

CASE FILE 25 / 237UAP00336

237UAP00336

Radar/correlation-focused public UAP report; score 66

HIGH-VALUE UNRESOLVED

REPORT NO.	UAP-OM-25-237UAP00336	DISPOSITION	HIGH-VALUE UNRESOLVED
PRIMARY CASE	237UAP00336	GENERATED	2026-05-20 18:32 UTC
REPORT TIME	2024-01-02T01:43:00+00:00	OBSERVER	42.36231, -74.01885
SOURCE CASE IDS	237UAP00336		

Abstract

This case file evaluates a reported UAP sighting against historical Starlink orbital elements. The primary external-object candidate is a 3-object same-launch group from 2020-09-03, spanning azimuth 22.83-38.88 deg and elevation 16.04-16.57 deg. The analysis distinguishes plausible geometric overlap from unresolved witness-language features.

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

237UAP00336 remains high-value unresolved after screening against historical Starlink orbital elements. The strongest compact object grouping contains 3 objects from 2020-09-03; however, this does not close the case because hard report features remain: radar/primary evidence, hard maneuver language. Context noted but not treated as causation: very dense orbital-object sky background; context only, not causation; NASA/JPL known-small-body rejection screen present.

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: 2024-01-02T01:43:00+00:00.
- External object layer used: Starlink.
- Disposition standard: UNRESOLVED 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 N22805 G280 a2012f at 5.7 km, azimuth 327.4 deg, elevation 36.31 deg, 1.66 min from report.
- Non-causal context / rejection screens: very dense orbital-object sky background; context only, not causation; NASA/JPL known-small-body rejection screen present.
- Remaining hard features: radar/primary evidence; hard maneuver language.
- Objects above horizon: 274; at/above 10 deg: 143.
- Top compact same-launch/designator group: 3 objects from 2020-09-03.
- No explicit Starlink/balloon wording was found in the source excerpt used for ranking.

1.2 Bottom Line

HIGH-VALUE UNRESOLVED: Hard report features remain after the normal-object screens, such as primary/radar evidence, multiple witnesses, footage references, or motion language that still conflicts with the available object layer.

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
237UAP00336	01:43 01/02/2024 Callsign: PDT5795 Origin: BOS	ZBW Operator: PDT Operator Type: Commercial	text extract present	237UAP00336.pdf

3. Original Report Evidence

PRIMARY EXCERPT USED FOR MATCHING	Aircraft reported an unidentified aerial phenomenon off their front while SW bound at FL260, 25NM SSW of ALB over 42.2105N, -74.375W. The unknown phenomenon was bright orange and moved quickly at near level altitude and would jump in altitude to around FL500. Pilot kept reporting the same maneuvers all the way down near DNY intersection. It appears some radar data was acquired up until 0155Z.
REPORT TIME USED	2024-01-02T01:43:00+00:00
OBSERVER COORDINATE USED	42.36231, -74.01885
OBSERVER SOURCE BASIS	aviation_offset:25NM SSW of ALB (public text extract 237UAP00336)

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	5268	HISTORICAL ELEMENT ROWS	5246
ABOVE HORIZON AT REPORT MINUTE	274	AT/ABOVE 10 DEG	143
LARGEST SAME-SKY CLUSTER	134		

5.2 Same-Launch / Same-Designator Candidate Groups

#	LAUNCH DATE	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS	MEMBERS
1	2020-09-03	3	22.83-38.88 deg	16.04-16.57 deg	eastward, setting	STARLINK-1707, STARLINK-1770, STARLINK-1653

5.3 Primary Group Members

OBJECT	NORAD	LAUNCH	AZ	EL	RANGE KM	APPARENT MOTION	ELEMENT AGE H
STARLINK-1707	46359	2020-09-03	36.43	16.57	1446.07	eastward, setting	1.14
STARLINK-1770	46383	2020-09-03	38.88	16.1	1468.48	eastward, setting	1.26
STARLINK-1653	46352	2020-09-03	22.83	16.04	1472.14	eastward, setting	1.21

5.4 Bright-Sky Context: Top Starlink Objects by Elevation

OBJECT	AZ	EL	RANGE KM	APPARENT MOTION	LAUNCH DATE
STARLINK-5100	314.73	78.37	573.65	eastward, setting	2023-02-02
STARLINK-4769	137.96	69.01	577.94	westward, setting	2022-09-19
STARLINK-4168	122.52	63.93	598.68	westward, setting	2022-06-17
STARLINK-1893	261.82	63.37	609.6	westward, setting	2020-10-24
STARLINK-2115	28.39	63.01	611.98	eastward, setting	2021-01-20
STARLINK-2124	210.09	59.33	630.88	westward, setting	2021-01-20
STARLINK-5505	62.23	59.14	385.14	eastward, setting	2023-07-07
STARLINK-3672	67.46	57.8	640.69	westward, setting	2022-03-09
STARLINK-30458	225.1	57.68	607.63	westward, setting	2023-09-24
STARLINK-5015	333.12	53.69	660.62	eastward, setting	2022-09-24
STARLINK-1420	169.11	48.98	707.96	westward, setting	2020-06-04
STARLINK-5501	44.27	48.74	747.92	westward, setting	2023-02-17

5.5 Largest Sky Clusters

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
1	134	1.79-358.56 deg	10.05-59.14 deg	eastward, level, eastward, rising, eastward, setting, westward, rising, westward, setting
2	2	122.52-137.96 deg	63.93-69.01 deg	westward, setting
3	2	210.09-225.1 deg	57.68-59.33 deg	westward, setting

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
4	1	314.73-314.73 deg	78.37-78.37 deg	eastward, setting
5	1	261.82-261.82 deg	63.37-63.37 deg	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	33	SATCAT ROWS MATCHED	33
TOP OWNERS	US: 33		
OBJECT TYPES	PAYLOAD: 33		

5.7 Space-Track Metadata for Top Propagated Objects

NORAD	OBJECT NAME	TYPE	OWNER	LAUNCH DATE	DECAY DATE
55495	STARLINK-5100	PAYLOAD	US	2023-02-02	n/a
53843	STARLINK-4769	PAYLOAD	US	2022-09-19	n/a
52845	STARLINK-4168	PAYLOAD	US	2022-06-17	n/a
46786	STARLINK-1893	PAYLOAD	US	2020-10-24	n/a
47394	STARLINK-2115	PAYLOAD	US	2021-01-20	2024-12-31
47402	STARLINK-2124	PAYLOAD	US	2021-01-20	2025-01-13
57259	STARLINK-5505	PAYLOAD	US	2023-07-07	2024-03-02
51974	STARLINK-3672	PAYLOAD	US	2022-03-09	n/a
57934	STARLINK-30458	PAYLOAD	US	2023-09-24	2025-10-07
53931	STARLINK-5015	PAYLOAD	US	2022-09-24	2025-11-27
45695	STARLINK-1420	PAYLOAD	US	2020-06-04	n/a
55648	STARLINK-5501	PAYLOAD	US	2023-02-17	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	42.36, -74.02
CLOSE-APPROACH OBJECTS	20	ABOVE HORIZON	9
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
2023 YR	2024-Jan-02 03:18	0.0115640803252806	24.90	265.42	68.92	17.48
2024 AA	2024-Jan-02 16:39	0.00408142072236893	27.41	65.07	40.40	18.25
2023 YR1	2024-Jan-01 02:48	0.0166144160264511	25.68	358.07	63.59	18.94
2019 KK5	2024-Jan-02 21:21	0.0260972744624454	22.79	314.96	10.74	19.39
2023 YY1	2024-Jan-01 20:09	0.0271321168847435	25.77	147.48	75.71	19.41
2011 YP10	2024-Jan-02 12:59	0.0704899553763525	23.94	47.96	53.17	19.62

OBJECT	CLOSE APPROACH UTC	DIST AU	H	AZ	EL	APP MAG
2024 AA6	2024-Jan-01 12:30	0.0491415516379195	25.12	118.04	7.17	20.19
2023 XZ4	2024-Jan-02 15:23	0.144999914734518	24.05	236.49	27.20	22.95
2025 AB	2024-Jan-01 11:34	0.158379265423944	27.13	239.35	59.03	25.45

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 20 near-Earth close approaches in the event-date +/-1 day window within 0.2 au.
- Horizons placed 9 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.

HOURLY UTC	2024010201
CLOUD AMOUNT	71.07%
PRECIPITATION	0.0 mm/hr
10 M WIND	2.28 m/s
TEMPERATURE	-4.33 C
RELATIVE HUMIDITY	94.88%
DONKI +/-1 DAY	CME: unavailable; FLR: unavailable; GST: unavailable; HSS: unavailable; IPS: unavailable; MPC: unavailable; RBE: unavailable; SEP: unavailable; WSAEnliSimulations: unavailable

5.10 Horizons Sky Geometry Context

OBJECT	AZ	EL	APP MAG
Sun	279.56	-45.06	-26.78
Moon	65.50	-15.88	-10.77
Venus	338.36	-65.38	-4.04
Mars	291.28	-55.79	1.41
Jupiter	214.74	55.57	-2.58
Saturn	252.61	1.38	0.96

- Sun elevation was -45.1 deg, so this was a dark-sky/nighttime sighting.
- Moon was below horizon at elevation -15.9 deg.
- Planets above horizon: Jupiter (55.6 deg), Saturn (1.4 deg).
- NASA POWER cloud amount for the hour was 71.07%, 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 1577.0 MiB; planes-readsb-prod-0 1578.0 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.

LAYER	STATUS	CASE-SPECIFIC NOTE
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 2024-01-02, then filter +/-60 min and 250 nmi around 42.3623,-74.0188.
- NASA POWER/Horizons/DONKI: batch context for 237UAP00336 at 2024-01-02T01:43:00+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/2024/002/01/
GOES GLM LIGHTNING PREFIX	https://noaa-goes16.s3.amazonaws.com/GLM-L2-LCFA/2024/002/01/

5.13 Nearest Weather-Airport Candidates

STATION	NAME	DISTANCE KM	COORDINATE
KALB	Albany International Airport	46.50	42.75, -73.80
KSCH	Schenectady County Airport	55.00	42.85, -73.93
KPOU	Dutchess County Airport	82.60	41.63, -73.88
KSWF	New York Stewart International Airport	95.70	41.50, -74.11
KBAF	Westfield-Barnes Regional Airport	109.60	42.16, -72.72

- KALB: [IEM ASOS/METAR daily CSV query](#)
- KSCH: [IEM ASOS/METAR daily CSV query](#)
- KPOU: [IEM ASOS/METAR daily CSV query](#)

5.14 Nearest Radiosonde Stations

STATION	NAME	DISTANCE KM	COORDINATE
USM00072518	ALBANY COUNTY AIRPORT; NY.	46.70	42.75, -73.80
USM00072501	UPTON; NY.	192.20	40.87, -72.86
USM00074389	GRAY; ME.	349.40	43.89, -70.26
USM00072528	BUFFALO/GREATER BUFFALO INT.;	389.70	42.94, -78.72
CAM00071722	MANIWAKI UA; QUE	465.70	46.30, -76.01

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
KALB	46.50	2024-01-02T01:51:00 +00:00	10.00	CLR, M, M, M	280.00 / 6.00	KALB 020151Z 28006KT 10SM CLR M03/M08 A3014 RMK AO2 SLP208 T10331083
KSCH	55.00	no retained observation	n/a	n/a	n/a / n/a	
KPOU	82.60	2024-01-02T01:53:00 +00:00	10.00	BKN03300, M, M, M	360.00 / 3.00	KPOU 020153Z AUTO 36003KT 10SM BKN033 M01/ M05 A3009 RMK AO2 SLP190 T10111050

5.16 NOAA IGRA Radiosonde Wind Profile

Nearest sounding implies mean 0-12 km wind drift toward 59.6 deg at 3.22 m/s; a passive balloon could drift about 23.2 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
USM00072518	ALBANY COUNTY AIRPORT; NY.	46.70	2024-01-02T00:00 :00+00:00	59.60	3.22	23.20	35.90 at 25232.00 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/2024/002/01/OR_ABI-L2-CMIPF-M6C01_G16_s20240020100206_e20240020109514_c20240020109578.nc](#)
- [ABI-L2-CMIPF/2024/002/01/OR_ABI-L2-CMIPF-M6C01_G16_s20240020110206_e20240020119514_c20240020119580.nc](#)
- [ABI-L2-CMIPF/2024/002/01/OR_ABI-L2-CMIPF-M6C01_G16_s20240020120206_e20240020129514_c20240020130005.nc](#)
- [ABI-L2-CMIPF/2024/002/01/OR_ABI-L2-CMIPF-M6C01_G16_s20240020130206_e20240020139514_c20240020139584.nc](#)

GLM lightning sample objects:

- [GLM-L2-LCFA/2024/002/01/OR_GLM-L2-LCFA_G16_s20240020100000_e20240020100200_c20240020100216.nc](#)
- [GLM-L2-LCFA/2024/002/01/OR_GLM-L2-LCFA_G16_s20240020100200_e20240020100400_c20240020100414.nc](#)
- [GLM-L2-LCFA/2024/002/01/OR_GLM-L2-LCFA_G16_s20240020100400_e20240020101000_c20240020101014.nc](#)
- [GLM-L2-LCFA/2024/002/01/OR_GLM-L2-LCFA_G16_s20240020101000_e20240020101200_c20240020101220.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.

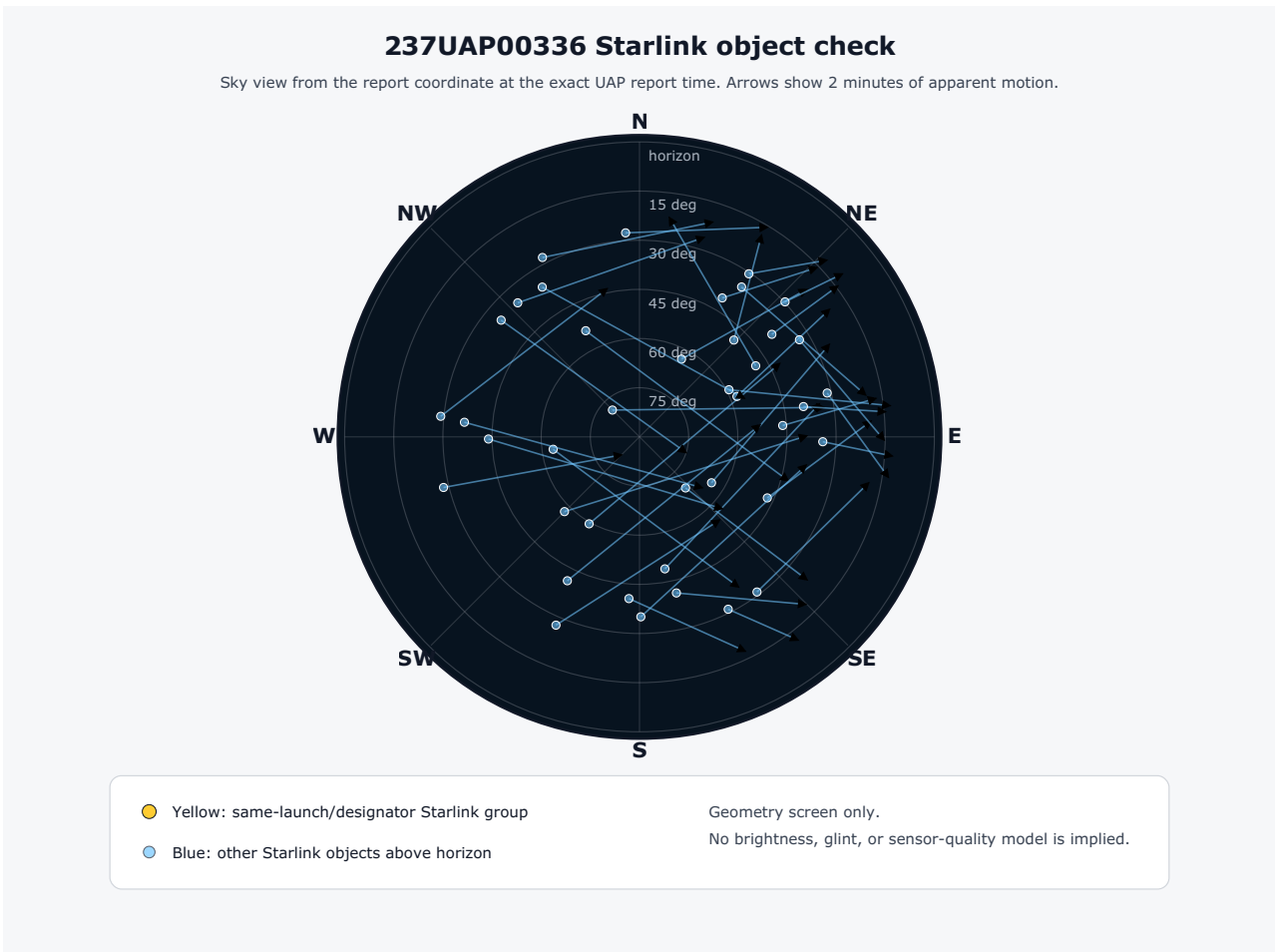
ARCHIVE WINDOW	2024-01-02T00:43:00+00:00 to 2024-01-02T02:43:00+00:00	RADIUS	250.00 nmi
TRACE FILES SCANNED	32153	TRACKS RETAINED	800
SUPPORT STATUS	aircraft strong candidate present	BEST-CANDIDATE NOTE	ordinary-object favored if the report's count, color, direction, and motion can be reconciled with the candidate track(s).

STRONG CANDIDATES	7	PLAUSIBLE CANDIDATES	114
REPORTING-AIRCRAFT TRACKS EXCLUDED	4	WEAK CANDIDATES	199

5.19 Top ADS-B Candidate Tracks

AIRCRAFT	STATUS	SCORE	MIN DIST KM	NEAREST DT MIN	ALT FT	AZ	EL
N22805 G280 a2012f	strong aircraft candidate	87.68	5.10	0.01	13800	327.40	36.31
G-YMMJ B772 4007f5	strong aircraft candidate	77.94	3.50	0.02	23975	81.40	52.07
N538AS B738 a6ce36	strong aircraft candidate	69.70	72.60	0.02	34000	343.80	7.18
N848BC FA7X ab9dad	strong aircraft candidate	66.73	35.10	0.03	20550	74.90	6.98
N421YX E75L a50192	strong aircraft candidate	61.04	35.10	0.05	8725	186.80	7.72
N540GJ CRJ7 a6d88b	strong aircraft candidate	55.68	23.60	7.55	375	23.30	-0.05
N761YX E75L aa477b	strong aircraft candidate	49.30	64.00	0.06	18600	115.00	5.97
N821NW A333 ab35d3	reporting aircraft track; excluded from support counts	95.32	10.10	0.13	37000	199.90	45.87

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	2024-01-02T01:43:00+00:00	Directly used in propagation; this is a hard filter, not descriptive context.
LOCATION CONSTRAINT	42.36231, -74.01885	Directly used as observer point for azimuth/elevation/range computation.
COUNT / PATTERN	not explicit	Primary same-launch group contains 3 propagated objects in a compact sky sector.
MOTION LANGUAGE	not explicit	Reported motion remains only partly explained; this is a principal reason for high-value unresolved status.
RADAR / OFFICIAL CHECK	not specified	Radar or hard maneuvering language is treated as a conflict/collection gap, not hand-waved away.
ANALYTIC DISPOSITION	unresolved	237UAP00336 remains high-value unresolved after screening against historical Starlink orbital elements. The strongest compact object grouping contains 3 objects from 2020-09-03; however, this does not close the case because hard report features remain: radar/primary evidence, hard maneuver language. Context noted but not treated as causation: very dense orbital-object sky background; context only, not causation; NASA/JPL known-small-body rejection screen present.

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.
- This case is retained as high-value unresolved because the hardest reported behavior is not resolved by the current normal-object layers.

Appendix A. Public Report Text Extracts

237UAP00336

SKYWATCH INCIDENT REPORT

PRIMARY CODE: UNIDENTIFIED AERIAL PHENOMENON

Date: 01:43 01/02/2024
Status: Closed
POD: DEN
Reporting Facility: ZBW

Callsign: PDT5795
Aircraft: E145
Tail Number:
Operator: PDT
Paged: YES

Origin: BOS
Destination: MDT
New Destination:
Operator Type: Commercial
MOR Init: YES
MOR ID: ZBW-M-2024/01/01-0002

REMARKS

Aircraft reported an unidentified aerial phenomenon off their front while SW bound at FL260, 25NM SSW of ALB over 42.2105N, -74.375W. The unknown phenomenon was bright orange and moved quickly at near level altitude and would jump in altitude to around FL500. Pilot kept reporting the same maneuvers all the way down near DNY intersection. It appears some radar data was acquired up until 0155Z.

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": "2024-01-02T01:43:00+00:00",
  "source_excerpt": "Aircraft reported an unidentified aerial phenomenon off their front while SW bound at FL260, 25NM SSW of ALB over 42.2105N, -74.375W. The unknown phenomenon was bright orange and moved quickly at near level altitude and would jump in altitude to around FL500. Pilot kept reporting the same maneuvers all the way down near DNY intersection. It appears some radar data was acquired up until 0155Z.",
  "historical_starlink_element_rows": 5246,
  "observer": {
    "lat": 42.362306573868096,
    "lon": -74.01884899318912,
    "source": "aviation_offset:25NM SSW of ALB (public text extract 237UAP00336)"
  },
  "case_id": "237UAP00336",
  "starlink_above_horizon_at_report_time": 274,
  "starlink_catalog_ids_considered": 5268,
  "largest_same-sky_cluster_count": 134,
  "starlink_at_or_above_10_deg": 143,
  "same_launch_sky_groups": [
    {
      "azimuth_range_deg": [
        22.83,
        38.88
      ],
      "count": 3,
      "elevation_range_deg": [
        16.04,
        16.57
      ],
      "ground_track_labels": [
        "E",
        "ENE",
        "ESE"
      ],
      "launch_date": "2020-09-03",
      "members": [
        {
          "azimuth_deg": 36.43,
          "azimuth_plus_2m_deg": 60.5,
          "azimuth_plus_5m_deg": 77.46,
          "element_age_hours": 1.14,
          "element_epoch": "2024-01-02T02:51:08.456832+00:00",
          "elevation_deg": 16.57,
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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: 237UAP00336
TIME AND OBSERVER COORDINATE	extracted	2024-01-02T01:43:00+00:00 at 42.36231, -74.01885
ORBITAL OBJECT PROPAGATION	screened	Starlink
SPACE-TRACK SATCAT METADATA	screened	33 NORAD IDs checked; 33 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	32153 trace files scanned; 800 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	high-value unresolved	Presence-only satellite density is context only; a stronger case-specific fit is required for normal-object disposition

References and Source Links

1. National Archives and Records Administration. *Records Related to Unidentified Flying Objects (UFOs) and Unidentified Anomalous Phenomena (UAPs) at the National Archives*. <https://www.archives.gov/research/topics/uaps>
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. *237UAP00336.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-615/493468575/237UAP00336.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/>
13. ADSB.lol. *Interactive API documentation and OpenAPI definition*. <https://api.adsb.lol/docs>
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/>