



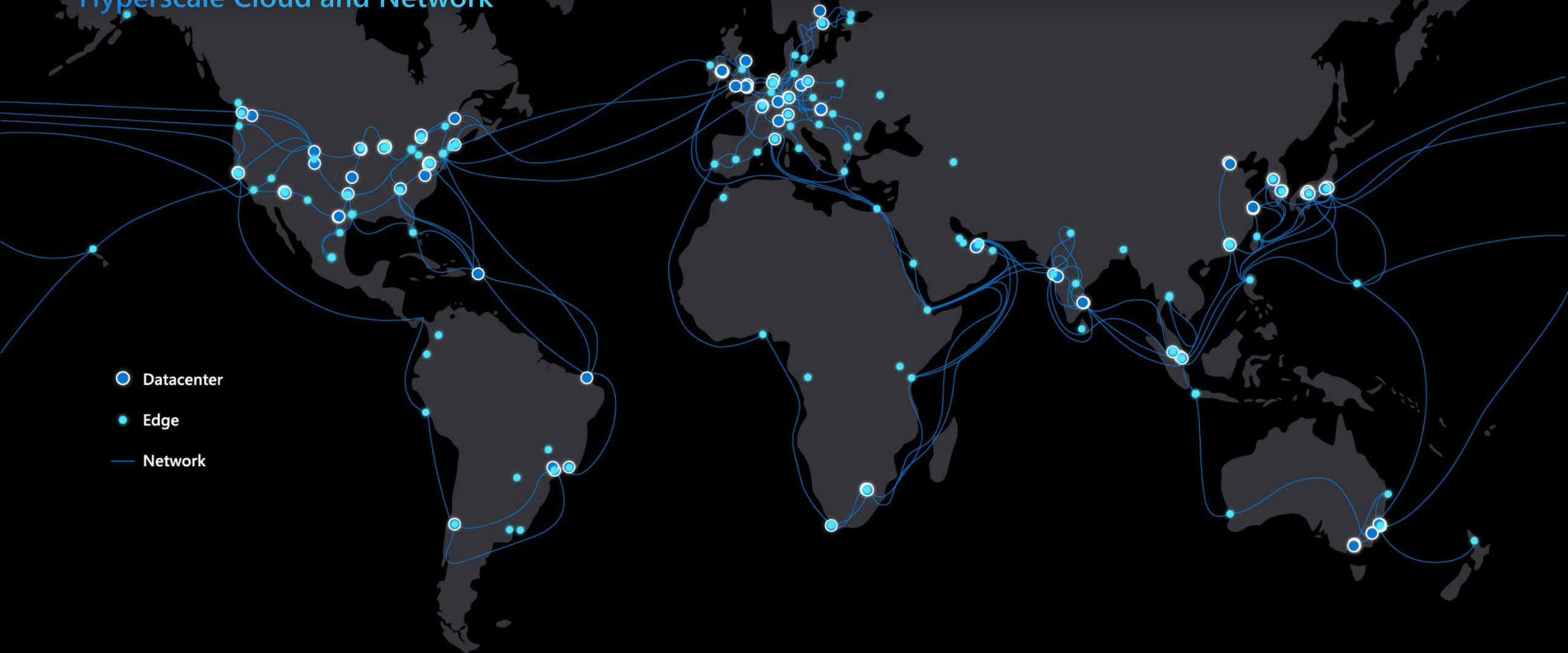
# Azure Space

Cloud powered innovation on and off the planet

Prepared for:  
GSAW 2024

# Microsoft Global Network

Hyperscale Cloud and Network



○ Datacenter

● Edge

— Network

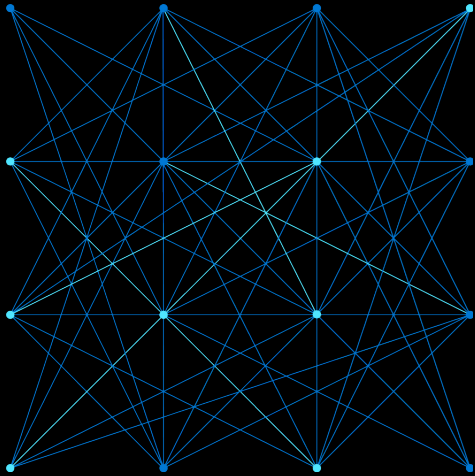
# Azure Cloud environments offer comprehensive authorization

CLOUD ENVIRONMENT				
	Commercial	Government	Secret	Top secret
STATE	Live	Live	Live	Live
AUTHORIZATION	FedRAMP High DoD IL2 HIPAA	FedRAMP High DoD IL4, DoD IL5 CJIS, IRS 1075, ITAR, DFARS, CMMC, HIPAA, StateRAMP	DoD IL6 ICD 503, ICD 705 Joint Special Access Program (SAP) Implementation Guide (JSIG) PL3	ICD 503, ICD 705 Joint Special Access Program (SAP) Implementation Guide (JSIG) PL3
INFRASTRUCTURE	70+ Regions 35 countries	5 Regions (2 regions DoD exclusive) >150 miles apart	3 Regions >150 miles apart	2 Regions >150 miles apart

# Azure Orbital

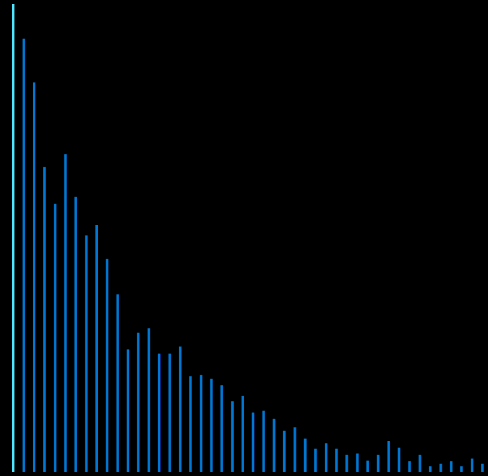
The product family of Azure Space

C O N N E C T



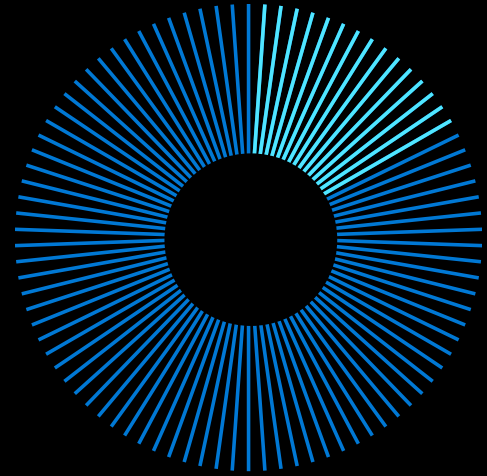
How can Azure be accessed from **anywhere** on the planet?

A N A L Y Z E



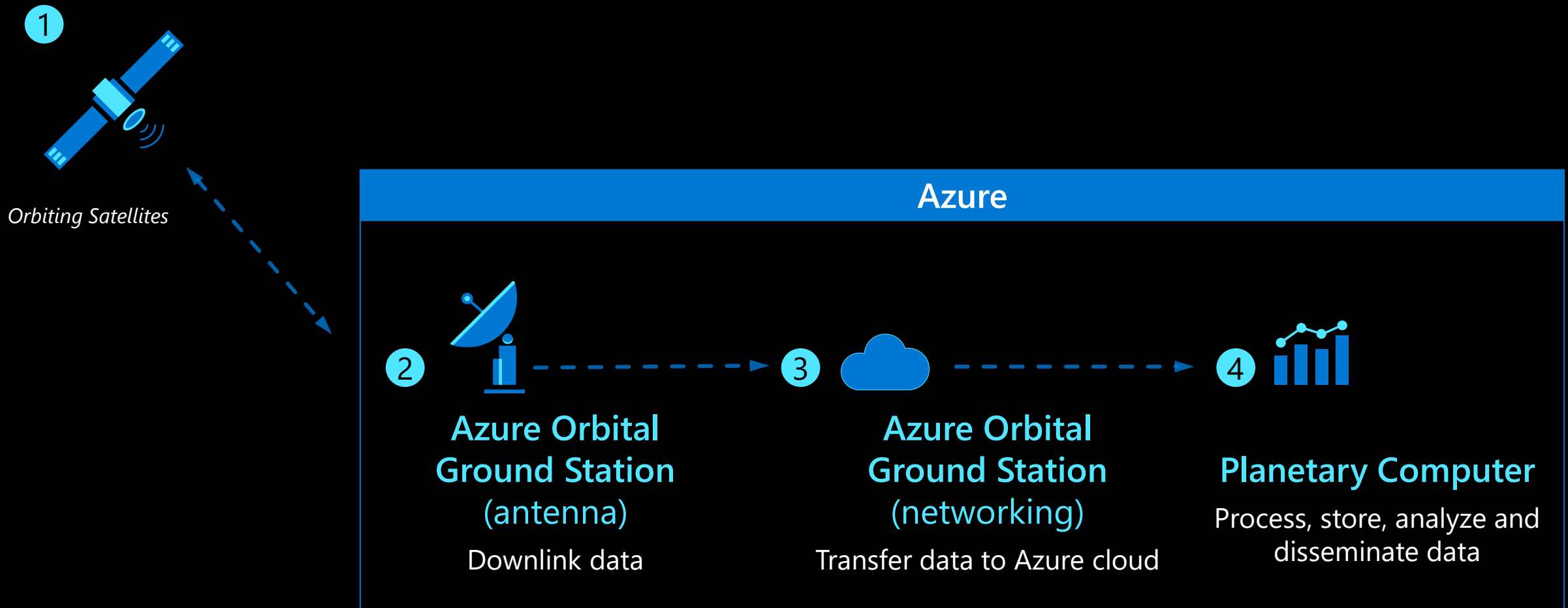
How can **anyone** access and create insights from space data?

D E V E L O P



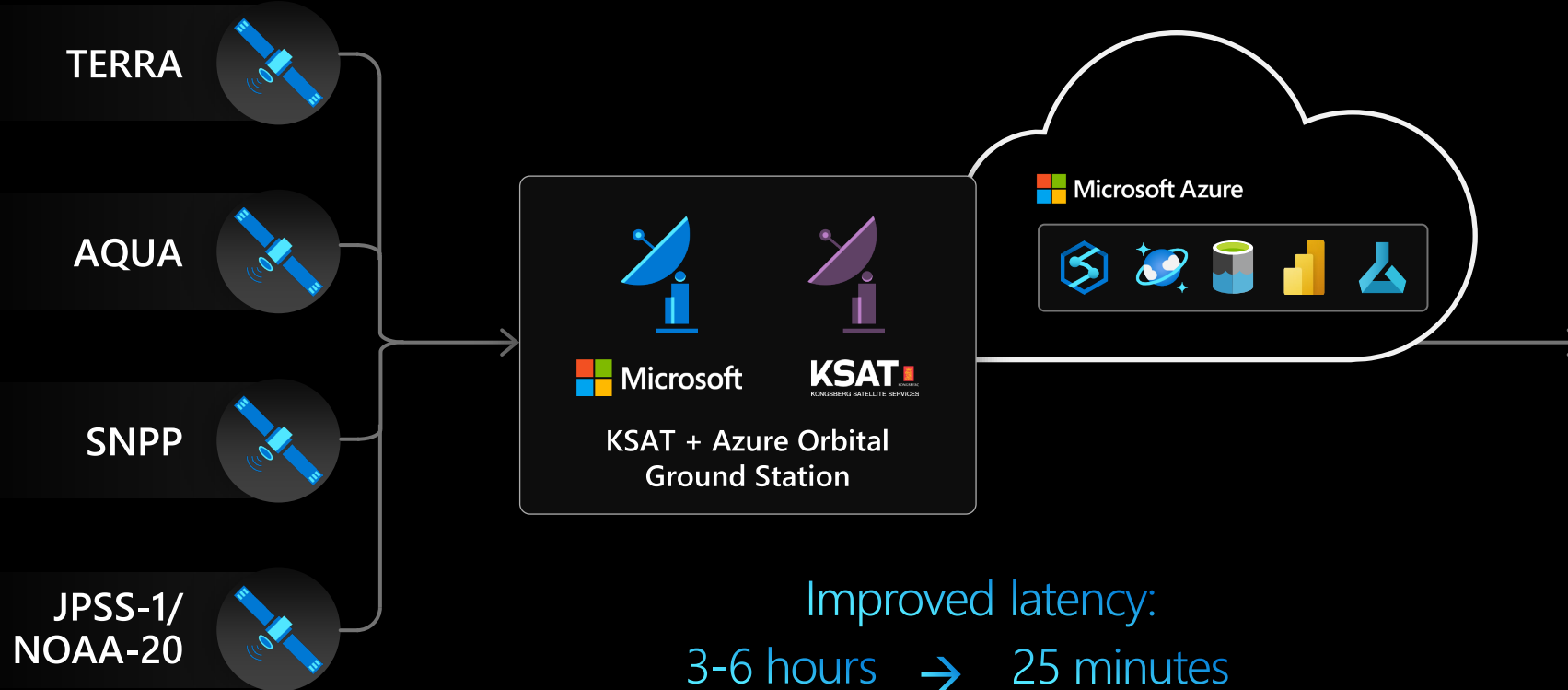
How can **any developer** be a space developer?

Azure provides end-to-end support for spaceborne data collection downlink, processing, storage, analytics, and dissemination

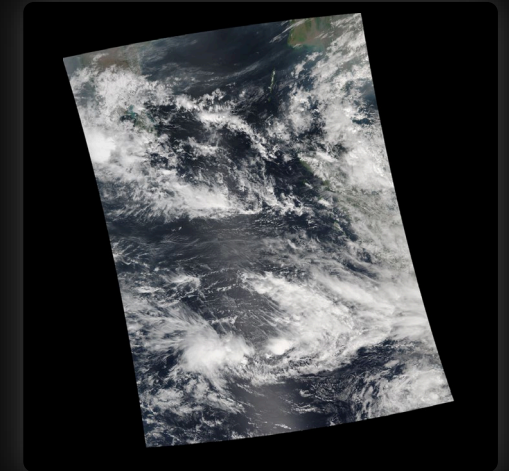
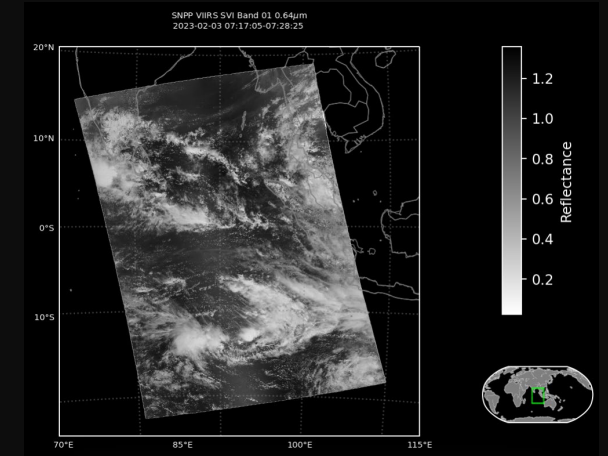




# Overview



## Near Real-time Science Data Products



## Explore datasets

Chat

Select a dataset to visualize

Select a preset filter to find data

Select a rendering option



## Geo Copilot

An experimental generative AI search and explore experience for the Planetary Computer.

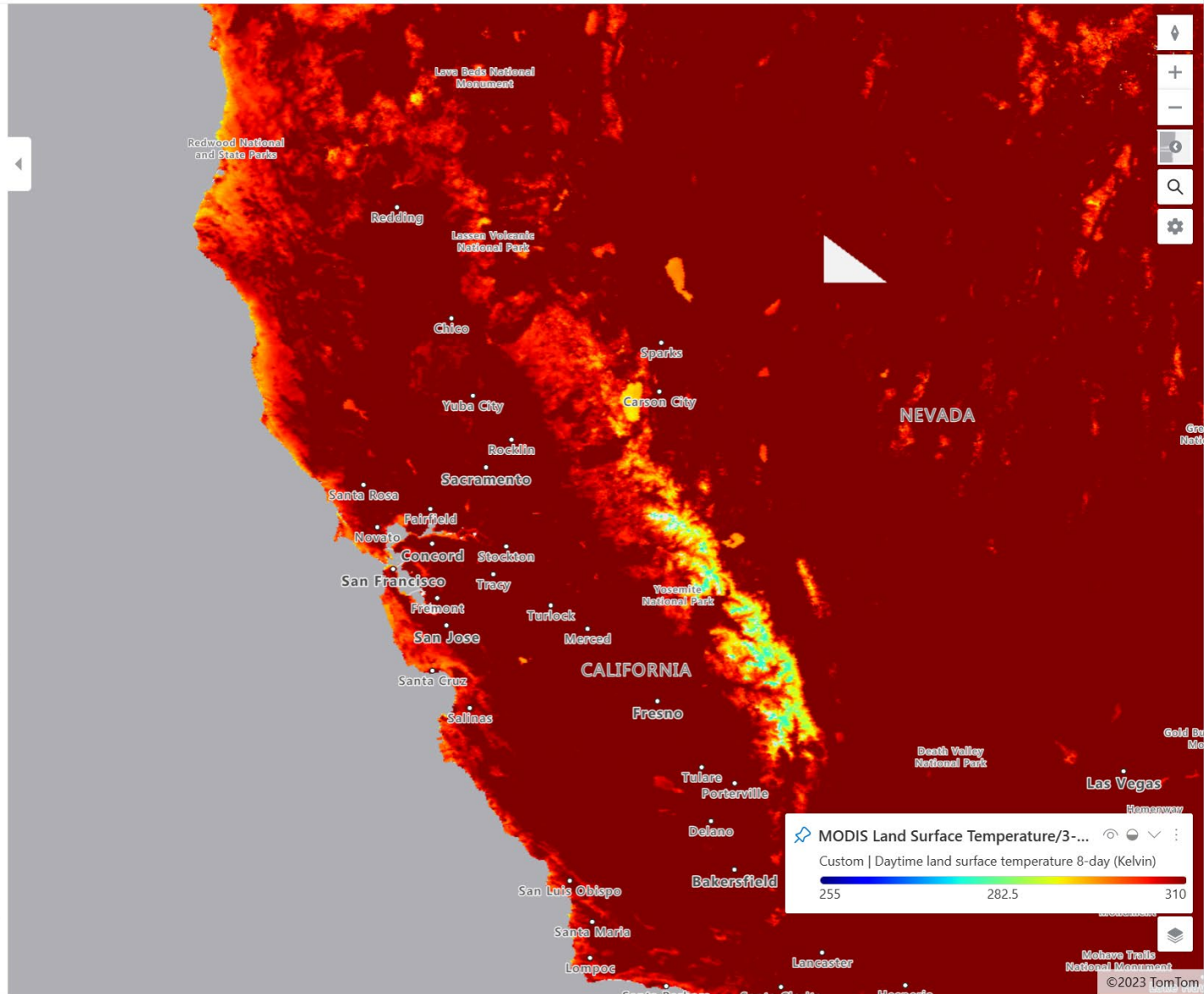
Welcome to Geo Copilot 🙌. I can help you find and visualize geospatial data within the Planetary Computer. What are you looking for?

Show me the heatwave in California that's happening right now

I am showing you the **heatwave happening right now in California** using the **MODIS Land Surface Temperature and Emissivity 8-Day** dataset. This dataset provides land surface temperature information on a global scale. Look for areas with higher temperatures (represented by warmer colors) to identify the regions affected by the heatwave.

[Explore](#)[Pin to the map](#)[More info](#)

Ask about Planetary Computer data...





## Geo Copilot

An experimental generative AI search and explore experience for the Planetary Computer.

**13Q1-061** which provides the Normalized Difference Vegetation Index (NDVI) and Enhanced Vegetation Index (EVI) every 16 days at a spatial resolution of 250 meters. This dataset is great for visualizing changes at a global scale and can help identify areas of high biomass. I will show you the NDVI layer which provides an indication of vegetation health and moisture levels. Look for areas with higher NDVI values (darker green) to identify regions with healthier vegetation.

What information could I get from SAR data?

Synthetic Aperture Radar (SAR) data can provide valuable information for various applications such as monitoring land cover changes, detecting floods, and analyzing surface deformations.

**Sentinel-1** datasets, including **Sentinel-1 Radiometrically Terrain Corrected (RTC)** and **Sentinel-1 Level-1 Ground Range Detected (GRD)**, are particularly useful for studying SAR data. One advantage of SAR data is its ability to penetrate clouds and work effectively during both day and night. This allows for consistent and reliable observations of the Earth's surface, making it a valuable resource for studying changes in land cover, vegetation, and other environmental phenomena.

Show me SAR data in California

I am showing you the **Sentinel-1 Level-1 Ground Range Detected (GRD)** dataset, which contains SAR data for California. This dataset is suitable for visualizing and analyzing medium and large-scale areas. Look for differences in color, texture, and intensity to analyze the surface and structures in the area. Since SAR data can penetrate clouds and work effectively during day and night, it provides consistent observations of the Earth's surface.

Ask about Planetary Computer data...





# Learn more about Azure Space

Get access to more details about Azure Space, including an overview, quickstart guide, tutorials, and how-to guides at the [Azure Orbital site](#).