

CASE FILE 35 / 237UAP00380

237UAP00380

Radar/correlation-focused public UAP report; score 60

NORMAL-OBJECT FAVORED

REPORT NO.	UAP-OM-35-237UAP00380	DISPOSITION	NORMAL-OBJECT FAVORED
PRIMARY CASE	237UAP00380	GENERATED	2026-05-20 18:32 UTC
REPORT TIME	2024-10-01T05:21:00+00:00	OBSERVER	33.74446, -118.65861
SOURCE CASE IDS	237UAP00380		

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

237UAP00380 is assessed as normal-object favored because the available public evidence gives a case-specific ordinary-object candidate: historical Starlink object traffic at the report spacetime. Dense satellite presence alone is not treated as causation in this packet.

1.1 Key Findings

- Source score 60 based on: radar/primary-return language, negative official correlation, high-altitude report, maneuvering/motion anomaly, UAP/UFO language.
- Report time used: 2024-10-01T05:21:00+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.
- Non-causal context / rejection screens: source language itself invokes satellite/space/launch context; substantial orbital-object sky background; context only, not causation.
- Remaining hard features: hard maneuver language.
- Objects above horizon: 311; at/above 10 deg: 134.
- No compact same-launch/designator group survived the report threshold.
- Explicit explanation words in source were noted and penalized: explicit Starlink mention.

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
237UAP00380	05:21 10/01/2024 Callsign: SWA986 Origin: SAN	ZLA Operator: SWA Operator Type: Commercial	text extract present	237UAP00380.pdf

3. Original Report Evidence

PRIMARY EXCERPT USED FOR MATCHING	Aircraft reported an unidentified aerial phenomenon off the left side while N bound at FL400, 16NM SW of LAX. The unknown phenomenon was bright lights orbiting and stationary at approximately FL600. The UAP was not observed on ATC facility radar system. Objects correlate with StarLink map.
REPORT TIME USED	2024-10-01T05:21:00+00:00
OBSERVER COORDINATE USED	33.74446, -118.65861
OBSERVER SOURCE BASIS	aviation_offset:16NM SW of LAX (public text extract 237UAP00380)

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	6423	HISTORICAL ELEMENT ROWS	6423
ABOVE HORIZON AT REPORT MINUTE	311	AT/ABOVE 10 DEG	134
LARGEST SAME-SKY CLUSTER	83		

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-30400	265.64	66.34	517.14	eastward, setting	2023-09-25
STARLINK-4558	342.32	63.53	599.61	eastward, setting	2022-08-10
STARLINK-31707	333.62	61.89	501.5	eastward, setting	2024-05-13
STARLINK-30428	30.62	60.48	636.65	eastward, setting	2023-09-20
STARLINK-1029	35.08	57.25	642.51	eastward, setting	2019-11-11
STARLINK-2705	170.9	56.75	644.88	westward, setting	2021-05-26
STARLINK-31148	245.4	56.74	659.33	westward, setting	2024-01-07
STARLINK-5241	38.85	51.19	678.79	eastward, setting	2022-10-28
STARLINK-2561	220.57	51.18	686.66	westward, setting	2021-05-04
STARLINK-3740	213.39	49.92	688.45	westward, level	2022-04-21
STARLINK-30377	65.58	48.67	725.47	eastward, setting	2023-09-09
STARLINK-5100	261.95	48.13	730.04	eastward, rising	2023-02-02

5.5 Largest Sky Clusters

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
1	83	2.69-358.8 deg	10.15-48.67 deg	eastward, rising, eastward, setting, westward, rising, westward, setting
2	41	132.72-253.24 deg	10.02-56.75 deg	eastward, rising, eastward, setting, nearly fixed azimuth, setting, westward, level, westward, rising, westward, setting

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
3	3	245.4-265.64 deg	48.13-66.34 deg	eastward, rising, eastward, setting, westward, setting
4	3	30.62-38.85 deg	51.19-60.48 deg	eastward, setting
5	2	333.62-342.32 deg	61.89-63.53 deg	eastward, 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
57937	STARLINK-30400	PAYLOAD	US	2023-09-25	n/a
53426	STARLINK-4558	PAYLOAD	US	2022-08-10	n/a
59736	STARLINK-31707	PAYLOAD	US	2024-05-13	n/a
57906	STARLINK-30428	PAYLOAD	US	2023-09-20	n/a
44734	STARLINK-1029	PAYLOAD	US	2019-11-11	2025-10-18
48672	STARLINK-2705	PAYLOAD	US	2021-05-26	n/a
58741	STARLINK-31148	PAYLOAD	US	2024-01-07	n/a
54204	STARLINK-5241	PAYLOAD	US	2022-10-28	n/a
48403	STARLINK-2561	PAYLOAD	US	2021-05-04	2025-03-24
52265	STARLINK-3740	PAYLOAD	US	2022-04-21	n/a
57825	STARLINK-30377	PAYLOAD	US	2023-09-09	n/a
55495	STARLINK-5100	PAYLOAD	US	2023-02-02	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.

HOURLY UTC	2024100105
CLOUD AMOUNT	70.35%
PRECIPITATION	0.0 mm/hr
10 M WIND	2.44 m/s
TEMPERATURE	17.62 C
RELATIVE HUMIDITY	93.13%
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	304.46	-44.91	-26.74
Moon	328.73	-47.52	-5.52
Venus	270.52	-28.62	-3.91
Mars	43.94	-18.40	0.47
Jupiter	61.30	-1.81	-2.46
Saturn	159.28	45.90	0.66

- Sun elevation was -44.9 deg, so this was a dark-sky/nighttime sighting.
- Moon was below horizon at elevation -47.5 deg.
- Planets above horizon: Saturn (45.9 deg).
- NASA POWER cloud amount for the hour was 70.35%, 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 2131.0 MiB; planes-readsb-prod-0 2132.0 MiB; planes-readsb-mlatonly-0 55.0 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_2024 for 2024-10-01, then filter +/-60 min and 250 nmi around 33.7445,-118.6586.
- NASA POWER/Horizons/DONKI: batch context for 237UAP00380 at 2024-10-01T05:21:00+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	GOES18
GOES ABI PREFIX	https://noaa-goes18.s3.amazonaws.com/ABI-L2-CMIPF/2024/275/05/
GOES GLM LIGHTNING PREFIX	https://noaa-goes18.s3.amazonaws.com/GLM-L2-LCFA/2024/275/05/

5.13 Nearest Weather-Airport Candidates

STATION	NAME	DISTANCE KM	COORDINATE
KLAX	Los Angeles International Airport	31.90	33.94, -118.41
KSMO	Santa Monica Municipal Airport	35.70	34.02, -118.45
KHHR	Jack Northrop Field Hawthorne Municipal Airport	35.90	33.92, -118.33

STATION	NAME	DISTANCE KM	COORDINATE
KLGB	Long Beach International Airport	47.70	33.82, -118.15
KVNY	Van Nuys Airport	54.00	34.21, -118.49

- KLAX: [IEM ASOS/METAR daily CSV query](#)
- KSMO: [IEM ASOS/METAR daily CSV query](#)
- KHRH: [IEM ASOS/METAR daily CSV query](#)

5.14 Nearest Radiosonde Stations

STATION	NAME	DISTANCE KM	COORDINATE
USM00072391	POINT MUGU/NAS	59.20	34.12, -119.12
USM00072381	EDWARDS AFB; CA.	147.80	34.92, -117.90
USM00072293	SAN DIEGO/MIRAMAR; NAS; CA.	175.50	32.83, -117.12
USM00072393	VANDENBERG AFB; CA. (72393-0)	208.00	34.75, -120.57
USM00074612	CHINA LAKE; NAF; CA.	233.30	35.68, -117.68

5.15 ASOS/METAR Surface Weather Observations

surface visibility ranged 6-10 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
KLAX	31.90	2024-10-01T04:53:00 +00:00	8.00	FEW00600, M, M, M	0.00 / 0.00	KLAX 010453Z 00000KT 8SM FEW006 18/16 A2992 RMK AO2 SLP131 T01780161 \$
KSMO	35.70	2024-10-01T04:51:00 +00:00	9.00	CLR, M, M, M	0.00 / 0.00	KSMO 010451Z AUTO 00000KT 9SM CLR 18/17 A2992 RMK AO2 SLP130 T01780167
KHRH	35.90	2024-10-01T04:53:00 +00:00	9.00	CLR, M, M, M	0.00 / 0.00	KHRH 010453Z 00000KT 9SM CLR 19/17 A2992 RMK AO2 SLP131 T01890167

5.16 NOAA IGRA Radiosonde Wind Profile

No nearby IGRA sounding was parsed within the +/-1 day window. 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
USM00072391	POINT MUGU/ NAS	59.20	no sounding	n/a	n/a	n/a	n/a at n/a 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	GOES18	BUCKET	noaa-goes18
ABI SAMPLE FILES	12	GLM SAMPLE FILES	12

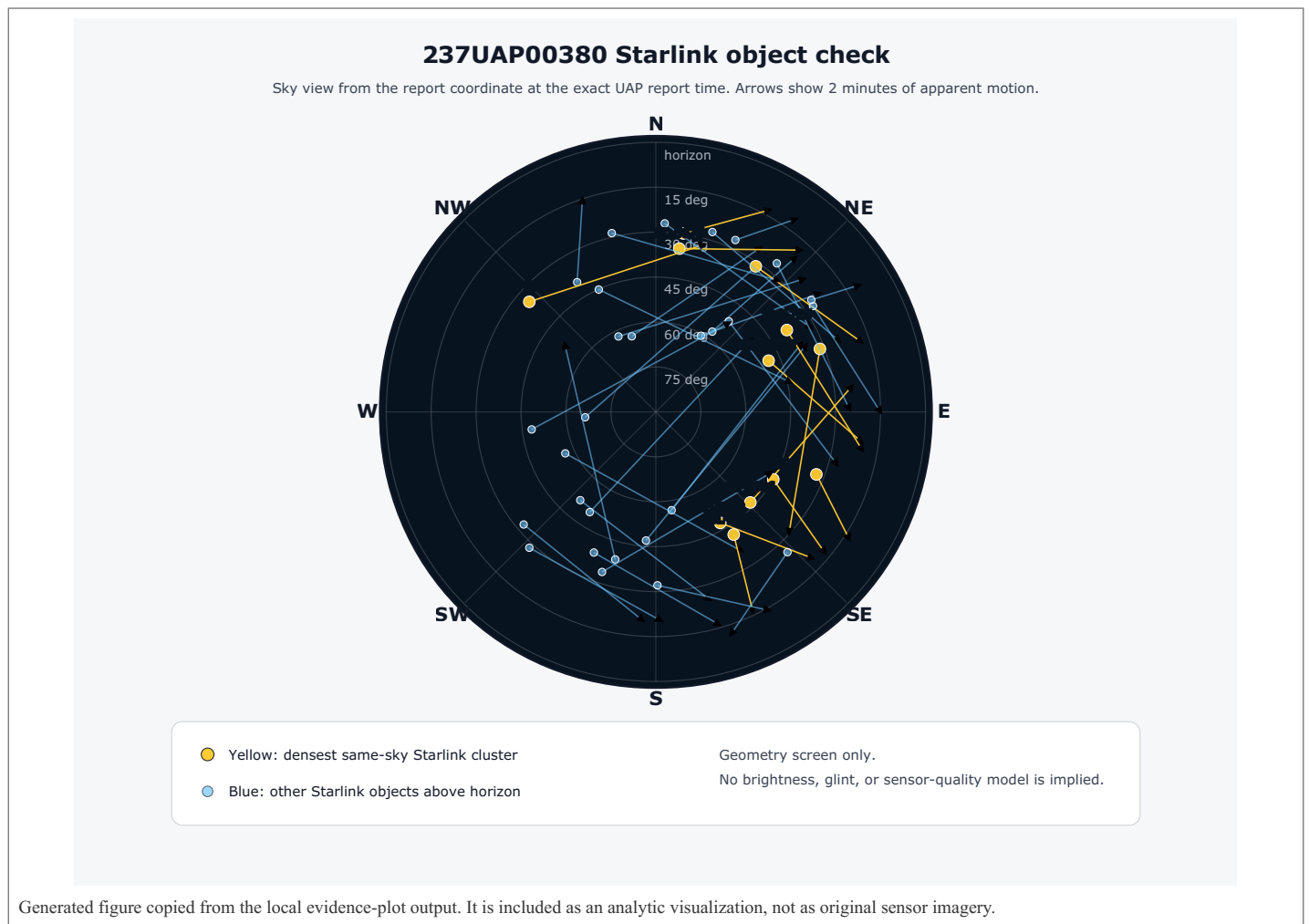
ABI sample objects:

- [ABI-L2-CMIPF/2024/275/05/OR_ABI-L2-CMIPF-M6C01_G18_s20242750500203_e20242750509511_c20242750509575.nc](#)
- [ABI-L2-CMIPF/2024/275/05/OR_ABI-L2-CMIPF-M6C01_G18_s20242750510203_e20242750519511_c20242750519595.nc](#)
- [ABI-L2-CMIPF/2024/275/05/OR_ABI-L2-CMIPF-M6C01_G18_s20242750520203_e20242750529511_c20242750529595.nc](#)
- [ABI-L2-CMIPF/2024/275/05/OR_ABI-L2-CMIPF-M6C01_G18_s20242750530203_e20242750539511_c20242750539569.nc](#)

GLM lightning sample objects:

- [GLM-L2-LCFA/2024/275/05/OR_GLM-L2-LCFA_G18_s20242750500000_e20242750500200_c20242750500214.nc](#)
- [GLM-L2-LCFA/2024/275/05/OR_GLM-L2-LCFA_G18_s20242750500200_e20242750500400_c20242750500414.nc](#)
- [GLM-L2-LCFA/2024/275/05/OR_GLM-L2-LCFA_G18_s20242750500400_e20242750501000_c20242750501016.nc](#)
- [GLM-L2-LCFA/2024/275/05/OR_GLM-L2-LCFA_G18_s20242750501000_e20242750501200_c20242750501216.nc](#)

6. Annotated Evidence Figure



7. Analytic Comparison

CRITERION	REPORT EVIDENCE	ANALYTIC TREATMENT
TIME CONSTRAINT	2024-10-01T05:21:00+00:00	Directly used in propagation; this is a hard filter, not descriptive context.
LOCATION CONSTRAINT	33.74446, -118.65861	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	orbit, 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	237UAP00380 is assessed as normal-object favored because the available public evidence gives a case-specific ordinary-object candidate: historical Starlink object traffic at the report spacetime. 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

237UAP00380

SKYWATCH INCIDENT REPORT

PRIMARY CODE: UNIDENTIFIED AERIAL PHENOMENON

Date: 05:21 10/01/2024
Status: Closed
POD: DEN
Reporting Facility: ZLA

Callsign: SWA986
Aircraft: B737
Tail Number:
Operator: SWA

Origin: SAN
Destination: OAK
New Destination:
Operator Type: Commercial
Paged: YES

REMARKS

Aircraft reported an unidentified aerial phenomenon off the left side while N bound at FL400, 16NM SW of LAX. The unknown phenomenon was bright lights orbiting and stationary at approximately FL600. The UAP was not observed on ATC facility radar system. Objects correlate with StarLink map.

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": "2024-10-01T05:21:00+00:00",
  "source_excerpt": "Aircraft reported an unidentified aerial phenomenon off the left side while N bound at FL400, 16NM SW of LAX. The unknown phenomenon was bright lights orbiting and stationary at approximately FL600. The UAP was not observed on ATC facility radar system. Objects correlate with StarLink map.",
  "historical_starlink_element_rows": 6423,
  "observer": {
    "lat": 33.74445923573863,
    "lon": -118.6586128711898,
    "source": "aviation_offset:16NM SW of LAX (public text extract 237UAP00380)"
  },
  "case_id": "237UAP00380",
  "starlink_above_horizon_at_report_time": 311,
  "starlink_catalog_ids_considered": 6423,
  "largest_same-sky_cluster_count": 83,
  "starlink_at_or_above_10_deg": 134,
  "top_starlinks": [
    {
      "azimuth_deg": 265.64,
      "azimuth_plus_2m_deg": 34.58,
      "azimuth_plus_5m_deg": 41.97,
      "element_age_hours": 0.19,
      "element_epoch": "2024-10-01T05:09:38.456352+00:00",
      "elevation_deg": 66.34,
      "elevation_plus_2m_deg": 30.85,
      "elevation_plus_5m_deg": 4.98,
      "epoch_altitude_km": 481.41,
      "ground_track_bearing_deg": 43.84,
      "ground_track_label": "NE",
      "launch_date": "2023-09-25",
      "name": "STARLINK-30400",
      "norad_id": "57937",
      "range_km": 517.14,
      "sky_motion_label": "eastward, setting",
      "subpoint_lat": 33.5946,
      "subpoint_lon": -120.7332
    },
    {
      "azimuth_deg": 342.32,
      "azimuth_plus_2m_deg": 32.62,
      "azimuth_plus_5m_deg": 40.86,
      "element_age_hours": 0.21,
      "element_epoch": "2024-10-01T05:08:37.060512+00:00",
      "elevation_deg": 63.53,
      "elevation_plus_2m_deg": 24.64,
      "elevation_plus_5m_deg": 4.0,
      "epoch_altitude_km": 545.49,
      "ground_track_bearing_deg": 45.53,
      "ground_track_label": "NE",
      "launch_date": "2022-08-10",
      "name": "STARLINK-4558",
      "norad_id": "53426",
      "range_km": 599.61,
      "sky_motion_label": "eastward, setting",
      "subpoint_lat": 35.8573,
      "subpoint_lon": -119.4872
    },
    {
      "azimuth_deg": 333.62,
      "azimuth_plus_2m_deg": 48.23,
      "azimuth_plus_5m_deg": 57.77,
      "element_age_hours": 3.36,
      "element_epoch": "2024-10-01T01:59:14.717472+00:00",
      "elevation_deg": 61.89,
      "elevation_plus_2m_deg": 23.16,
      "elevation_plus_5m_deg": 2.57,
      "epoch_altitude_km": 450.21,
      "ground_track_bearing_deg": 62.54,
      "ground_track_label": "ENE",
      "launch_date": "2024-05-13",
      "name": "STARLINK-31707",
      "norad_id": "59736",
      "range_km": 501.5,
      "sky_motion_label": "eastward, setting",
      "subpoint_lat": 35.5233,
      "subpoint_lon": -119.7408
    },
    {
      "azimuth_deg": 30.62,
      "azimuth_plus_2m_deg": 54.13,
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```

"azimuth_plus_5m_deg": 59.06,
"element_age_hours": 3.45,
"element_epoch": "2024-10-01T01:53:50.341632+00:00",
"elevation_deg": 60.48,
"elevation_plus_2m_deg": 22.3,
"elevation_plus_5m_deg": 3.34,
"epoch_altitude_km": 565.74,
"ground_track_bearing_deg": 63.22,
"ground_track_label": "ENE",
"launch_date": "2023-09-20",
"name": "STARLINK-30428",
"norad_id": "57906",
"range_km": 636.65,
"sky_motion_label": "eastward, setting",
"subpoint_lat": 35.9703,
"subpoint_lon": -117.0302
},
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"azimuth_deg": 35.08,
"azimuth_plus_2m_deg": 42.14,
"azimuth_plus_5m_deg": 44.06,
"element_age_hours": 2.98,
"element_epoch": "2024-10-01T08:19:33.029184+00:00",
"elevation_deg": 57.25,
"elevation_plus_2m_deg": 20.05,
"elevation_plus_5m_deg": 2.17,
"epoch_altitude_km": 552.56,
"ground_track_bearing_deg": 45.97,
"ground_track_label": "NE",
"launch_date": "2019-11-11",
"name": "STARLINK-1029",
"norad_id": "44734",
"range_km": 642.51,
"sky_motion_label": "eastward, setting",
"subpoint_lat": 36.0888,
"subpoint_lon": -116.6155
},
{
"azimuth_deg": 170.9,
"azimuth_plus_2m_deg": 64.62,
"azimuth_plus_5m_deg": 50.1,
"element_age_hours": 3.01,
"element_epoch": "2024-10-01T08:21:33.156288+00:00",
"elevation_deg": 56.75,
"elevation_plus_2m_deg": 35.98,
"elevation_plus_5m_deg": 7.78,
"epoch_altitude_km": 553.44,
"ground_track_bearing_deg": 42.05,
"ground_track_label": "NE",
"launch_date": "2021-05-26",
"name": "STARLINK-2705",
"norad_id": "48672",
"range_km": 644.88,
"sky_motion_label": "westward, setting",
"subpoint_lat": 30.8437,
"subpoint_lon": -118.1204
},
{
"azimuth_deg": 245.4,
"azimuth_plus_2m_deg": 148.18,
"azimuth_plus_5m_deg": 132.77,
"element_age_hours": 5.81,
"element_epoch": "2024-10-01T11:09:47.904192+00:00",
"elevation_deg": 56.74,
"elevation_plus_2m_deg": 35.04,
"elevation_plus_5m_deg": 7.84,
"epoch_altitude_km": 565.46,
"ground_track_bearing_deg": 122.17,
"ground_track_label": "ESE",
"launch_date": "2024-01-07",
"name": "STARLINK-31148",
"norad_id": "58741",
"range_km": 659.33,
"sky_motion_label": "westward, setting",
"subpoint_lat": 32.4547,
"subpoint_lon": -121.8751
},
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"azimuth_deg": 38.85,
"azimuth_plus_2m_deg": 106.34,
"azimuth_plus_5m_deg": 122.48,
"element_age_hours": 5.78,
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"elevation_deg": 51.19,
"elevation_plus_2m_deg": 26.8,
"elevation_plus_5m_deg": 5.12,
"epoch_altitude_km": 546.12,
"ground_track_bearing_deg": 134.55,

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"ground_track_label": "SE",
"launch_date": "2022-10-28",
"name": "STARLINK-5241",
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"subpoint_lat": 36.4677,
"subpoint_lon": -115.913
},
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"azimuth_deg": 220.57,
"azimuth_plus_2m_deg": 163.82,
"azimuth_plus_5m_deg": 150.3,
"element_age_hours": 5.4,
"element_epoch": "2024-09-30T23:57:15.828768+00:00",
"elevation_deg": 51.18,
"elevation_plus_2m_deg": 24.52,
"elevation_plus_5m_deg": 4.27,
"epoch_altitude_km": 553.25,
"ground_track_bearing_deg": 138.38,
"ground_track_label": "SE",
"launch_date": "2021-05-04",
"name": "STARLINK-2561",
"norad_id": "48403",
"range_km": 686.66,
"sky_motion_label": "westward, setting",
"subpoint_lat": 30.9988,
"subpoint_lon": -121.3592
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"azimuth_deg": 213.39,
"azimuth_plus_2m_deg": 52.7,
"azimuth_plus_5m_deg": 46.02,
"element_age_hours": 3.01,
"element_epoch": "2024-10-01T08:21:21.709152+00:00",
"elevation_deg": 49.92,
"elevation_plus_2m_deg": 49.87,
"elevation_plus_5m_deg": 10.5,
"epoch_altitude_km": 545.92,
"ground_track_bearing_deg": 41.71,
"ground_track_label": "NE",
"launch_date": "2022-04-21",
"name": "STARLINK-3740",
"norad_id": "52265",
"range_km": 688.45,
"sky_motion_label": "westward, level",
"subpoint_lat": 30.6443,
"subpoint_lon": -121.0055
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"azimuth_deg": 65.58,
"azimuth_plus_2m_deg": 98.47,
"azimuth_plus_5m_deg": 107.97,
"element_age_hours": 0.54,
"element_epoch": "2024-10-01T04:48:28.557792+00:00",
"elevation_deg": 48.67,
"elevation_plus_2m_deg": 20.29,
"elevation_plus_5m_deg": 2.7,
"epoch_altitude_km": 565.12,
"ground_track_bearing_deg": 118.42,
"ground_track_label": "ESE",
"launch_date": "2023-09-09",
"name": "STARLINK-30377",
"norad_id": "57825",
"range_km": 725.47,
"sky_motion_label": "eastward, setting",
"subpoint_lat": 35.3082,
"subpoint_lon": -114.245
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"azimuth_deg": 261.95,
"azimuth_plus_2m_deg": 39.65,
"azimuth_plus_5m_deg": 57.01,
"element_age_hours": 11.4,
"element_epoch": "2024-09-30T17:56:51.149472+00:00",
"elevation_deg": 48.13,
"elevation_plus_2m_deg": 51.16,
"elevation_plus_5m_deg": 11.72,
"epoch_altitude_km": 565.55,
"ground_track_bearing_deg": 59.15,
"ground_track_label": "ENE",
"launch_date": "2023-02-02",
"name": "STARLINK-5100",
"norad_id": "55495",
"range_km": 730.04,
"sky_motion_label": "eastward, rising",
"subpoint_lat": 33.0869,
"subpoint_lon": -123.4142
}

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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: 237UAP00380
TIME AND OBSERVER COORDINATE	extracted	2024-10-01T05:21:00+00:00 at 33.74446, -118.65861
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	screened	Hourly weather, sky geometry, and space-weather context where local JSON is present
AIRCRAFT/ADS-B LAYER	not exhausted	ADSB.lol historical release pattern is recorded separately; actual aircraft exhaustion requires targeted trace extraction
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. *237UAP00380.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-615/493468575/237UAP00380.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>
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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 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>
11. NASA. *DONKI space weather API documentation*. <https://api.nasa.gov/>
12. ADSB.lol. *Interactive API documentation and OpenAPI definition*. <https://api.adsb.lol/docs>
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14. OpenSky Network. *REST API documentation*. <https://openskynetwork.github.io/opensky-api/rest.html>
15. OpenSky Network. *Historical data via Trino documentation*. <https://openskynetwork.github.io/opensky-api/trino.html>
16. NASA GIBS. *Global Imagery Browse Services API documentation*. <https://nasa-gibs.github.io/gibs-api-docs/>
17. NASA Earthdata. *Common Metadata Repository search API documentation*. <https://cmr.earthdata.nasa.gov/search/site/docs/search/api.html>
18. NOAA / AWS Open Data. *GOES public dataset registry*. <https://registry.opendata.aws/noaa-goes/>
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20. NOAA NCEI. *Integrated Global Radiosonde Archive*. <https://www.ncei.noaa.gov/products/weather-balloon/integrated-global-radiosonde-archive>
21. Iowa Environmental Mesonet. *ASOS/AWOS/METAR data download service*. <https://mesonet.agron.iastate.edu/request/download.phtml>
22. Celestrak. *Spacetrack Report No. 3: Models for propagation of NORAD element sets*. <https://celestrak.org/NORAD/documentation/spacetrk.pdf>
23. Celestrak. *Supplemental GP element sets documentation and current endpoint index*. <https://celestrak.org/NORAD/elements/supplemental/>