

# Debris Detection Using Star Trackers

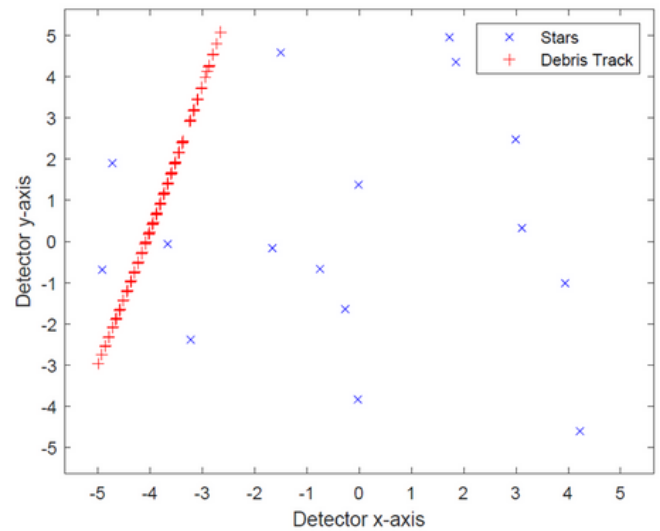
Arcsec's star trackers can be used to identify and map space debris. Our star trackers process the full frame of information that reaches our sensor allowing us to identify and categorize space debris, that is later available in real time through a database



## FEATURES

### Benefits

- Retrofitted to in orbit star trackers from arcsec
- Scalable solution: Added to a satellite or constellation via software update
- Capture small size debris that can't be tracked from Earth due to atmospheric distortion
- Cover all orbits, no blind spots
- Revenue stream for satellite operators



### Debris Detection

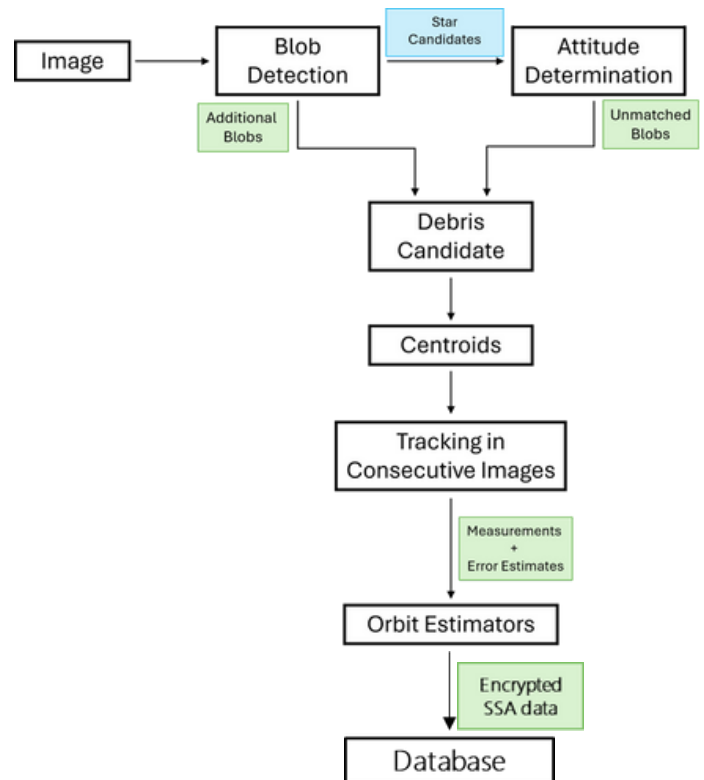
- Debris of 50 cm from >200km away
- Debris of 20 cm from 100 km away
- Debris of 10 cm from 50 km away
- Debris of 3 cm from 25 km away

### Database

- Real time space debris database
- Data transfer from satellite +/-350 Kb

### Availability

- Sagitta Star Tracker
- Scorpio Star Tracker
- ARCUS ADCS system





# Precision Aerospace Solutions



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## Arcsec's Remarkable Achievements in Perspective



**<0.2s** LISA Solution time

Robust attitude solutions at 10Hz after short acquisition time.



**2** Interplanetary star trackers

Two Twinkle star trackers will visit an asteroid on the Hera mission.



**375** Twinkles in a box

Number of Twinkle star trackers you could put in a 6U CubeSat. Although it might be excessive.



**+2000** Hours

Number of hours both Sagitta and Twinkle gather real sky data each year at our La Palma site.