



AGUACEROWX USER GUIDE

Satellite and lightning

Satellite covers GOES-East and GOES-West, Himawari-9 and EUMETSAT at native resolution, with single bands, RGB composites and recipes you build yourself. GLM lightning from the toolbar draws on top of any layer.

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BEFORE YOU START

- Load satellite from the sidebar: on **Select Data**, click **Satellite** in the data type filter, then pick a satellite and a sector.
- Single bands and RGB products are also in **Add Layer > Satellite** on the **Edit Layers** tab, sorted by sector.
- Every band and RGB is on every plan. Your plan sets how many hours a loop can hold.
- Satellite loops run 1 hour on Free, 12 hours on Enthusiast and 24 hours on Professional. Mesoscale sectors run 4 hours on Enthusiast and 12 on Professional.

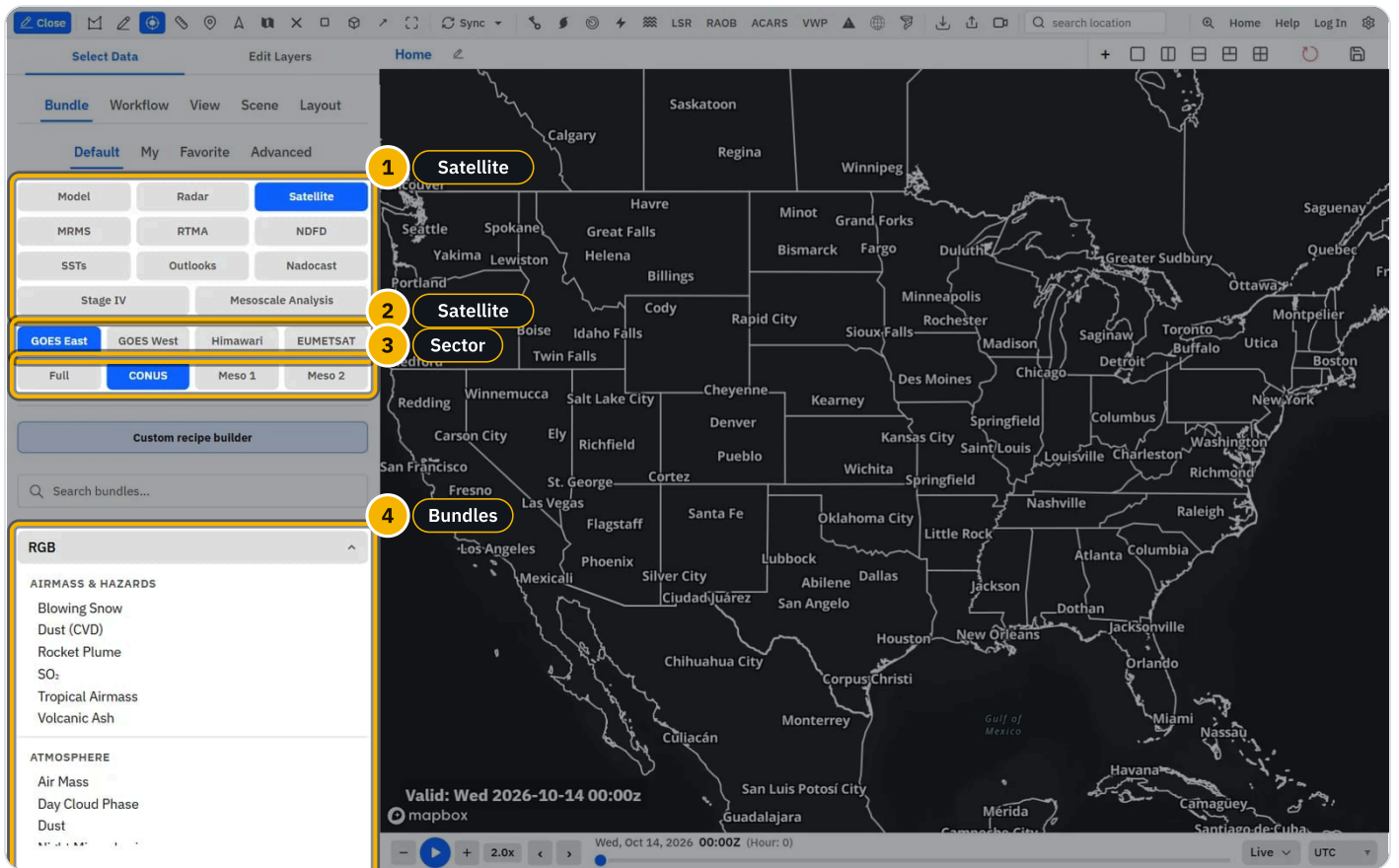
01 Load GOES satellite

Every ABI band from GOES-East and GOES-West, over CONUS, the full disk and the mesoscale sectors.

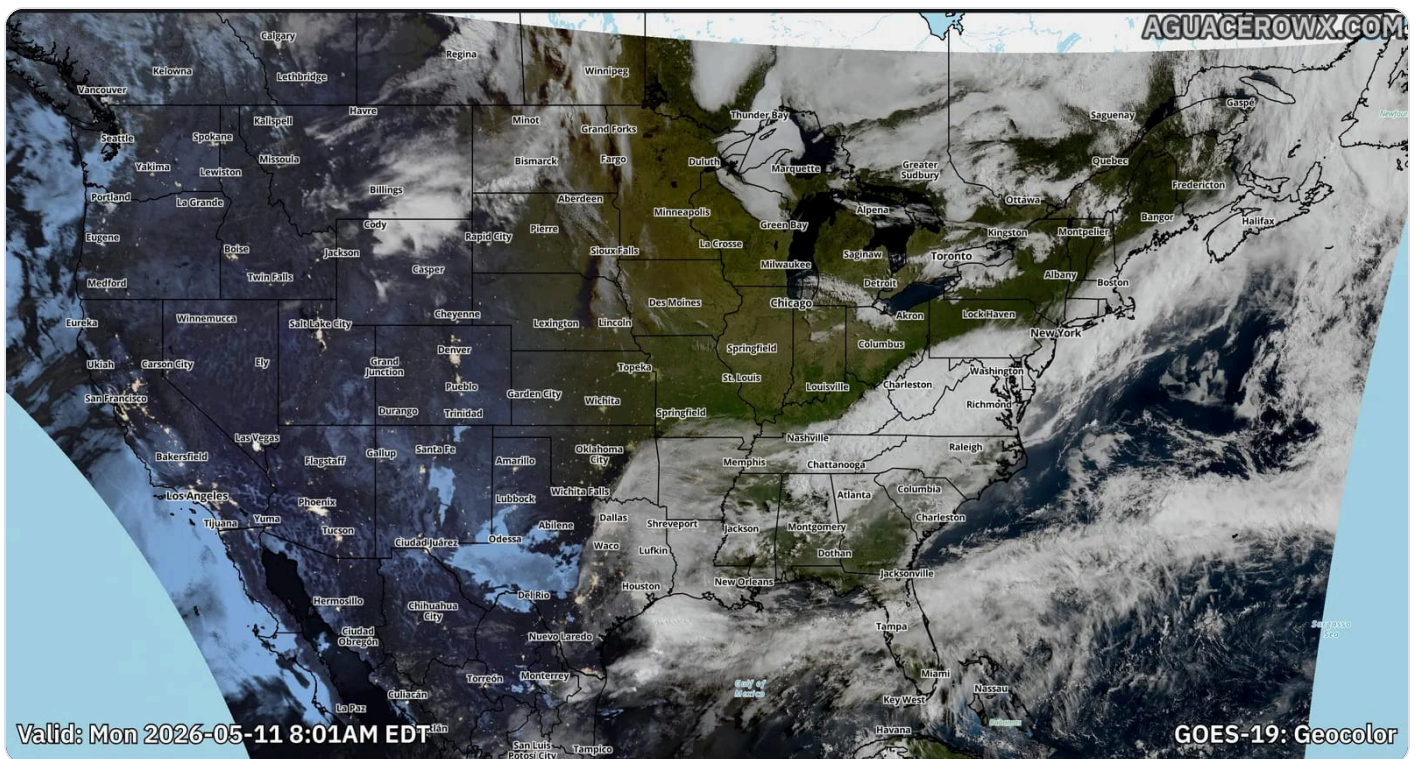
- 1 On **Select Data**, click **Satellite** in the data type filter. Press **F1** first if the sidebar is closed.
- 2 Click **GOES East** or **GOES West**.
- 3 Pick a sector, such as **CONUS**, **Full** or **Meso 1**.
- 4 Click a bundle in the list to load it.

TIPS

- With a satellite bundle loaded, clicking another satellite or sector moves it there and flies the map to it.
- To add one band, open **Edit Layers**, click **Add Layer**, then **Satellite**, a sector and a band.
- Right-click the map and choose **Nearest satellite** to add the clean longwave infrared band for the sector under the cursor.



The Satellite data type, the satellite and sector buttons, and the bundle list.



GOES-19 GeoColor image of North America.

02 GeoColor and RGB recipes

Ready-made composites such as GeoColor, Air Mass, Sandwich, Day Cloud Phase Distinction, Day Convection, Nighttime Microphysics, Dust, Fire Temperature and Day Snow-Fog.

- 1 Click the **Edit Layers** tab in the sidebar.
- 2 Click **Add Layer**, then **Satellite**.
- 3 Click a sector, such as **GOES-EAST CONUS**.
- 4 Pick a product under **Natural Color**, **Day RGB**, **Night & Microphysics**, **Airmass & Hazards** or **Water Vapor RGB**.

TIPS

- Geocolor, True Color and Sandwich are under **Natural Color**. Air Mass, Dust and Fire Temperature are under **Airmass & Hazards**.
- Click the info icon next to a product to read what it shows.

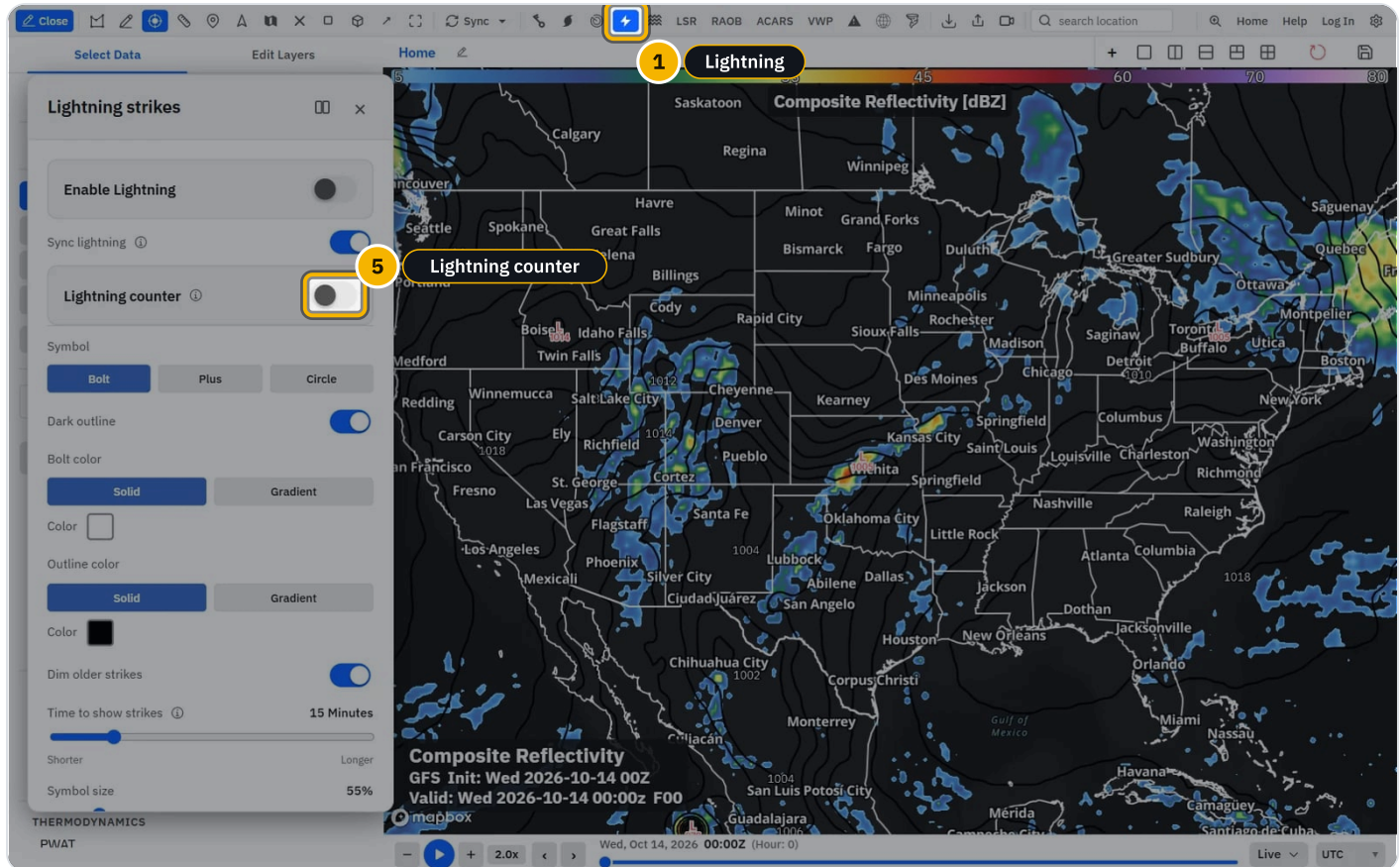
03 GLM lightning

Flashes from the GOES Geostationary Lightning Mapper, filtered by time and energy, with an optional strike counter.

- 1 Single-click **Lightning** on the toolbar to open **Lightning strikes**.
- 2 Turn on **Enable Lightning**.
- 3 Drag **Time to show strikes** to set how many minutes of flashes stay on the map.
- 4 Drag **Minimum flash energy** toward **High energy only** to hide weaker flashes.
- 5 Turn on **Lightning counter** for a running count of the strikes on the map.

TIPS

- Double-click **Lightning** to turn it on or off without opening the settings.
- Turn on **Sync lightning** to switch lightning on or off in every panel at once.



The Lightning button and the Lightning strikes settings.

04 Custom IR and water vapor color tables

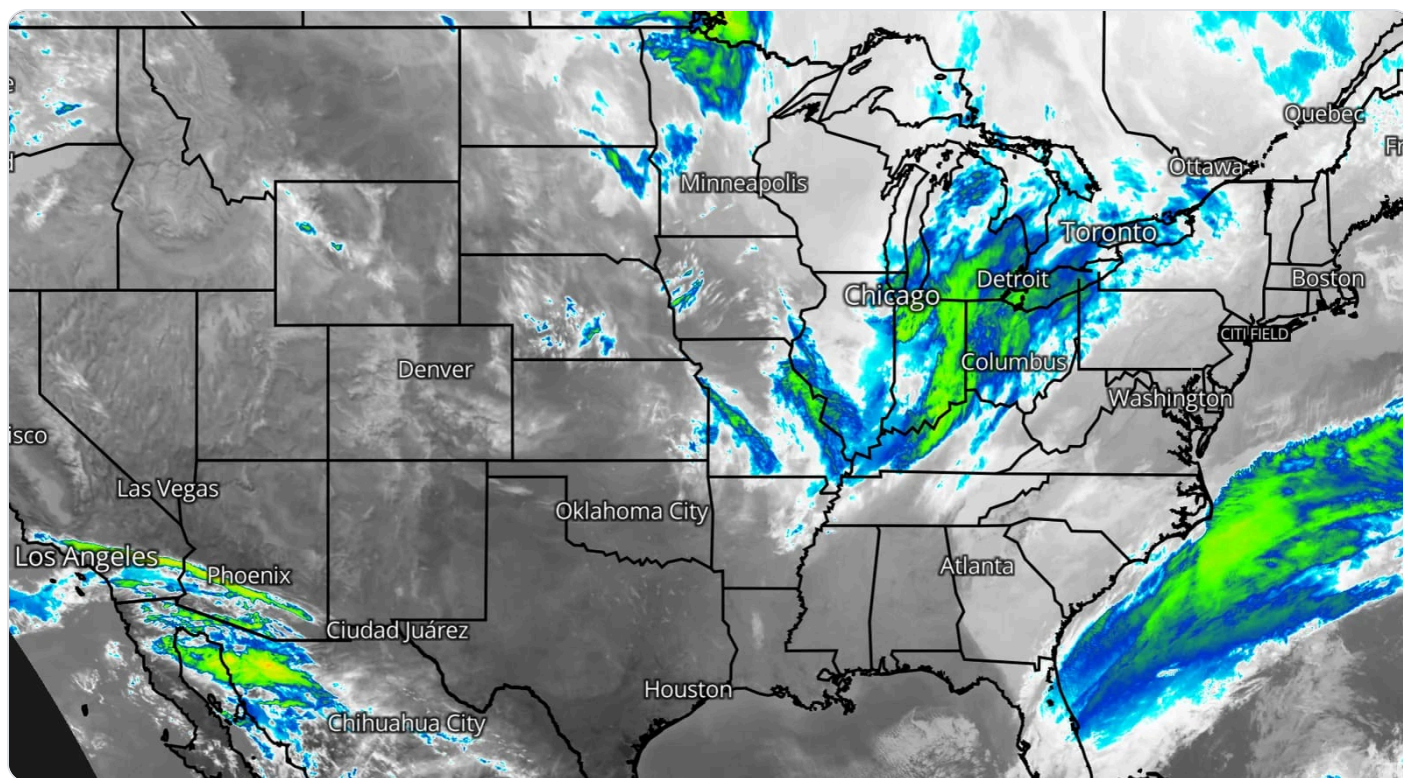
Restyle infrared and water vapor bands with your own colors and value ranges.

- 1 Load an infrared or water vapor band, such as **Clean Longwave Window (Band 13)**.
- 2 Click the **Edit Layers** tab, then **Edit Layer** on the satellite layer.
- 3 Change the colors and breakpoints in the colormap editor.

TIPS

- To use your colors every time, open **Settings > Data > Satellite** and edit the band there.

Infrared and water vapor bands need Enthusiast or higher.

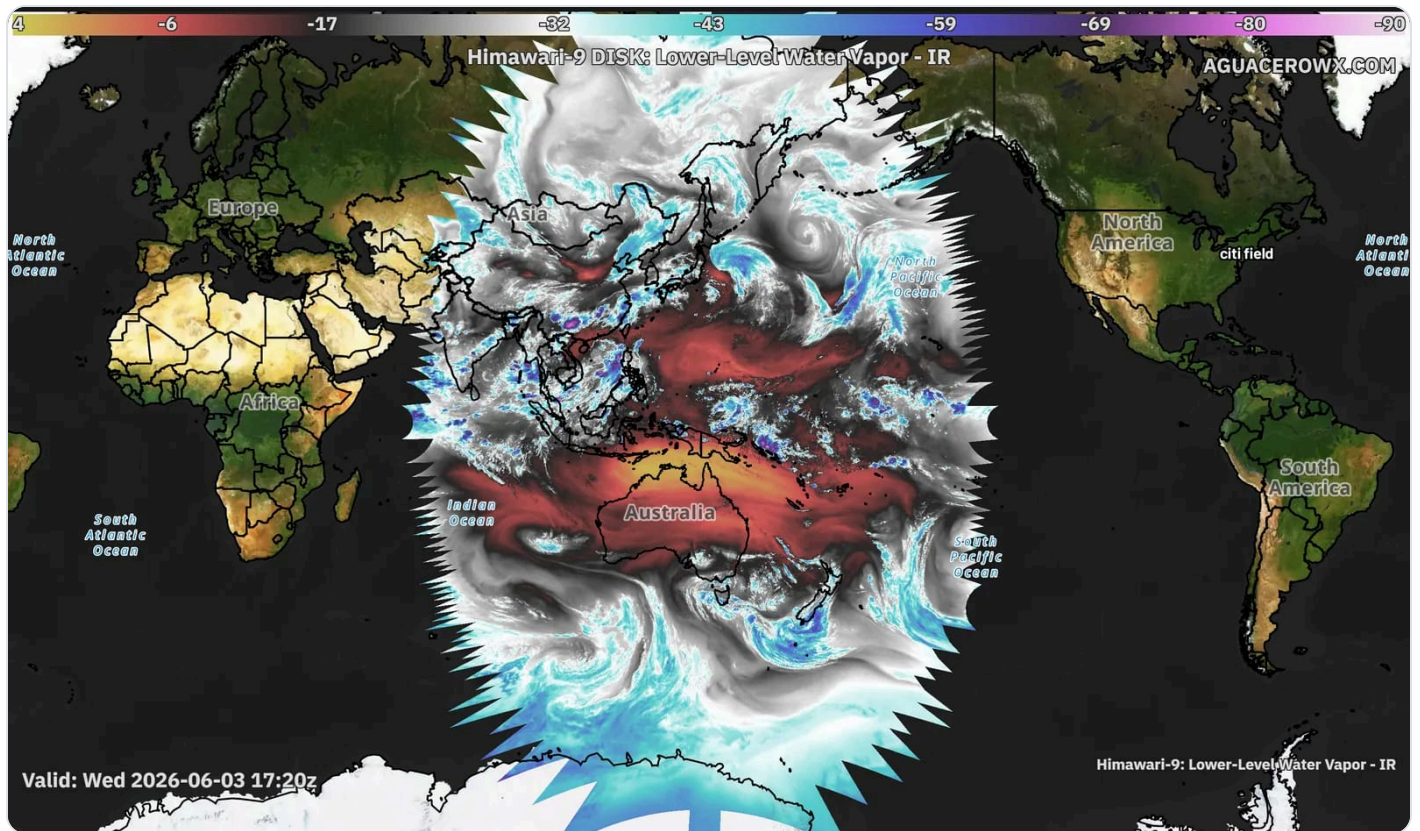


GOES-East infrared imagery with a custom color table.

05 Himawari-9

The western Pacific, Asia and Australia, with the same bands and products as GOES.

- 1 On **Select Data**, click **Satellite** in the data type filter.
- 2 Click **Himawari**.
- 3 Pick **Full Disk, Japan** or **Target**.
- 4 Click a bundle in the list to load it.



Himawari-9 full-disk lower-level water vapor.

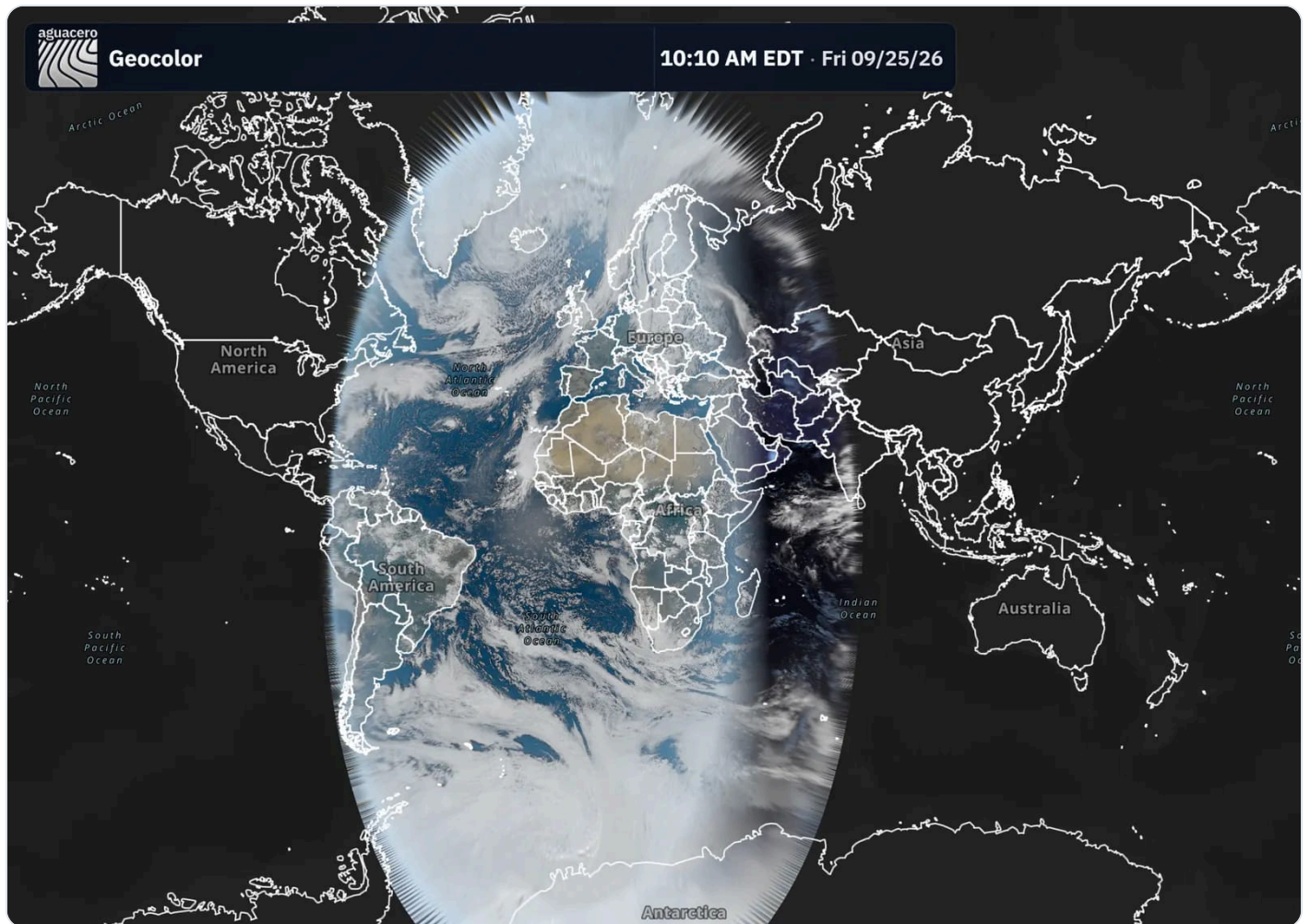
06 EUMETSAT: Europe, India and Rapid Scan

Meteosat over Europe and Africa, the Indian Ocean and the Rapid Scan sector, with the products you know from GOES.

- 1 On **Select Data**, click **Satellite** in the data type filter.
- 2 Click **EUMETSAT**.
- 3 Pick **Full Disk**, **Europe** or **India**.
- 4 Click a bundle in the list to load it.

TIPS

- The Rapid Scan sector is in **Add Layer** > **Satellite** on the **Edit Layers** tab.

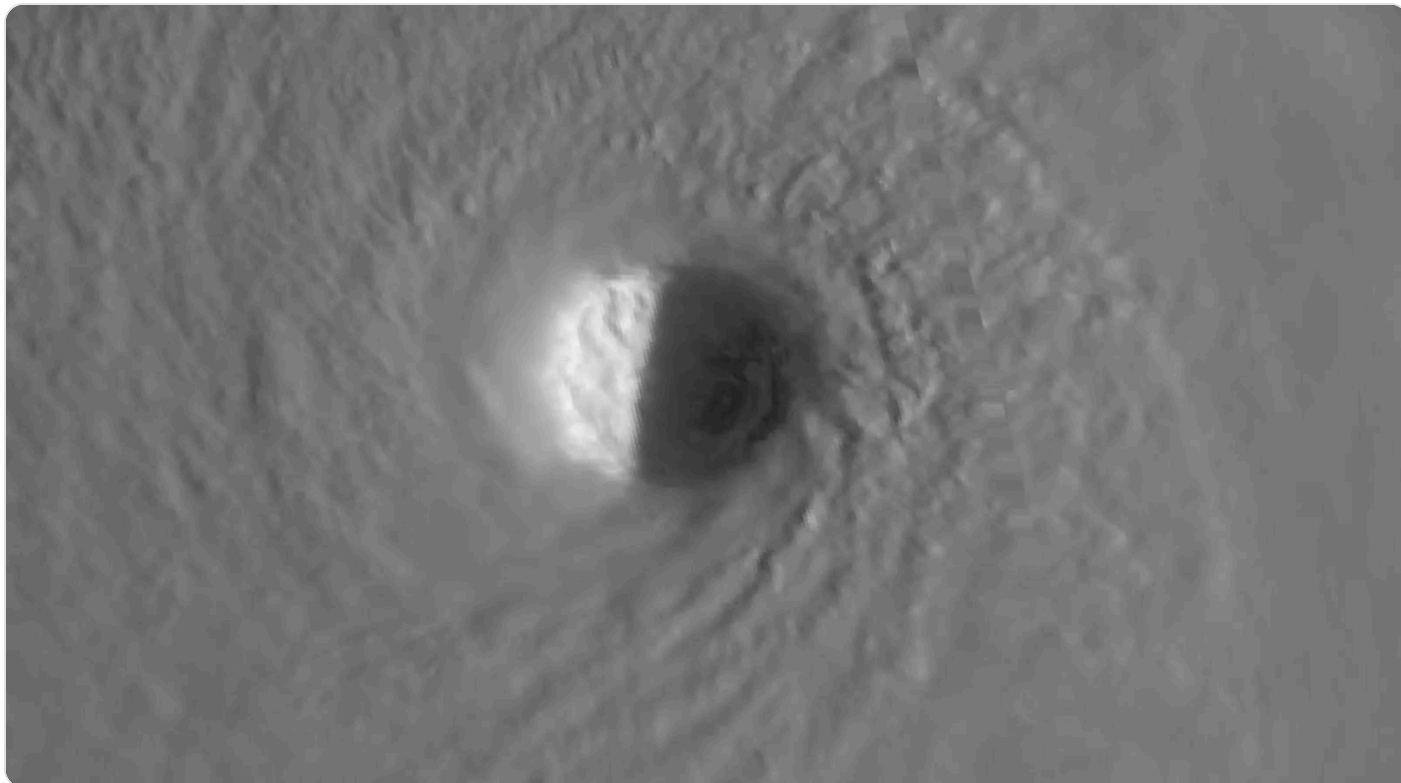


Meteosat GeoColor full-disk image of Europe and Africa on a globe.

07 Native-resolution satellite

Imagery loads at native resolution as you zoom in, down to 0.5 km for the GOES red visible band.

- 1 On the **Edit Layers** tab, click **Add Layer > Satellite** and pick a GOES sector.
- 2 Click **Red (Band 2)** under **Visible**.
- 3 Zoom in on the area you want. Finer detail loads as you zoom.



Native-resolution visible image of a hurricane eye.

08 Satellite recipe builder PROFESSIONAL

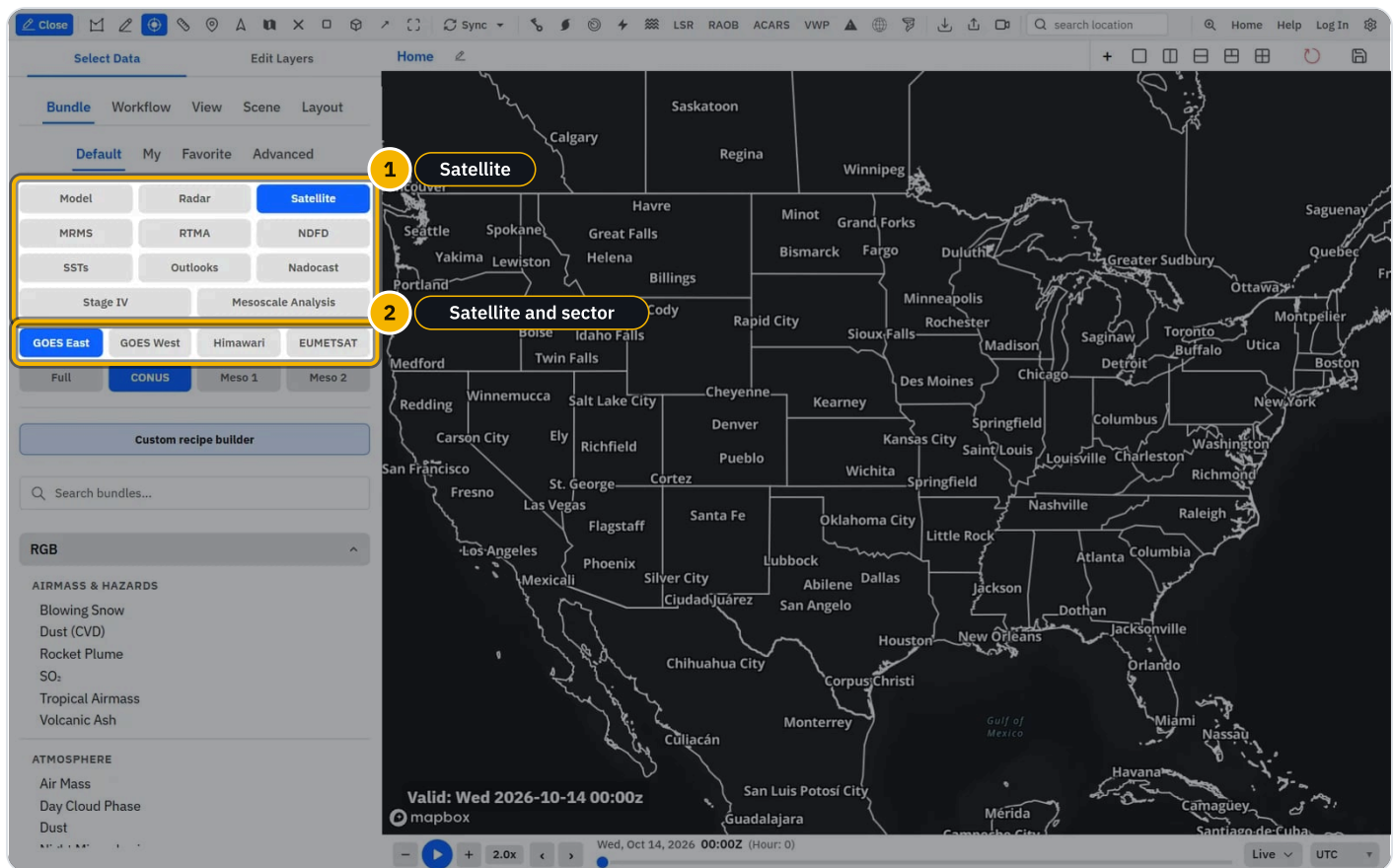
Build your own composite from single bands, with day and night stacks, stretch, gamma and color mix, then load it on the map and save it.

- 1 On **Select Data**, click **Satellite** in the data type filter.
- 2 Pick a satellite and a sector.
- 3 Click **Custom recipe builder**.
- 4 Under **Day channels** or **Night channels**, click **Add channel** until you have at least two different bands.
- 5 Set each band's **Channel color**, **Stretch** and **Gamma**.
- 6 Click **Load** to draw the recipe.
- 7 Click **Save**, enter a **Name** and **Category**, and click **Save** again.

TIPS

- With both day and night bands, **Auto** blends them by sun angle. **Manual** uses one mix for the whole image.
- Leave **Private** checked to keep a recipe out of **Advanced search**.
- Saved recipes are in **Add Layer > Satellite > Custom Recipe**.

A board holds one satellite layer. If one is already there, edit that layer to load a recipe.



The Satellite data type and the satellite buttons. Custom recipe builder sits below them.

09 3D satellite PROFESSIONAL

Raise infrared cloud tops in 3D, so colder, higher clouds stand taller.

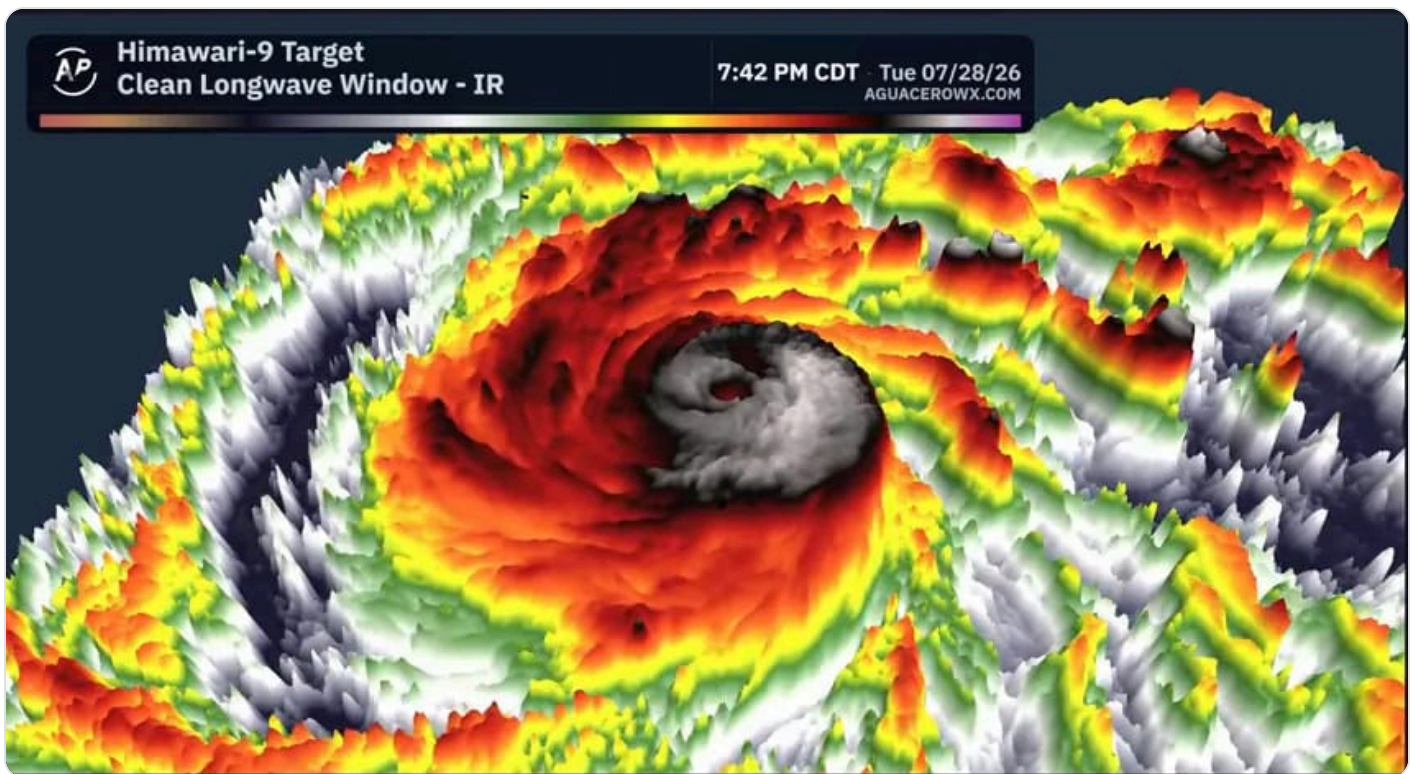
- 1 Load a single band, such as **Clean Longwave Window (Band 13)**.
- 2 Click the **Edit Layers** tab, then **Edit Layer** on the satellite layer.

- 3 Tick **3D cloud tops**.
- 4 Drag **Height** to set how tall the clouds stand.
- 5 Right-click and drag on the map to tilt the view.

TIPS

- If the cloud tops stay flat, turn on **Allow 3D effects** in **Settings > Performance**.

3D works on single bands. RGB composites stay flat.



Himawari-9 clean longwave infrared cloud tops in 3D around a typhoon.