

CASE FILE 96 / 237UAP00119

# 237UAP00119

Multiple-witness public UAP report; score 8

INSUFFICIENT / LOW ANOMALY VALUE

REPORT NO.	UAP-OM-96-237UAP00119	DISPOSITION	INSUFFICIENT / LOW ANOMALY VALUE
PRIMARY CASE	237UAP00119	GENERATED	2026-05-20 18:32 UTC
REPORT TIME	2022-10-09T10:25:00+00:00	OBSERVER	34.36700, -105.67800
SOURCE CASE IDS	237UAP00119		

## 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

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237UAP00119 has too little discriminating evidence for a named identification. It is not treated as evidence of exotic activity; it is classified as insufficient/low-value until better sensor, aircraft, or weather data is available.

## 1.1 Key Findings

- Source score 8 based on: UAP/UFO language.
- Report time used: 2022-10-09T10:25:00+00:00.
- External object layer used: Starlink.
- Disposition standard: INSUFFICIENT 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: substantial orbital-object sky background; context only, not causation.
- Objects above horizon: 161; at/above 10 deg: 52.
- 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

**INSUFFICIENT / LOW ANOMALY VALUE:** The report does not contain enough discriminating evidence for a named identification. It is not treated as evidence of exotic activity; it is a low-value insufficient case unless stronger sensor data appears.

# 2. Source Control

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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
237UAP00119	10:25 10/09/2022 Callsign: AAL2438 Origin: LAX	ZAB Operator: AAL Operator Type: Commercial	text extract present	<a href="#">237UAP00119.pdf</a>

### 3. Original Report Evidence

PRIMARY EXCERPT USED FOR MATCHING	Starting at 0955 and continuing, aircraft reports: an unidentified aerial phenomenon overhead while E bound at FL350, over CNX. The unknown phenomenon was multiple lights moving in different directions, left of the constellation Leo.
REPORT TIME USED	2022-10-09T10:25:00+00:00
OBSERVER COORDINATE USED	34.36700, -105.67800
OBSERVER SOURCE BASIS	aviation_fix:over CNX (public text extract 237UAP00119)

### 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	3177	HISTORICAL ELEMENT ROWS	3125
ABOVE HORIZON AT REPORT MINUTE	161	AT/ABOVE 10 DEG	52
LARGEST SAME-SKY CLUSTER	19		

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-2516	20.87	79.34	558.28	eastward, setting	2021-04-29
STARLINK-3852	48.23	48.99	697.47	westward, setting	2022-04-29
STARLINK-2192	318.81	48.9	707.91	eastward, setting	2021-03-04
STARLINK-2690	201.47	46.09	734.43	westward, rising	2021-05-09
STARLINK-4511	267.43	43.46	756.21	westward, setting	2022-08-19
STARLINK-1510	242.32	43.08	769.32	eastward, rising	2020-06-13
STARLINK-1335	161.65	42.93	771.59	westward, setting	2020-04-22
STARLINK-2618	123.11	41.96	784.24	eastward, setting	2021-05-26
STARLINK-1357	346.28	35.98	874.81	eastward, rising	2020-04-22
STARLINK-3744	74.83	34.22	894.5	eastward, setting	2022-04-21
STARLINK-3888	214.22	31.19	952.27	westward, setting	2022-05-06
STARLINK-4260	31.49	28.57	1016.11	eastward, setting	2022-07-07

### 5.5 Largest Sky Clusters

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
1	19	6.44-356.81 deg	10.84-35.98 deg	eastward, rising, eastward, setting, westward, setting
2	4	203.81-214.22 deg	10.46-31.19 deg	westward, rising, westward, setting
3	3	73.21-78.58 deg	17.9-34.22 deg	eastward, setting, westward, setting
4	3	157.52-173.21 deg	10.02-25.27 deg	

#	COUNT	AZIMUTH SPAN	ELEVATION SPAN	MOTION LABELS
				westward, rising, westward, setting
5	3	267.24-273.05 deg	10.44-22.43 deg	eastward, rising, westward, rising

### 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.

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

### 5.7 Space-Track Metadata for Top Propagated Objects

NORAD	OBJECT NAME	TYPE	OWNER	LAUNCH DATE	DECAY DATE
48283	STARLINK-2516	PAYLOAD	US	2021-04-29	n/a
52345	STARLINK-3852	PAYLOAD	US	2022-04-29	n/a
47769	STARLINK-2192	PAYLOAD	US	2021-03-04	2025-01-18
48480	STARLINK-2690	PAYLOAD	US	2021-05-09	2024-08-17
53527	STARLINK-4511	PAYLOAD	US	2022-08-19	2025-12-13
45784	STARLINK-1510	PAYLOAD	US	2020-06-13	2026-01-06
45581	STARLINK-1335	PAYLOAD	US	2020-04-22	n/a
48693	STARLINK-2618	PAYLOAD	US	2021-05-26	n/a
45565	STARLINK-1357	PAYLOAD	US	2020-04-22	n/a
52304	STARLINK-3744	PAYLOAD	US	2022-04-21	n/a
52454	STARLINK-3888	PAYLOAD	US	2022-05-06	n/a
52986	STARLINK-4260	PAYLOAD	US	2022-07-07	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
<b>ADSB.LOL HISTORICAL RELEASE LISTING</b>	not yet exhausted	v2022-10-09-planes-readsb-prod-0, v2022-10-09-planes-readsb-prod-1, v2022-10-09-planes-readsb-staging-0, v2022-10-09-planes-readsb-mlatonly-0
<b>ADSB TRACKS DOWNLOADED</b>	not yet exhausted	Requires targeted extraction from large daily history archives before claiming aircraft exhaustion.
<b>NOAA GOES IMAGERY</b>	not yet exhausted	Needed for cloud/lightning visual context.
<b>NOAA GOES ABI/GLM MANIFEST</b>	screened/present	Public S3 object availability for the report hour.
<b>NOAA NEXRAD WEATHER RADAR</b>	not yet exhausted	Weather radar only; not ATC radar.
<b>NOAA IGRA RADIOSONDE</b>	screened/present	Needed for balloon drift plausibility.
<b>ASOS/METAR WEATHER OBSERVATIONS</b>	screened/present	Nearest station surface observations around report time.

- ADSB.lol historical: extract aircraft traces from no public ADSB.lol annual repo found for 2022-10-09, then filter +/-60 min and 250 nmi around 34.3670,-105.6780.

- NASA POWER/Horizons/DONKI: batch context for 237UAP00119 at 2022-10-09T10:25:00+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.

<b>GOES SATELLITE</b>	GOES18
<b>GOES ABI PREFIX</b>	<a href="https://noaa-goes18.s3.amazonaws.com/ABI-L2-CMIPF/2022/282/10/">https://noaa-goes18.s3.amazonaws.com/ABI-L2-CMIPF/2022/282/10/</a>
<b>GOES GLM LIGHTNING PREFIX</b>	<a href="https://noaa-goes18.s3.amazonaws.com/GLM-L2-LCFA/2022/282/10/">https://noaa-goes18.s3.amazonaws.com/GLM-L2-LCFA/2022/282/10/</a>

### 5.13 Nearest Weather-Airport Candidates

STATION	NAME	DISTANCE KM	COORDINATE
KSRR	Sierra Blanca Regional Airport	101.40	33.46, -105.54
KABQ	Albuquerque International Sunport	113.30	35.04, -106.61
KAEG	Double Eagle II Airport	133.80	35.15, -106.79
KSAF	Santa Fe Municipal Airport	144.00	35.62, -106.09
KLVS	Las Vegas Municipal Airport	151.20	35.65, -105.14

- KSRR: [IEM ASOS/METAR daily CSV query](#)
- KABQ: [IEM ASOS/METAR daily CSV query](#)
- KAEG: [IEM ASOS/METAR daily CSV query](#)

### 5.14 Nearest Radiosonde Stations

STATION	NAME	DISTANCE KM	COORDINATE
USM00072365	ALBUQUERQUE/INT.; NM.	114.10	35.04, -106.62
USM00072364	SANTA TERESA; NM.	293.20	31.87, -106.70
USM00072363	AMARILLO/INTL.; TX.	374.90	35.23, -101.71
USM00072265	MIDLAND/MIDLAND REG. AIRTERM	422.00	31.94, -102.19
USM00072274	TUCSON; AZ	545.00	32.23, -110.96

### 5.15 ASOS/METAR Surface Weather Observations

surface visibility ranged 1.75-10 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
KSRR	101.40	2022-10-09T09:55:00+00:00	8.00	M, M, M, M	100.00 / 5.00	KSRR 090955Z AUTO 10005KT 8SM 09/09 A3040 RMK AO2
KABQ	113.30	2022-10-09T10:52:00+00:00	10.00	OVC07000, M, M, M	360.00 / 6.00	KABQ 091052Z 36006KT 10SM OVC070 11/09 A3034 RMK AO2 SLP229 T01110094

STATION	DISTANCE KM	NEAREST OBS UTC	VIS SM	SKY	WIND DEG/KT	METAR
KAEG	133.80	2022-10-09T09:55:00 +00:00	10.00	OVC05000, M, M, M	360.00 / 4.00	KAEG 090955Z AUTO 36004KT 10SM -DZ OVC050 10/10 A3037 RMK AO2 T00970095

### 5.16 NOAA IGRA Radiosonde Wind Profile

Nearest sounding implies mean 0-12 km wind drift toward 60.3 deg at 3.87 m/s; a passive balloon could drift about 27.9 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
USM00072365	ALBUQUERQUE /INT.; NM.	114.10	2022-10-09T12:00 :00+00:00	60.30	3.87	27.90	17.50 at 13950.00 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	GOES18	BUCKET	noaa-goes18
ABI SAMPLE FILES	12	GLM SAMPLE FILES	12

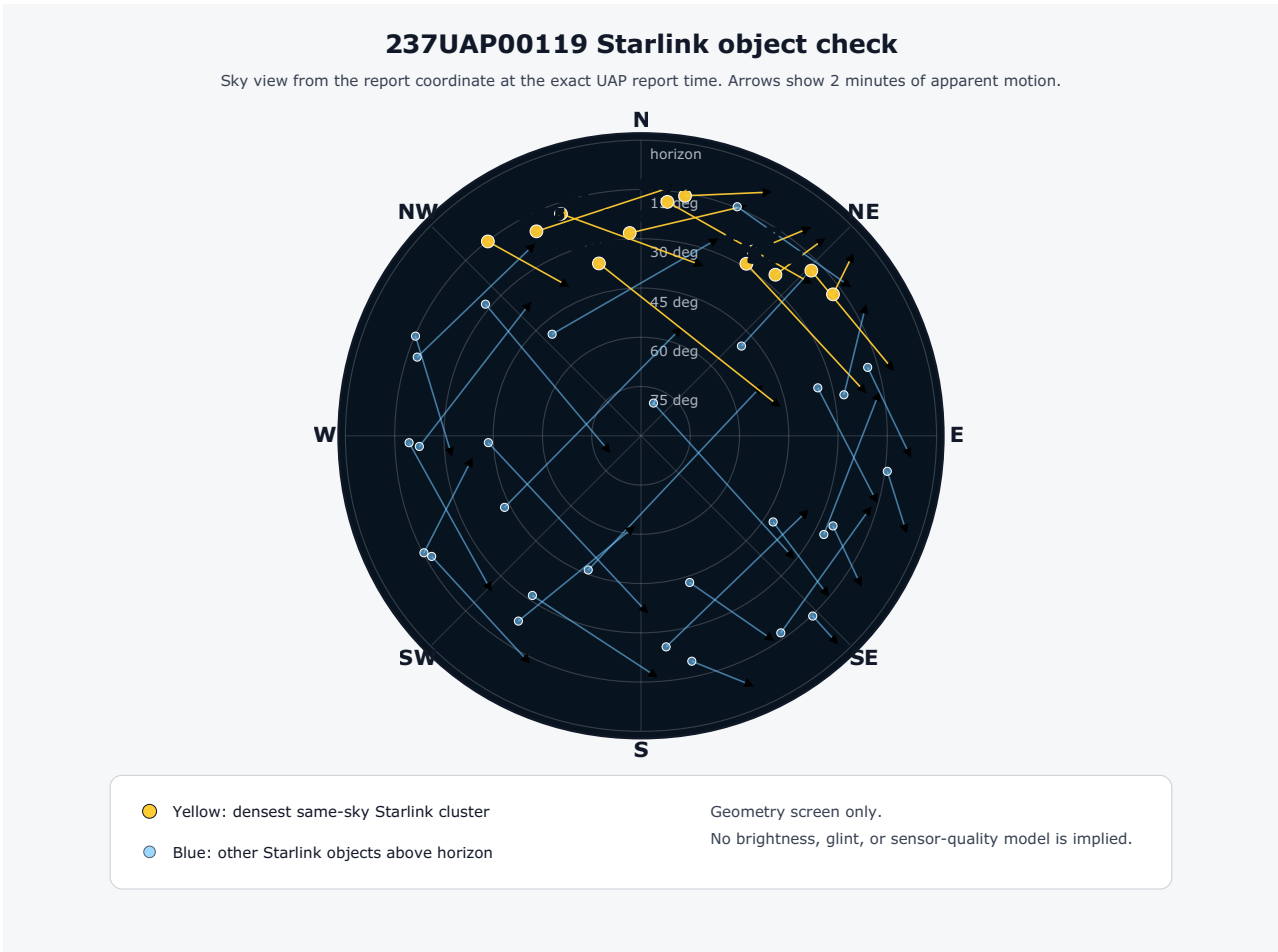
#### ABI sample objects:

- [ABI-L2-CMIPF/2022/282/10/OR\\_ABI-L2-CMIPF-M6C01\\_G18\\_s20222821000201\\_e20222821009509\\_c20222821009584.nc](#)
- [ABI-L2-CMIPF/2022/282/10/OR\\_ABI-L2-CMIPF-M6C01\\_G18\\_s20222821010201\\_e20222821019509\\_c20222821019574.nc](#)
- [ABI-L2-CMIPF/2022/282/10/OR\\_ABI-L2-CMIPF-M6C01\\_G18\\_s20222821020201\\_e20222821029509\\_c20222821029573.nc](#)
- [ABI-L2-CMIPF/2022/282/10/OR\\_ABI-L2-CMIPF-M6C01\\_G18\\_s20222821030201\\_e20222821039510\\_c20222821039575.nc](#)

#### GLM lightning sample objects:

- [GLM-L2-LCFA/2022/282/10/OR\\_GLM-L2-LCFA\\_G18\\_s20222821000000\\_e20222821000200\\_c20222821000226.nc](#)
- [GLM-L2-LCFA/2022/282/10/OR\\_GLM-L2-LCFA\\_G18\\_s20222821000200\\_e20222821000400\\_c20222821000414.nc](#)
- [GLM-L2-LCFA/2022/282/10/OR\\_GLM-L2-LCFA\\_G18\\_s20222821000400\\_e20222821001000\\_c20222821001009.nc](#)
- [GLM-L2-LCFA/2022/282/10/OR\\_GLM-L2-LCFA\\_G18\\_s20222821001000\\_e20222821001200\\_c20222821001214.nc](#)

## 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	2022-10-09T10:25:00+00:00	Directly used in propagation; this is a hard filter, not descriptive context.
LOCATION CONSTRAINT	34.36700, -105.67800	Directly used as observer point for azimuth/elevation/range computation.
COUNT / PATTERN	multiple-object/light language present	No compact same-launch count match; retained for unresolved report features.
MOTION LANGUAGE	moving	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	insufficient	237UAP00119 has too little discriminating evidence for a named identification. It is not treated as evidence of exotic activity; it is classified as insufficient/low-value until better sensor, aircraft, or weather data is available.

## 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.

# Appendix A. Public Report Text Extracts

## 237UAP00119

SKYWATCH INCIDENT REPORT

PRIMARY CODE: UNIDENTIFIED AERIAL PHENOMENON		
Date: 10:25 10/09/2022	Callsign: AAL2438	Origin: LAX
Status: Closed	Aircraft: A321	Destination: DFW
POD: DEN	Tail Number:	New Destination:
Reporting Facility: ZAB	Operator: AAL	Operator Type: Commercial
		Paged: YES

REMARKS

Starting at 0955 and continuing, aircraft reports: an unidentified aerial phenomenon overhead while E bound at FL350, over CNX. The unknown phenomenon was multiple lights moving in different directions, left of the constellation Leo.

## 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": "2022-10-09T10:25:00+00:00",
  "source_excerpt": "Starting at 0955 and continuing, aircraft reports: an unidentified aerial phenomenon overhead while E
bound at FL350, over CNX. The unknown phenomenon was multiple lights moving in different directions, left of the constellation
Leo.",
  "historical_starlink_element_rows": 3125,
  "observer": {
    "lat": 34.367000579833984,
    "lon": -105.6780014038086,
    "source": "aviation_fix:over CNX (public text extract 237UAP00119)"
  },
  "case_id": "237UAP00119",
  "starlink_above_horizon_at_report_time": 161,
  "starlink_catalog_ids_considered": 3177,
  "largest_same-sky_cluster_count": 19,
  "starlink_at_or_above_10_deg": 52,
  "top_starlinks": [
    {
      "azimuth_deg": 20.87,
      "azimuth_plus_2m_deg": 128.65,
      "azimuth_plus_5m_deg": 133.01,
      "element_age_hours": 0.59,
      "element_epoch": "2022-10-09T09:49:27.562656+00:00",
      "elevation_deg": 79.34,
      "elevation_plus_2m_deg": 30.77,
      "elevation_plus_5m_deg": 5.86,
      "epoch_altitude_km": 553.13,
      "ground_track_bearing_deg": 135.41,
      "ground_track_label": "SE",
      "launch_date": "2021-04-29",
      "name": "STARLINK-2516",
      "norad_id": "48283",
      "range_km": 558.28,
      "sky_motion_label": "eastward, setting",
      "subpoint_lat": 35.1669,
      "subpoint_lon": -105.3062
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      "azimuth_deg": 48.23,
      "azimuth_plus_2m_deg": 45.74,
      "azimuth_plus_5m_deg": 45.51,
      "element_age_hours": 1.38,
      "element_epoch": "2022-10-09T11:47:36.970368+00:00",
      "elevation_deg": 48.99,
      "elevation_plus_2m_deg": 17.36,
      "elevation_plus_5m_deg": 0.97,
      "epoch_altitude_km": 545.62,
      "ground_track_bearing_deg": 46.4,
      "ground_track_label": "NE",
      "launch_date": "2022-04-29",
      "name": "STARLINK-3852",
      "norad_id": "52345",
      "range_km": 697.47,
      "sky_motion_label": "westward, setting",
      "subpoint_lat": 36.8509,
      "subpoint_lon": -102.1473
    },
    {
      "azimuth_deg": 318.81,
      "azimuth_plus_2m_deg": 21.06,
      "azimuth_plus_5m_deg": 37.84,
      "element_age_hours": 2.97,
      "element_epoch": "2022-10-09T13:23:05.853696+00:00",
      "elevation_deg": 48.9,
      "elevation_plus_2m_deg": 25.92,
      "elevation_plus_5m_deg": 5.09,
      "epoch_altitude_km": 553.23,
      "ground_track_bearing_deg": 47.0,
      "ground_track_label": "NE",
      "launch_date": "2021-03-04",
      "name": "STARLINK-2192",
      "norad_id": "47769",
      "range_km": 707.91,
      "sky_motion_label": "eastward, setting",
      "subpoint_lat": 37.2336,
      "subpoint_lon": -108.8597
    },
    {
      "azimuth_deg": 201.47,
      "azimuth_plus_2m_deg": 67.66,
```

```

    "azimuth_plus_5m_deg": 49.44,
    "element_age_hours": 3.01,
    "element_epoch": "2022-10-09T13:25:42.676608+00:00",
    "elevation_deg": 46.09,
    "elevation_plus_2m_deg": 50.47,
    "elevation_plus_5m_deg": 11.15,
    "epoch_altitude_km": 553.21,
    "ground_track_bearing_deg": 41.77,
    "ground_track_label": "NE",
    "launch_date": "2021-05-09",
    "name": "STARLINK-2690",
    "norad_id": "48480",
    "range_km": 734.43,
    "sky_motion_label": "westward, rising",
    "subpoint_lat": 30.415,
    "subpoint_lon": -107.4654
  },
  {
    "azimuth_deg": 267.43,
    "azimuth_plus_2m_deg": 178.16,
    "azimuth_plus_5m_deg": 152.62,
    "element_age_hours": 3.58,
    "element_epoch": "2022-10-09T14:00:01.000224+00:00",
    "elevation_deg": 43.46,
    "elevation_plus_2m_deg": 36.34,
    "elevation_plus_5m_deg": 8.45,
    "epoch_altitude_km": 545.79,
    "ground_track_bearing_deg": 136.51,
    "ground_track_label": "SE",
    "launch_date": "2022-08-19",
    "name": "STARLINK-4511",
    "norad_id": "53527",
    "range_km": 756.21,
    "sky_motion_label": "westward, setting",
    "subpoint_lat": 34.0394,
    "subpoint_lon": -111.1599
  },
  {
    "azimuth_deg": 242.32,
    "azimuth_plus_2m_deg": 20.14,
    "azimuth_plus_5m_deg": 40.85,
    "element_age_hours": 3.0,
    "element_epoch": "2022-10-09T13:25:05.058912+00:00",
    "elevation_deg": 43.08,
    "elevation_plus_2m_deg": 55.34,
    "elevation_plus_5m_deg": 12.18,
    "epoch_altitude_km": 553.32,
    "ground_track_bearing_deg": 42.88,
    "ground_track_label": "NE",
    "launch_date": "2020-06-13",
    "name": "STARLINK-1510",
    "norad_id": "45784",
    "range_km": 769.32,
    "sky_motion_label": "eastward, rising",
    "subpoint_lat": 32.101,
    "subpoint_lon": -110.539
  },
  {
    "azimuth_deg": 161.65,
    "azimuth_plus_2m_deg": 147.19,
    "azimuth_plus_5m_deg": 142.86,
    "element_age_hours": 0.97,
    "element_epoch": "2022-10-09T11:23:00.680352+00:00",
    "elevation_deg": 42.93,
    "elevation_plus_2m_deg": 16.08,
    "elevation_plus_5m_deg": 0.43,
    "epoch_altitude_km": 553.24,
    "ground_track_bearing_deg": 139.06,
    "ground_track_label": "SE",
    "launch_date": "2020-04-22",
    "name": "STARLINK-1335",
    "norad_id": "45581",
    "range_km": 771.59,
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    "subpoint_lon": -103.9818
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  {
    "azimuth_deg": 123.11,
    "azimuth_plus_2m_deg": 130.44,
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    "element_age_hours": 3.8,
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    "elevation_deg": 41.96,
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  "name": "STARLINK-1357",
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  "range_km": 874.81,
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  "subpoint_lon": -107.4908
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  "azimuth_plus_5m_deg": 118.35,
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  "element_epoch": "2022-10-09T09:49:42.887424+00:00",
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  "epoch_altitude_km": 545.44,
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  "name": "STARLINK-3744",
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  "subpoint_lon": -98.3824
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  "azimuth_plus_5m_deg": 159.35,
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  "elevation_plus_5m_deg": 1.61,
  "epoch_altitude_km": 545.71,
  "ground_track_bearing_deg": 139.96,
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  "name": "STARLINK-3888",
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  "range_km": 952.27,
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  "subpoint_lon": -110.0031
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  "elevation_plus_2m_deg": 20.51,
  "elevation_plus_5m_deg": 4.45,
  "epoch_altitude_km": 545.81,
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  "name": "STARLINK-4260",
  "norad_id": "52986",
  "range_km": 1016.11,
  "sky_motion_label": "eastward, setting",
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  "subpoint_lon": -100.5961
}

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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: 237UAP00119
TIME AND OBSERVER COORDINATE	extracted	2022-10-09T10:25:00+00:00 at 34.36700, -105.67800
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	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	insufficient / low anomaly value	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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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. *237UAP00119.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-615/493468575/237UAP00119.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/>