



ExoAnalytic Solutions

GeoGov Summit 2023

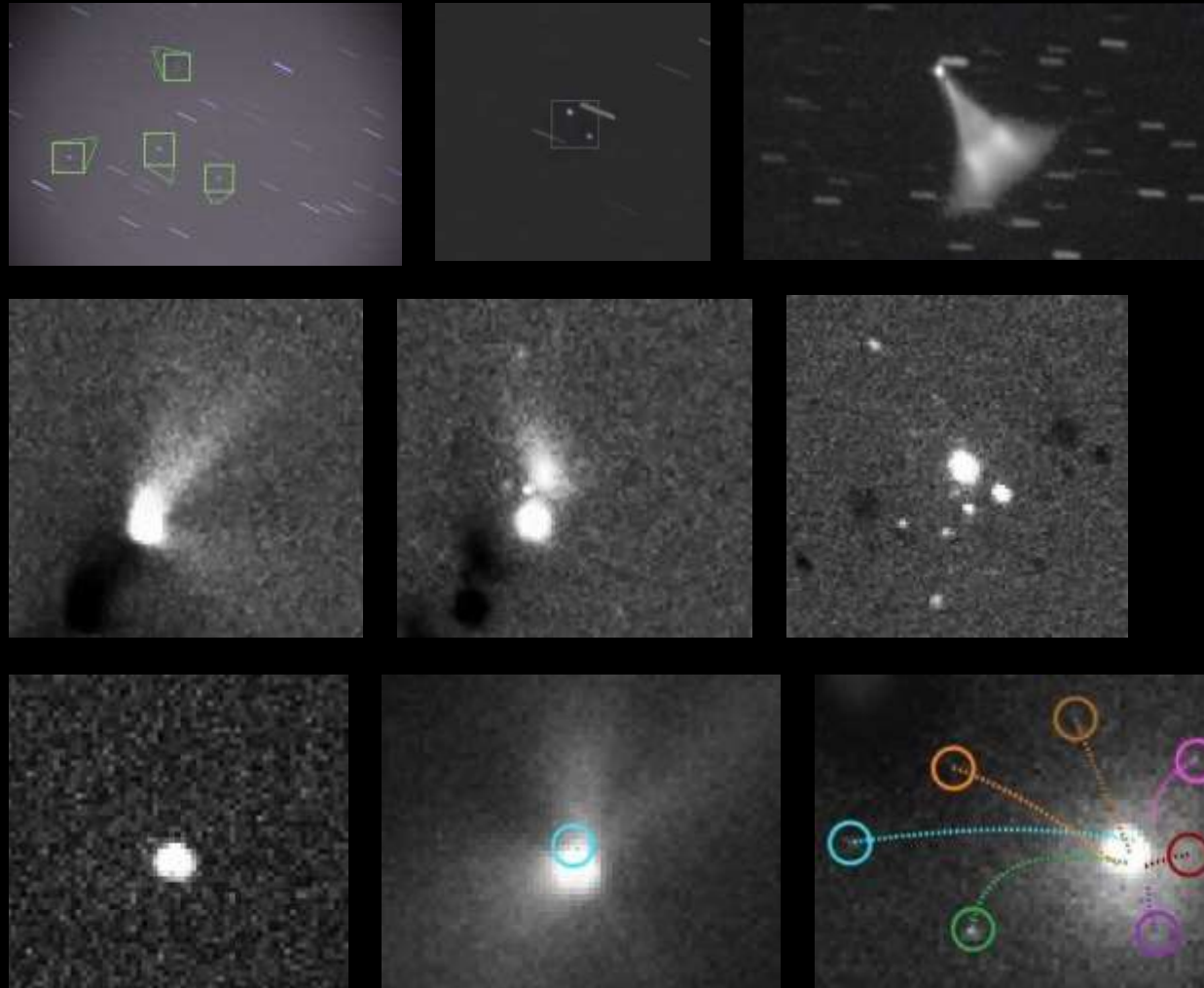
Deep Dive Discussion on Space Domain Awareness

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7 September 2023

A Decade Observing the Post GEO Gold Rush

- 1/1/2010 ● GALAXY 15
- 1/1/2011 ● Exo 1st Light
- 1/1/2012
- 1/1/2013 ● GOES 15 / AMC 10
- 1/1/2014
- 1/1/2015 ● GSSAP 1&2
LUCH (OLYMP)
- 1/1/2016 ● EUTELSAT 33B
AMOS 5
- 1/1/2017 ● GSSAP 3&4
SHIJIAN 17
AMC 9
- 1/1/2018 ● TELKOM 1
- 1/1/2019 ● TJS 3 / TJS 3 AKM
GALAXY 11
INTELSAT 29E
- 1/1/2020 ● MEV 1 / INTELSAT 901
VENESAT 1
- 1/1/2021 ● COSMOS 2473
JDRS 1
- 1/1/2022 ● MEV 2 / INTELSAT 10 02
SJ-21 Launch,
Deployment, Docking



Observe

Track

Catalog

Dominate

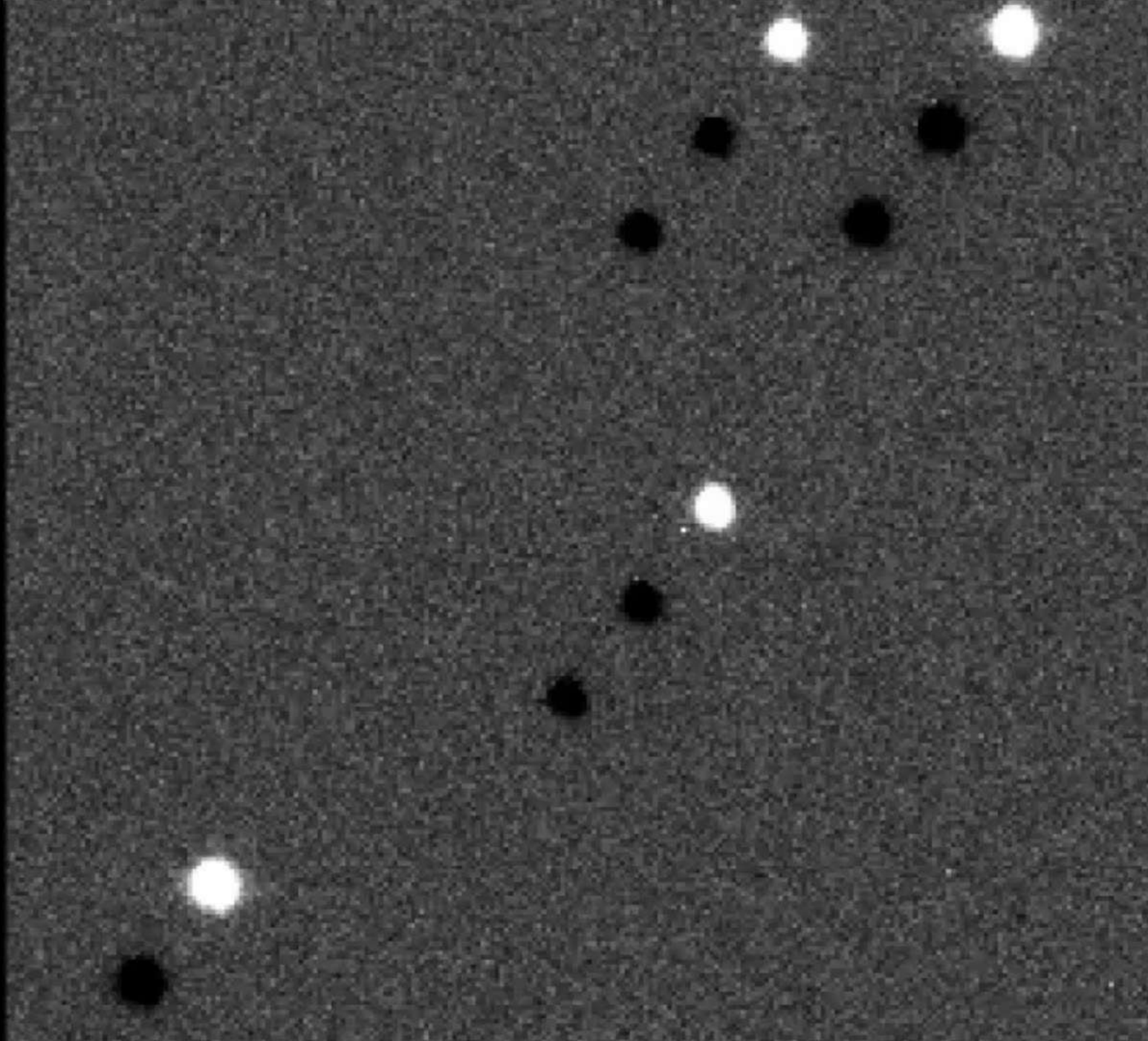
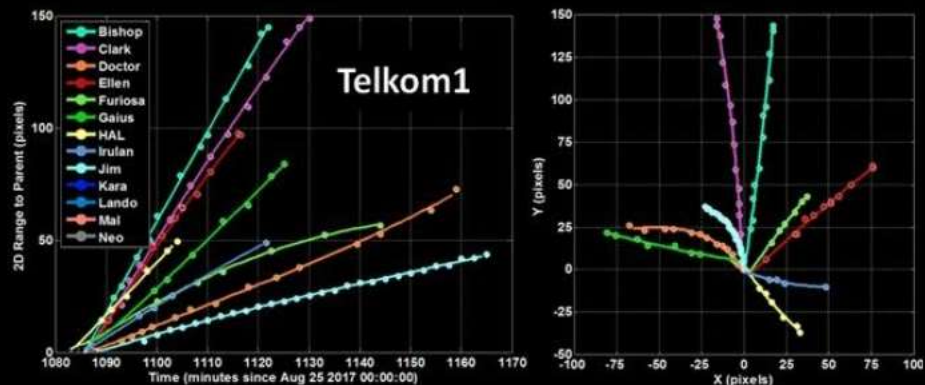
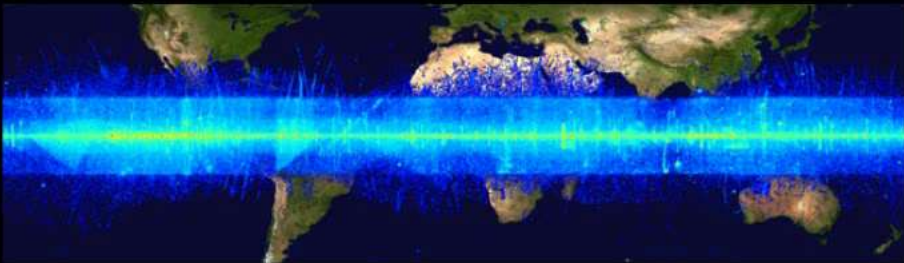
Sensor Network Capability Overview



Performance Metrics:

Coverage	All 360 degrees GEO Longitude
Availability	99+% for each GEO Longitude
Persistence	18 hours per day
Tasking	Real-time Dynamic (MTM)
Timeliness	Real-time (15 – 30 sec. latency)
Cadence	6 – 30 sec. between observations
Sensitivity	18 – 21 Mv (~10 cm at GEO)
Accuracy	0.25 arcsec (~30m at GEO)





Events and Orbits:
Age 30d 7d 1d
CGE 55 4 0
ELE 2017 1957 1138
TLE 21054 20267 12601

Alerts:
CGA 27 Persistent
RGA 115 Last 36h
RGA 14 Active

ExoALERT

24/7 real-time automated alerts for GEO

- Real-Time Uncooperative Monitoring

- Fully automated processing

- 100% independent of USG data

- New Objects

- Maneuvers

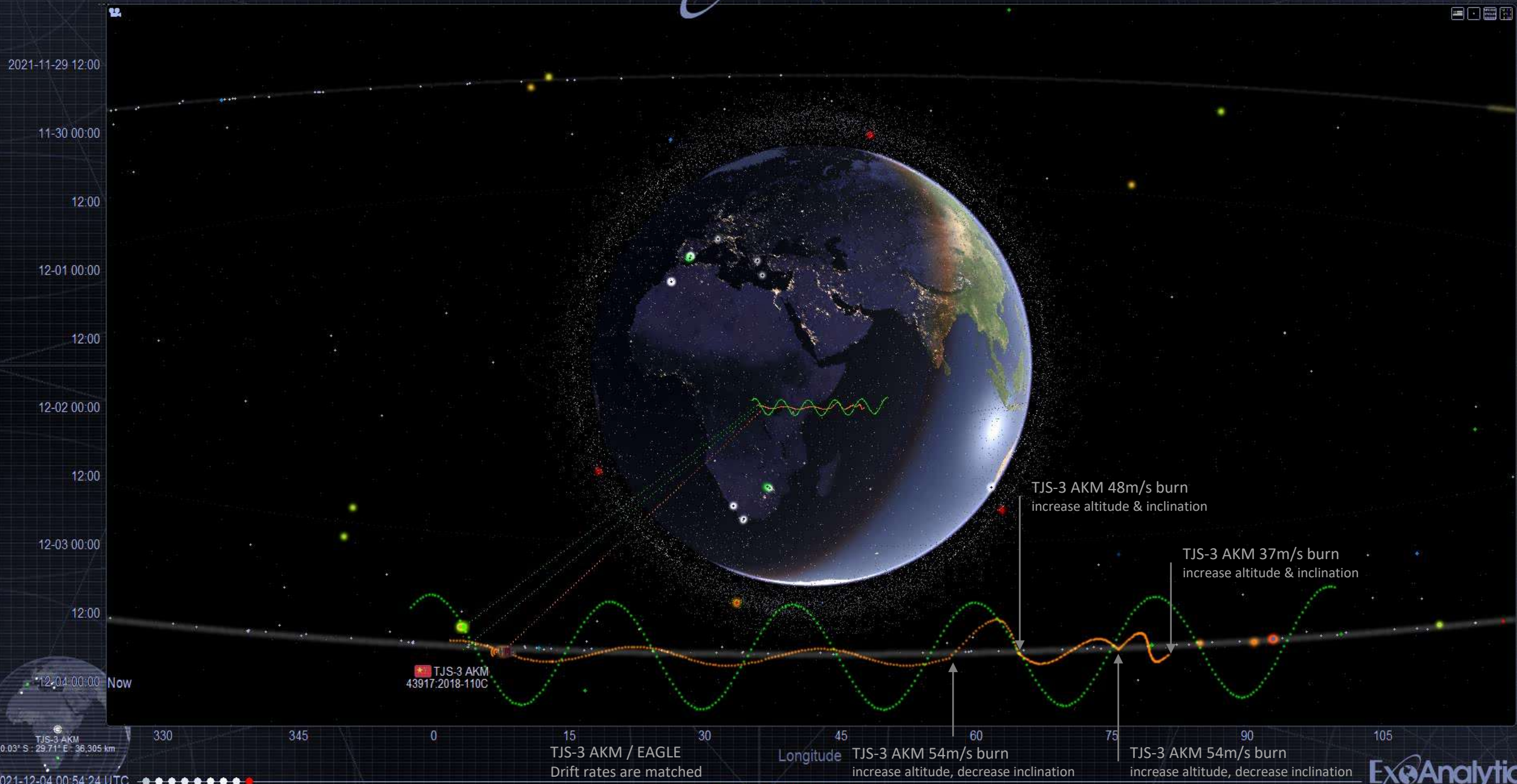
- Attitude Changes

- Proximity Events

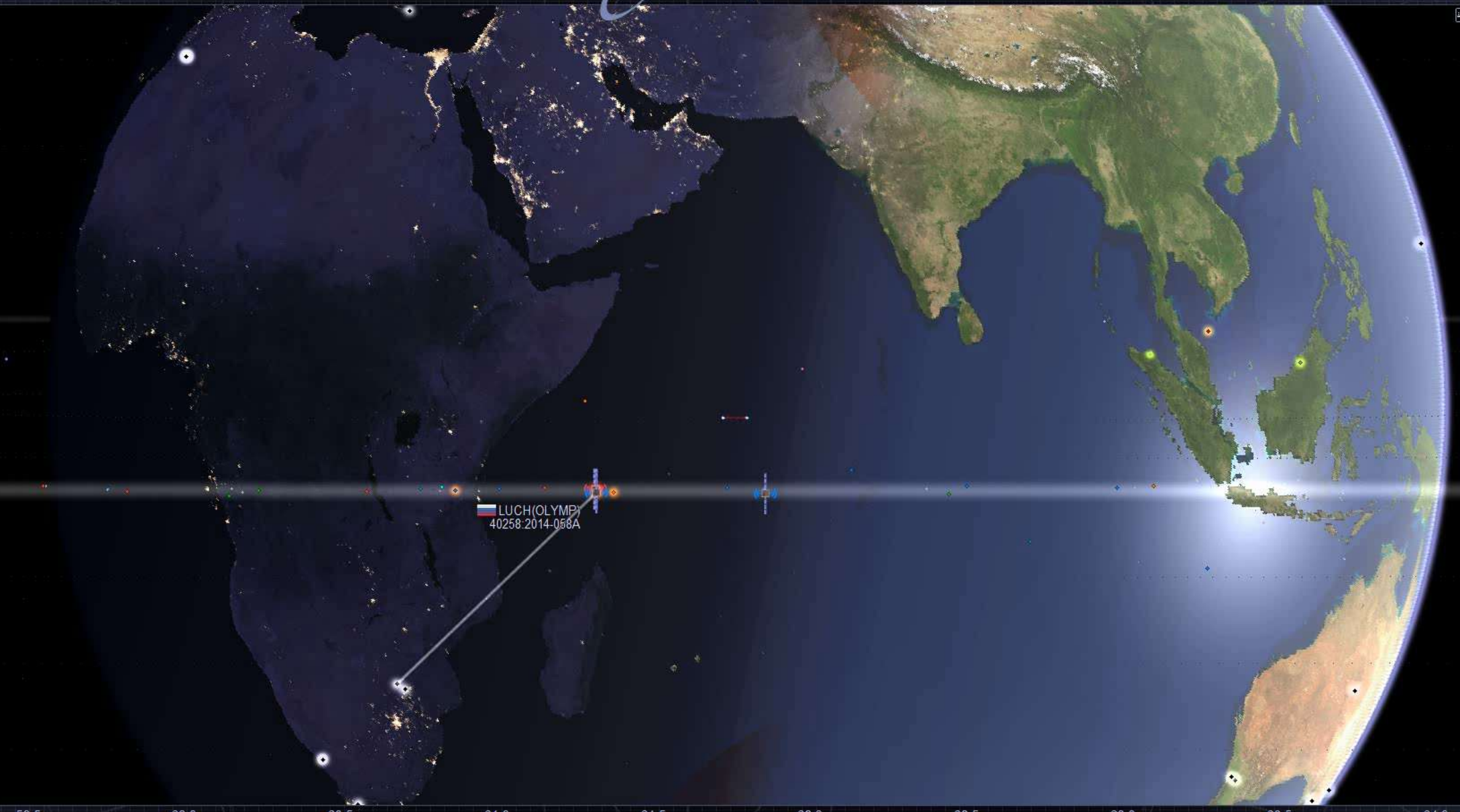
Persistent Alerts

- Proximity
- Tumbling & Drifting
- Tumbling ● Drifting

2021-04-24 02:50:50 UTC



2022-01-14
01-16
01-18
01-20
01-22
01-24
01-26
01-28
01-30



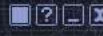
LUCH(OLYMP)
40258:2014-068A

LUCH(OLYMP)
0.02° S - 61.94° E - 35,785 km

59.5 60.0 60.5 61.0 61.5 62.0 62.5 63.0 63.5 64.0

Longitude

2022-01-12 03:21:06 UTC



2022-01-19

01-20

01-21

01-22

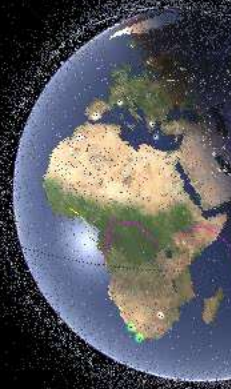
01-23

01-24

01-25

01-26

01-27



SJ-21
49330-2021-094A



SJ-21
5.69° N - 13.80° E - 35,354 km

240 270 300 330 0 30 60 90 120 150 180 210

Longitude

2022-01-18 14:23:51 UTC

ExoAnalytic Proprietary





2022-01-18



01-19

01-20

01-21

01-22

01-23

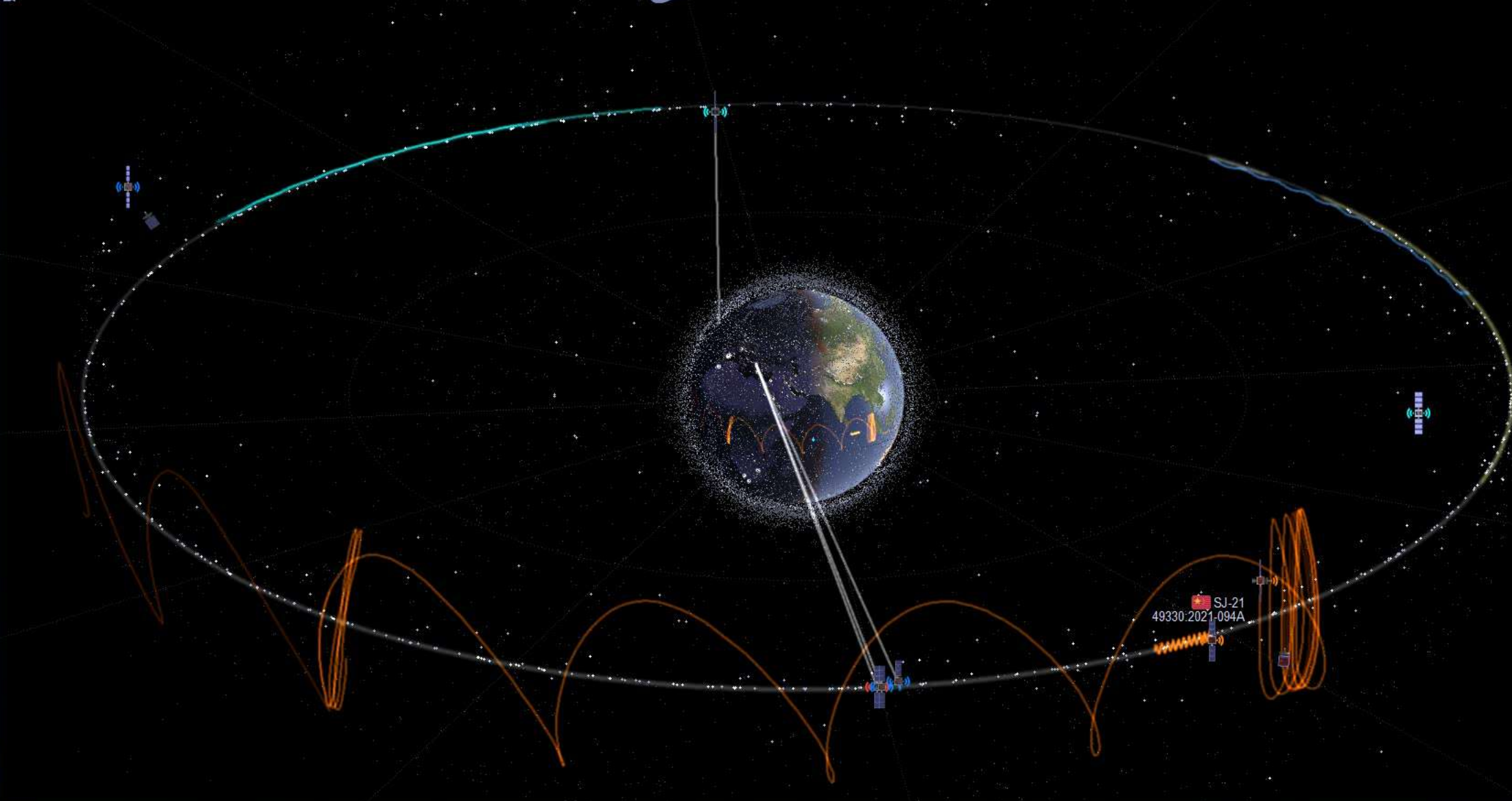
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01-28



SJ-21
49330:2021-094A



240 270 300 330 0 30 60 90 120 150 180 210

Longitude

2022-01-17 23:47:19 UTC



SJ-23 Full Maneuver Near USA-270



2023-01-13 14:16:50 UTC



SJ-23 Terminal Ingress Sequence

