol. *Interactive API documentation and OpenAPI definition*. <https://api.adsb.lol/docs>
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23. Celestrak. *Supplemental GP element sets documentation and current endpoint index*. <https://celestrak.org/NORAD/elements/supplemental/>