

# LeoLabs Collision Avoidance

Empowering satellite operators with advanced tools for safety of flight

LeoLabs Collision Avoidance enables satellite owner-operators to enhance operational safety with industry-leading web analytics tools for conjunction event monitoring and risk analysis. Built on the LeoLabs data platform – the industry's only platform fueled by a dedicated commercial radar network – this tailored service provides users access to the most advanced tools and data available to understand event risk and inform operational decisions.

## Protect your satellites, your business and your bottom line.

LeoLabs Collision Avoidance is a cloud-based, turnkey system that consists of several unique services and powerful capabilities:

### Streaming Conjunctions

Real-time, continuous delivery of Conjunction Data Messages (CDMs) and dynamic analytics on events using LeoLabs tracking data and operator-provided ephemerides.

### On-Demand Ephemeris Screening

Screening of candidate ephemerides against the full LeoLabs object catalog to search for potential conjunctions, with results returned automatically in less than 30 seconds.

### Enhanced Secondary Object Support

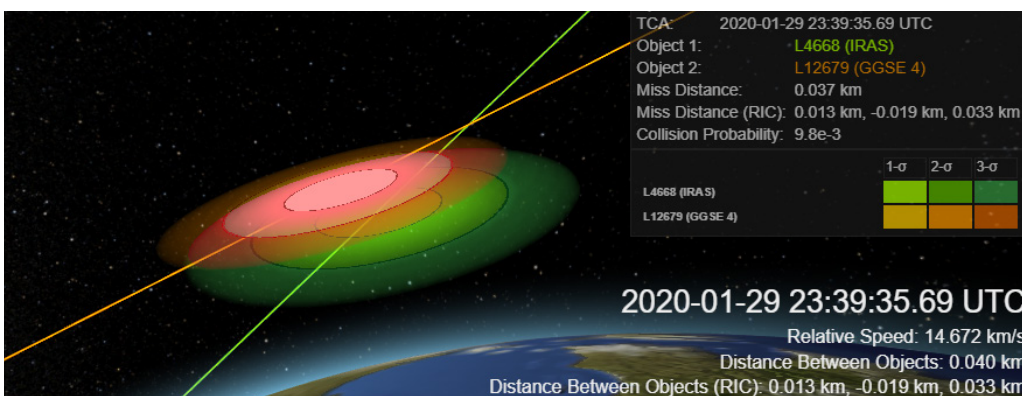
Increased data collection on secondary objects in high-risk conjunction events and delivery of high accuracy state vectors with covariances.

### External CDM Integration

Ingestion of CDMs from the 18th Space Defense Squadron (18 SDS) into the LeoLabs data platform, with automatic conjunction event matching. Search and view LeoLabs CDMs and 18 SDS CDMs in a single location, utilizing the best data sources available for maneuver decision making on a given event.

### Web Dashboards

Tailored web tools for operators and analysts, including Conjunction Analysis Reports with interactive data plots and visualizations for key event risk and trending metrics. Understand how collision probability evolves over time and is sensitive to multiple environmental factors.



**Reduce collision risk with real-time alerts**



**Decrease maneuver screening time by 99%**



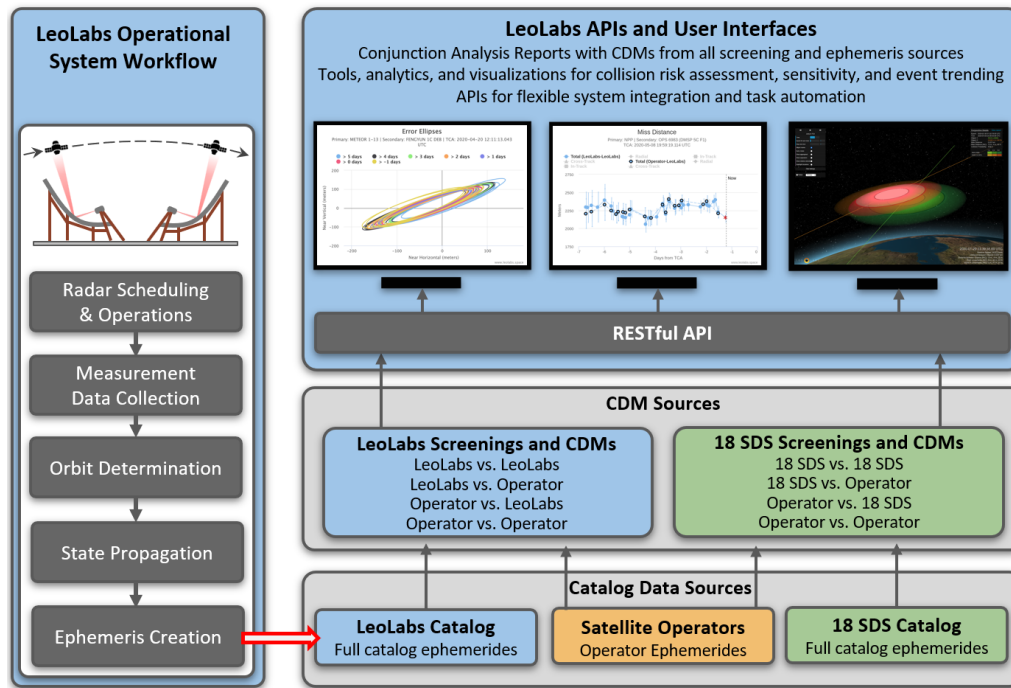
**Automate tasks & reduce staff workload**



**Foster best practices for space sustainability**

## Integration of Multiple Data Sources

LeoLabs Collision Avoidance functions as a stand-alone system or as an augmentation to existing systems and data sources already in use. It can incorporate CDMs from multiple sources of ephemerides and conjunction screenings including LeoLabs, owner-operator, and 18 SDS.



## Operational Benefits

### More Data, When It Matters

Receive up to 400% more frequent conjunction event updates, to make maneuver decisions with higher confidence.

### Full Data Access

Receive high accuracy state vectors and ephemerides with full covariance matrices on secondary objects in all conjunction events.

### Traceability

Know when to expect the next event updates, with schedule transparency on next radar passes and tracking confidence predictions.

### Lower Operational Costs

Through increased automation and no waiting for human in the loop processes, save staff time and resources for your operational teams.

### Turnkey System for Spaceflight Safety

LeoLabs Collision Avoidance is an end-to-end service providing both additional tracking data and analytics tools for conjunction risk assessment – no need to build, buy or maintain separate analysis software.

## Ready to get started?

Contact us today to learn more about LeoLabs Collision Avoidance or the other services in our portfolio. A trial evaluation can be activated upon request at: [platform.leolabs.space/register](https://platform.leolabs.space/register).

## Radar Network Growth

- Today: six radars at four locations
- 2022: adding one southern hemisphere site and one northern hemisphere site
- 2023-2025: further expansion to 20+ sites



**Costa Rica**  
Costa Rica Space Radar



**New Zealand**  
Kiwi Space Radar



**Texas**  
Midland Space Radar



**Alaska**  
Poker Flat Incoherent Scatter Radar



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## Radar Network Planned Capability

- Industry-first capability to track objects < 10cm in size
- Catalog of 10x more LEO objects than today (estimate)
- Revisit rates of 10+ times per day for prioritized objects