



The Bureau
of Meteorology



AOMSUC-15 FYSUC-2025
FIFTEENTH ASIA-OCEANIA METEOROLOGICAL SATELLITE USERS' CONFERENCE
THE JOINT 2025 FENGYUN SATELLITE USER CONFERENCE

AOMSUC-15 Training Event: Case Study Analysis and Discussion

Resource and Worksheet

Mr Bodo Zeschke

Teacher, Australian Bureau of Meteorology Training Centre
Point of Contact, Australian VLab Centre of Excellence

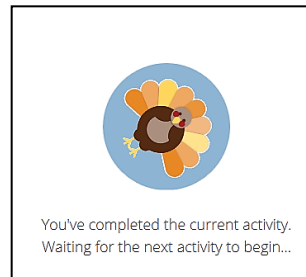
Using the Socrative cloud-based learner response system to enhance interaction

1

On your computer or smartphone type in Link 1
b.socrative.com

choose **Student login**

then Room Name
AOMSUC15TE



Please give some information about yourself.
Choose all the options that apply below

- ☐ A My most recent qualification is a University Undergraduate degree
- ☐ B My most recent qualification is a Masters degree
- ☐ C My most recent qualification is a PhD
- ☒ D I am fascinated by satellite data
- ☐ E Satellite data is ok, but I prefer other meteorological data
- ☐ F I am not particularly interested in satellite data
- ☐ G I am not sure about the use of satellite data within meteorology. Tell me more.

SUBMIT ANSWER

SUBMIT ANSWER

2

Answer the question

3

Submit the Answer

4

Please wait for the next question



Contents

Case studies, and associated exercises in the context of WMO Early Warning For All (EW4ALL) Initiative Priority Hazards. (Gap analysis).

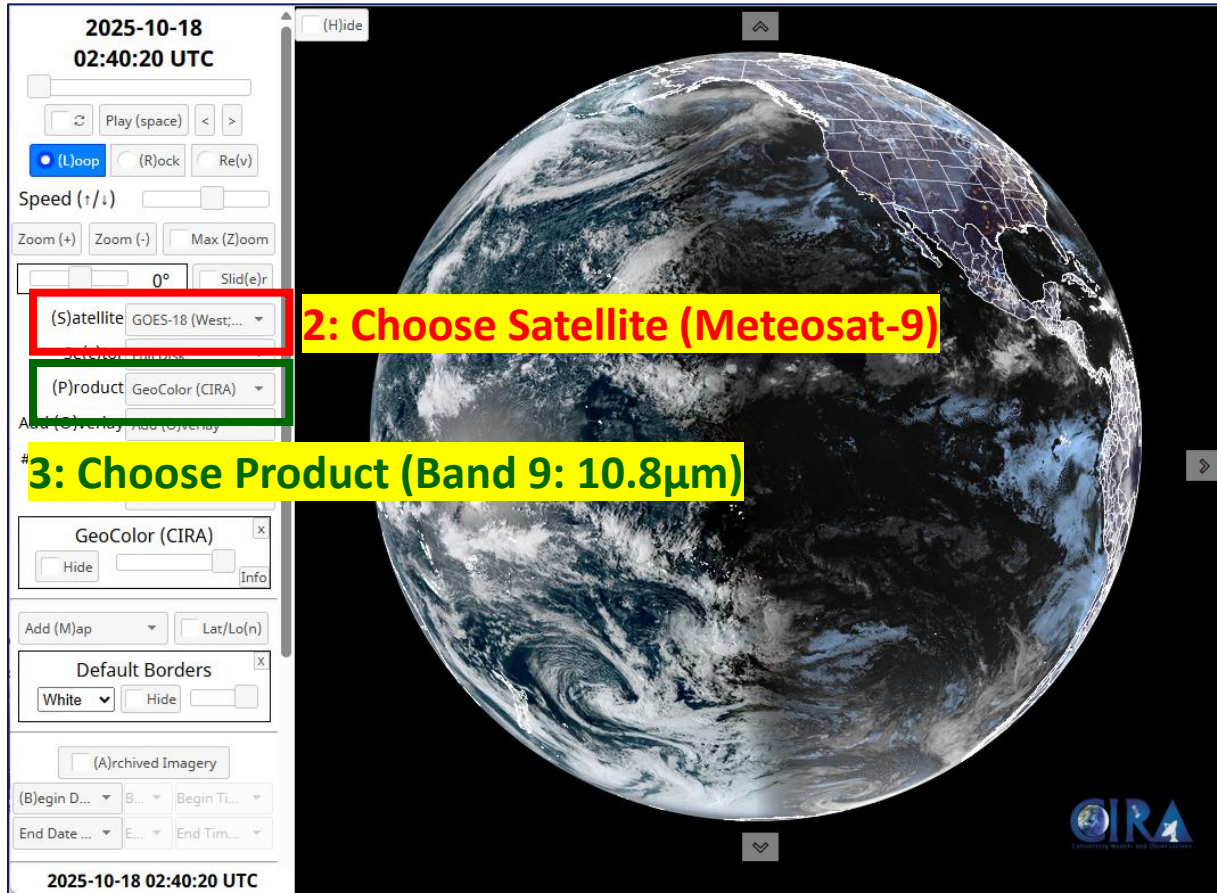
- **Main topics examined here:**
 - **Thunderstorms**
 - Heavy Rainfall and Flooding
 - Rapid Scan Imagery
 - Tropical Cyclones
- **Within each topic:**
 - Resources available on the Australian VLab CoE RFG archive.
 - One case study introduced, with associated satellite data.
 - Socrative questions.
 - **Follow up activities. Exploring web pages.**



Exercise 1a

1: Open the CIRA SLIDER resource

<https://rammb-slider.cira.colostate.edu/>



The screenshot shows the CIRA SLIDER interface. On the left is a control panel with various settings. The main area displays a satellite image of Earth. Three yellow callout boxes with red borders point to specific settings in the control panel:

- 2: Choose Satellite (Meteosat-9)** points to the "(S)atellite" dropdown menu, which is currently set to "GOES-18 (West...)".
- 3: Choose Product (Band 9: 10.8μm)** points to the "(P)roduct" dropdown menu, which is currently set to "GeoColor (CIRA)".

The control panel includes the following elements:

- Timestamp: 2025-10-18 02:40:20 UTC
- Buttons: Play (space), <, >
- Buttons: (L)oop, (R)ock, Re(v)
- Speed (1/1) slider
- Buttons: Zoom (+), Zoom (-), Max (Z)oom
- Buttons: 0°, Slid(e)r
- Buttons: (S)atellite, GOES-18 (West...)
- Buttons: (P)roduct, GeoColor (CIRA)
- Buttons: Add (S)atellite, Add (P)roduct
- Buttons: #
- Buttons: GeoColor (CIRA), Hide, Info
- Buttons: Add (M)ap, Lat/Lo(n)
- Buttons: Default Borders, White, Hide
- Buttons: (A)rchived Imagery
- Buttons: (B)egin D..., B..., Begin Tl..., End Date..., E..., End Tim...
- Timestamp: 2025-10-18 02:40:20 UTC

The main image shows a satellite view of Earth with a grid overlay. The CIRA logo is visible in the bottom right corner of the image area.



Exercise 1b

OFFICIAL

Exploring the CIRA SLIDER resource

<https://rammb-slider.cira.colostate.edu/>

The image shows the CIRA SLIDER interface. On the left, a global map displays cloud cover over the Pacific and Atlantic oceans. A yellow box labeled '1: Choose an area of convection' highlights a storm system in the central Pacific. A red box labeled '2: Zoom into area of interest. Use mouse cursor to centre this' points to the 'Zoom (+)' button in the left sidebar. On the right, a zoomed-in view of the storm system is shown. A green box labeled '3: Choose Add Overlay, then Day Cloud Phase Distinction (JMA)' points to the 'Add (O)verlay' button in the right sidebar. Below this, a list of overlays is shown, with 'Day Cloud Phase Distinction (JMA)' highlighted in blue. The interface includes various controls for time, speed, zoom, and overlays.

2025-10-18 08:30:00 UTC

Speed (1/1)

Zoom (+) Zoom (-) Max (Zoom)

Zoom (+)

1: Choose an area of convection

2: Zoom into area of interest. Use mouse cursor to centre this

3: Choose Add Overlay, then Day Cloud Phase Distinction (JMA)

-----MULTISPECTRAL RGB COMPOSITES-----

- Day Land Cloud (EUMETSAT)
- Airmass (EUMETSAT)
- Day Cloud Phase Distinction (JMA)
- Nighttime Microphysics (EUMETSAT)

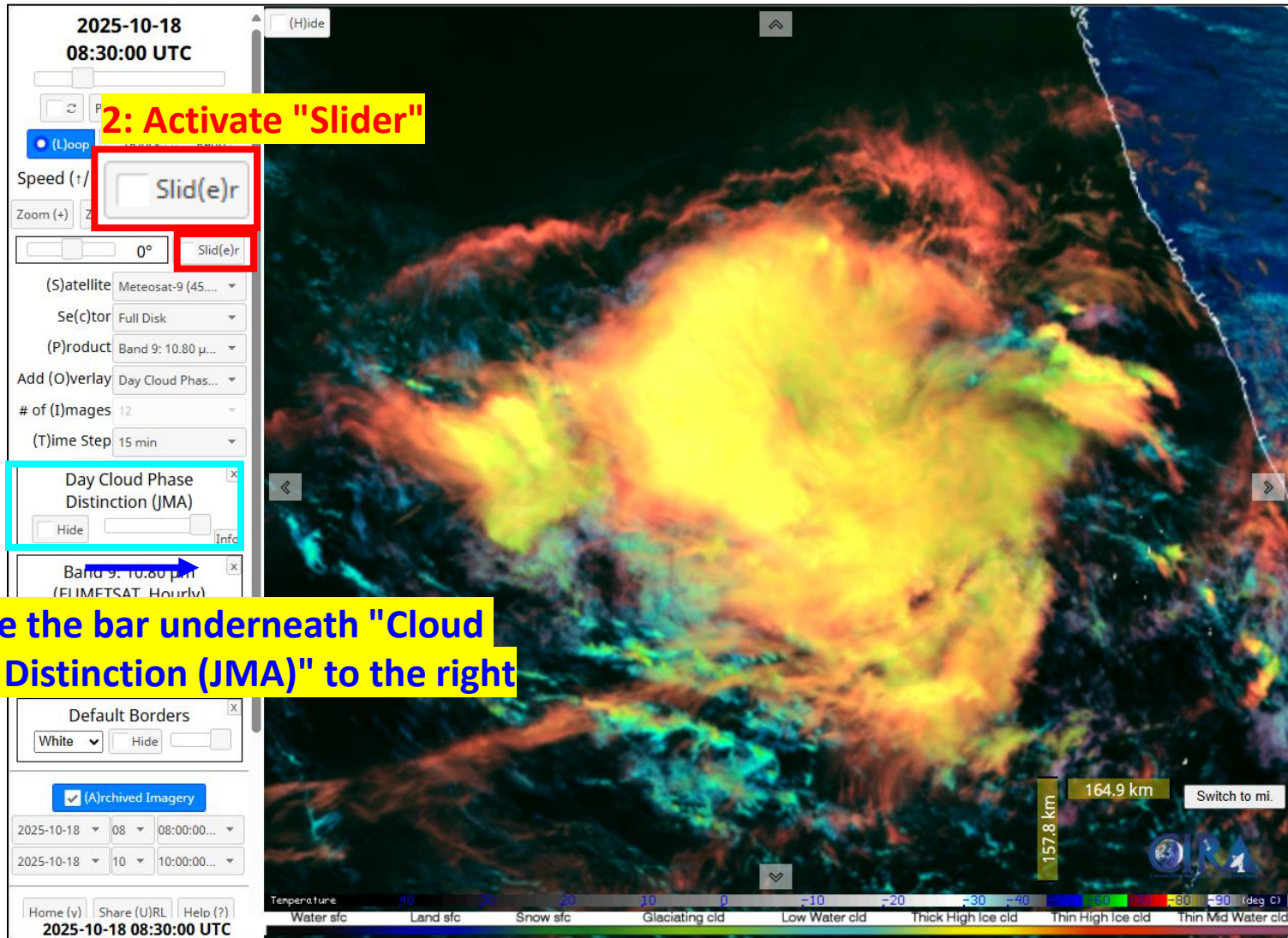
images courtesy CIRA Colorado State University



Exercise 1c

Exploring the CIRA SLIDER resource

<https://rammb-slider.cira.colostate.edu/>



1: Slide the bar underneath "Cloud Phase Distinction (JMA)" to the right

2: Activate "Slider"

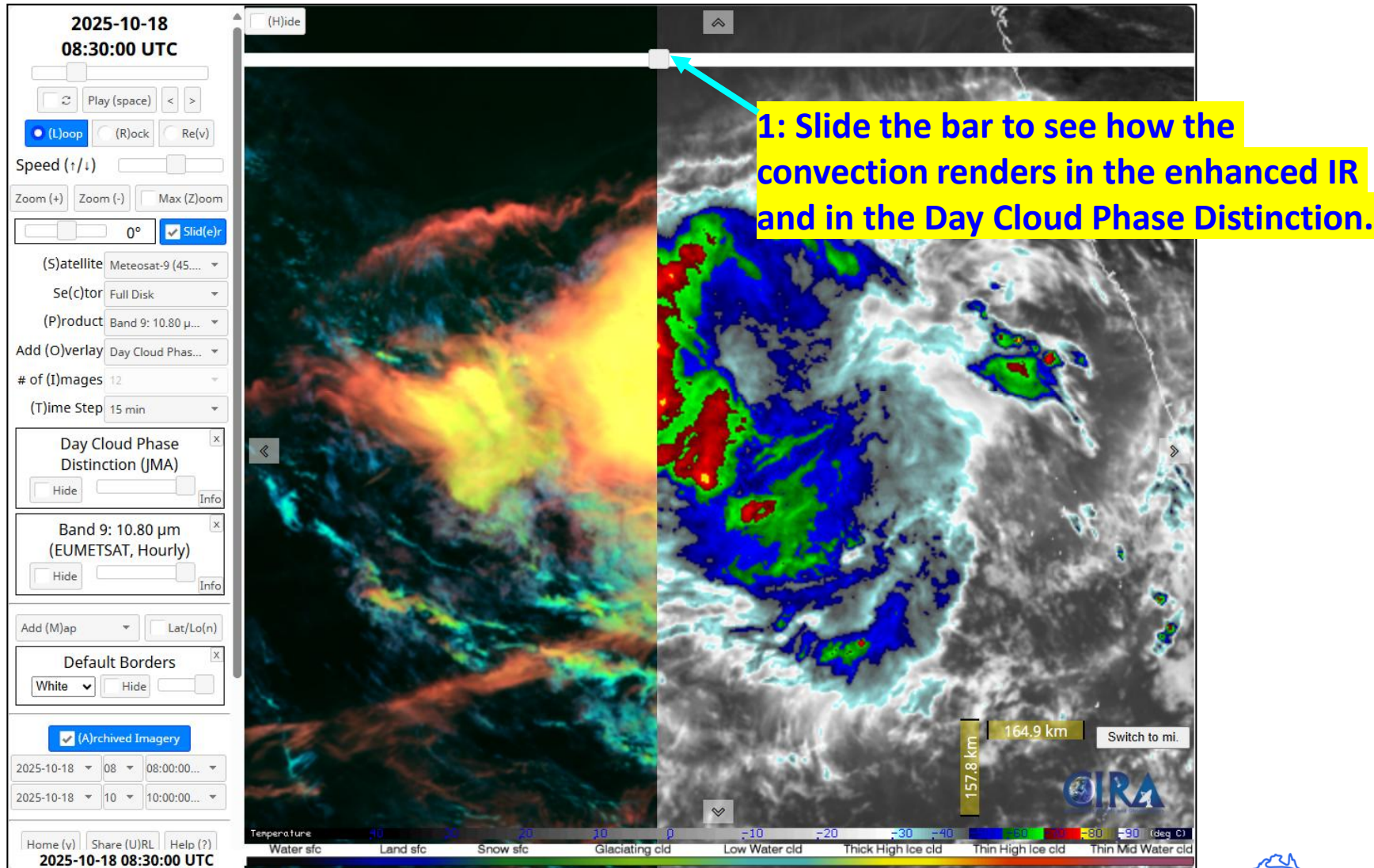


Exercise 1d

OFFICIAL

Exploring the CIRA SLIDER resource

<https://rammb-slider.cira.colostate.edu/>



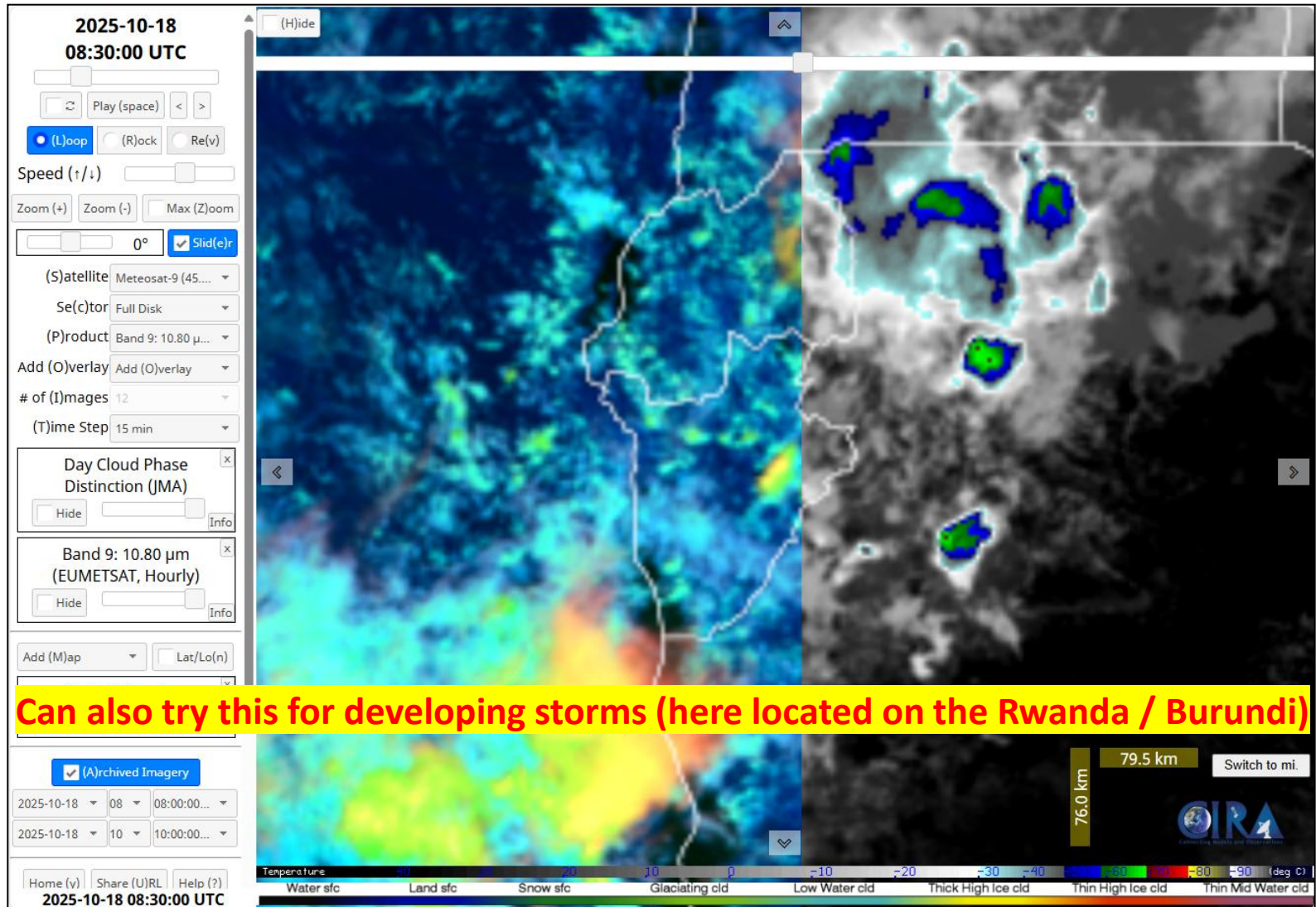
images courtesy CIRA Colorado State University



Exercise 1e

Exploring the CIRA SLIDER resource

<https://rammb-slider.cira.colostate.edu/>



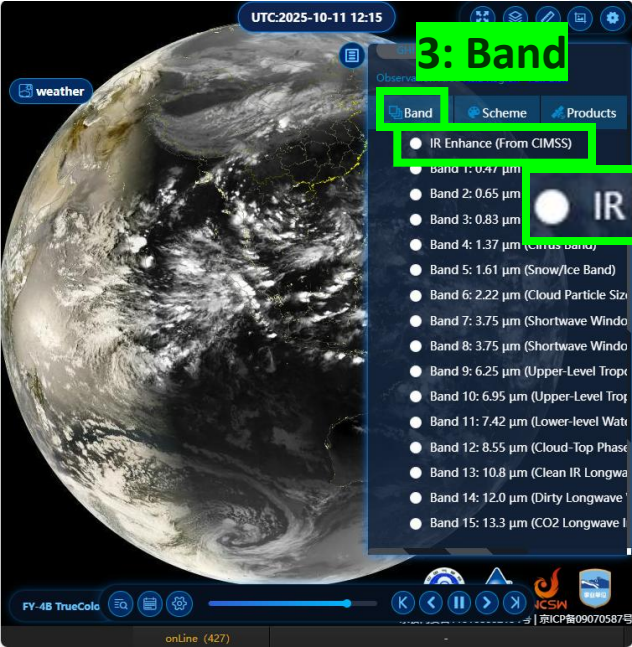
Can also try this for developing storms (here located on the Rwanda / Burundi)



Exercise 2a

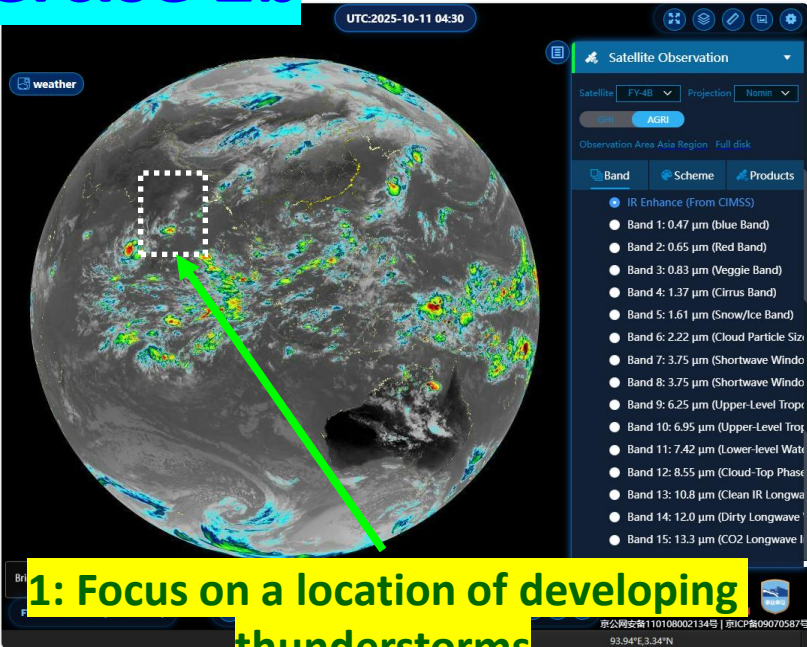
1: Open the CMA SWAP website

<http://rsapp.nsmc.org.cn/geofy/>

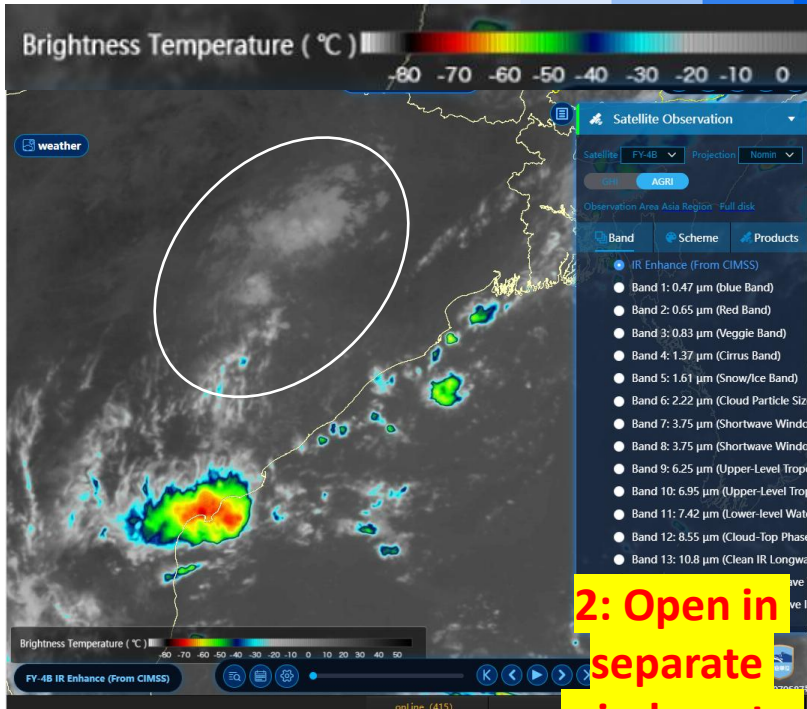


Exercise 2b

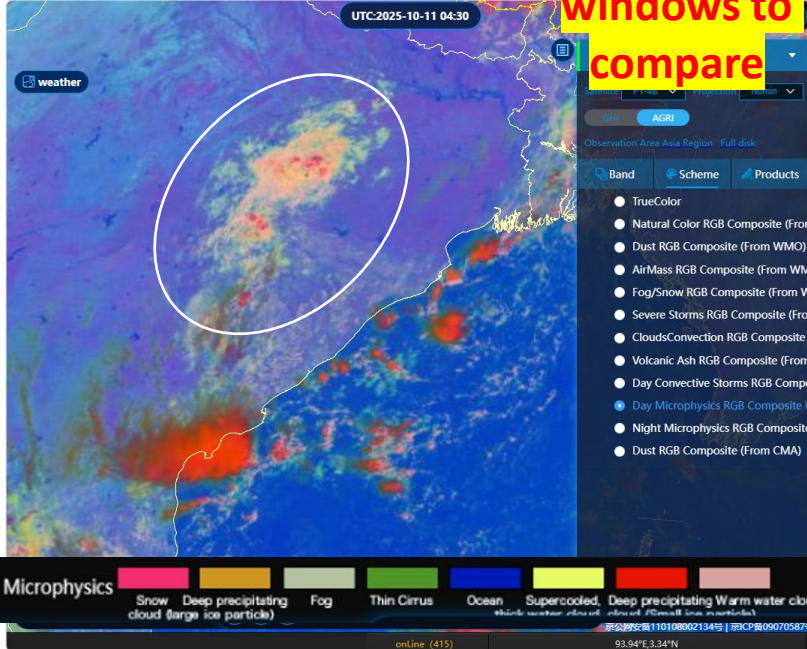
OFFICIAL



1: Focus on a location of developing thunderstorms
Maybe over your own country



2: Open in separate windows to compare



OFFICIAL

Exercise 3

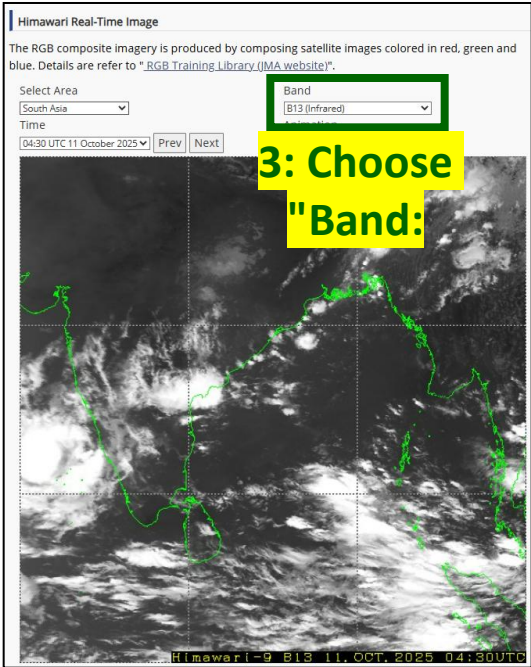
OFFICIAL

1: Open the JMA AHI Real-Time image website

<https://www.data.jma.go.jp/mscweb/data/himawari/>

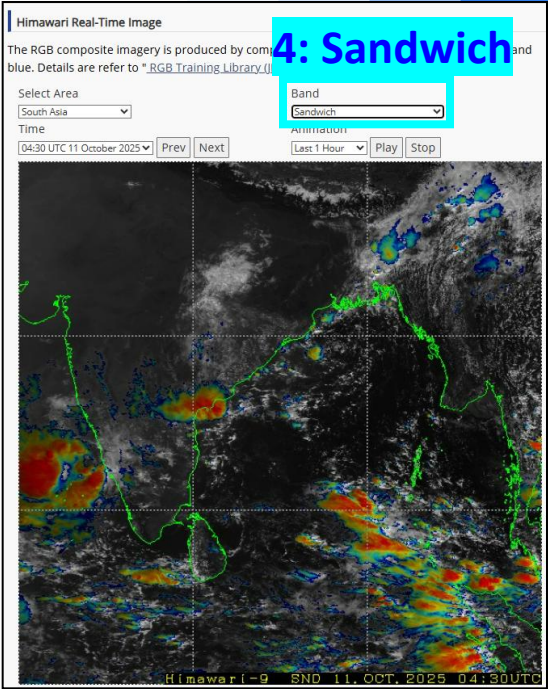


2: Choose area of interest

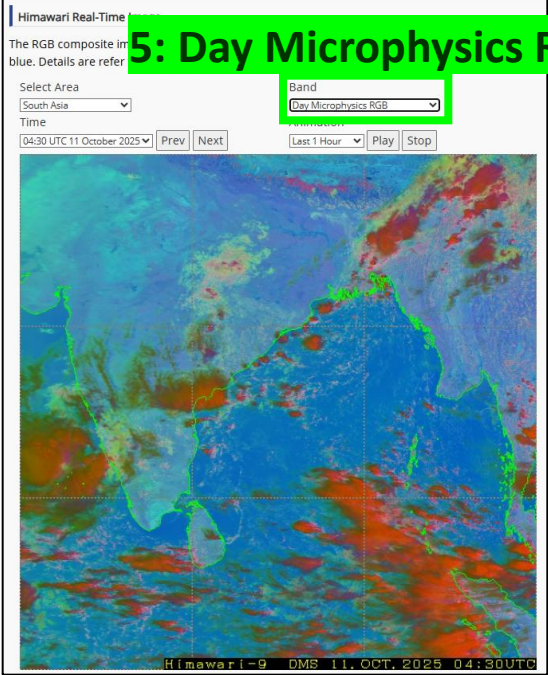


3: Choose "Band:"

6: Open in separate windows to compare



4: Sandwich



5: Day Microphysics RGB

Exercise 4a

1: Open the NOAA / CIMSS web resource over Fiji / Tonga / Samoa

https://cimss.ssec.wisc.edu/severe_conv/pltg.html

LightningCast

The ProbSevere LightningCast model uses images of visible, near-infrared, and long-wave infrared channels aboard [GOES ABI](#) to predict the probability of lightning in the next 60 minutes.

2: Select sector

- On-demand dashboard request form (NOAA only)
- Training materials and GRLevelX placefiles

Select sector

GOES-East

CONUS

Mesoscale-1

Mesoscale-2

OPC/TAFB

GOES-West

PACUS

Mesoscale-1

Mesoscale-2

Alaska-Canada

American Samoa

Himawari-8

Guam

4: Play the loop

Show: 1 hours

Of: LightningCast GOES-W

Ending: Latest

Products & Layers

Collection: RealEarth

Presets

Products

Displayed

LightningCast GOES-West American Samoa

2023-10-28 08:30:22

Aviation - lightning dashboards

2023-09-08 17:40:19

Stadiums - lightning dashboards

2023-09-07 13:51:20

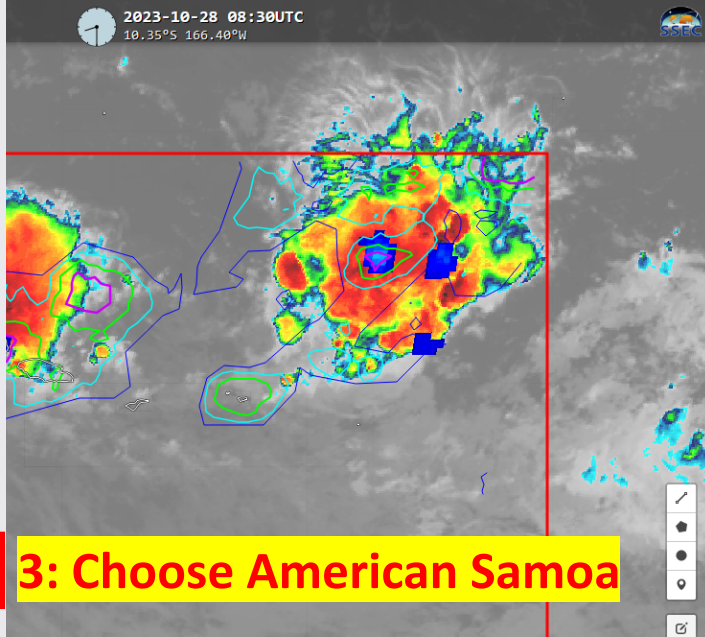
Current Fire Incidents: lightning dashboards

2023-10-28 08:30:02

2023-10-28 08:30UTC

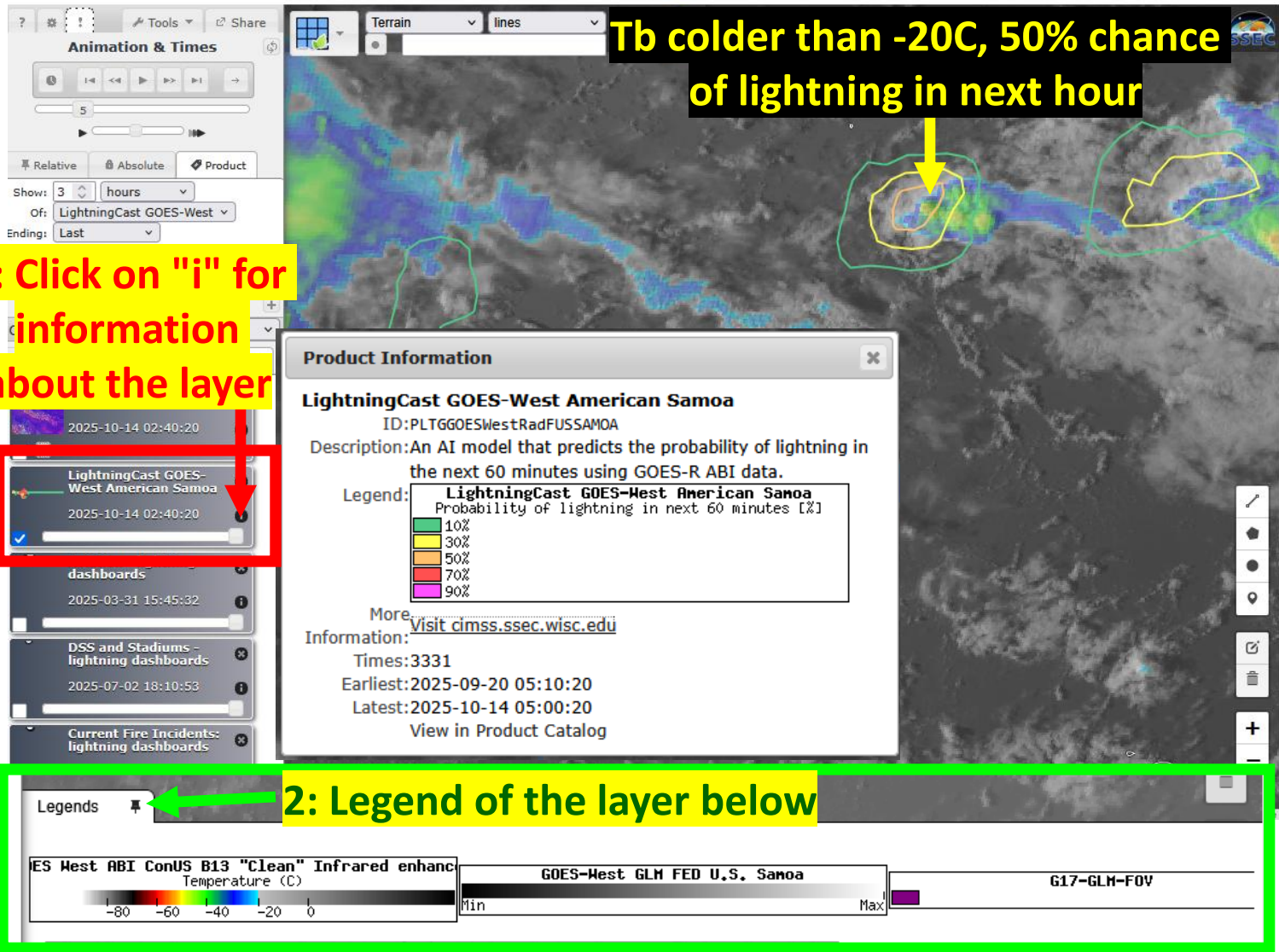
10.35°S 166.40°W

3: Choose American Samoa




Exercise 4b

Interpreting LightningCast
using the NOAA / CIMSS web resource at
https://cimss.ssec.wisc.edu/severe_conv/pltg.html



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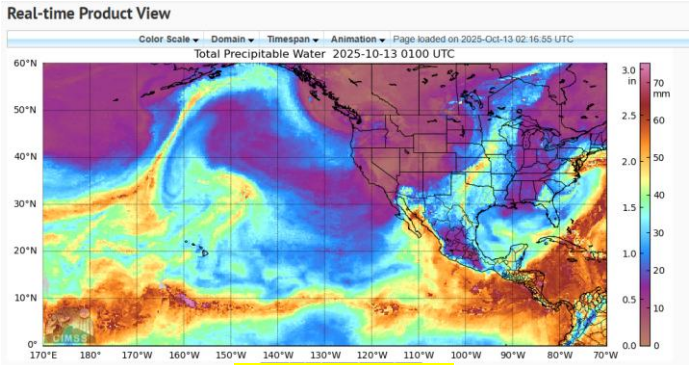
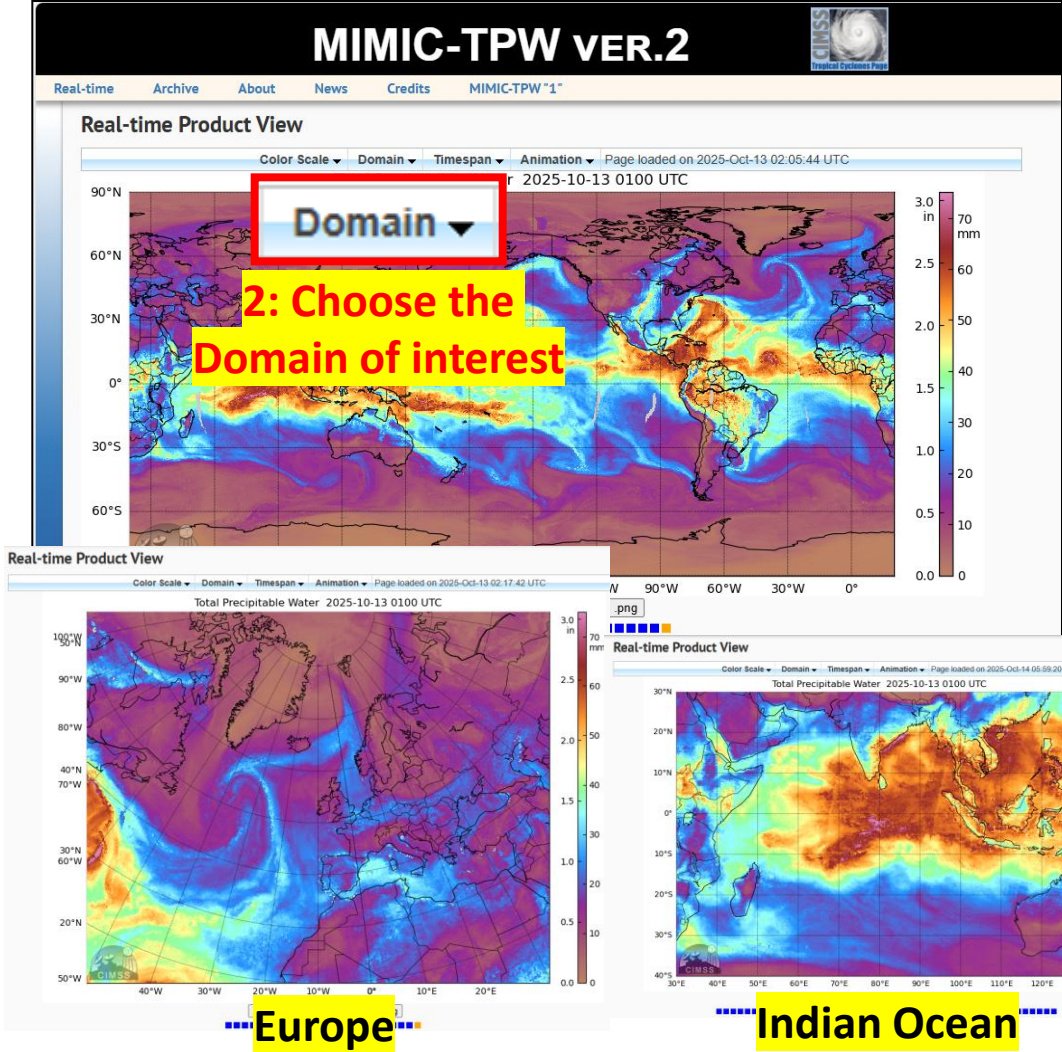


Exercise 5a

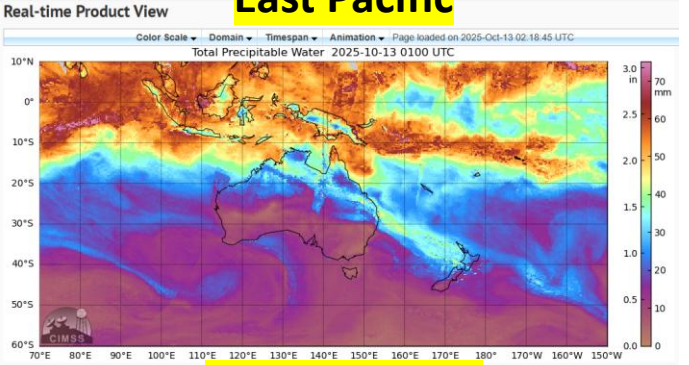
OFFICIAL

1: Open the MIMIC-TPW web page

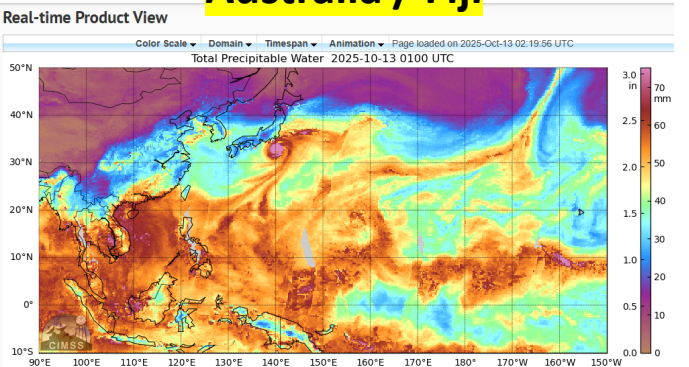
<http://tropic.ssec.wisc.edu/real-time/mtpw2/>



East Pacific



Australia / Fiji



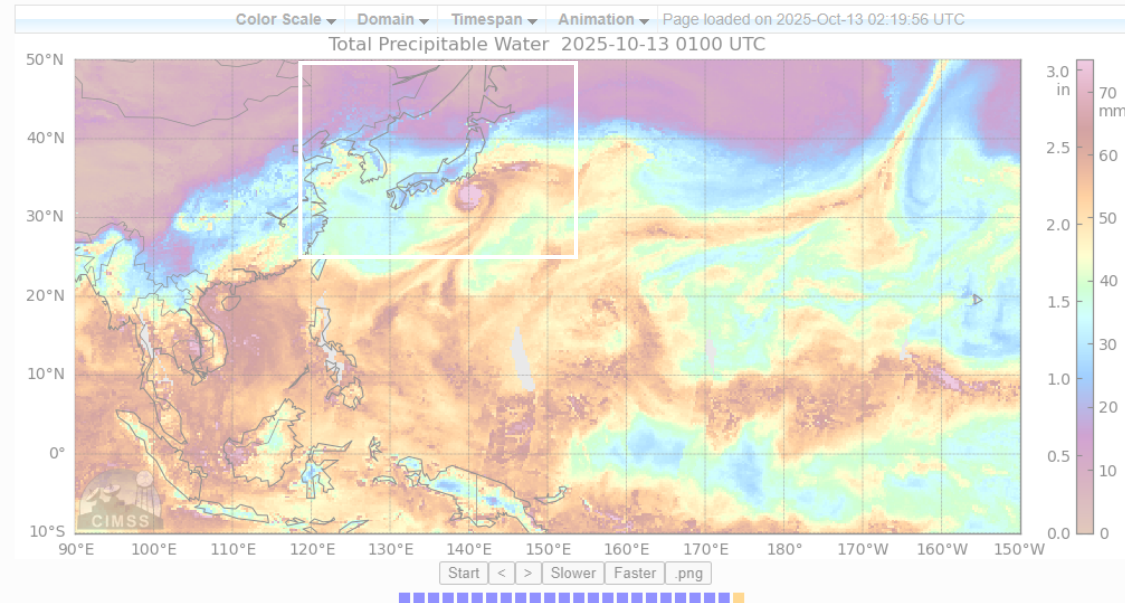
West Pacific



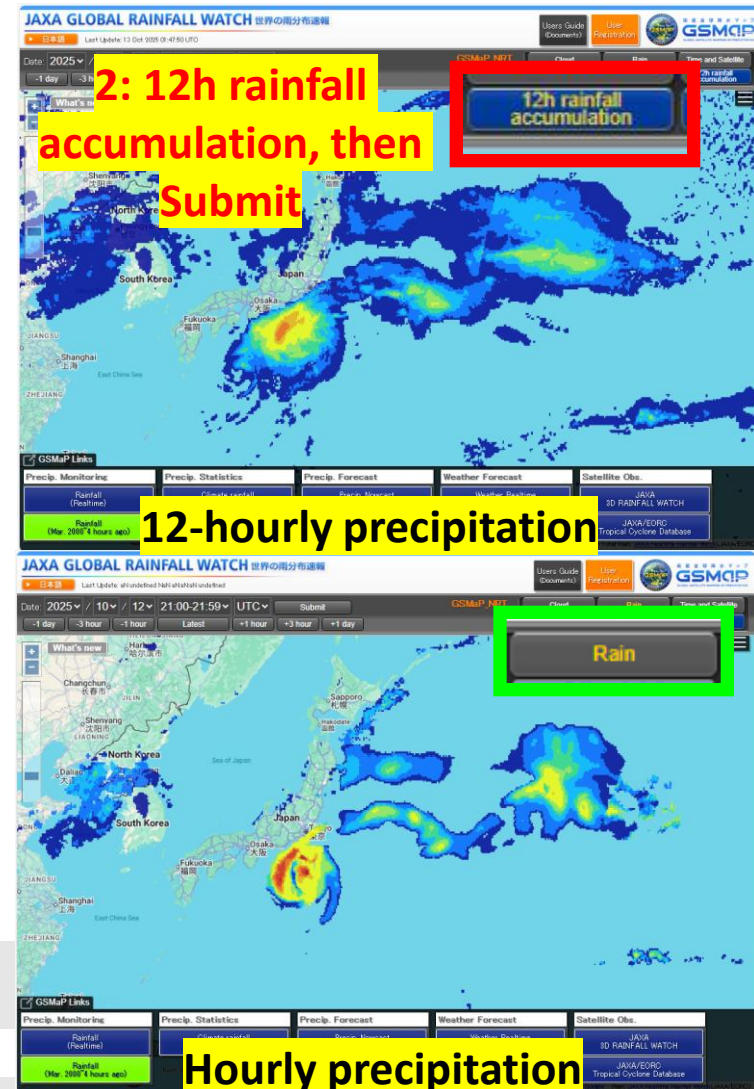
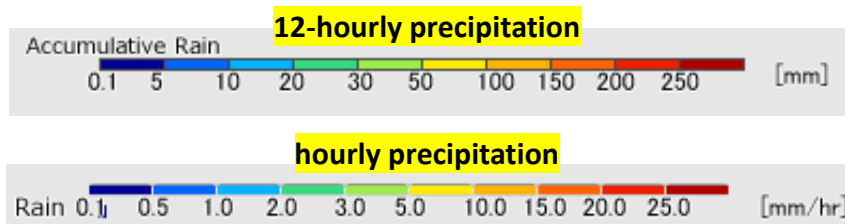
Exercise 5b

1: Open the JAXA GSMap web page <https://sharaku.eorc.jaxa.jp/GSMaP/>

Real-time Product View



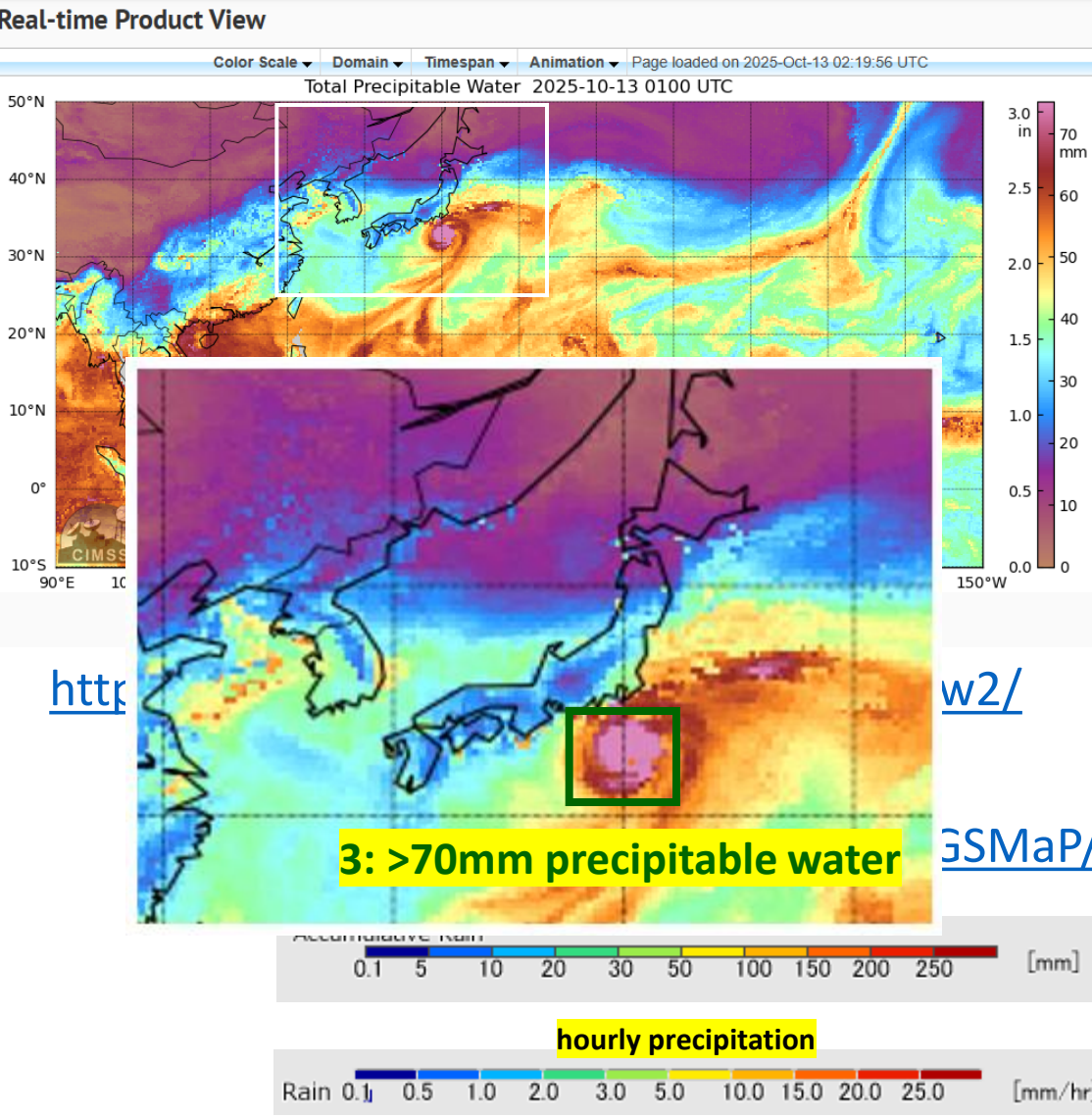
<http://tropic.ssec.wisc.edu/real-time/mtpw2/>



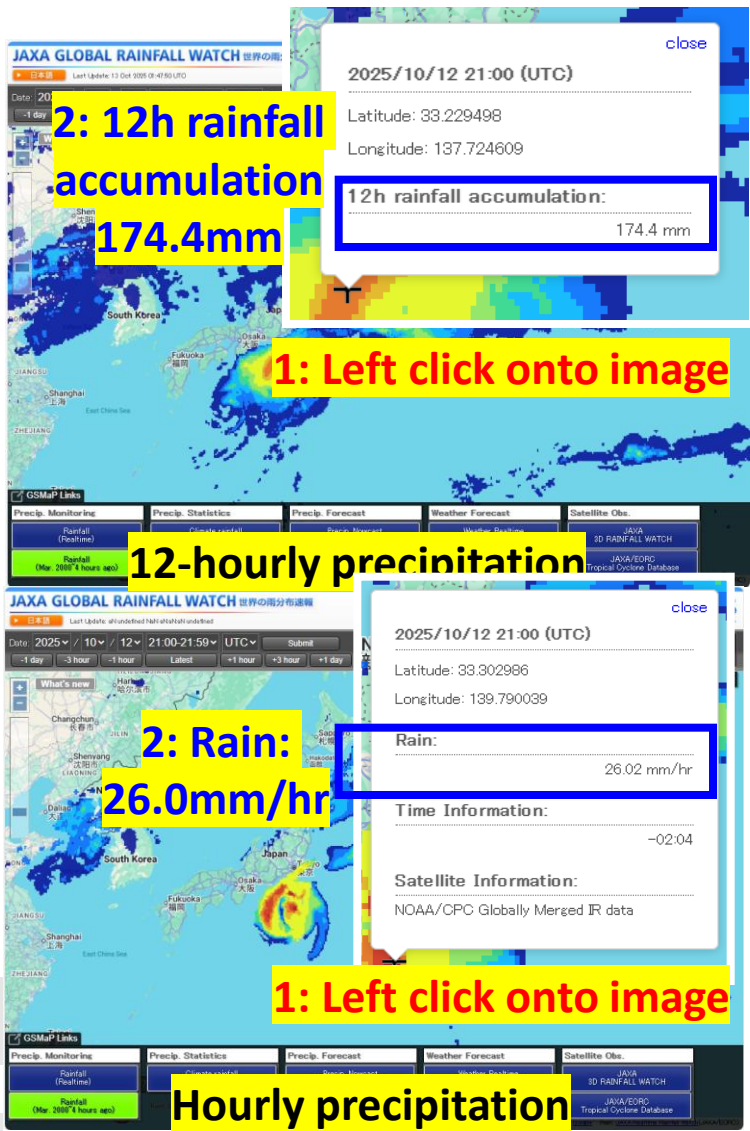
Exercise 5c

OFFICIAL

Comparing across MIMIC-TPW and JAXA GSMap data



<http://w2/GSMaP/>



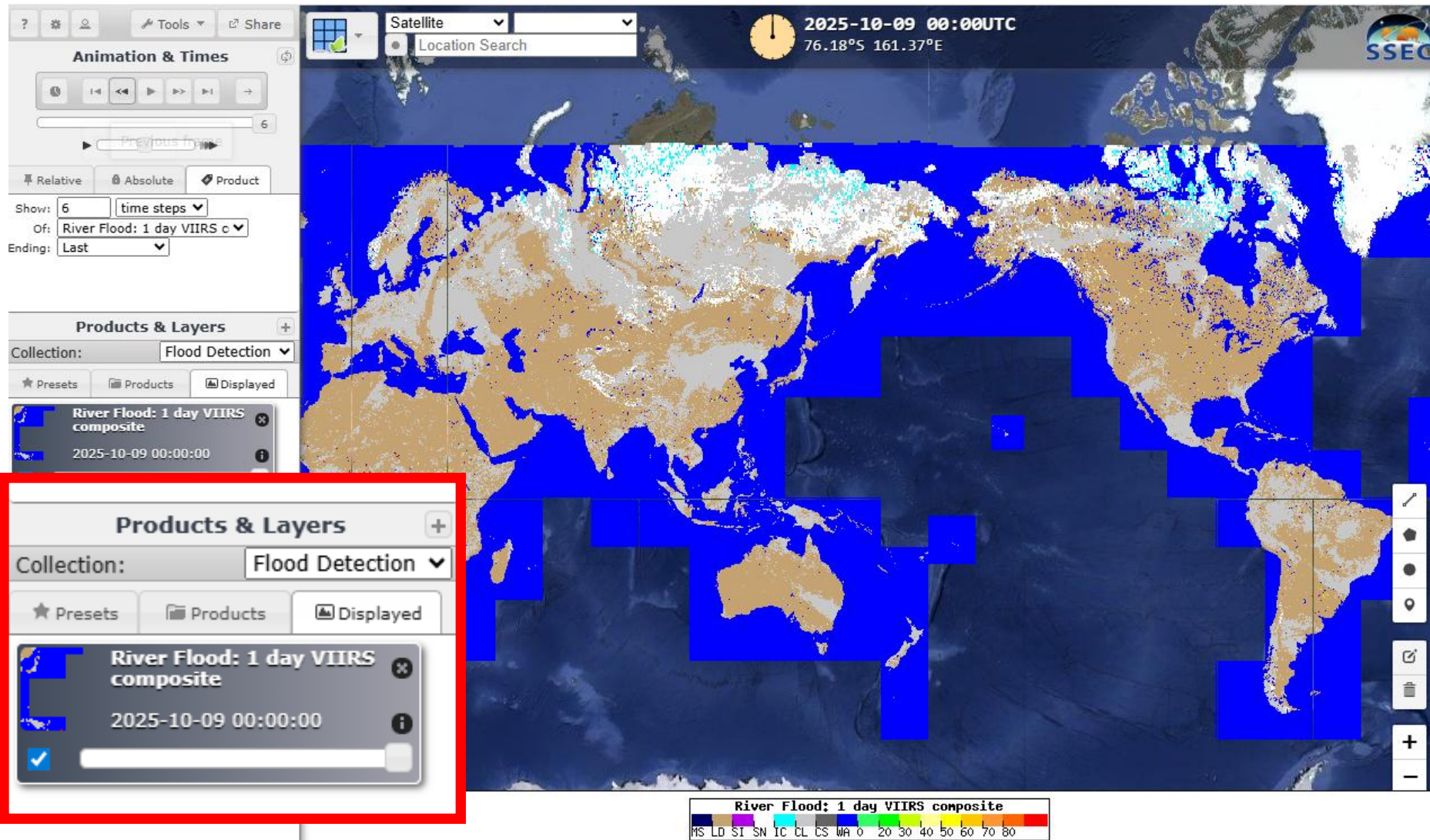
Exercise 6a

image courtesy GMU / CIMSS

OFFICIAL

1: Open the River Flood: 1 day VIIRS composite.

<https://floods.ssec.wisc.edu/?products=RIVER-FLDglobal-composite1.75¢er=10,0&zoom=3&basemap=satellite&labels=-×tep=1d>



Exercise 6b

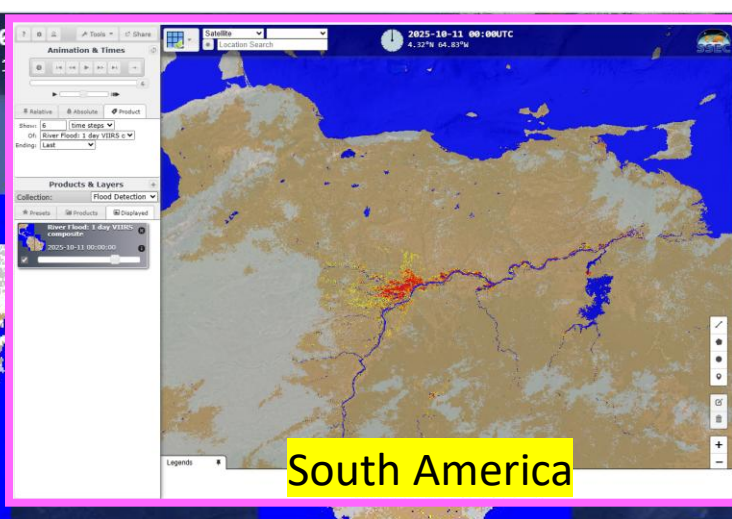
Exploring the River Flood: 1 day VIIRS composite.

1: Chose a region of interest. 3 examples are shown here.

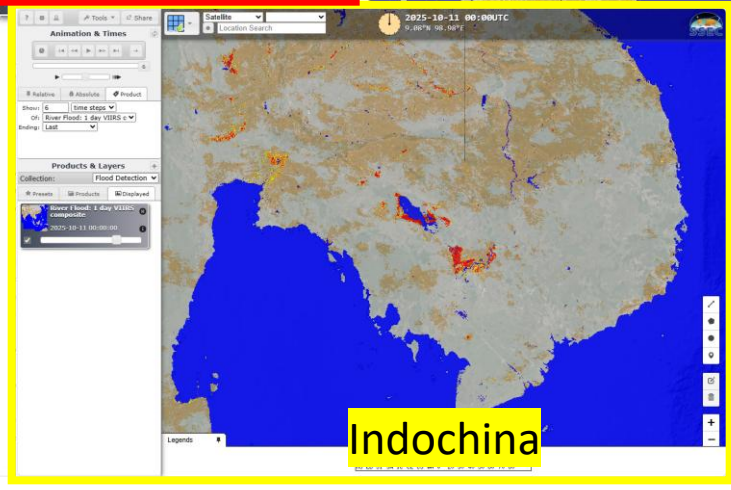
Note that the Japan area is covered in cloud



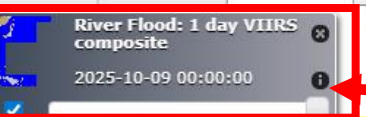
Japan



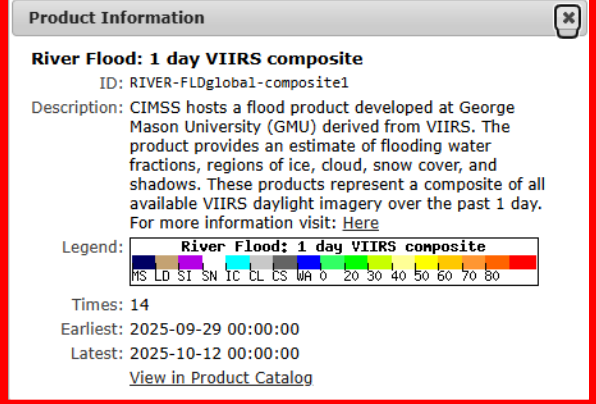
South America



Indochina



River Flood: 1 day VIIRS composite
2025-10-09 00:00:00



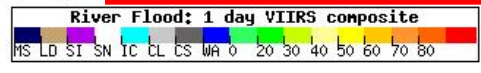
Product Information

River Flood: 1 day VIIRS composite
ID: RIVER-FLDglobal-composite1

Description: CIMSS hosts a flood product developed at George Mason University (GMU) derived from VIIRS. The product provides an estimate of flooding water fractions, regions of ice, cloud, snow cover, and shadows. These products represent a composite of all available VIIRS daylight imagery over the past 1 day. For more information visit: [Here](#)

Legend: **River Flood: 1 day VIIRS composite**
MS LD SI SN IC CL CS WA 0 20 30 40 50 60 70 80

Times: 14
Earliest: 2025-09-29 00:00:00
Latest: 2025-10-12 00:00:00
[View in Product Catalog](#)



River Flood: 1 day VIIRS composite
MS LD SI SN IC CL CS WA 0 20 30 40 50 60 70 80

Exercise 7

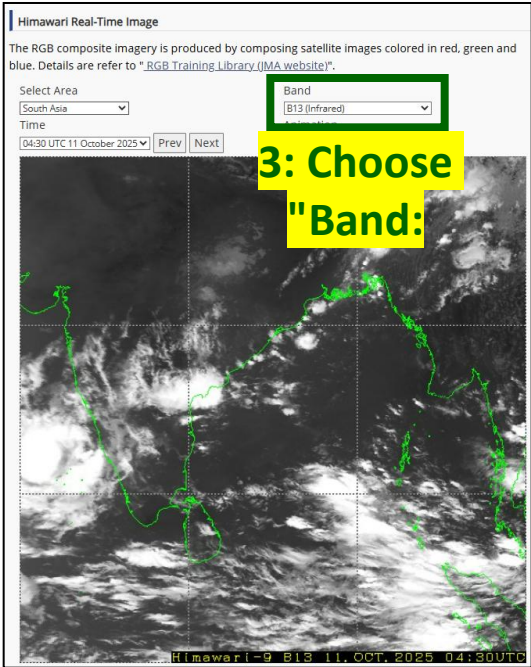
OFFICIAL

1: Open the JMA AHI Real-Time image website

<https://www.data.jma.go.jp/mscweb/data/himawari/>

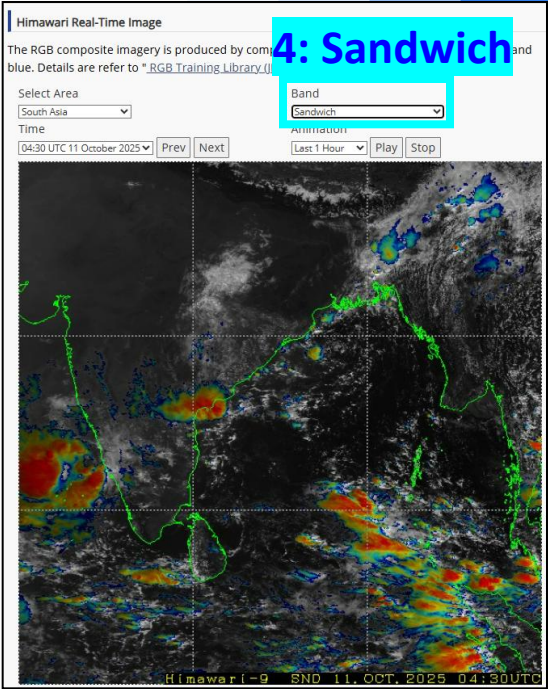


2: Choose area of interest

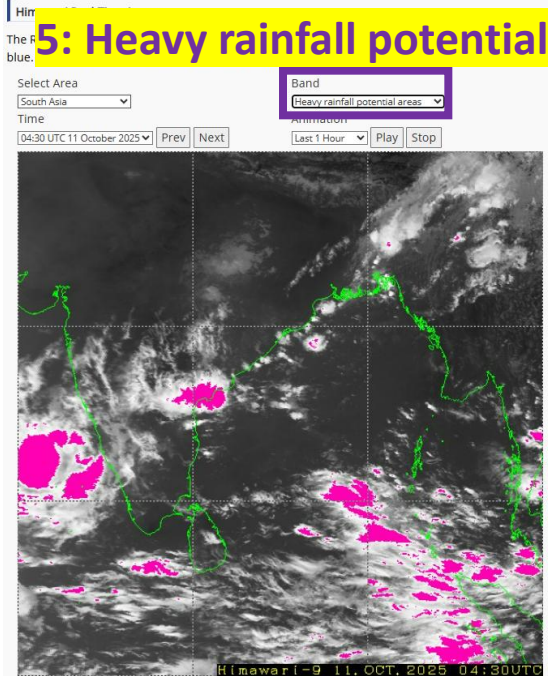


3: Choose "Band:"

6: Open in separate windows to compare



4: Sandwich



5: Heavy rainfall potential area

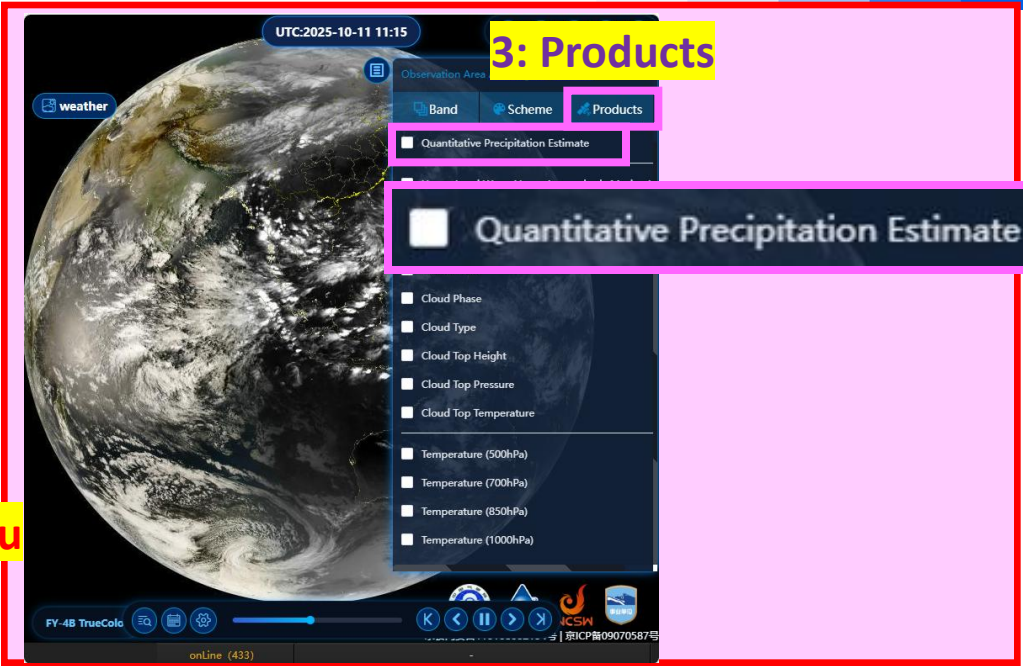
Exercise 8a

1: Open the CMA SWAP website

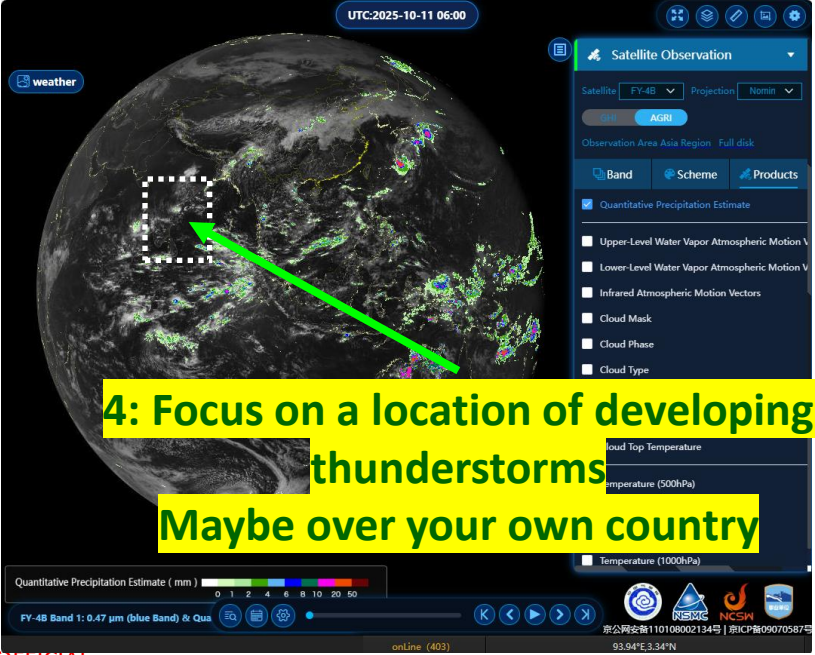
<http://rsapp.nsmc.org.cn/geofy/>



2: Menu



3: Products



4: Focus on a location of developing thunderstorms
Maybe over your own country



Exercise 8b

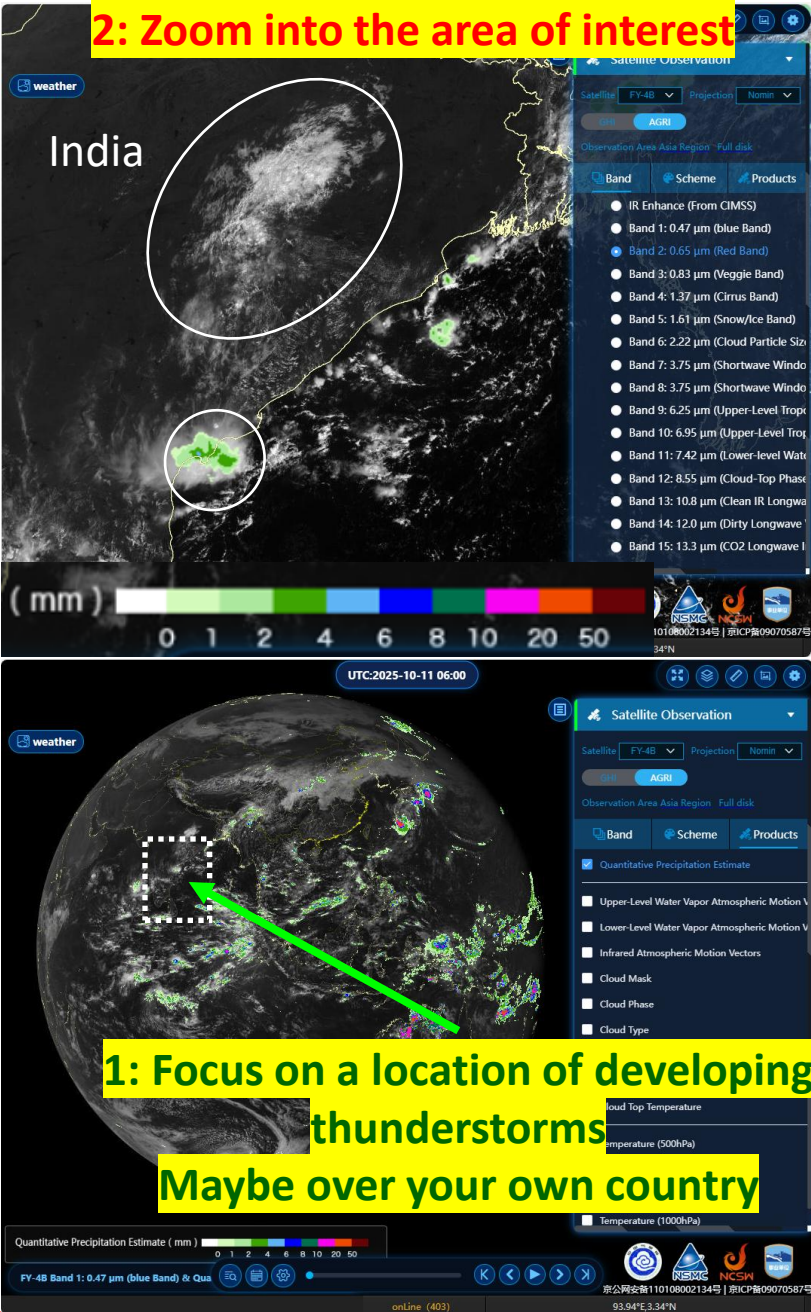
Exploring the Quantitative Precipitation Estimate on the CMA SWAP website

<http://rsapp.nsmc.org.cn/geofy/>



images courtesy China Meteorological Administration (CMA)

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OFFICIAL



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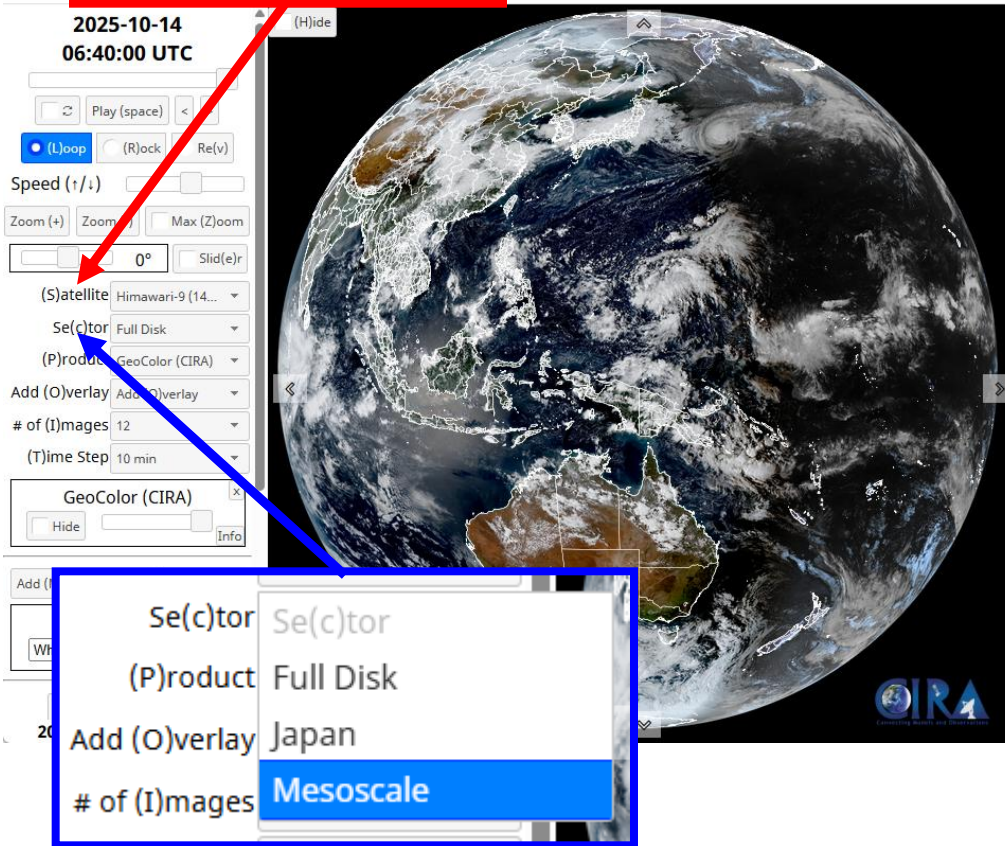
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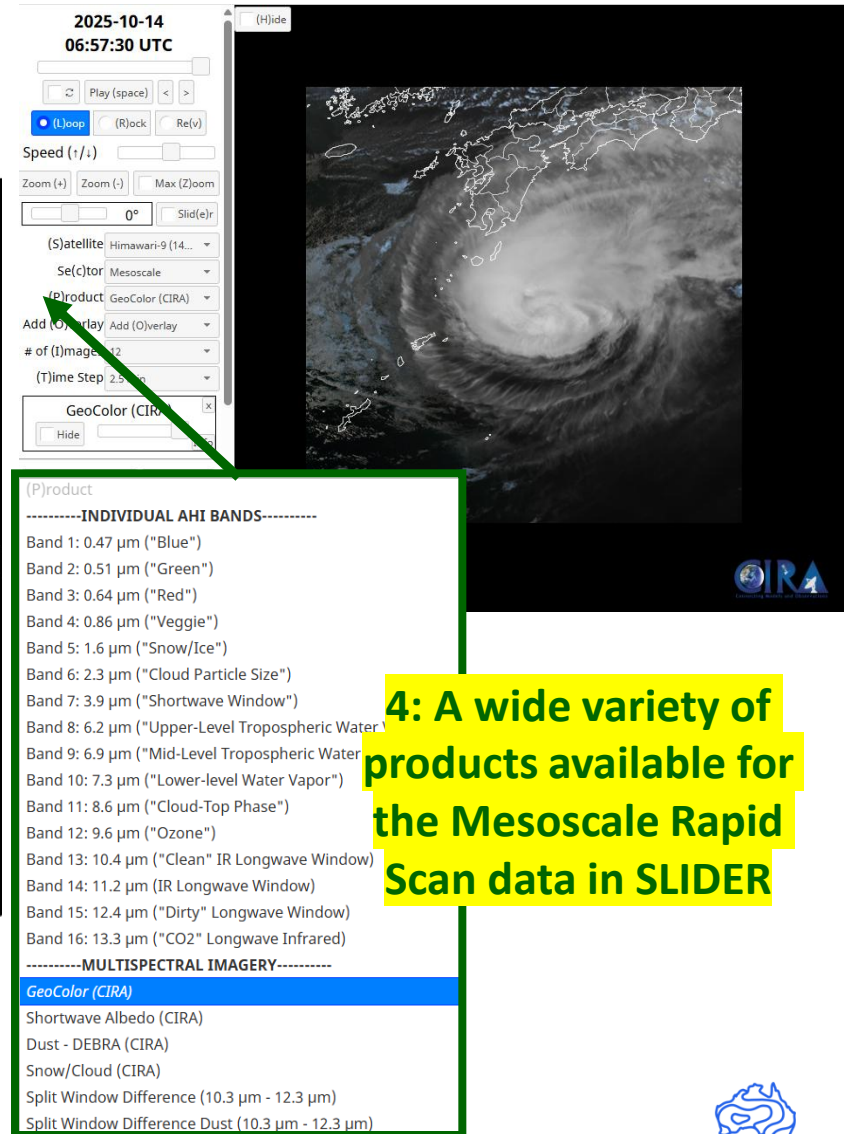
Exercise 9

1: Open the CIRA SLIDER viewer at <https://rammb-slider.cira.colostate.edu/>

2: For "Satellite" choose Himawari-9



3: For the "Sector", choose Mesoscale

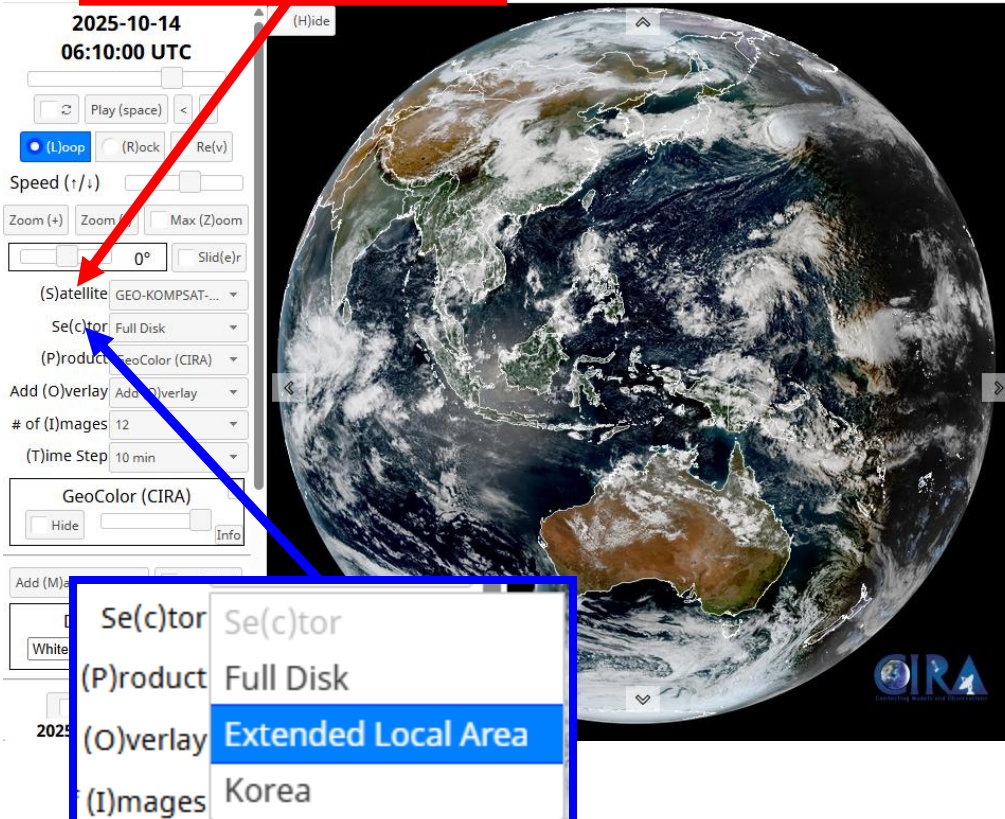


Exercise 10

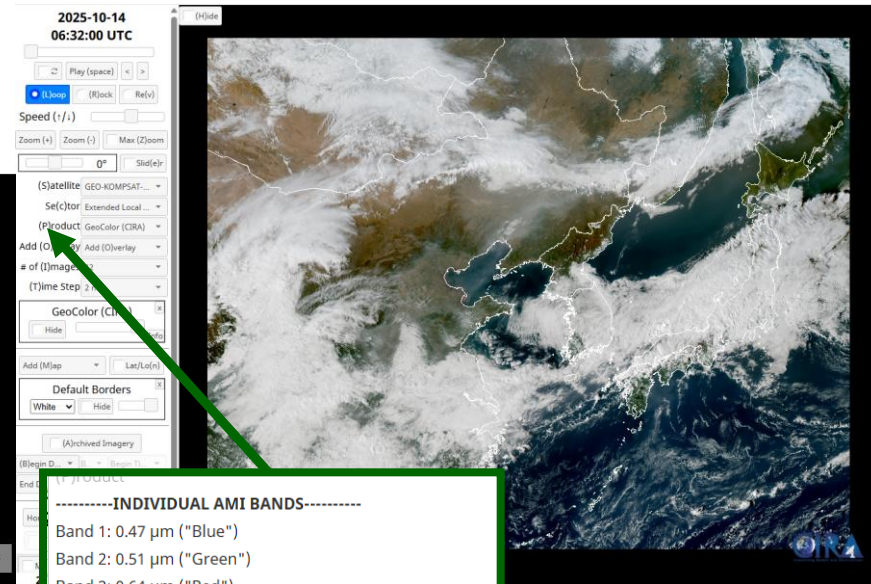
1: Open the CIRA SLIDER viewer at <https://rammb-slider.cira.colostate.edu/>

2: For "Satellite" choose
GEO-KOMPSAT-2A

(S)atellite GEO-KOMPSAT-...



3: For the "Sector", choose
Extended Local Area



-----INDIVIDUAL AMI BANDS-----

- Band 1: 0.47 μm ("Blue")
- Band 2: 0.51 μm ("Green")
- Band 3: 0.64 μm ("Red")
- Band 4: 0.86 μm ("Veggie")
- Band 5: 1.38 μm ("Cirrus")
- Band 6: 1.6 μm ("Snow/Ice")
- Band 7: 3.8 μm ("Shortwave Window")
- Band 8: 6.2 μm ("Upper-Level Tropospheric Water Vapor")
- Band 9: 6.9 μm ("Mid-Level Tropospheric Water Vapor")
- Band 10: 7.3 μm ("Lower-level Water Vapor")
- Band 11: 8.6 μm ("Cloud-Top Phase")
- Band 12: 9.6 μm ("Ozone")
- Band 13: 10.4 μm ("Clean" IR Longwave Window)
- Band 14: 11.2 μm (IR Longwave Window)
- Band 15: 12.4 μm ("Dirty" Longwave Window)
- Band 16: 13.3 μm ("CO₂" Longwave Infrared)

-----MULTISPECTRAL IMAGERY-----

- GeoColor (CIRA)
- GeoProxy (CIRA)
- Split Window Difference (10.3 μm - 12.3 μm)
- Split Window Difference Dust (10.3 μm - 12.3 μm)
- GeoDust (CIRA)

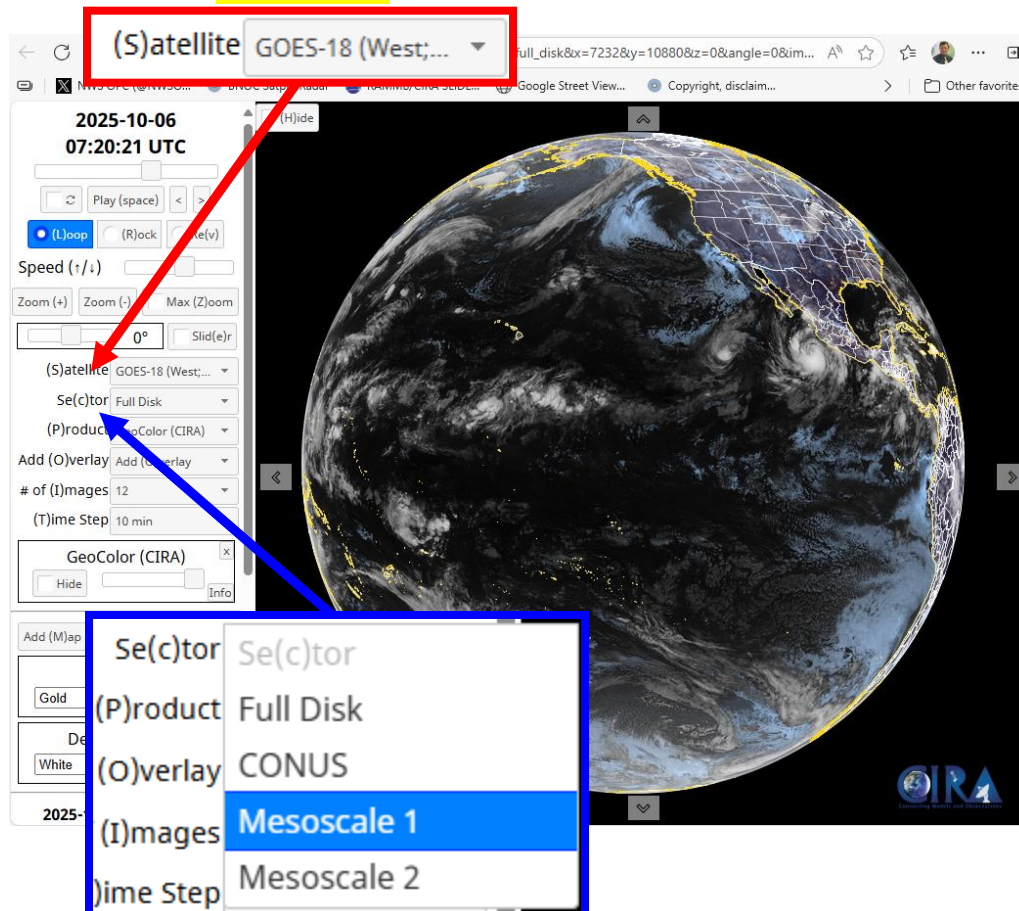
4: A wide variety of
products available for
the Extended Local
Area Rapid Scan data
in SLIDER



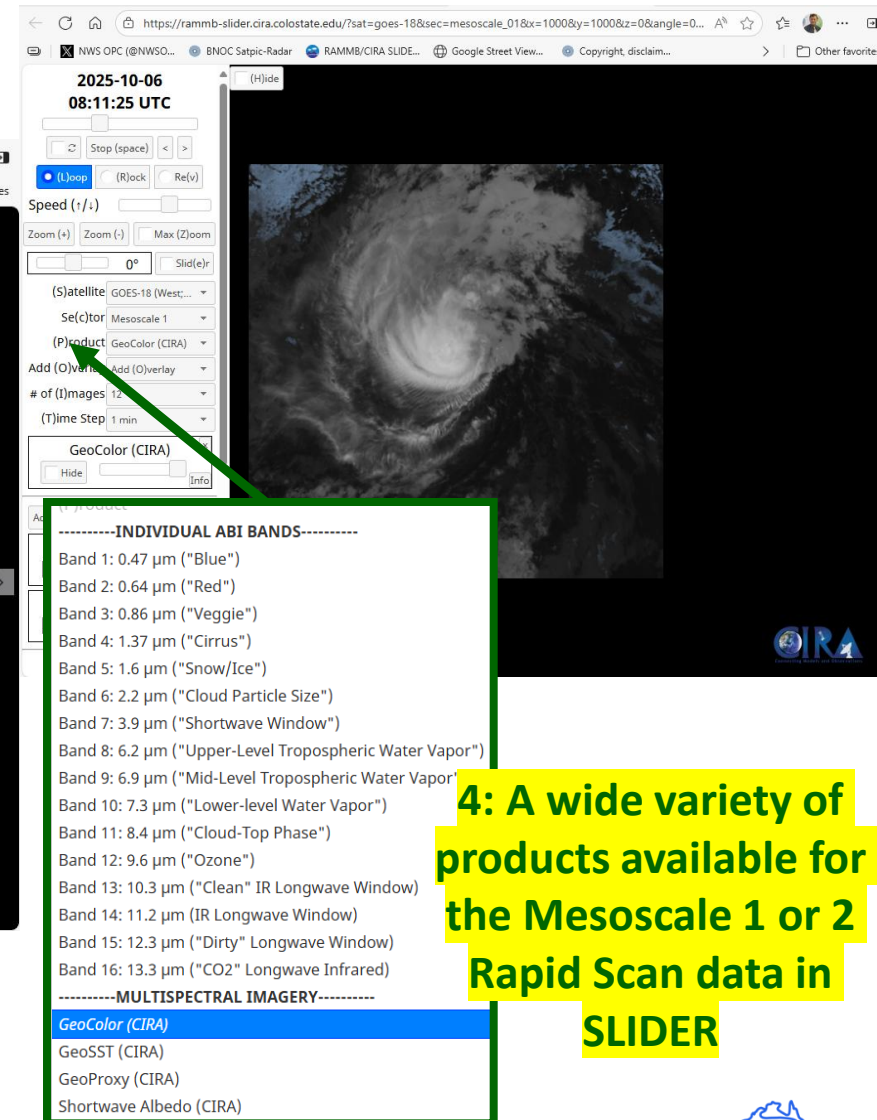
Exercise 11

1: Open the CIRA SLIDER viewer at <https://rammb-slider.cira.colostate.edu/>

2: For "Satellite" choose
GOES-18



3: For the "Sector", choose
Mesoscale 1 or Mesoscale 2

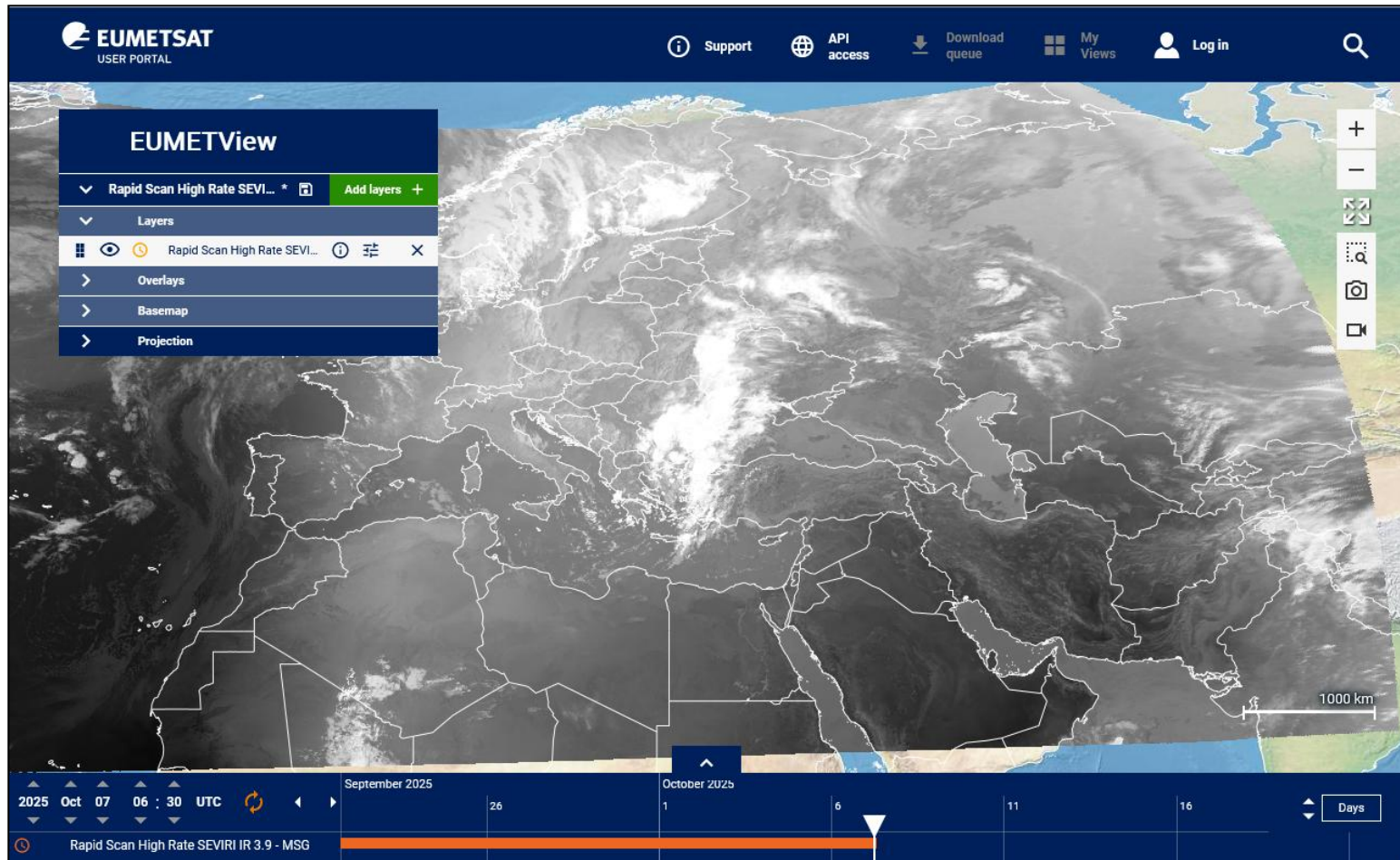


4: A wide variety of
products available for
the Mesoscale 1 or 2
Rapid Scan data in
SLIDER



Exercise 12

1: Render the METEOSAT 5-minute data from the EUMETView viewer https://view.eumetsat.int/productviewer?v=msg_rss:ir039_nrt



Rapid Scan High Rate SEVIRI data



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Exercise 13

OFFICIAL

1: Open the CIMSS/SSEC Tropical Cyclone page at <http://tropic.ssec.wisc.edu/>

W2

tropic.ssec.wisc.edu

Cooperative Institute for Meteorological Satellite Studies
Space Science and Engineering Center / University of Wisconsin-Madison

Tropical Cyclones ...A Satellite Perspective
CIMSS TC Webpage Product Archive

DATA STATUS (as of 21 Aug 2024 / 00:10UTC) : All products are currently available.

TC Image Gallery Who We Are Our Research Archive FAQ Links Contact Us KML

Current Time : 21 August 2024 / 00:22:39UTC

Storm Coverage (Information)

Mouse over and click on individual storm symbol(s) for specific "TCTrack" storm coverage product window

Active Storm Product Summary Pages: 10W 07E

CIMSS TC Intensity, Structure, and Positioning Products "Quick Links"

Intensity: AD AIDT AI-RI AMSU D-MINT D-PRINT SATCON

Positioning/Structure: ARCHER Meso-AMV M-PRC MIMIC-TC MIMIC-TPW SAL TC Diurnal Cycle

Tropical Outlooks/Regional Websites: Atlantic East Pacific West Pacific Indian Ocean Australia/Fiji

2: Choose Meso-AMV

Mouse over specific ocean basin (colored regions) for menu of available products; click on desired products

Global Mosaics

Tropical Cyclone Image Gallery

VIIRS DNB overshooting top product of Hurricane Idalia from VIIRS-NPP on 30 August, 2023 at 8:09 UTC (courtesy NRL-Monterey and Jeff Hawkins, CIMSS)

Cooperative Institute for Meteorological Satellite Studies / University of Wisconsin-Madison

Tropical Cyclones
TC-Scale Atmospheric Motion Vectors (AMV)

Tropical Storm 17E

UW-CIMSS
TC-Scale Atmospheric Motion Vectors (AMVs)

Plots of available TC-scale AMV coverage

3: Choose a current storm of interest

4: Animated GIF of Whole Period

East/Central Pacific
Tropical Storm RAYMOND

Product Description

Available AMV Article

Atmospheric Motion Vectors for Hurricane Applications. (in Remote Sensing)

Archive Page

Archive Page

Archive Page

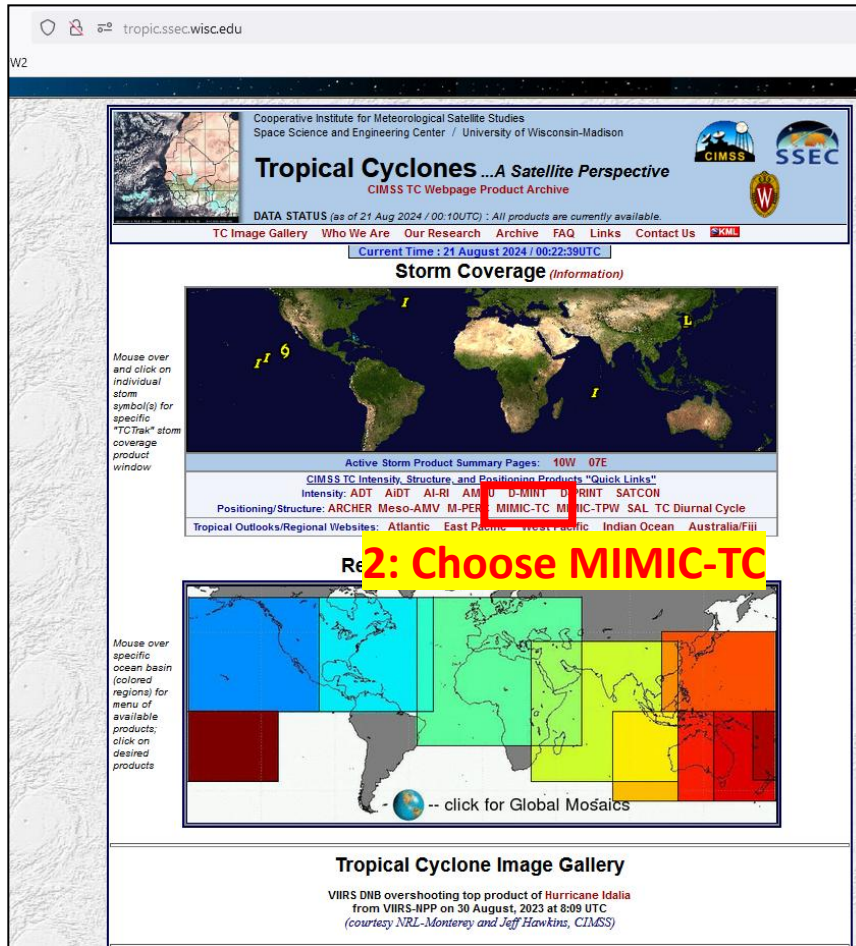
Archive Page

Archive Page



Exercise 14a

1: Open the CIMSS/SSEC Tropical Cyclone page at
<http://tropic.ssec.wisc.edu/>



Cooperative Institute for Meteorological Satellite Studies
 Space Science and Engineering Center / University of Wisconsin-Madison

Tropical Cyclones ...A Satellite Perspective
 CIMSS TC Webpage Product Archive

DATA STATUS (as of 21 Aug 2024 / 00:10UTC) : All products are currently available.

TC Image Gallery Who We Are Our Research Archive FAQ Links Contact Us 

Current Time : 21 August 2024 / 00:22:39UTC

Storm Coverage (Information)

Mouse over and click on individual storm symbol(s) for specific "TCTrack" storm coverage product window

Active Storm Product Summary Pages: 10W 07E

CIMSS TC Intensity, Structure, and Positioning Products "Quick Links"

Intensity: ADT AIDT AI-RI AMU D-MINT D-PRINT SATCON

Positioning/Structure: ARCHER Meso-AMV M-PERC MIMIC-TC MIMIC-TPW SAL TC Diurnal Cycle

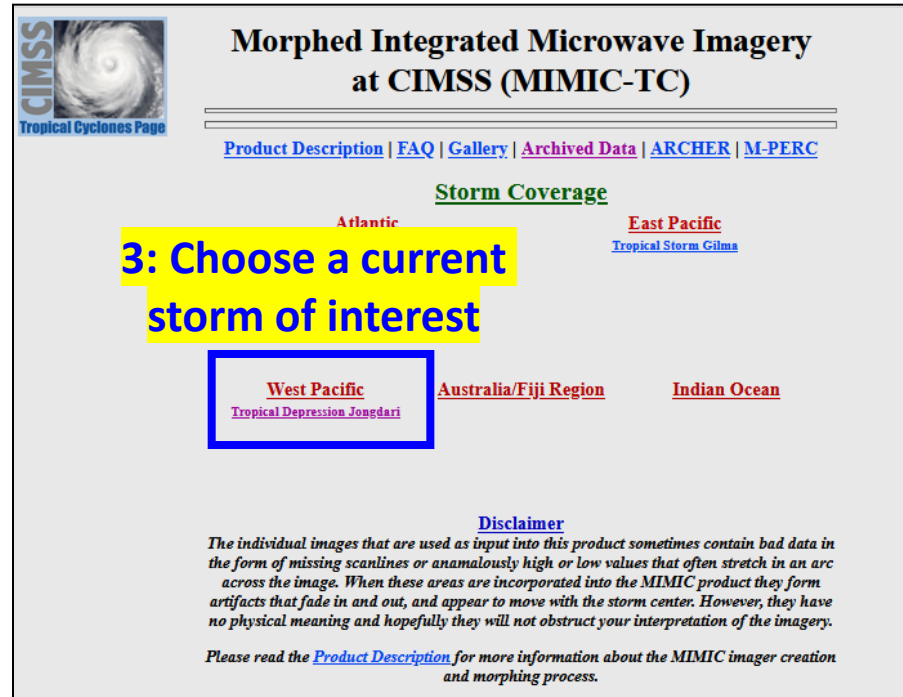
Tropical Outlooks/Regional Websites: Atlantic East Pacific West Pacific Indian Ocean Australia/Fiji

2: Choose MIMIC-TC

Mouse over specific ocean basin (colored regions) for menu of available products; click on desired products

Tropical Cyclone Image Gallery

VIIRS DNB overshooting top product of Hurricane Idalia from VIIRS-NPP on 30 August, 2023 at 8:09 UTC (courtesy NRL-Monterey and Jeff Hawkins, CIMSS)



Morphed Integrated Microwave Imagery at CIMSS (MIMIC-TC)

Product Description | [FAQ](#) | [Gallery](#) | [Archived Data](#) | [ARCHER](#) | [M-PERC](#)

Storm Coverage

Atlantic East Pacific
[Tropical Storm Gilma](#)

3: Choose a current storm of interest

West Pacific
[Tropical Depression Jongdari](#)

Australia/Fiji Region Indian Ocean

Disclaimer

The individual images that are used as input into this product sometimes contain bad data in the form of missing scanlines or anomalously high or low values that often stretch in an arc across the image. When these areas are incorporated into the MIMIC product they form artifacts that fade in and out, and appear to move with the storm center. However, they have no physical meaning and hopefully they will not obstruct your interpretation of the imagery.

Please read the [Product Description](#) for more information about the MIMIC imager creation and morphing process.

Morphed Integrated Microwave Imagery at CIMSS (MIMIC) Version 1

-- Latest 24 hours -- [\[Animated GIF\]](#)

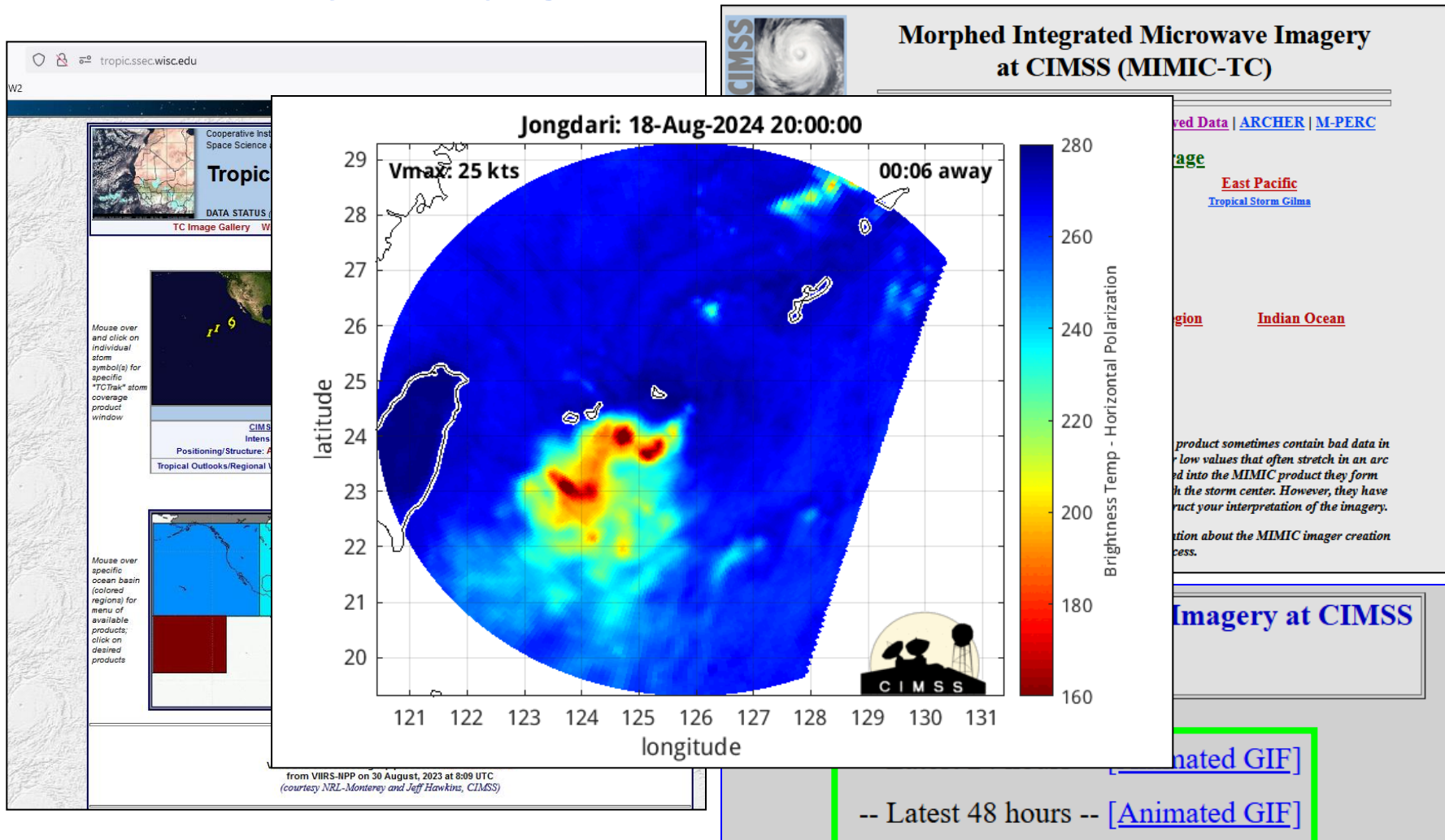
-- Latest 48 hours -- [\[Animated GIF\]](#)

4: Animated loop of the last 24 or 48 hours



Exercise 14b

Exploring the MIMIC TC website on the CIMSS/SSEC Tropical Cyclone page at <http://tropic.ssec.wisc.edu/>

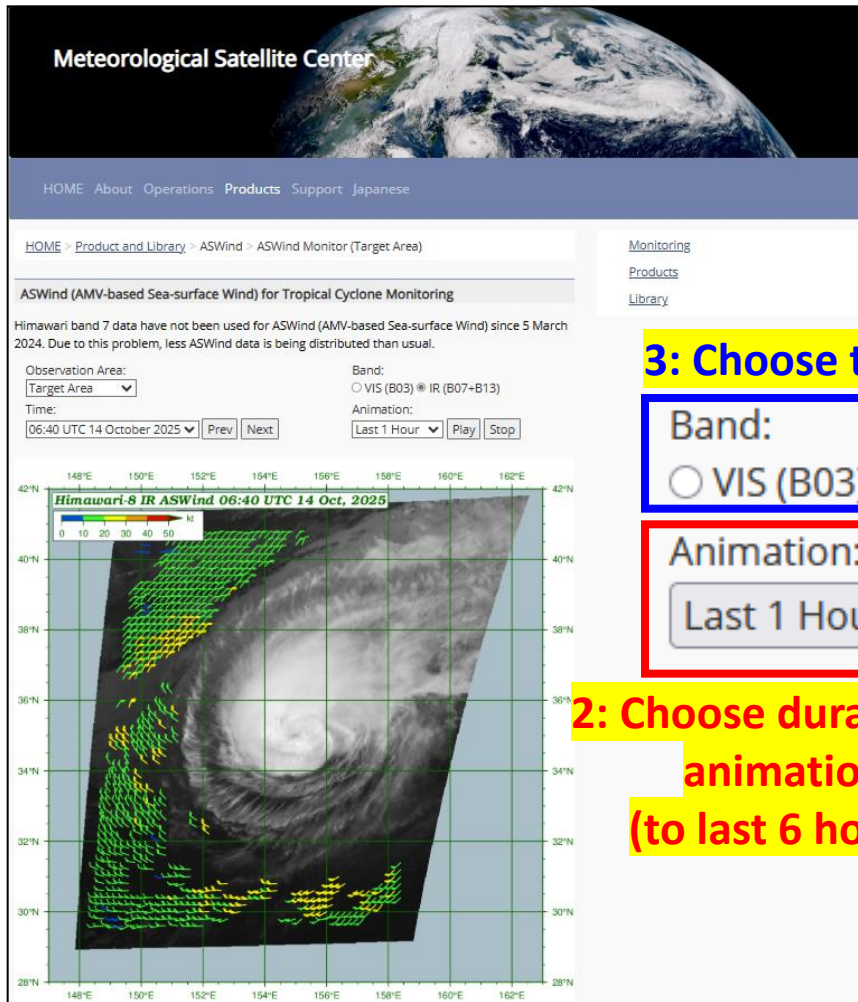


**Animated loop of the last 24
or 48 hours**



Exercise 15

1: Open the JMA Target Area high resolution Sea-Surface Winds page at <https://www.data.jma.go.jp/mscweb/en/product/aswind.php>



3: Choose the bands.

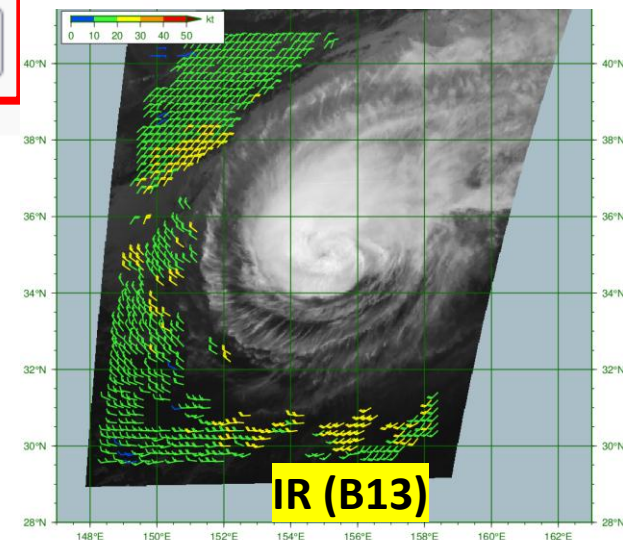
Band:

☐ VIS (B03) ☒ IR (B07+B13)

Animation:

Last 1 Hour

2: Choose duration of animation (to last 6 hours)





The Bureau
of Meteorology

Thank you

Bodo Zeschke

Bodo.Zeschke@bom.gov.au

A short 10-minute video explaining ProbSevere LightningCast

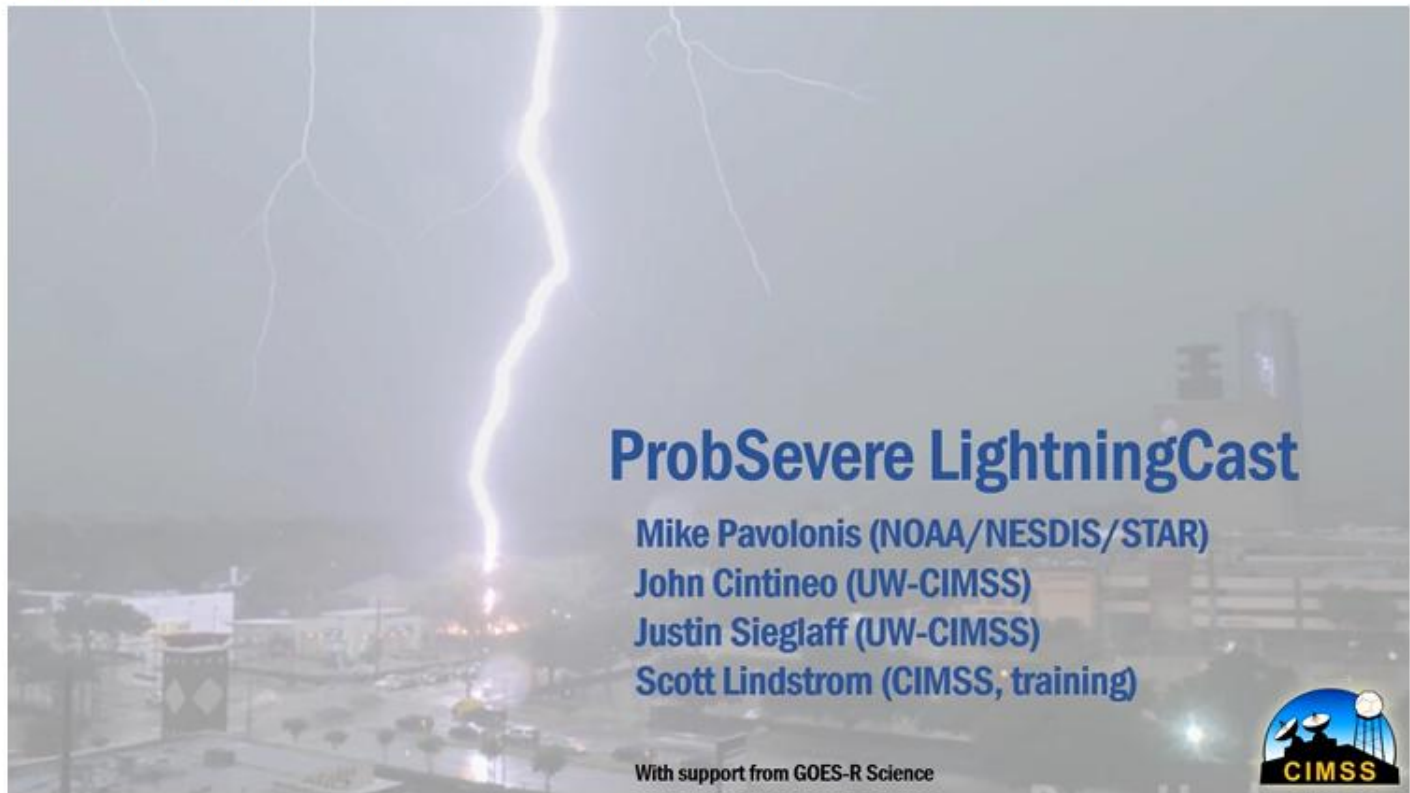
at https://cimss.ssec.wisc.edu/severe_conv/training/training.html#pltg

LightningCast (probability of lightning)

See this [blog post](#) for a succinct introduction to LightningCast.

[Experimental real-time page.](#)

[Training video and slides](#)



Geostationary Lightning Mapper

https://rammb.cira.colostate.edu/training/visit/quick_guides/GLM_Quick_Guide_Detection_Methods_June_2018.pdf



Geostationary Lightning Mapper: Definitions and Detection Methods

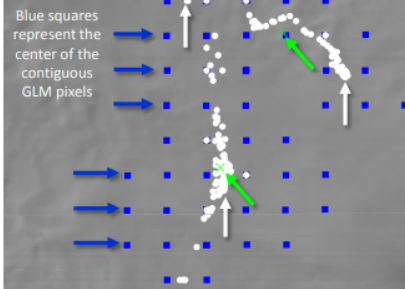
Quick Guide




GLM Detection Methods

- The GLM creates background images every 2.5 minutes, then images 500 frames per second to detect changes in brightness relative to the background image
- Individual pixels that are illuminated above the background threshold during a 2 ms frame are termed GLM events, filters then determine the likelihood that these events are real lightning
- Lightning Cluster Filter Algorithm combines events into groups and groups into flashes

1077 GLM Events
166 GLM Groups
2 GLM Flashes



Blue squares represent the center of the contiguous GLM pixels

Green X's depict the location of two GLM flashes

GLM groups appear as white dots (which typically do not occur at the center of GLM pixels)

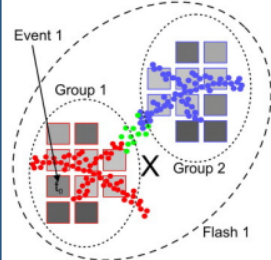
GLM events are depicted as blue squares on the GLM fixed grid – there were >1000 GLM events during these 2 GLM flashes, only 50 pixels were illuminated, so most pixels were illuminated for multiple 2 ms frames

GLM Definitions

- Event:** occurrence of a single pixel exceeding the detection threshold during one ~2 ms frame
- Group:** 1+ simultaneous GLM events observed in adjacent (neighboring/diagonal) pixels
- Flash:** 1 or more sequential groups separated by less than 330 ms and 16.5 km
- GLM flash rates are most closely tied to updraft and storm evolution, and GLM event locations best depict the spatial extent

Event, Group, and Flash Locations

- While GLM events are reported as the center points of GLM pixels, the group and flash locations represent radiance weighted centroids
- In this image the red, green, and blue dots represent a lightning mapping array depiction of a lightning flash; the red squares with grey shades indicate GLM events with lighter shades being brighter
- The GLM flash location considers the brightness of all events from both groups to locate the brightest part of the flash, or radiance weighted centroid, indicated by the black X in this image
- Note that the flash location may not always fall along the lightning channel, but will always fall within the flash footprint



Author: Dr. Scott Rudlosky
NOAA/NESDIS/STAR (CICS-MD)

Version 2 – June 11, 2018





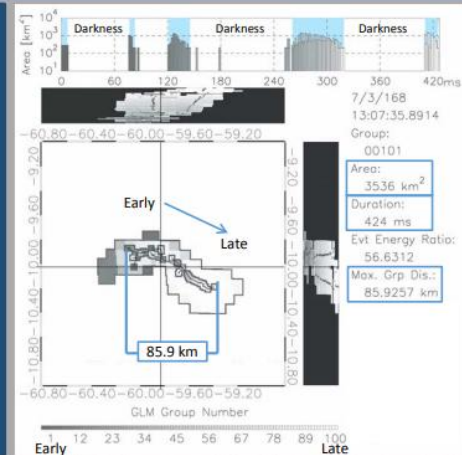


Geostationary Lightning Mapper: Definitions and Detection Methods

Quick Guide




- The GLM maps the extent of the cloud illuminated by individual lightning flashes
- Despite a relatively coarse spatial resolution, the GLM provides rapid temporal updates, allowing it to map flash structure
- Groups within individual flashes are connected to create flash skeletons
- This image depicts the evolution of one flash in space and time, the top panel illustrates an important feature of most lightning flashes, this 0.4 second flash produces discrete optical emissions separated by periods of darkness
- This is an example of how optical GLM lightning observations provide helpful insights into the flash structure, these insights can in turn be used to make inferences regarding lightning physics and storm structure



Area [km²]

Time [ms]

Darkness

Darkness

Darkness

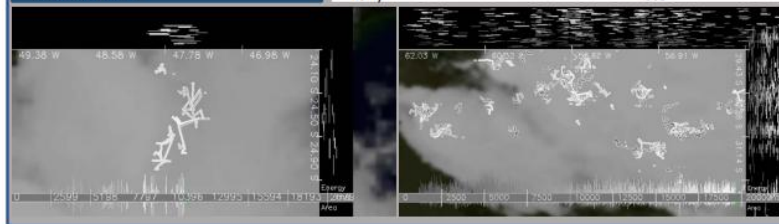
7/3/168
13:07:35.8914
Group:
00101
Area:
35.36 km²
Duration:
424 ms
Evt. Energy Ratio:
56.6312
Max. Grp Dis.:
85.9257 km

Early

Late

GLM Group Number

Early 12 23 34 45 56 67 78 89 100 Late



- These examples illustrate that the GLM is an imager rather than a detector
- Flash skeletons illustrate the variety of lightning composition and time evolution, which provides important insights into convective mode and storm structure
- Forecasters cannot be expected to observe lightning at this frequency during severe storm warning operations, so scientists are working to quantify this information into new products, this motivated the gridded GLM products

Additional Resources

[Virtual Lab for the GLM](#)

[GLM Faculty Virtual Course](#)

[NESDIS/STAR - CICS-MD](#)

[NASA SPoRT Home Page](#)

Hyperlinks not available when viewing material in AIR Tool



RGB Quick Guides

Meteorological Satellites -Japan Meteorological Agency (JMA)-

HOME > Services > Meteorological Satellites > NMHS > VLab > RGB Training Library

RGB Training Library



Meteorological Satellites

- Introduction
- News Release Archive
- Real-time Imagery
- Image Gallery
- Operational Information
- Data Access
- For NMHSs
- HimawariRequest
- About Us
- Links
- Site Map

Satellite imagery contains much of the physical information needed for nephanalysis. However, such analysis requires skills and experience to enable interpretation and extraction of the necessary information from imagery. Red-green-blue (RGB) composite imagery can be easily created by overlapping and displaying color satellite images to present information from several satellite channels.

Note: As work on color interpretation for Himawari-8 remains ongoing, the content of this site may change in the future.

RGB Training Materials

RGB Outline

- Outline of RGB Composite Imagery (PDF version)[approx. 13MB]

WMO recommended schemes

- Natural Color RGB - Detection of snow/ice, vegetation and clouds - (PDF [approx. 5MB])
- Day Microphysics RGB - Nephanalysis in daytime - (PDF [approx. 4MB])
- Day Snow-Fog RGB - Detection of low-level clouds and snow/ice covered area - (PDF [approx. 3MB])
- Night Microphysics RGB - Nephanalysis in night time - (PDF [approx. 3MB])
- Day Convective Storm RGB - Detection of Cumulonimbus Cloud - (PDF [approx. 3MB])
- Dust RGB - Detection of Yellow Sand (Asian Dust) - (PDF [approx. 3MB])
- Airmass RGB - Analysis of air mass and jet stream - (PDF version [approx. 2MB])

RGB recipes for other applications

- Ash RGB - Detection of Volcanic Ash (PDF [approx. 3MB])
- True Color RGB by Himawari-8 and -9 (PDF [approx. 3MB])

Himawari RGB quick guides

- Outline and list of RGB quick guide
- List of RGB quick guide "by-purpose"

← → ↺ 🏠 ⓘ rammb.cira.colostate.edu/training/visit/quick_guides/ ... ☆ ⬇ 🖨 📄

VISIT

Quick Guides

Below is a list of Quick Guide reference documents for satellite imagery and products. SBN availability refers to availability in AWIPS via the Satellite Broadcast Network, products not on the SBN are generally still available in AWIPS via the LDM.

Product	Last Updated	SBN availability	Satellite	Category
Legacy Version				
GCOS AM				
Jason Significant				
Day Snow/C				
Gridded				
SAR V				
VIIRS Cloud				
Day Sn				
JPSS Snow				
GCOS AM				
VIIRS Cloud				
VIIRS Ice Surface				
VIIRS Ice Co				
VIIRS Flood				
GLM Average Flash				
Optical				
GLM Data				

- VISIT Home
- Training Sessions
- Training Calendar
- Blog Sites
- FDTD GOES Applications Webinars
- VISIT Satellite Chat
- VISIT Satellite Help Desk
- The VISIT Program
- VISIT Contributors
- VISIT FAQ
- Links / Tutorials
- RAMSDIS Online
- Quick Reference

Quick Guides:
These are a 1-2 page PDF document designed to be a reference to provide summarizing information about a product. This includes limitations, an example or two and highlighted features.

Quick Briefs:
These are a brief (around 5 minutes) video that provide an introduction, basic explanation and one or two quick application examples.

Quick Guides Quick Briefs

Product	Material	Updated	SBN Availability	Satellite	Category	WMO Sat. num(s)
VIIRS Day-Cloud Phase Distribution RGB	PDF	2025/04/09		JPSS	RGB	
Derived Motion Winds - LEO	External Website	2025-04-02		Low Earth Orbiting (LEO)	Baseline Product	
Advanced Layer-Resolvable Water (ALRW) Product	PDF	2025-05-16	Yes	Low Earth Orbiting (LEO)	Product	
Snowfall Rate (SR)	PDF	2025-03-18		JPSS	Product	
Merged Snowfall Rate (msr)	PDF	2025-03-18		JPSS	Product	
Sat Winds	PDF	2025-03-10	No	JPSS	Product	
VIIRS Blowing Snow RGB	PDF	2025-02-07		JPSS	RGB	
VIIRS Aerosol Optical Depth (AOD)	External Website	2024-08-30		JPSS	Product	
VIIRS Aerosol Detection Product (ADP)	External Website	2024-08-30		JPSS	Product	
VIIRS Nighttime Microphysics RGB	PDF	2024-07-09		JPSS	RGB	
VIIRS Ash Index	External Website	2024-06-18		JPSS	Product	
CMRIS and VIIRS RGB Products	External Website	2024-04-18		JPSS	Product	
CMRIS Ash-Smoke Index	External Website	2024-04-18		JPSS	Product	

JMA User's Guide to RGB composite imagery (Himawari RGB Training Library)

http://www.jma.go.jp/jma/jma-eng/satellite/RGB_TL.html

CIRA Quick Guides

http://rammb.cira.colostate.edu/training/visit/quick_guides/



RGB Quick Briefs and Interpretation Guides

VISIT Quick Briefs

Below is a list of Quick Briefs for satellite imagery and products. Quick Briefs are short training videos designed to introduce various imagery and products. Be sure that you are using a [flash enabled browser](#).

Title	Last Updated	Category
VIIRS Fire Temperature RGB	2020-04-06	RGB
VIIRS Day Land Cloud Fire RGB	2020-01-10	RGB

Regional and Mesoscale Meteorology Branch

VISIT – Quick Reference Material

Quick Guides:
These are a 1-2 page PDF document designed to be a reference to provide summarizing information about a product. This includes limitations, an example or two and highlighted features.

Quick Briefs:
These are a brief (around 5 minutes) video that provide an introduction, basic explanation and one or two quick application examples.

Product	Material	Last Updated	Category	WMO Sat. Skill(s)
GLM Full Disk Gridded Products	Video	2020-04-16	GLM	
GLM Minimum Flash Area	Video	2020-04-16	GLM	
GLM Full Disk Status Quality	Video	2020-04-16	GLM	
VIIRS Fire Temperature RGB	Video	2020-04-06	RGB	
SOCS Fire Temperature RGB		2019-12-13	RGB	
Volcanic Ash Detection and Retrieval		2019-01-31	Product	
VIIRS Near Constant Contour	Video	2019-07-25	Product	

EUMeTrain

RGB Color Guide

This guide will come in handy for matching colours in RGB images with cloud type or surface feature. It also works the other way round: you can select a meteorological phenomenon and ask for the colour that shows the phenomenon in a given RGB combination.

The collection contains the standard RGBs created from the MSG/SEVIRI imager and also some RGBs from the VIIRS and AVHRR imagers.

To analyse the colours of an RGB image, an interactive tool can be downloaded from the "All Resources" pull-down menu (**RGB Colour Tool**).

The descriptions of the recipes of used RGBs can be found under the "User Manual" menu (RGB Recipes).

RGB COLOR GUIDE

Search

Satellite Instrument: - Any -

Phenomena: - Any -

RGB: - Any -

Colour: - Any -

Apply

Thick ice clouds
Deep convective clouds with strong updraft - severe convective clouds - often appear light blue in Cloud Phase RGB. The reason is that...

Thick ice clouds covered by large ice crystals
Thick ice clouds covered by large ice crystals appear medium blue in Cloud Phase RGB.

Dust
Dust clouds usually appear tan in VIIRS Cloud Phase RGB. Dust clouds are usually semi-transparent. Its actual colour shade depends both...

Sunglint
Sunglints appear blurred yellowish grey in VIIRS Cloud Phase RGB.

CIRA Quick Briefs

http://rammb.cira.colostate.edu/training/visit/quick_briefs/

EUMETRAIN RGB Colour Interpretation Guide

<https://eumetrain.org/rgb-color-guide>

