



FengYun Satellite Data Access Update and Application Services



**National Satellite Meteorological Center
(National Center for Space Weather)
China Meteorological Administration**

AOMSUC-13

3 - 10 November 2023
Busan, Korea

Hosted by Korea Meteorological Administration

13th Asia-Oceania Meteorological Satellite Users' Conference





CONTENTS

1. FengYun Satellite Program Overview
2. FengYun Satellite Data Access
3. **Typical Applications and Examples**
4. FengYun Satellite Application Tools
5. Actions and Plans

9 FengYun Satellites in orbit

GEO

FY-2G, -2H

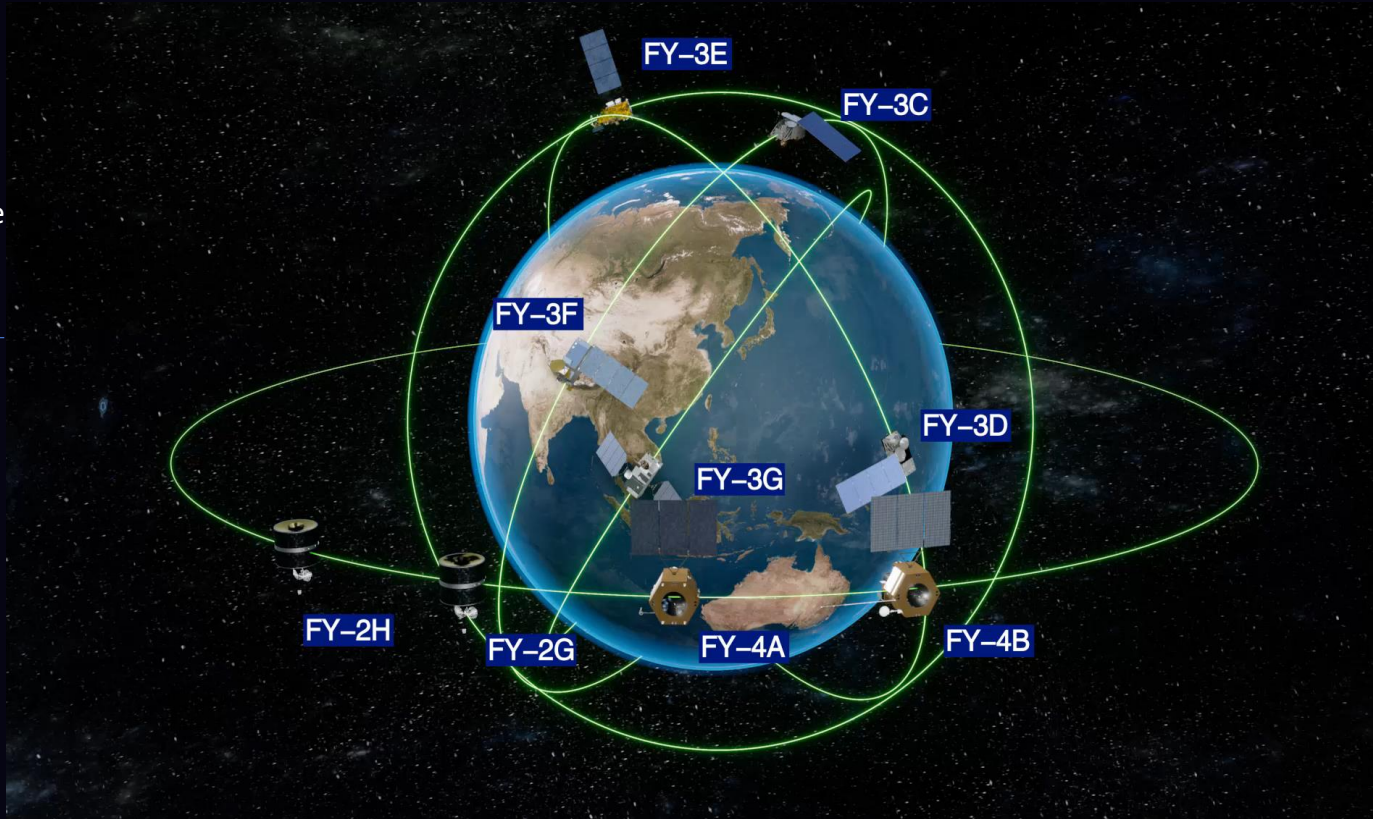
FY-2G (99.5°E) and FY-2H (79°E)
Full disk every 30 min
FY-2H, last flight unit of FY-2 serie

FY-4A, -4B

China's second generation GEO meteorological satellites.

FY-4A (104.7°E), Full disk every 15 min.

FY-4B (133°E), Full disk every 15 min, partial areas rapid scanning at 1 min.



LEO

FY-3C

Mid-morning orbit
Operational with degraded performance

FY-3D

Afternoon orbit,
10 EO instruments

FY-3E

Early-morning orbit
11 EO instruments

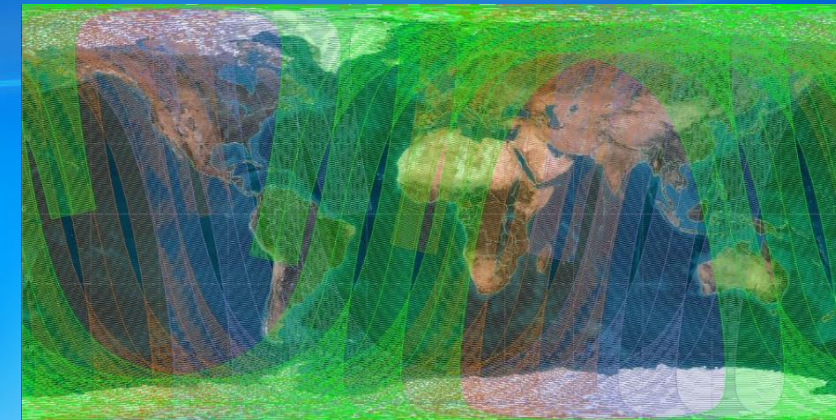
FY-3F

Morning orbit, successor of FY-3C
Launched on August 3, 2023

FY-3G

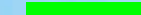
China's first precipitation measurement satellite, launched on April 16, 2023

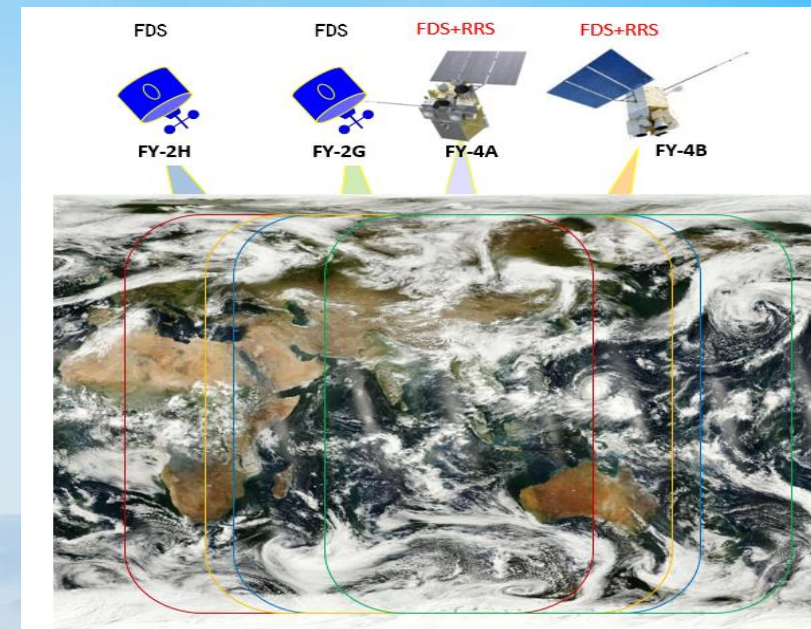
Series	Name	Launch Date	Position	Instruments
FY-3	FY-3C	2013-09	10:15 desc	SIM-II, TOU, VASS, VIRR, ERM-I, GNOS-I, IRAS, MERISI-I, MWHS-II, MWRI-I, MWTS-II, SBUS
	FY-3D	2017-11	14:00 asc	SEM, WAI, GAS, GNOS-I, HIRAS-I, IPM, MERISI-II, MWHS-II, MWRI-I, MWTS-II
	FY-3E	2021-07	05:30 desc	SEM, SIM-II, SSIM, Tri-IPM, WindRAD, X-EUVI, GNOS-II, HIRAS-II, MERISI-LL, MWHS-II, MWTS-III
	FY-3G	2023-04	Inclining orbit	PMAI, HAOC, GNOS-II, MERISI-RM, MWRI-RM, PMR
	FY-3F	2023-08	10:15 desc	SIM-II, ERM-II, GNOS-II, HIRAS-II, MERISI-III, MWHS-II, MWRI-II, MWTS-III, OMS-L, OMS-N
FY-2	FY-2G	2014-12	99.5°E	VISSR-II
	FY-2H	2018-06	79°E	VISSR-II
FY-4	FY-4A	2016-12	104.7°E	SEP, AGRI, GIIRS, LMI
	FY-4B	2021-06	133°E	SEP, AGRI, GHI, GIIRS



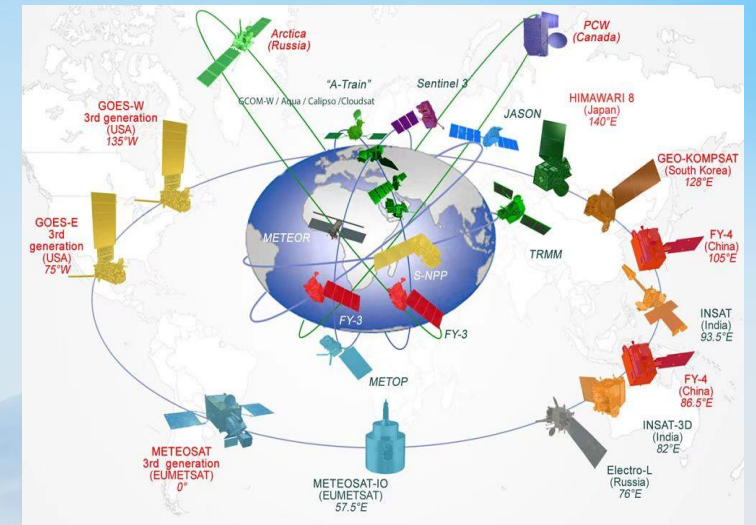
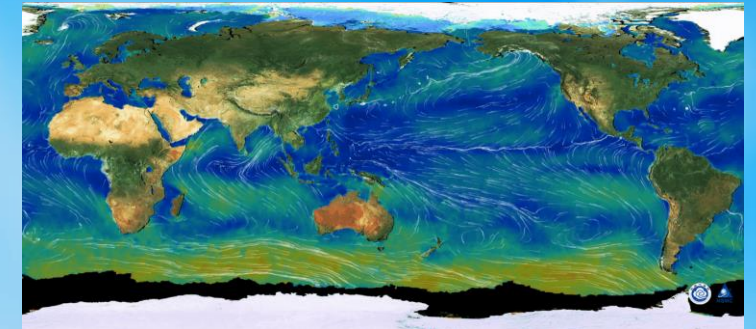
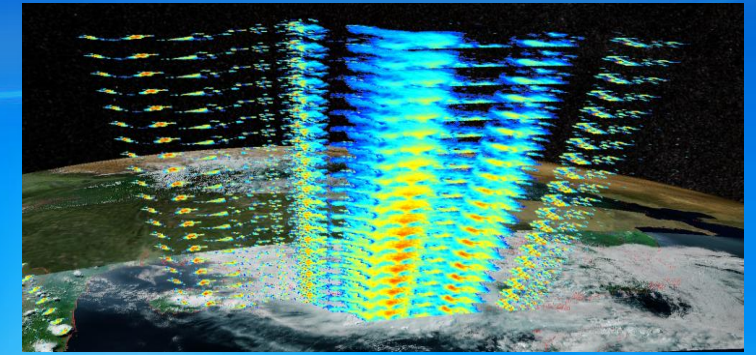
 FY-3 Early Morning 5:30 AM

 Metop-A 9:30 AM, FY-3F 10:15 AM

 NPP 13:30 PM, FY-3D 14:00



- ✓ FY-3G launched on Apr.16,2023 is the first precipitation measurement satellite. Operates in a 50° inclination orbit, equipped with Ku/Ka-band dual-frequency precipitation measurement radar, and 4 other sensors. Measure the 3D structure of precipitation, obtains cloud microphysical parameters. Creating an active-passive combined comprehensive FengYun precipitation measurement system.
- ✓ FY-3F launched on Aug.3, 2023 is the newest member of FengYun Constellation with as international advanced load configuration and performance .Equipped with both microwave and optical instruments, which allows vertical detection of atmospheric temperature and humidity stratification up by over 40 times than previous design. Upgraded ultraviolet detection capability, and is equipped with two newly developed ultraviolet hyperspectral remote sensing detectors.
- ✓ FY-3E launched on July 5, 2021 is the world's first meteorological satellite in early morning orbit for civil service, filling in the observing gap in early morning. It can monitor solar and space environments and their effects, as well as ionospheric data to meet the needs of space weather forecasts and supporting services
- ✓ FY-4B launched on June 3, 2021 is designed to be the first operational satellite of FY-4 series. The Geostationary Interferometric Infrared Sounder (GIIRS) for 3D detection of atmospheric temperature and humidity, and the Geostationary High-speed Imager (GHI), which can make area-targeted quick scan at a spatial resolution of 250 meters and time interval of 1 minute.



Space-based WMO Integrated Global Observing System



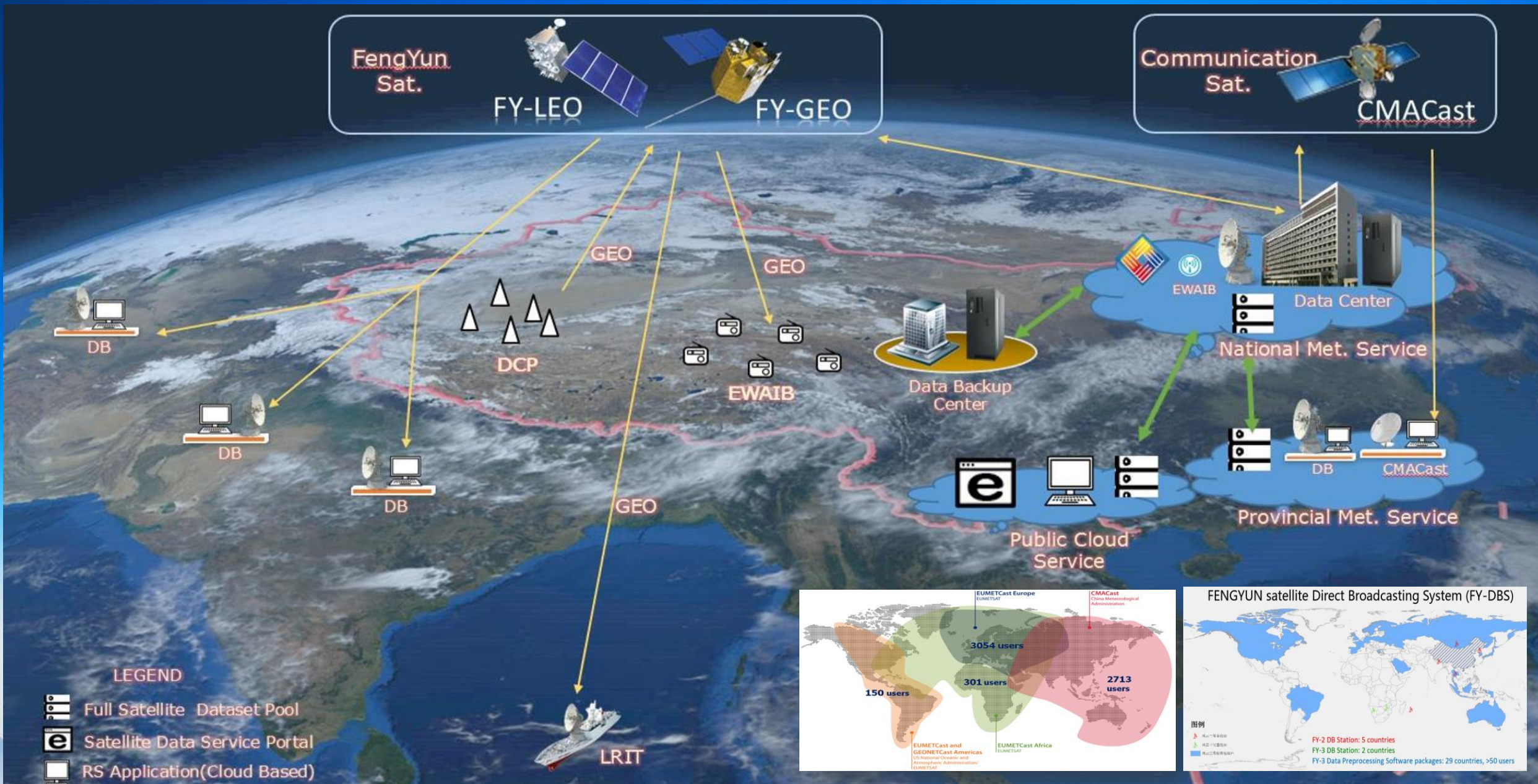
CONTENTS

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FengYun Satellite Data Service

Type	User	Time
Website	All user	Non real-time
Direct Broadcast	Agreement user	Real-time
CMAcast	Agreement user	Real-time
FTP service	All user	Non real-time
Emergency data service	Agreement user	Real-time
GTS /WIS	Agreement user	Non real-time
China-EU data exchange	Agreement user	Non real-time
Manual Service	All user	Non real-time

Data services



Web services

data.nsmc.org.cn/portalsite/


- All 31 PB archived data (incl. real time)
- Satellites' information
- Satellite images browsing
- Documents and tools

User: freely register, update need authorization

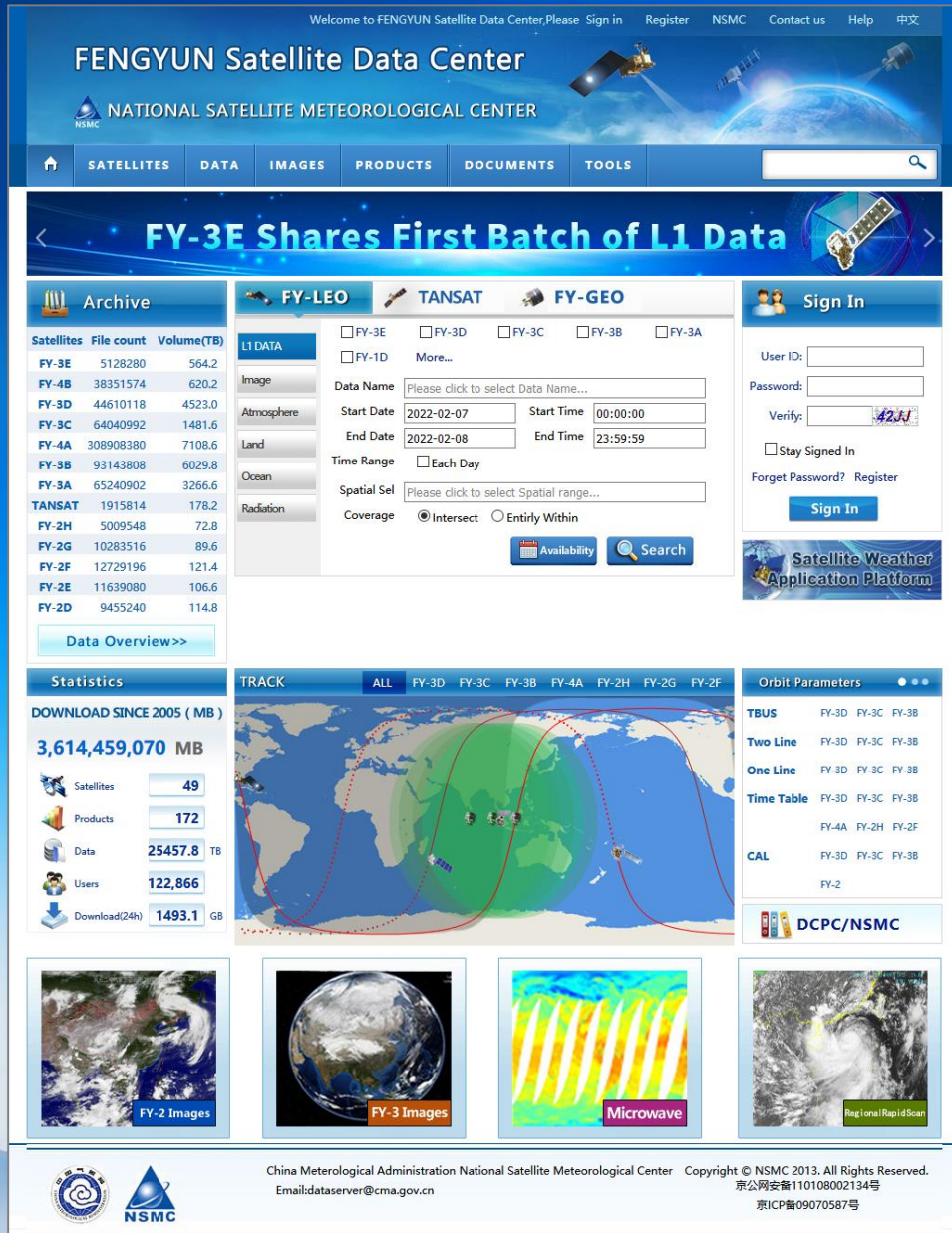
- ❖ Normal: 30GB/day
- ❖ Senior: 100GB/day

Application form:

<https://satellite.nsmc.org.cn/PortalSite/StaticContent/DocumentDownload.aspx?TypeID=8>

Data download	
<input type="checkbox"/> Data Format	User upgrade application form 
<input type="checkbox"/> Auxiliary Data	Download times[473]
<input type="checkbox"/> Application Forms	Download times[983]

Click to download the form



The screenshot shows the FENGYUN Satellite Data Center website. The header includes the site name and navigation links. The main content area features a news banner for 'FY-3E Shares First Batch of L1 Data', a data archive table, a search and filter interface for L1 DATA, a sign-in form, and a satellite weather application platform. A statistics section shows download metrics since 2005. The bottom of the page displays satellite imagery thumbnails and footer information.

Satellites	File count	Volume(TB)
FY-3E	5128280	564.2
FY-4B	38351574	620.2
FY-3D	44610118	4523.0
FY-3C	64040992	1481.6
FY-4A	308908380	7108.6
FY-3B	93143808	6029.8
FY-3A	65240902	3266.6
TANSAT	1915814	178.2
FY-2H	5009548	72.8
FY-2G	10283516	89.6
FY-2F	12729196	121.4
FY-2E	11639080	106.6
FY-2D	9455240	114.8

Downloaded since 2005 (MB): 3,614,459,070 MB

- Satellites: 49
- Products: 172
- Data: 25457.8 TB
- Users: 122,866
- Download(24h): 1493.1 GB

Footer: China Meteorological Administration National Satellite Meteorological Center. Copyright © NSMC 2013. All Rights Reserved. Email:dataserver@cma.gov.cn. 京公网安备 110108002134号. 京ICP备09070587号

Windows users

FY Satellite Data Download Toolkit

FY Satellite Data Download Toolkit 1.0

Welcome luoluo

Search Subscribe Cart My Order Download List

Satellite Product

▼ LEO satellite

FY-3D

FY-3C

FY-3B

FY-3A

FY-1D

FY-1C

NOAA-18

NOAA-17

NOAA-16

NOAA-15

AQUA

TERRA

METOPB

▼ GEO satellite

FY-4A

Instrument: GAS(GAS)

Type: L0 Data(L0)

<input type="checkbox"/> Product	Start date	End date	Count
<input type="checkbox"/> FY3D GAS L0 Data	2017-11-25	2019-07-18	8481

Time range: Beijing time UTC time

2019-07-18 00:00 to 2019-07-19 23:59 Each day

Spatial Selection Location: Whole Area Whole Area Precise position

China Asia Africa Europe North America South America Oceania

Anhui Beijing China Chongqing

Fujian Gansu Guangdong Guangxi

Guizhou Hainan Hebei Heilongjiang

Henan Hong Kong Hubei Hunan

Inner Mongolia Jiangsu Jiangxi Jilin

Liaoning Macao Ningxia Qinghai

Search

- ✓ Data Search
- ✓ Download Monitor
- ✓ Subscribe
- ✓ Breakpoint resume

**FY-3 Preprocessing
Software Packages**

Emergency Users:

Upgrade FY_ESM website and dataflow to support more efficient service.

<http://www.nsmc.org.cn/service/en/emergency/index.html>

The screenshot shows the website interface for the National Satellite Meteorological Center (NSMC). At the top left, it says "NSMC Home" and "National Satellite Meteorological Center, CMA". Below this is the NSMC logo and the text "Emergency Support Mechanism for International Users of FengYun Satellites". A navigation menu includes "Home", "Request", "Description", "Protocol", "Satellite", "Data & Product", "List", "Image", and "Tools". The main content area features a large background image of a storm with lightning. The text "FYESM" is prominently displayed, followed by "Emergency Support Mechanism for International Users of FengYun Meteorological Satellites in Disaster Prevention and Mitigation". There are three buttons: "New Request >", "Join FYESM >", and "Brouche (PDF) >". Below this is a "Latest Monitoring" section with a "More ..." link and a row of six satellite imagery thumbnails.

CMA introduced the Emergency Support Mechanism of FENGYUN (FY) Satellite (FY ESM) to international users who made a request once visited by such extreme events as typhoon, heavy rain, severe convection, forest or grassland fire and sand and dust storm.

Emergency Support Mechanism for International Users of FengYun Satellites

<https://fy4.nsmc.org.cn/service/en/emergency/index.html>

This screenshot shows the home page of the National Satellite Meteorological Center (NSMC) for the Emergency Support Mechanism for International Users of FengYun Satellites (FYESM). The page features a navigation menu with 'Request' highlighted. Below the menu, there are buttons for 'New Request', 'Join FYESM', and 'Brouche (PDF)'. A red box highlights the 'Request' menu item and the 'New Request' button, with a white arrow pointing to the latter. The page also displays 'Latest Monitoring' with satellite images of tropical cyclones and 'Types of disasters' including tropical cyclones, floods, fires, sand and dust storms, earthquakes, ocean waves, snow and ice, and volcanoes.

This close-up view shows the 'Request' menu item in the navigation bar, which is circled in red. Below it, the 'New Request' button is also circled in red, with a white arrow pointing to it. The background shows the header of the website with the NSMC logo and the title 'National Satellite Meteorological Center, CMA Emergency Support Mechanism for International Users of FengYun Satellites'.

This screenshot shows the 'Request' form on the website. The form includes fields for 'Country', 'Organization', 'Name', 'Email', 'Event Type', 'Location', and 'Longitude/Latitude'. Below these fields is a map with a 'Mouse Operation' legend. The 'Satellite' section has checkboxes for FY3B, FY3C, and FY3D, and dropdown menus for longitude and latitude coordinates. There are also fields for 'Start Time (UTC)', 'End Time (UTC)', 'Purpose', and 'Reference URL (if any)'. A 'Validate' field and a 'Submit' button are at the bottom. The page footer contains the NSMC logo and contact information.

Emergency Support Mechanism for International Users of FengYun Satellites

- FY_ESM: Emergency support for 45 countries, 96 times from 2018, including FY_ESM, UN-SPIDER, CHARTER, etc.

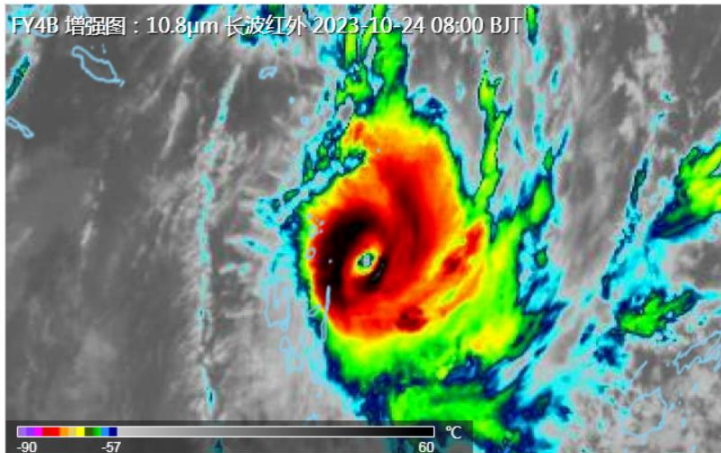
32 Countries

Laos, Myanmar, Iran, Maldives, Thailand, Philippines, Algeria, Malaysia, Uzbekistan, Tunisia, Mongolia, Nepal, New Zealand, Oman, Mozambique, Kyrgyzstan, Kingdom of Lesotho, Nigeria, Ethiopia, Guinea, Benin, Mauritius, Ghana, Portugal, Malawi, Armenia, Sri Lanka, Solomon Islands, Vanuatu Papua New Guinea, Pakistan, Côte d'Ivoire

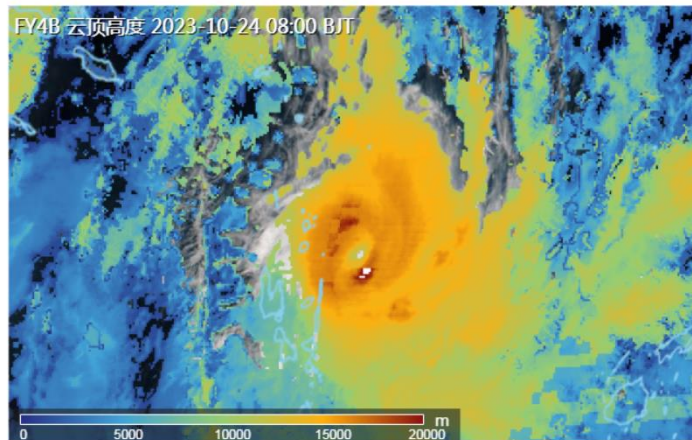
2023/10/24-10/26: South Pacific tropical cyclone LOLA

The South Pacific tropical cyclone LOLA was located on the ocean about 360 kilometers (14.5°N , 169°E) east of Villa Port of Vanuatu. The maximum wind near the center was above 17 (62 m / s), and the central pressure was 905 hpa.

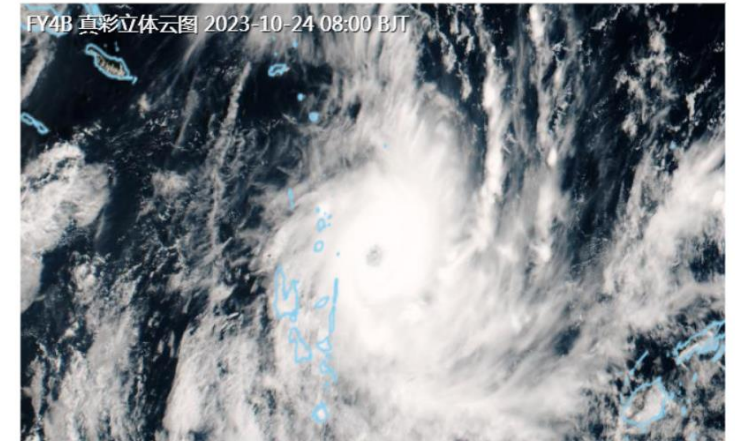
According to the FY-4B satellite infrared enhanced cloud map (Figure 2), the convection near LOLA was booming and the bright temperature of the cloud top was lower than -70°C.



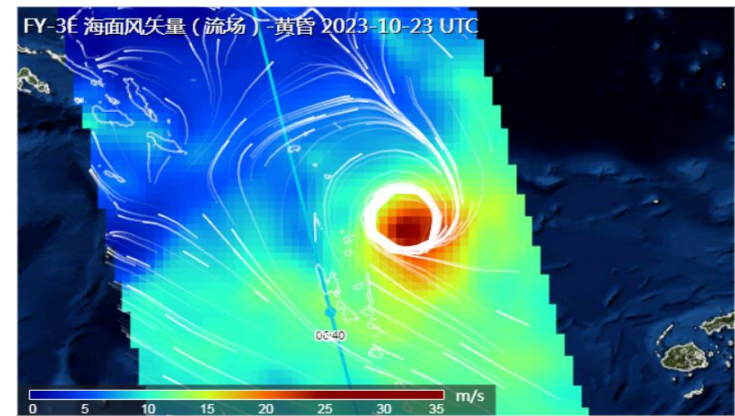
FY-4B satellite cloud top height monitoring (Figure 3) showed that the cloud top height of the convective cloud over the area near the center of LOLA was high, reached more than 18km.



In the past 24 hours, LOLA has increased significantly, with the maximum wind speed near the center strengthening from level 13 to above level 17. The true color cloud map of FY-4B satellite at 08:00 on October 24 showed (Figure 1) that LOLA has a more obvious spiral structure and a clear eye area.



Due to the influence of LOLA, strong wind appeared on the ocean surface in the northeast of Vanuatu. FY-3E ocean wind field (Figure 4) showed that the wind speed near the center of the cyclone has exceeded 35m/s and the radius of the class 8 wind circle exceeded 150km at 14:40 on October 23.

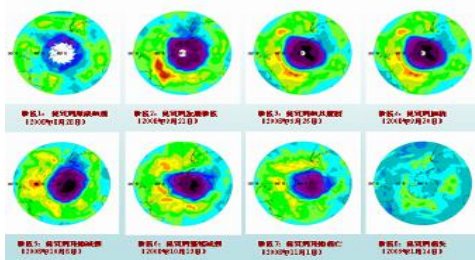
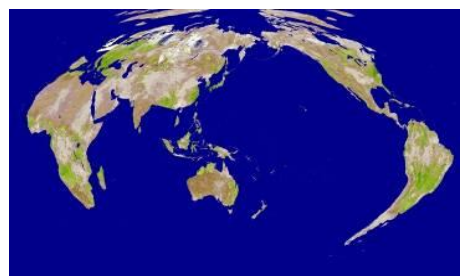
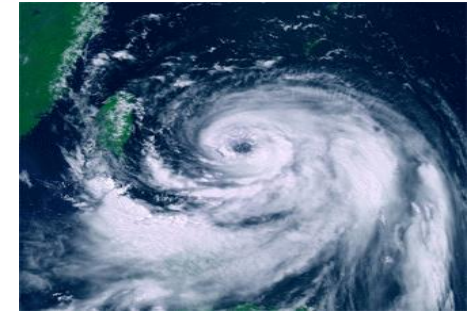
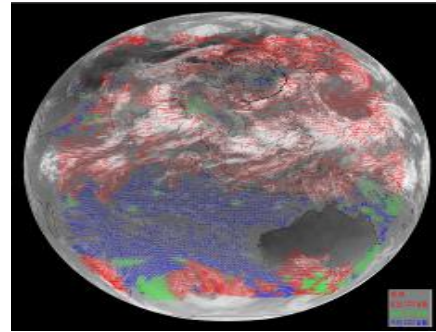
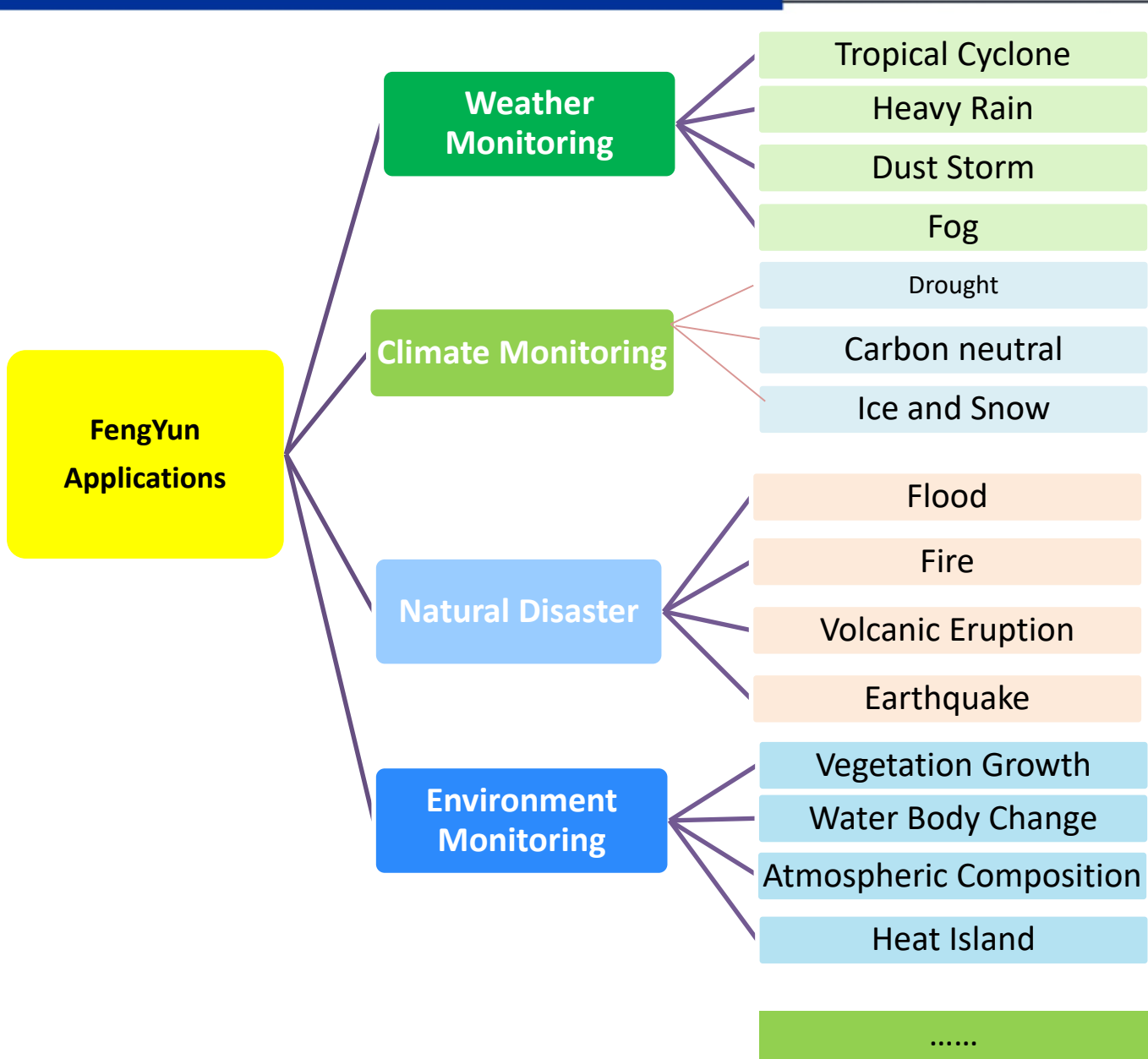




CONTENTS

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2. FengYun Satellite Data Access
3. **Typical Applications and Examples**
4. FengYun Satellite Application Tools
5. Actions and Plans

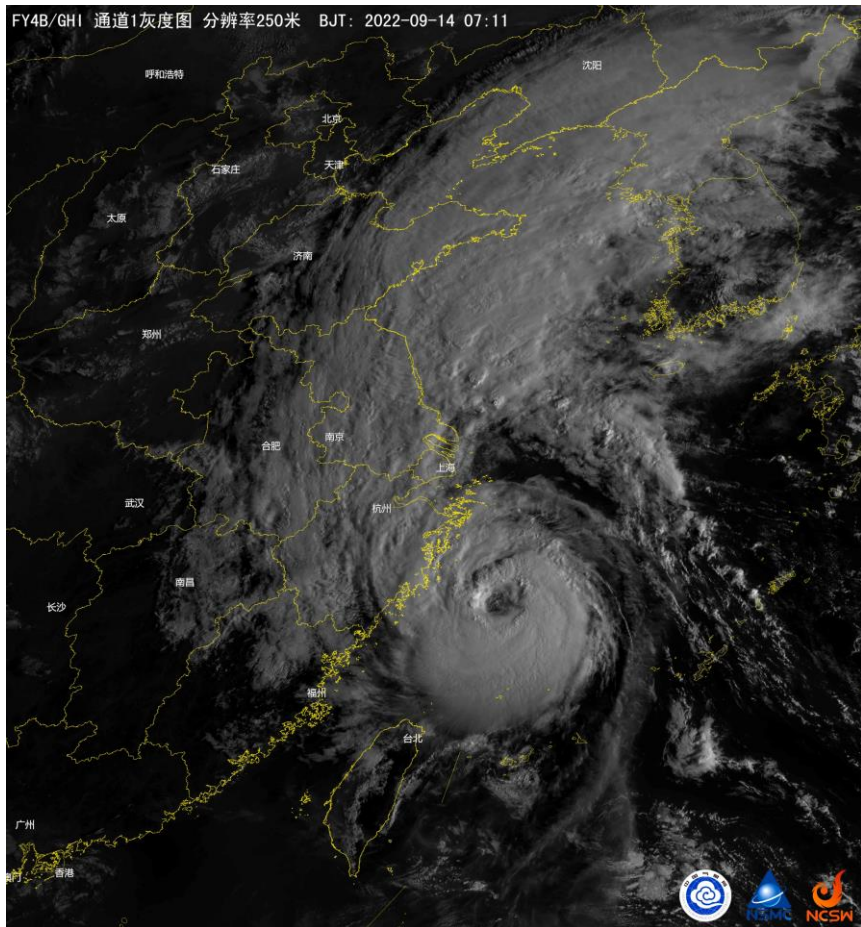
Fengyun Applications



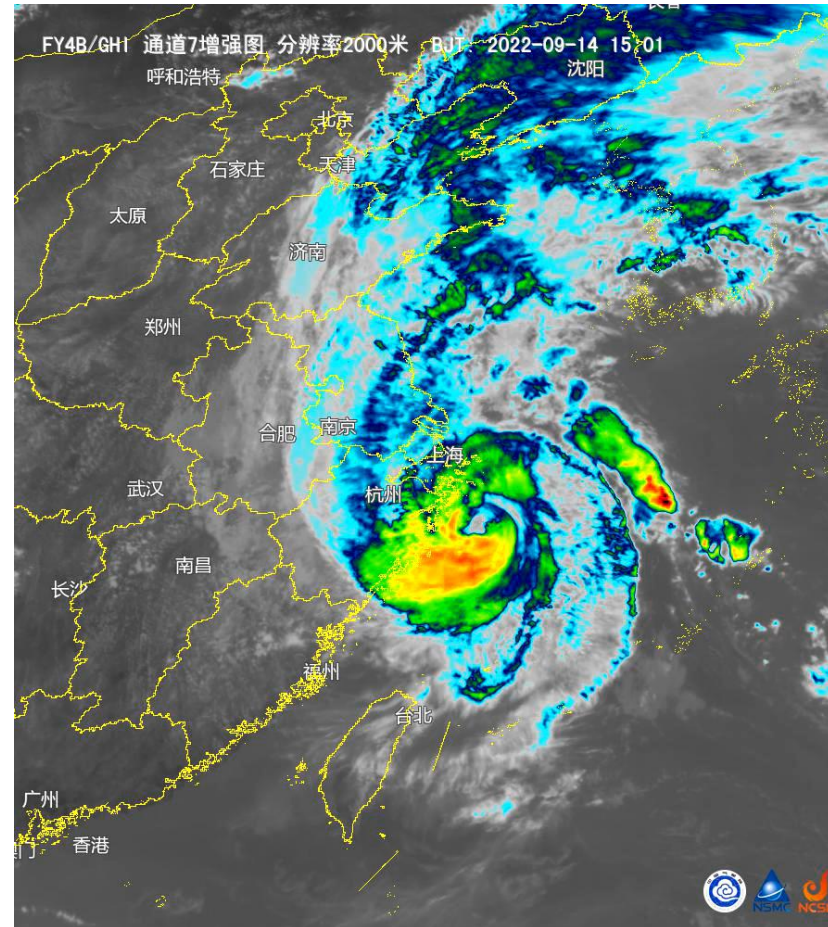
.....

Applications: Weather Monitoring

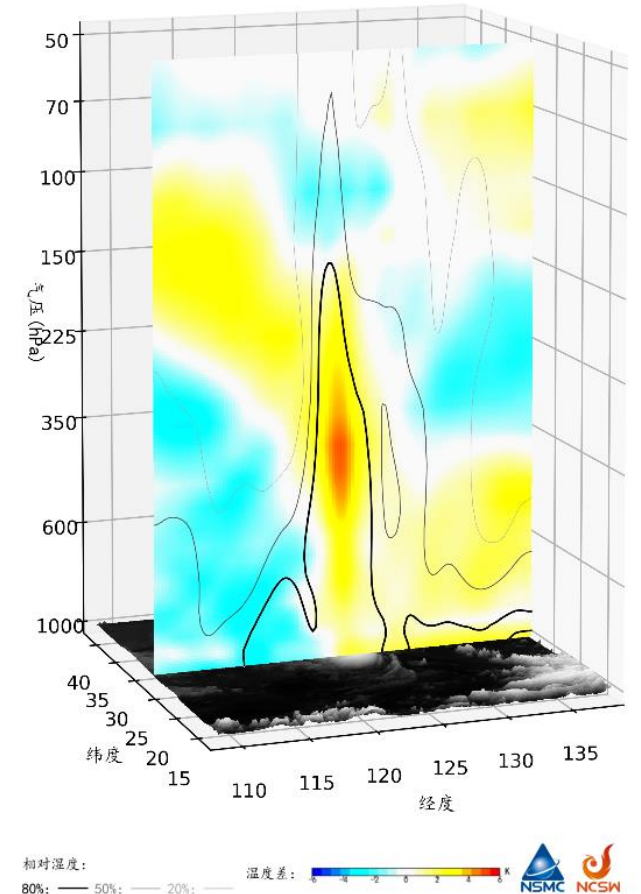
Severe Typhoon MUIFA



FY-4B cloud image



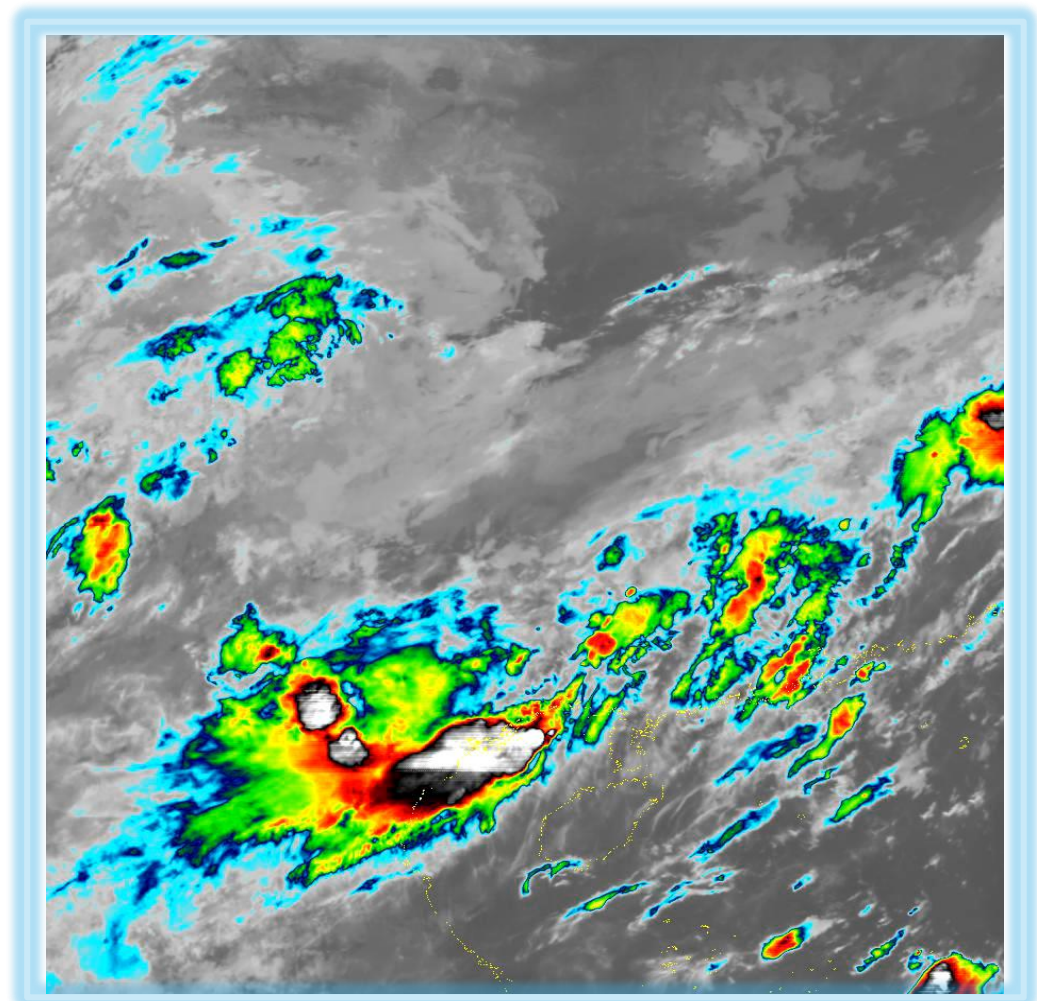
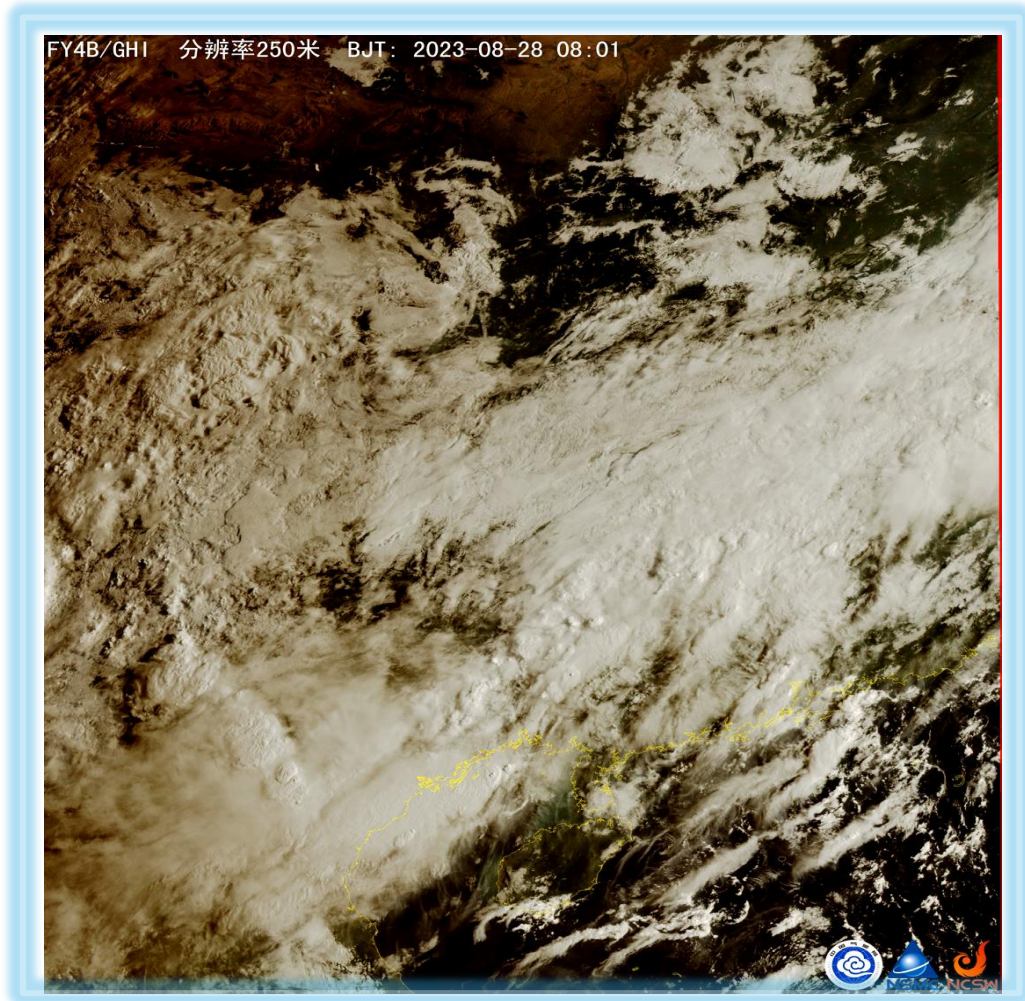
FY-4B Infrared enhanced image



Structure Diagram of Typhoon Warm Center

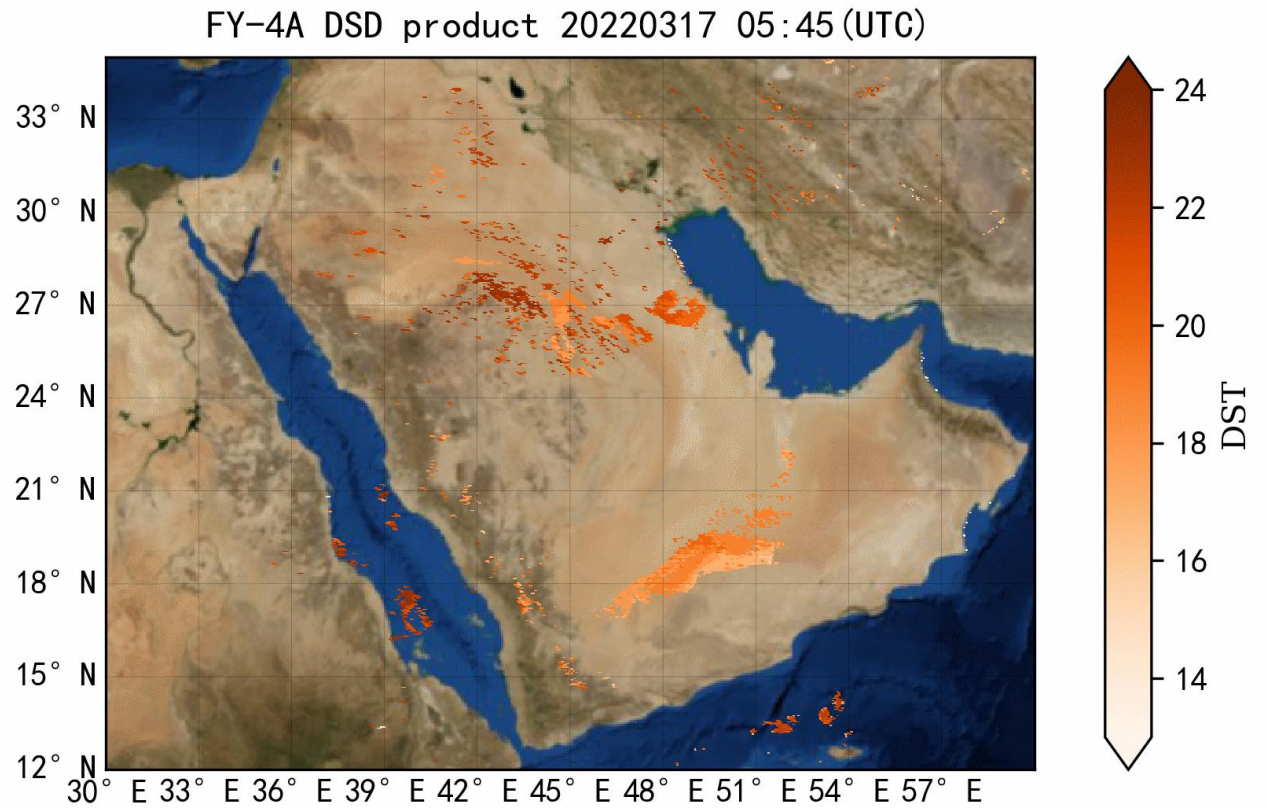
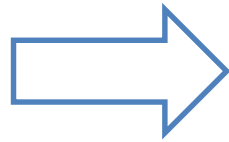
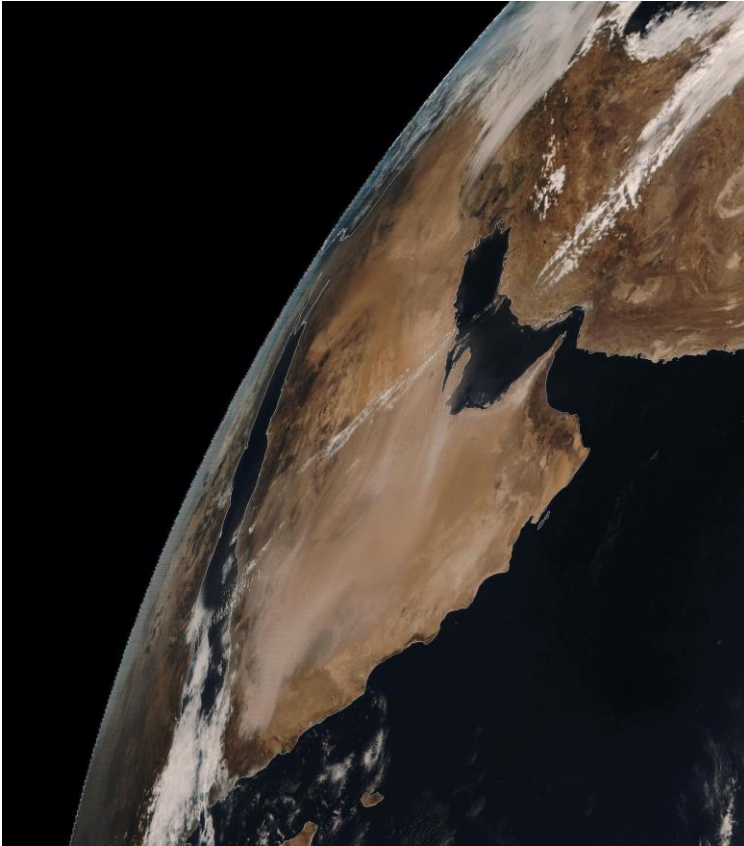
Applications: Weather Monitoring

Severe Convection



Applications: Weather Monitoring

The Dust Storm Monitoring in Saudi

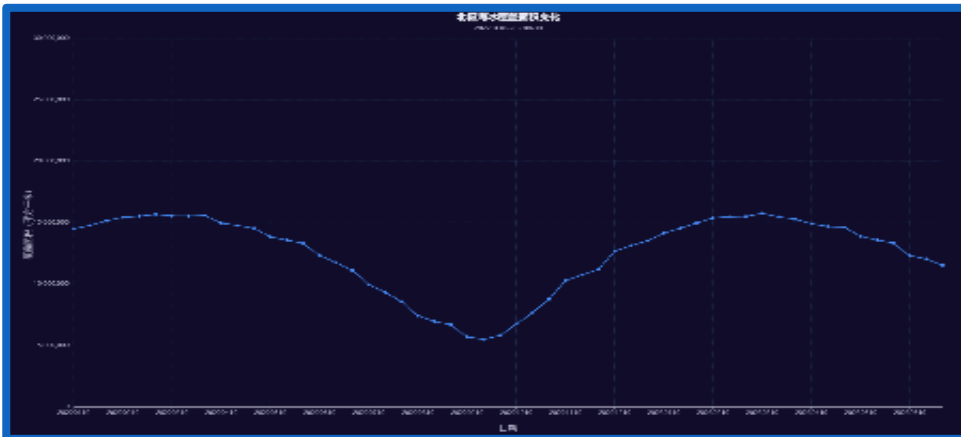
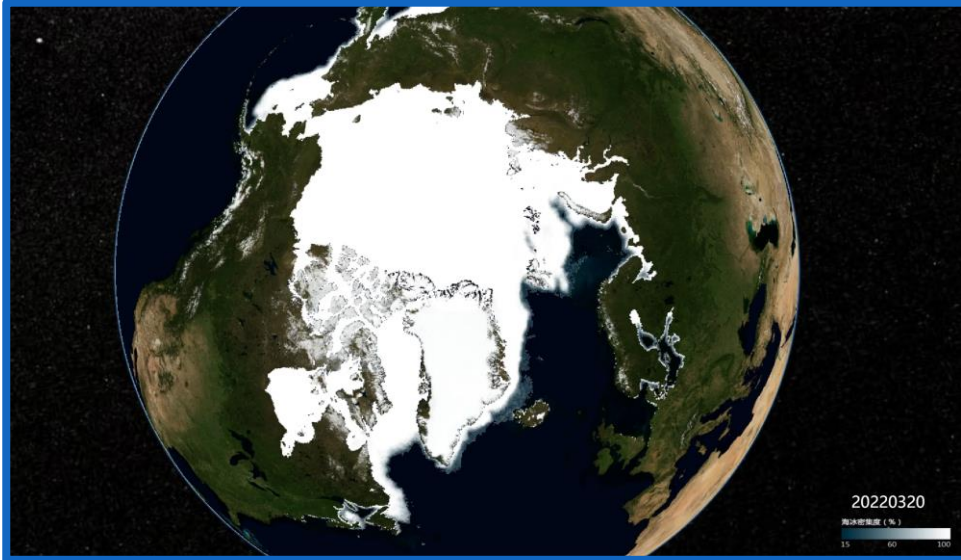


Applications: Climate Monitoring

Sea Ice Monitoring

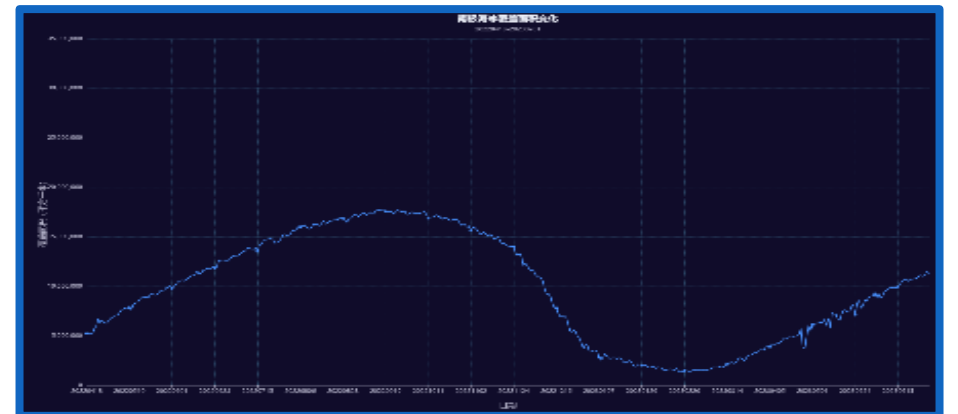
FY-3D/MWRI Arctic Ice

(202201-202306)



FY-3E/WindRAD Antarctic Ice

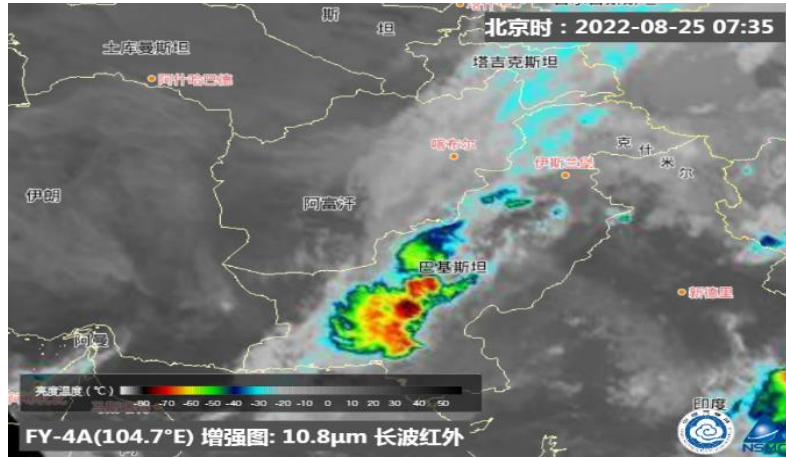
(20220506-20230601)



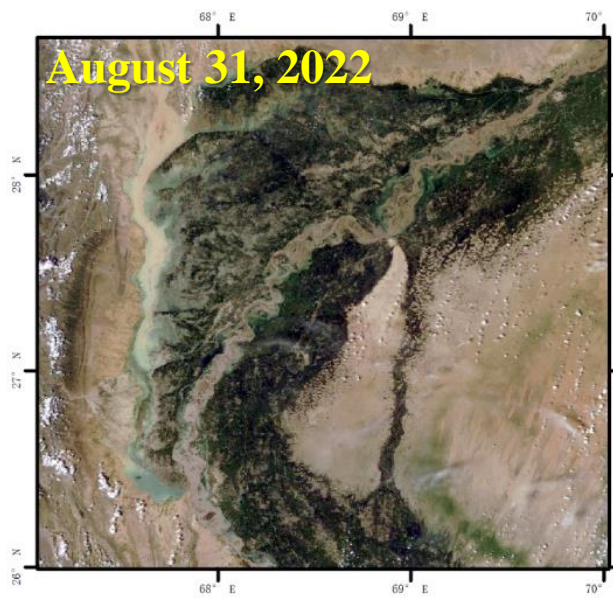
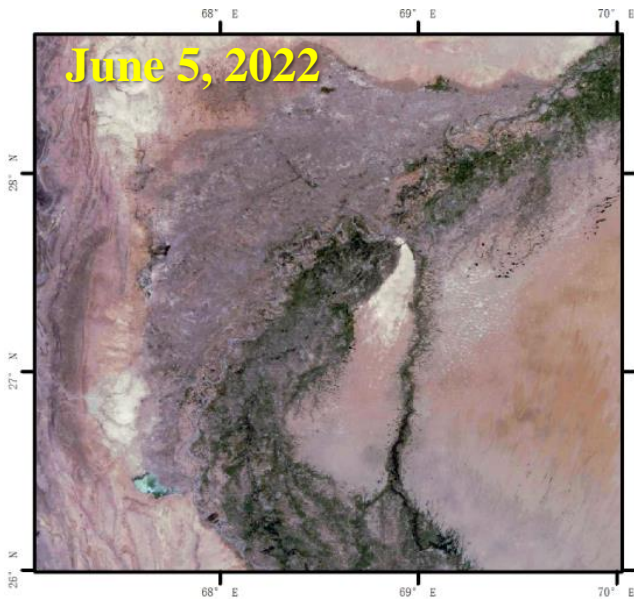
FengYun satellite the observation results show sea ice extent in Antarctica **reached an minimum** in February, 2023.

Applications: Natural Disaster

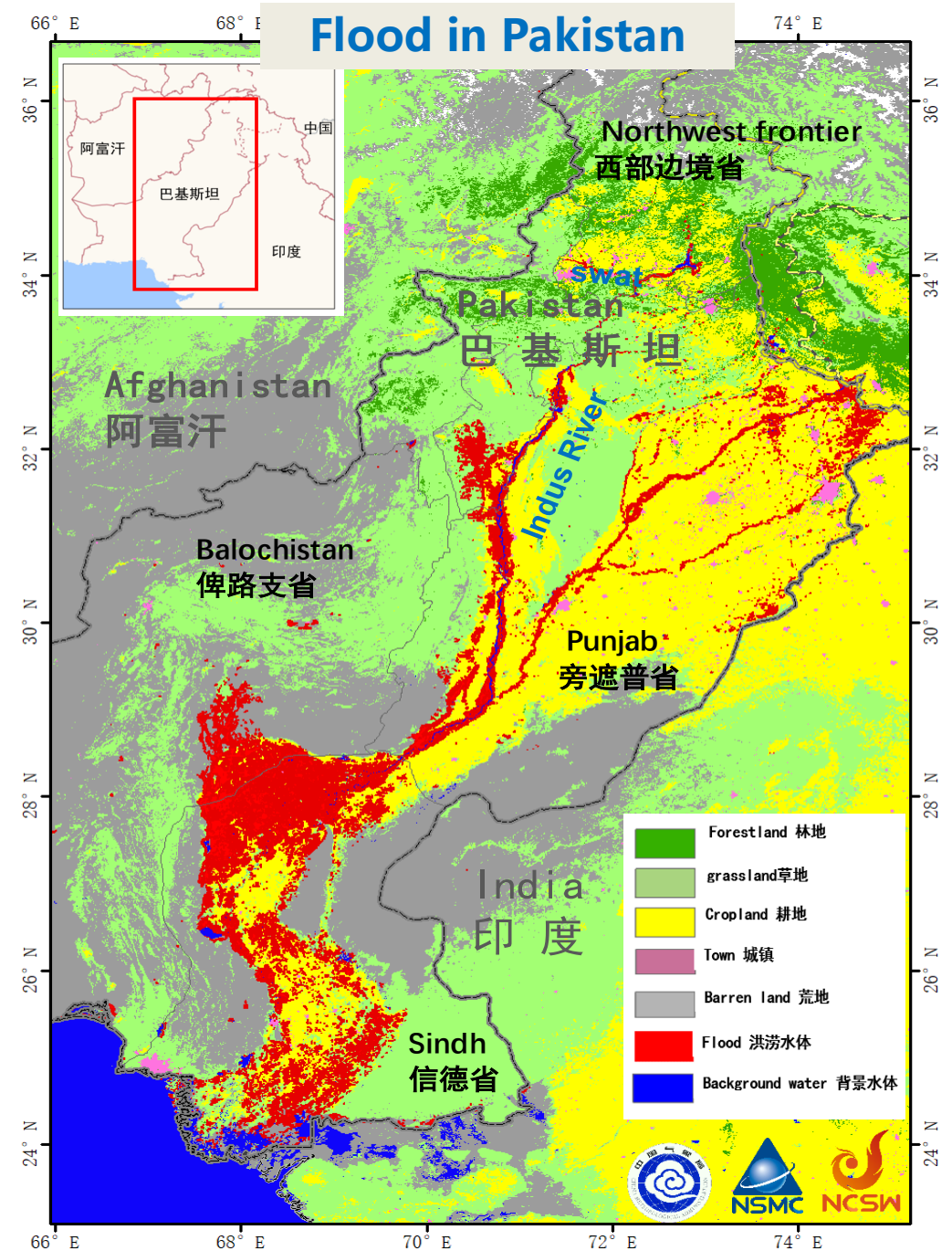
Pakistan has suffered heavy rainfall from the middle of June to September this year, Continuous rainstorm leads to flood disaster.



FY-4A Infrared Enhanced Image
2022-08-25 07:00



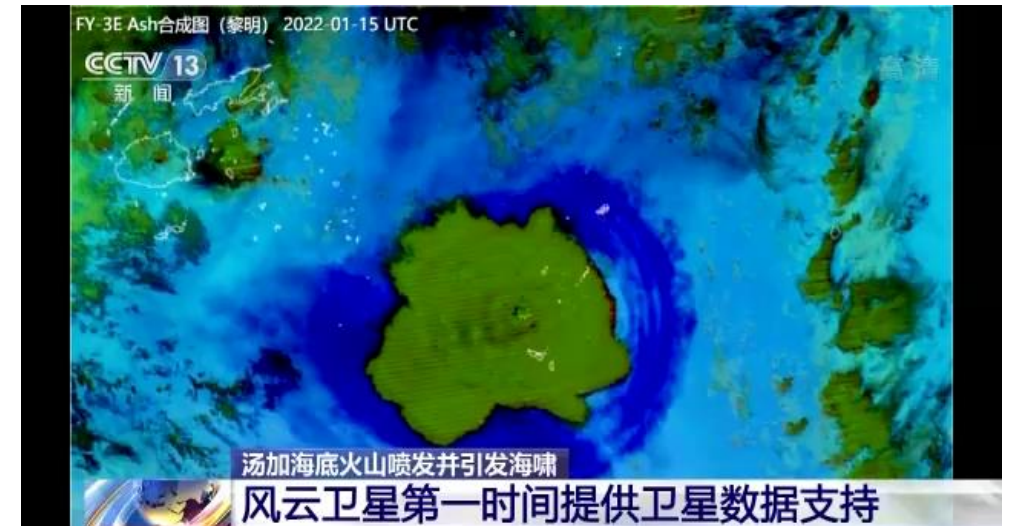
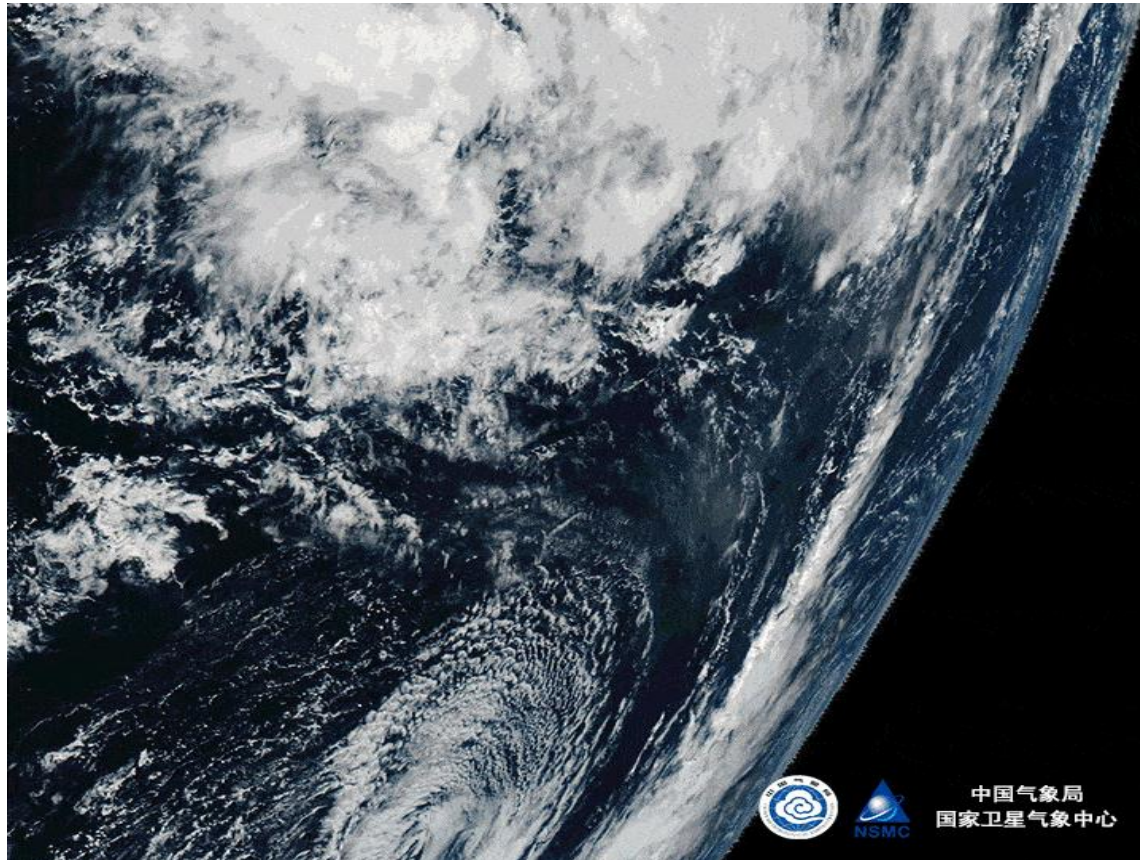
2022-06-05 vs 2022-08-31



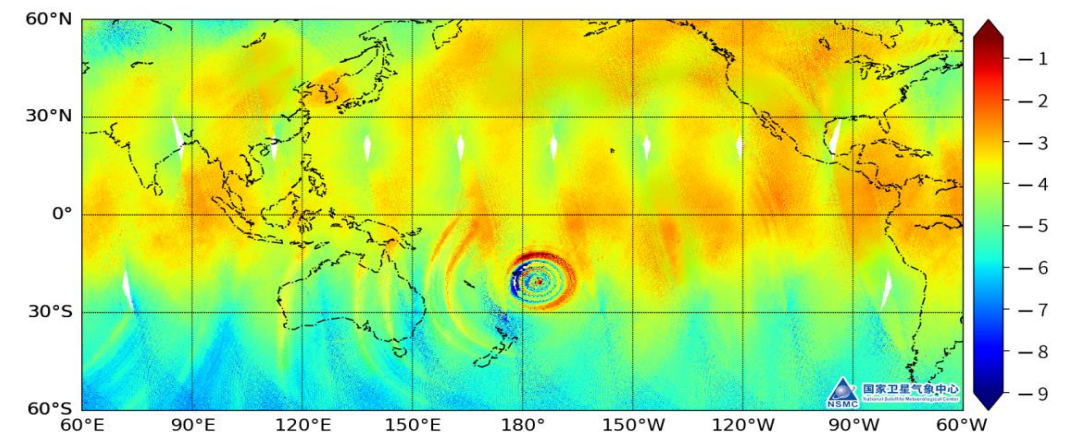
Applications: Natural Disaster

The Volcano Eruption Monitoring over Tonga

- The FengYun satellite have **observed volcano eruption**, we also provide **volcanic ash transmission** and **atmospheric gravity waves** monitoring services.



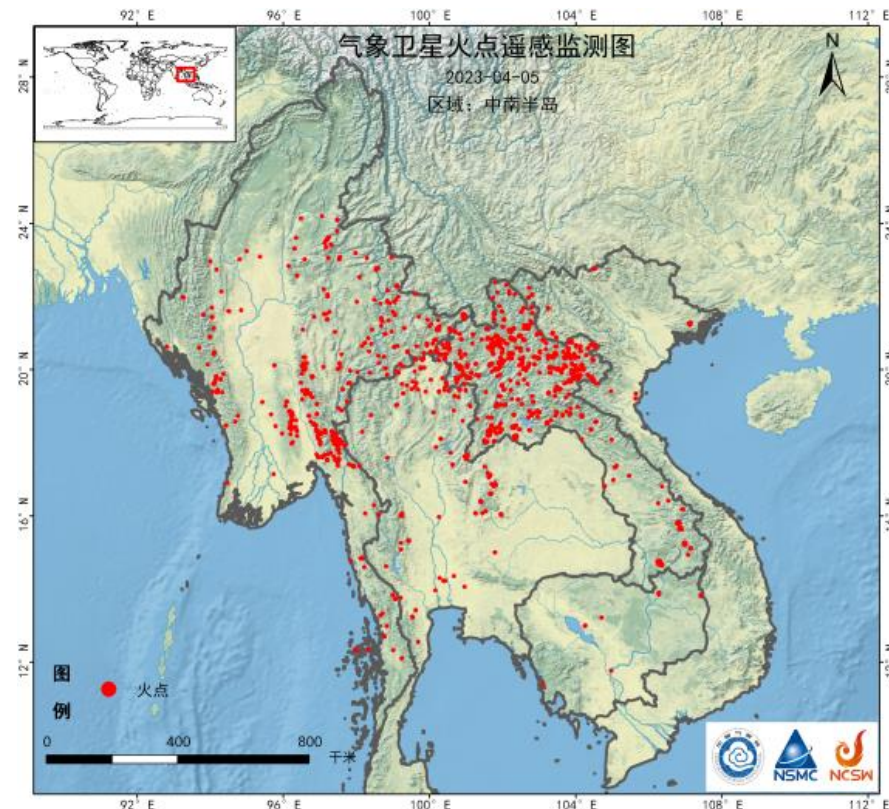
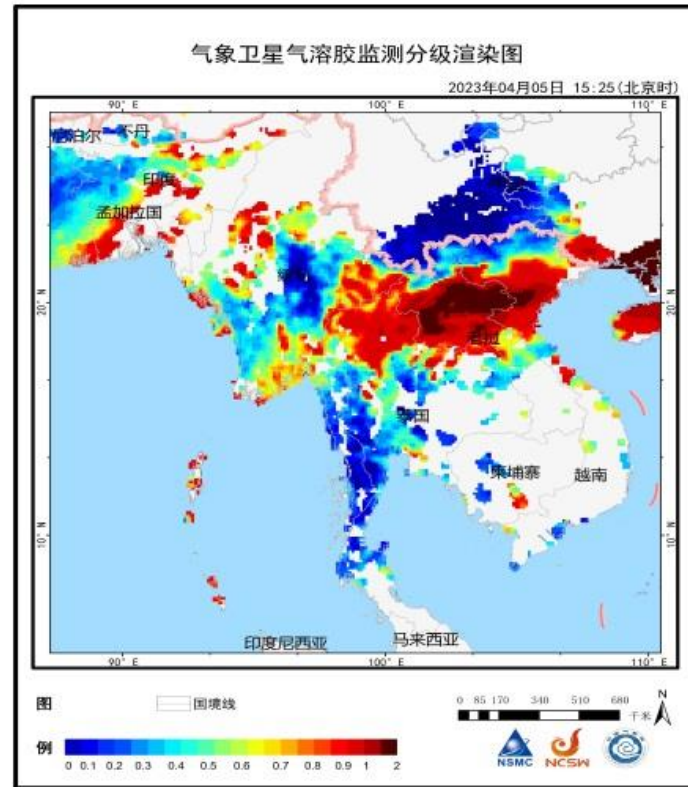
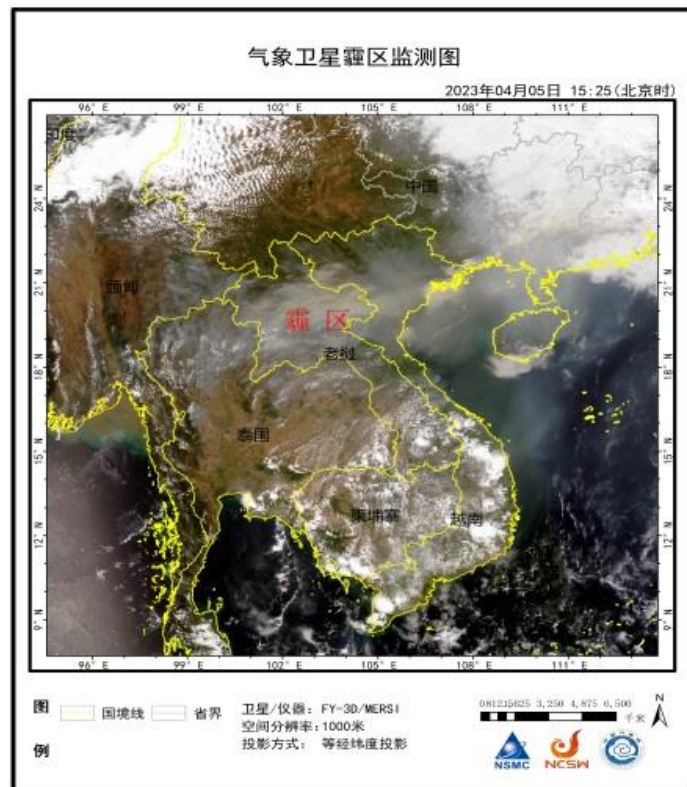
FY-3E volcanic ash and shock wave monitoring



Applications: Environment Monitoring

The Haze Monitoring in Southeast Asia

- FY-3 satellite monitored **the serious haze** caused by **the continuous biomass burning**, the haze smoke were mainly appeared in northern Laos, in early April, 2023.





CONTENTS

1. FengYun Satellite Program Overview
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FENGYUN EARTH

Comprehensive

Main User: Forecaster

Same underlying platform

Integrate resources

Complementary advantages

SWAP

(GEO)

Main User: Meteorologist

SMART

(LEO)

Main User: RS professional

Platforms: FengYun Earth

Comprehensive Cloud Platform

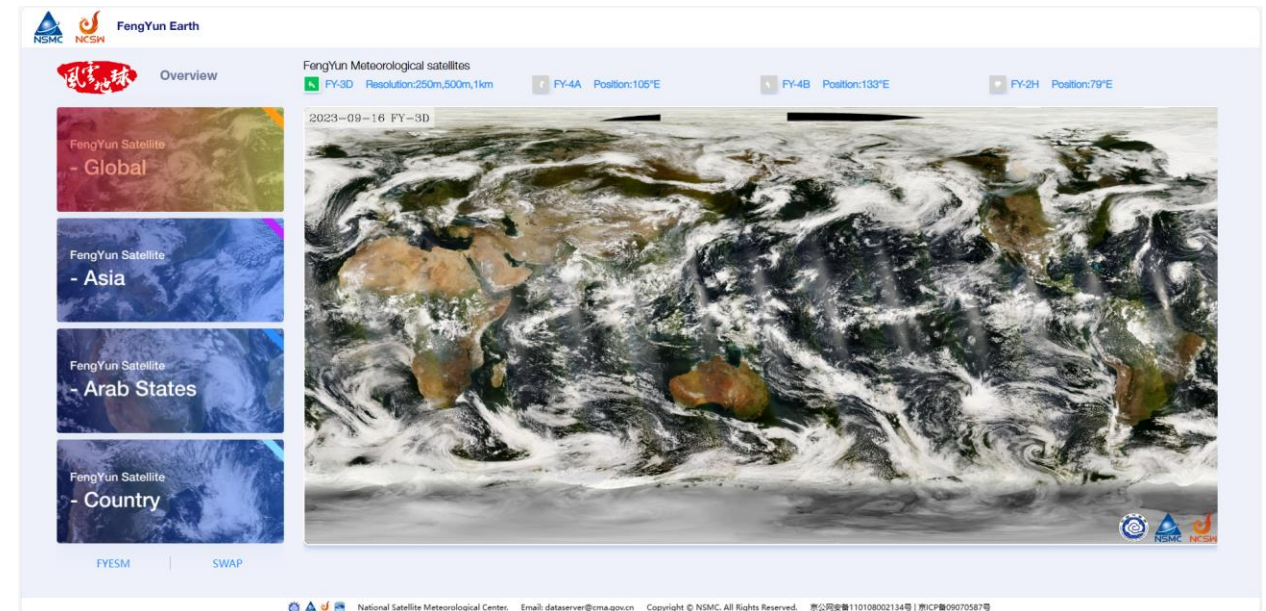
Main User: Forecaster

Typical Applications: **Weather Monitoring and Analyzing**

- Build an **integrated meteorological comprehensive product service platform**
- Realize **multi-source, multi-scale, multi-element, multi-form data access**
- Realize **automatic and intelligent processing and analysis of multidimensional data**
- Provide customizable comprehensive meteorological product services by different scale regions such as the **world, Asia, Africa, South America, countries, etc.**

Website

<http://fyearth.nsmc.org.cn/>



FengYun Earth -UI Design-Homepage

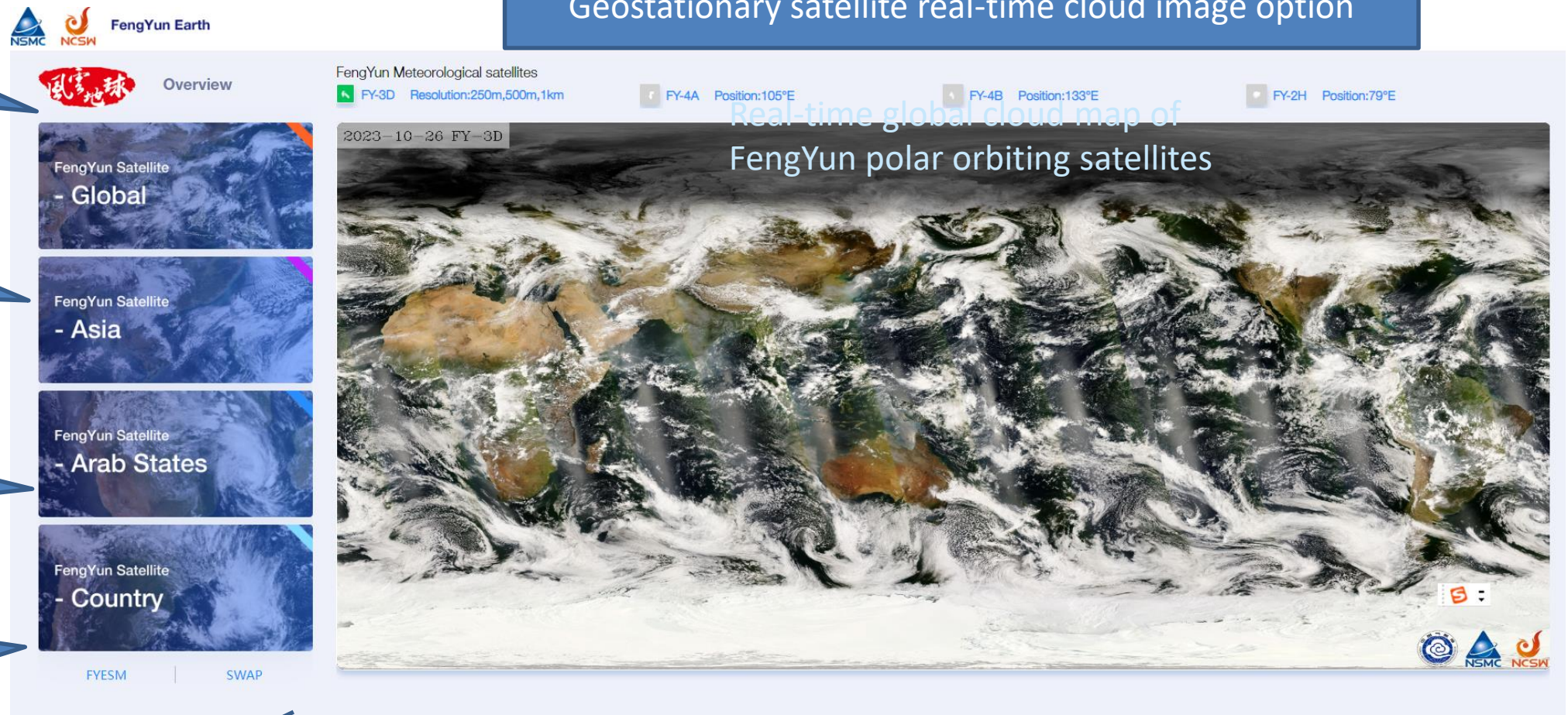
Entrance of global thematic product display

Entrance to thematic product display in Asia

Entrance to thematic product display in Arab States

Entrance to thematic product display in country

Geostationary satellite real-time cloud image option



external system link

FengYun Earth

风云地球 FengYun Earth | Asia

Image Elements Disaster Events Climate

2023-09-18 02:38:24 (UTC)
2023-09-18 10:38:24 (LST)

Image

Cloud Image Product List

- Cloud Image
- 0.65μm: Red Band
- 7.1μm: Water Vapor
- 10.8μm: Clean IR
- GeoCLR
- IR Enhance**
- SWCI
- Circulation

SouthEast...

TimePicker

- 09-18 02:15
- 09-18 01:45
- 09-18 01:30
- 09-18 01:15
- 09-18 01:00
- 09-18 00:45
- 09-18 00:30
- 09-18 00:15
- 09-18 00:00
- 09-17 23:30
- 09-17 23:15
- 09-17 23:00
- 09-17 22:45
- 09-17 22:30
- 09-17 22:15
- 09-17 22:00
- 09-17 21:45**
- 09-17 21:30

More

IR Enhance 09-17 21:45 (UTC)

IR Enhance(From CIMSS)
2023-09-17 21:45(UTC)

Satellite/Sensor : FY4B/AGRI

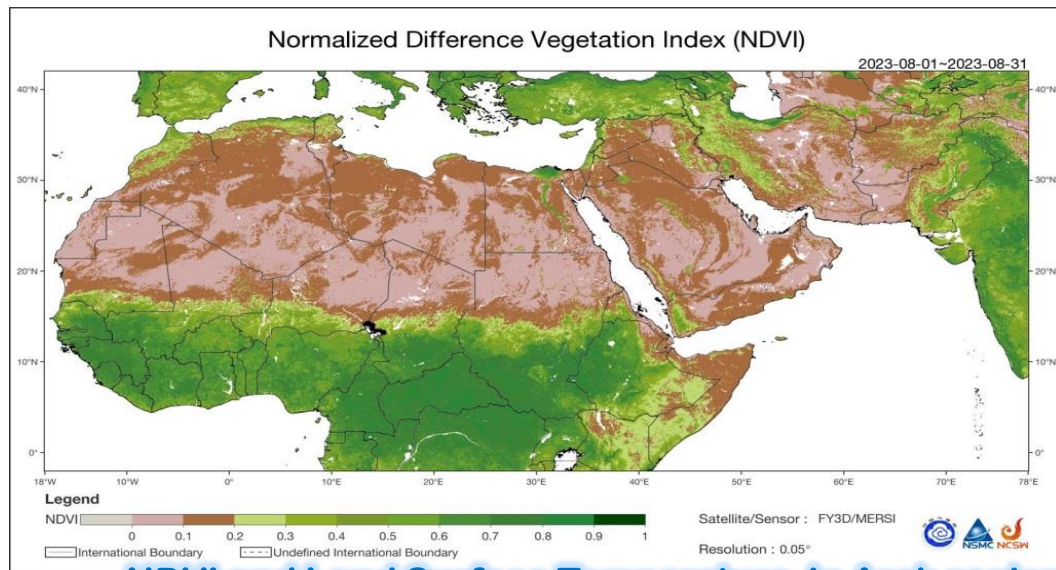
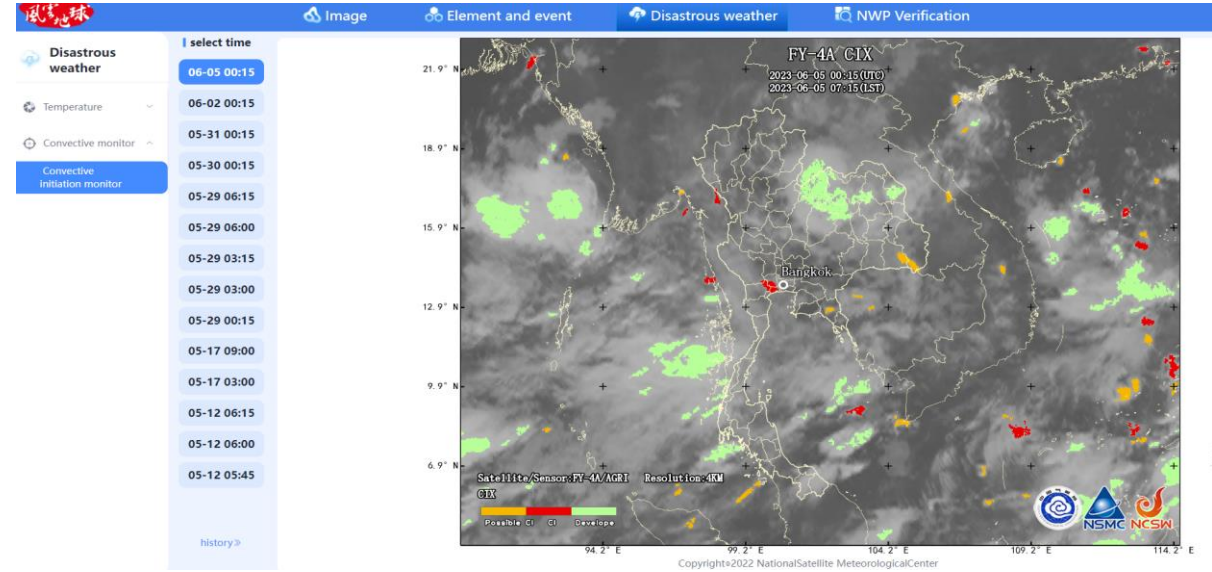
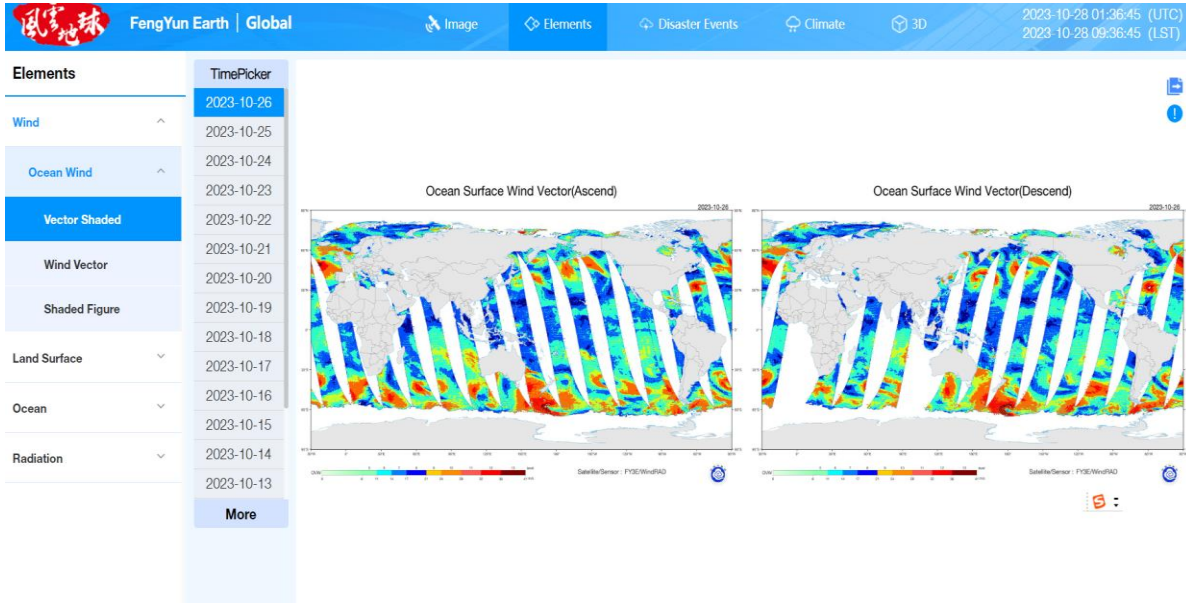
BT -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50

National Satellite Meteorological Center. Email: dataserver@cma.gov.cn Copyright © NSMC. All Rights Reserved. 京公网安备110108002134号 | 京ICP备09070587号

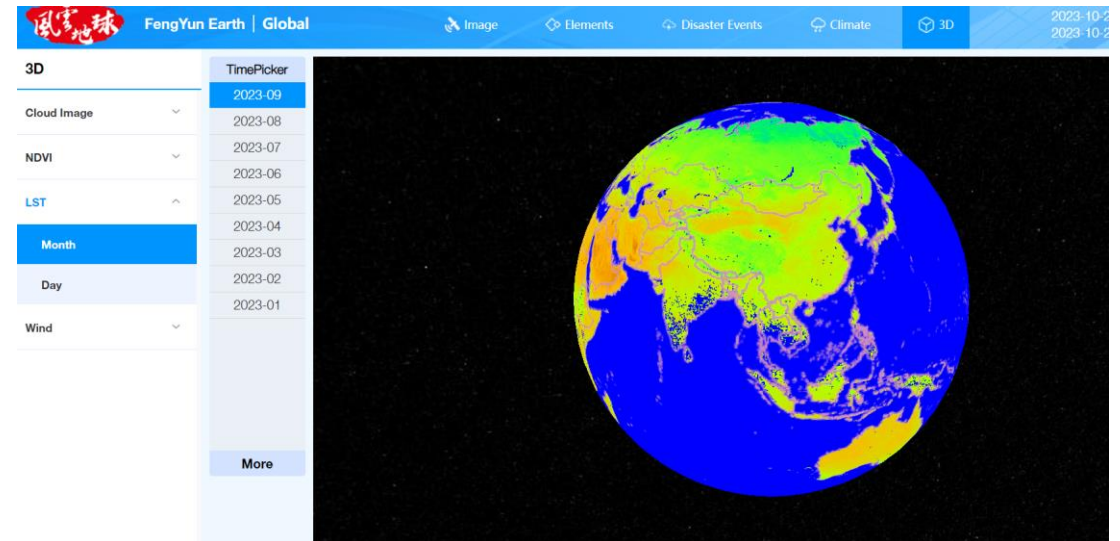
Animation Play Command

Dynamic Thematic Maps

FengYun Earth -Product



NDVI and Land Surface Temperature in Arab region



Platforms: SWAP

Weather monitoring and analysis---Geostationary Satellite data (FY-2/FY-4)

Platform for Geostationary Satellites

Main User: **Meteorologist**

Typical Applications: **Tropical cyclone, Convection, Sandstorm, Fire, etc.**



● SWAP Web version



● SWAP Stand-alone version

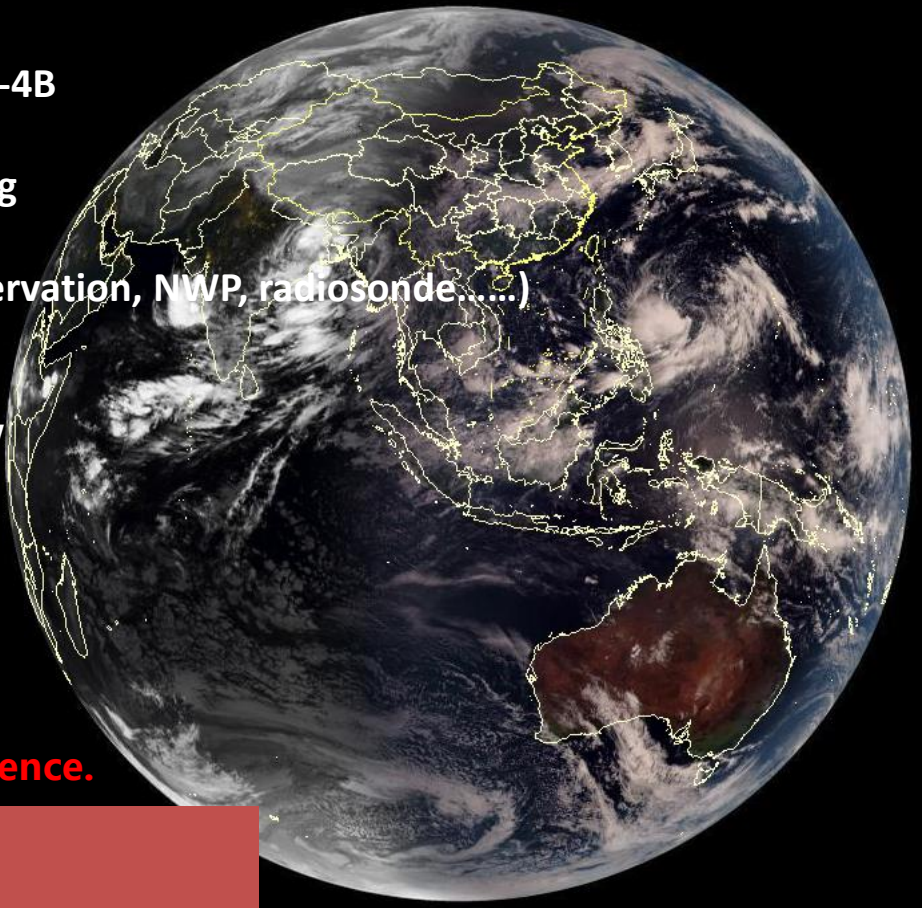
Platforms: SWAP (web version)

weather

Main functions

- Near real-time images of FY-2H , FY-4A, FY-4B
- 30+ GEO satellite products
- Special applications on weather forecasting
- Animation generation and sharing
- Multiple data analysis (radar, ground observation, NWP, radiosonde.....)
- Data statistics

http://rsapp.nsmc.org.cn/test_geofy/



Satellite Observation

Satellite: FY-4A Projection: Nomin

Observation Area: Asia Region Full disk

Band Scheme Products

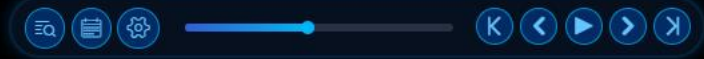
- True Color
- NatureColor_NoLit
- Natural Color RGB Composite (Fron
- Dust RGB Composite (From WMO)
- AirMass RGB Composite (From WN
- Fog/Snow RGB Composite (From W
- Severe Storms RGB Composite (Fro
- CloudsConvection RGB Composite
- Volcanic Ash RGB Composite (Fron
- Day Convective Storms RGB Comp
- Day Microphysics RGB Composite (
- Night Microphysics RGB Composite

Chrome is recommended for best user experience.

Supported browser:

IE 10+	Edge 18+	Chrome 26+	Safari 8+	Opera 18+
YES	YES	YES	YES	YES

FY-4A True Color



SWAP : Satellite view

SWAP FY4 Channel View

Satellite Band

- IR Enhance (From CIMSS)
- Band 1: 0.47 μm (blue Band)
- Band 2: 0.65 μm (Red Band)
- Band 3: 0.83 μm (Veggie Band)
- Band 4: 1.37 μm (Cirrus Band)
- Band 5: 1.61 μm (Snow/Ice Band)
- Band 6: 2.22 μm (Cloud Particle Size Band)
- Band 7: 3.72 μm (Shortwave Window Band High)
- Band 8: 3.72 μm (Shortwave Window Band Low)
- Band 9: 6.25 μm (Upper-Level Tropospheric Water Vapor Band)
- Band 10: 7.1 μm (Lower-level Water Vapor Band)
- Band 11: 8.5 μm (Cloud-Top Phase Band)
- Band 12: 10.8 μm (Clean IR Longwave Window Band)
- Band 13: 12 μm (Dirty Longwave Window Band)
- Band 14: 13.5 μm (CO2 Longwave Infrared Band)

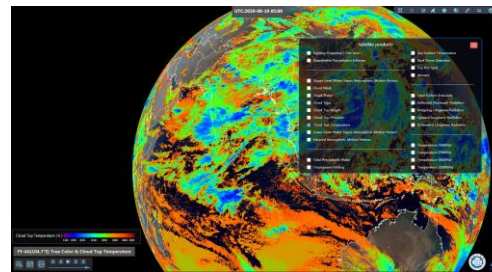
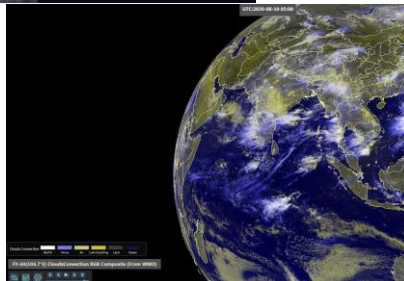
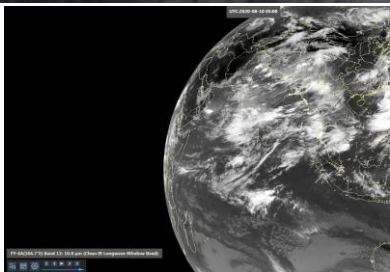
SWAP Support 12 Synthetics scheme

Synthetic scheme

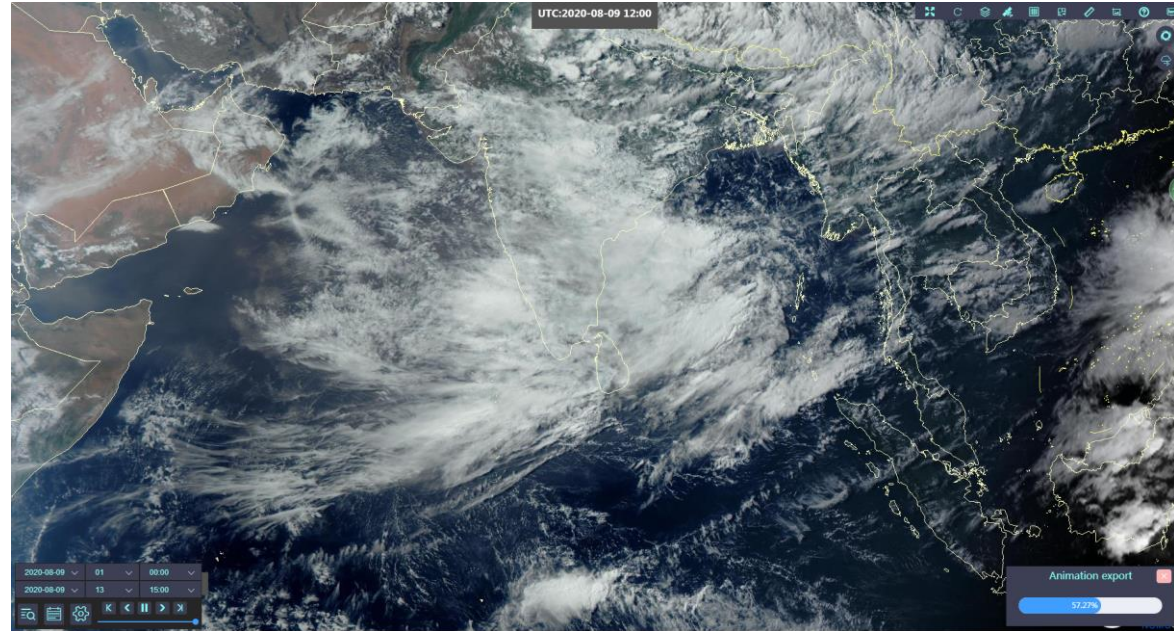
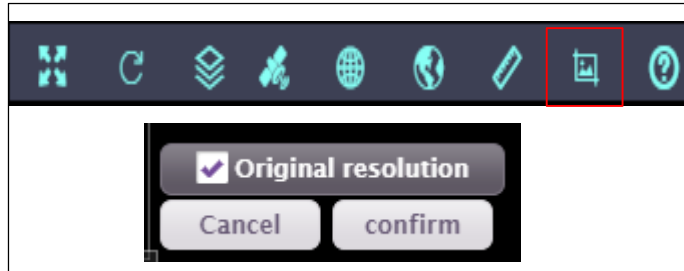
- NatureColor
- NatureColor_NoLit
- Natural Color RGB Composite (From WMO)
- Dust RGB Composite (From WMO)
- AirMass RGB Composite (From WMO)
- Fog/Snow RGB Composite (From WMO)
- Severe Storms RGB Composite (From WMO)
- CloudsConvection RGB Composite (From WMO)
- Volcanic Ash RGB Composite (From WMO)
- Day Convective Storms RGB Composite (From WMO)
- Day Microphysics RGB Composite (From WMO)
- Night Microphysics RGB Composite (From WMO)

SWAP Support 30+ Products

- Cloud Mask
- Cloud Type
- Dust Storm Detection
- Outgoing Longwave Radiation
- Quantitative Precipitation Estimate
- Surface Solar Irradiance
- Atmospheric Vertical Profile
- Number of Lightning Events (Count/min)
- Cloud Phase
- Cloud Top Height
- Cloud Top Temperature
- Cloud Top Pressure
- Downward Longwave Radiation (DLR)
- Upward Longwave Radiation (ULR)
- Reflected Shortwave Radiation (RSR)
- Tropopause Folding
- Land Surface Emissivity
- Sea Surface Temperature
- Fire Hot Spot
- Layer Precipitable Water (Contain Total Precipitable Water)
- Upper-Level Water Vapor Atmospheric Motion Vectors
- Convective Initiation

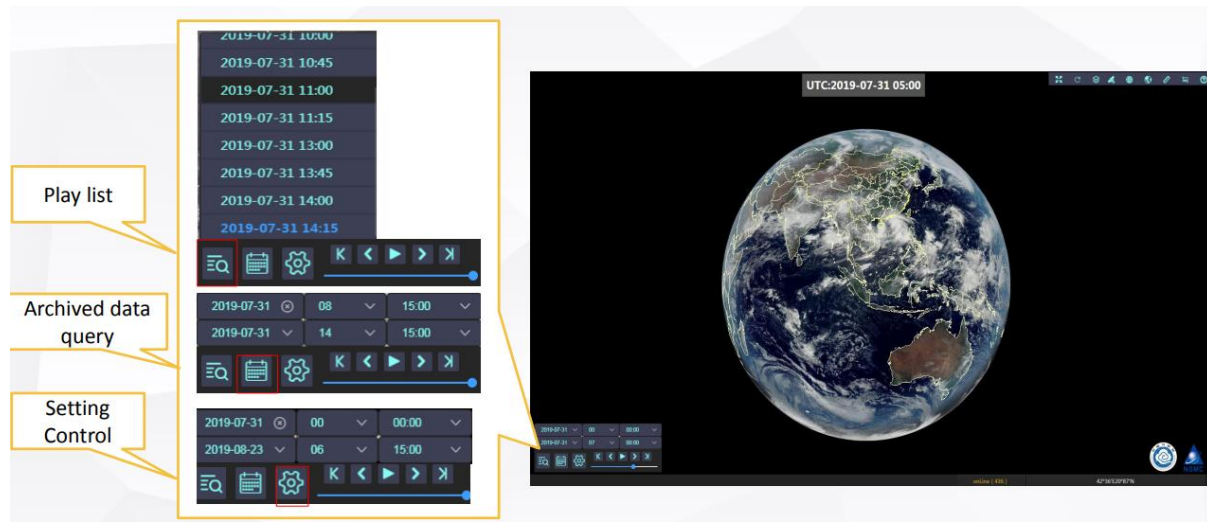


SWAP : Animation export



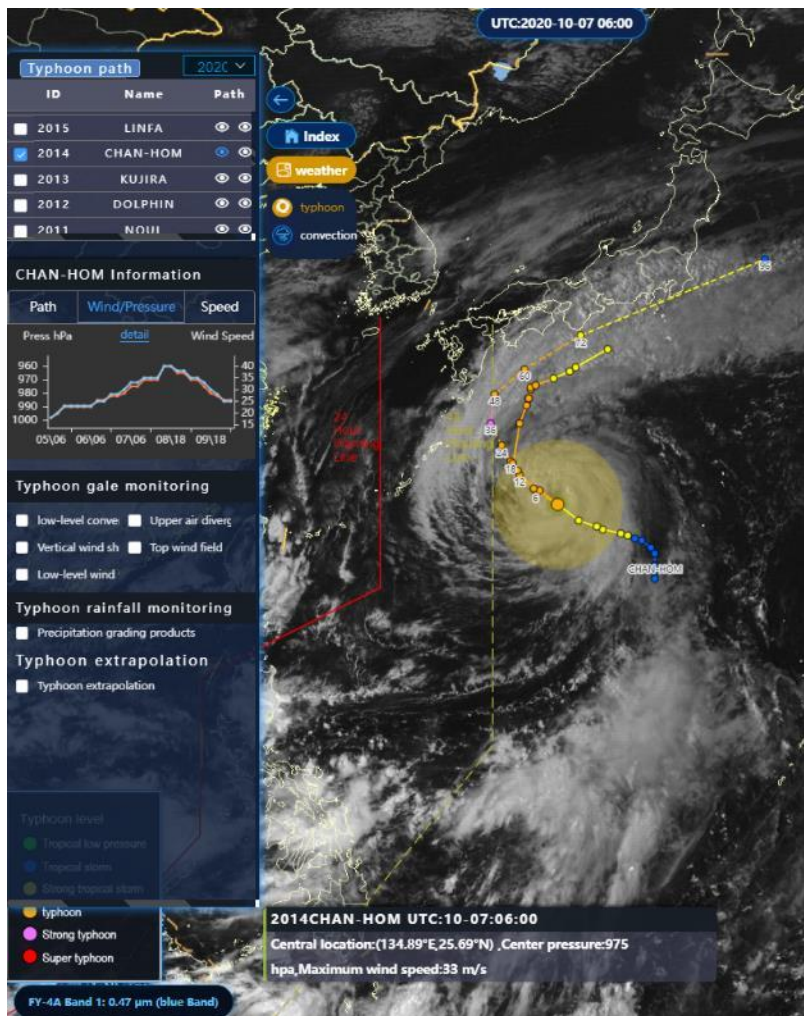
http://rsapp.nsmc.org.cn/FY4A/exp_gif/20200810/1597048891753_11_1.gif

The "Archived Image" can be freely selected for FY4 data within the last 6 months, and the business personnel can perform historical weather process animation playback as needed.

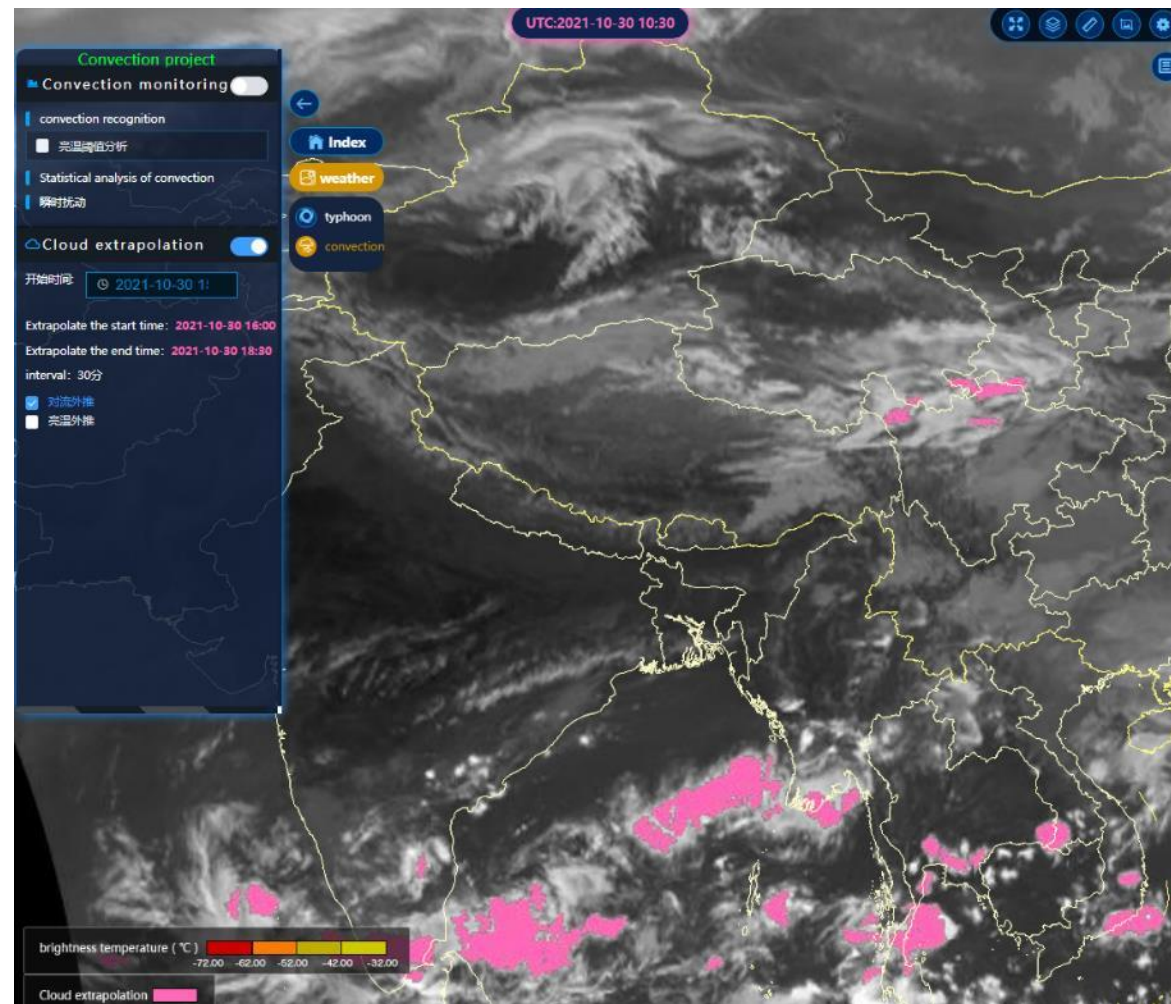


SWAP : analysis

Typhoon analysis



Convective analysis and forecast



SWAP(stand-alone version) -features

SWAP stand-alone version can support provincial CMACast default folder structure, Provincial direct receiving station data format and custom data access. Realizing comprehensive display of FY-4A and FY-2 series satellite data, interactive typhoon positioning / intensity estimation, and strong convective system analysis. Displaying L1 data, compositing multiple channel data, playing animation, rendering L2 data, etc.

Data Access

- ◆ CMACast default folder structure support
- ◆ Provincial direct receiving station HRIT format support
- ◆ Custom data access with configuration file
- ◆ System file selector and manual file selection support

Comprehensive FY4 and FY2 satellite data display

- ◆ Nominal geostationary satellite coordinate system support
- ◆ Single-frame cloud atlas and multi-frame animation support
- ◆ Flexible channel toggle and layer management
- ◆ Single channel pseudo-color enhancement with specific color map
- ◆ L2 data overlay display
- ◆ Cloud atlas animation file export
- ◆ FY-4A true color composite

Thematic application

Strong convective system interactive analysis

- ◆ Default and manual ROI selection
- ◆ Interactive parameter configuration, real time analysis result display

Cyclone positioning and intensity estimation

- ◆ Pixel level positioning and inverse positioning based on cloud atlas
- ◆ Interactive point selection and spiral fitting
- ◆ Spiral parameter adjustment

SWAP Interface layout

FY-4 Satellite Weather Application Platform 1.0

File Satellite Image Product Data Weather Application Tool View Settings Menu Bar toolbar Animation control bar

UTC:2018/09/27 06:15:00
Channel 12:Long Wave Infrared(10.8 μ m)

Interactive panel switching

Shortcut toolbar

Main view area

Interactive panel

Animations Channel Layers

Animations

Data Settings

Satellite type: FY4A

Data Type: FY4A China Region

Data Path: R:\FY4A\AGRI\L1\FDI\REGC

Animation Content :

Last Session (Hours): 6

Arbitrary Session (UTC)

2018/9/27 days 8 Hour 14

to

2018/9/27 days 14 Hour 14

Custom session 51/51

2018/09/27 00:15:00

2018/09/27 00:30:00

2018/09/27 00:34:17

2018/09/27 00:38:34

2018/09/27 00:45:00

2018/09/27 00:49:17

2018/09/27 00:53:34

2018/09/27 01:00:00

2018/09/27 01:15:00

2018/09/27 01:19:17

2018/09/27 01:23:34

2018/09/27 01:30:00

2018/09/27 01:34:17

2018/09/27 01:38:34

2018/09/27 01:45:00

2018/09/27 01:49:17

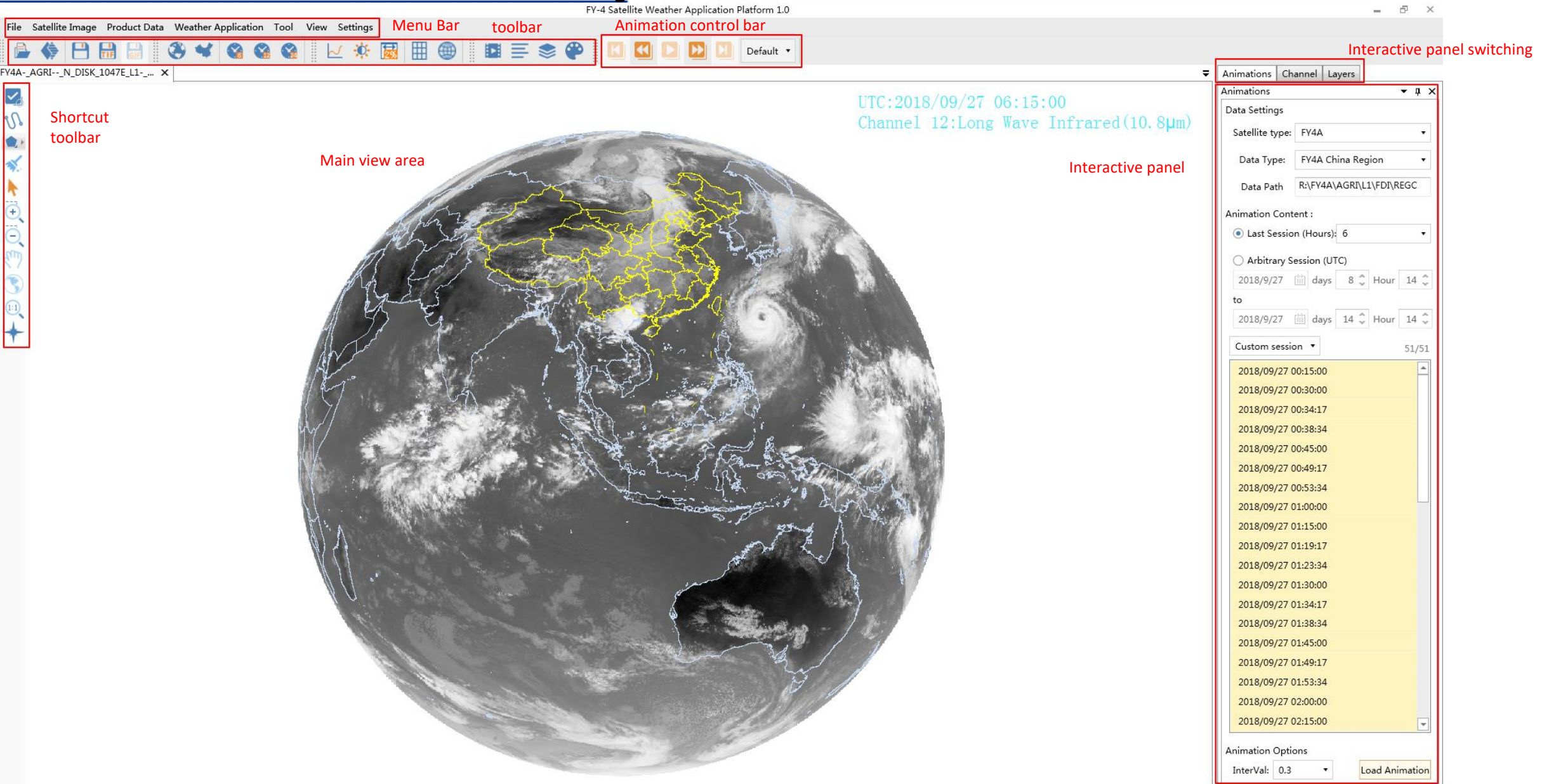
2018/09/27 01:53:34

2018/09/27 02:00:00

2018/09/27 02:15:00

Animation Options

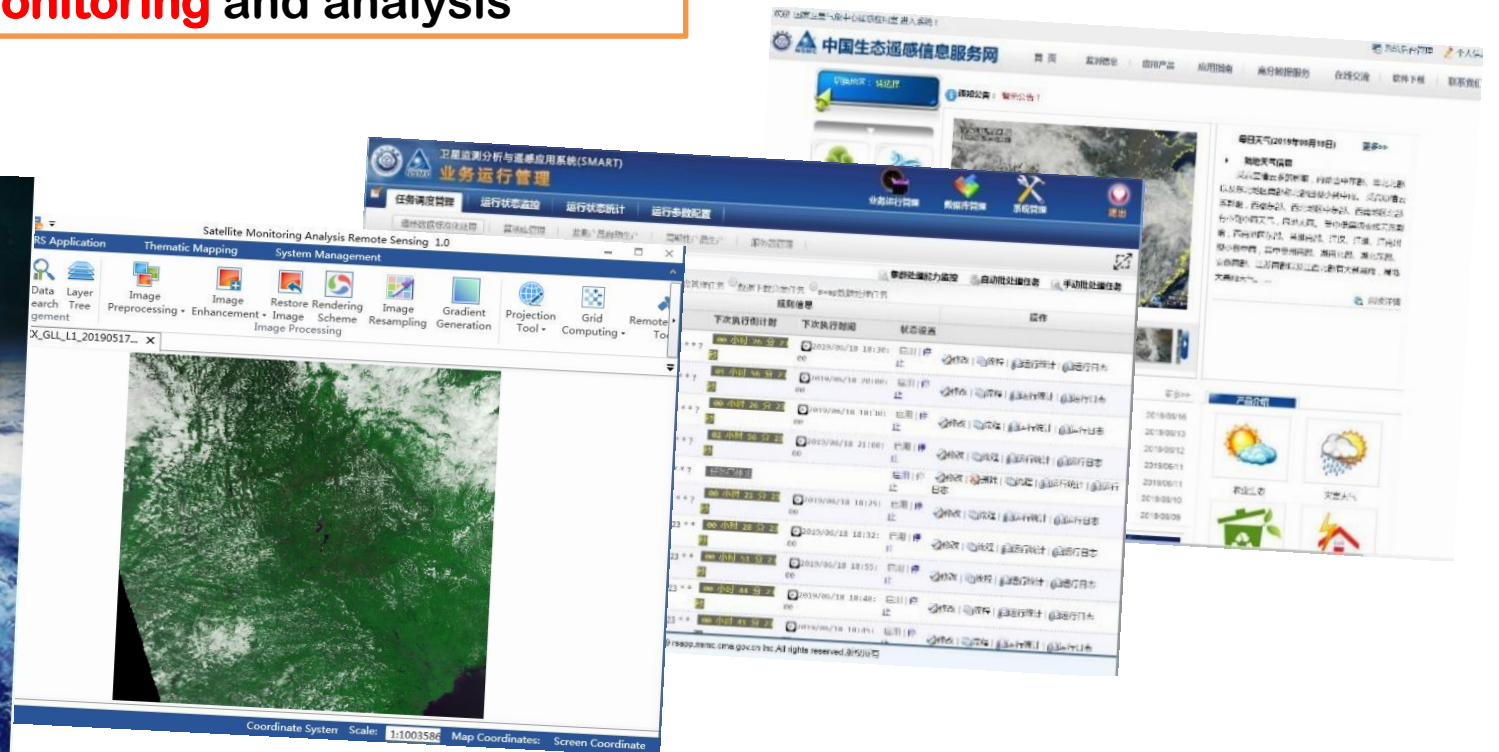
InterVal: 0.3 Load Animation



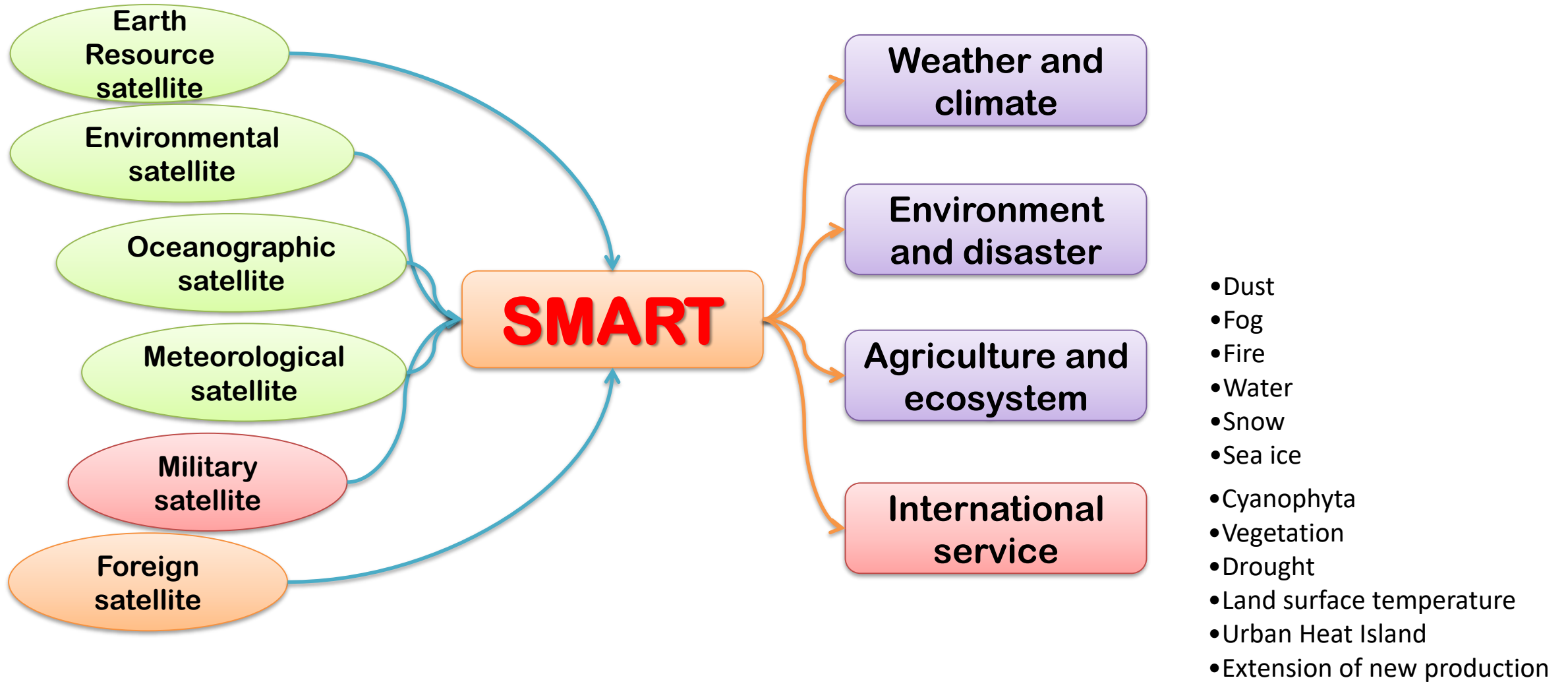
SMART

SMART(Satellite Monitoring Analysis & Remote sensing Toolkit) is a general application platform developed by NSMC that offers FY-3-based monitoring outputs, data analyses and public services. It is a comprehensive application platform for remote sensing monitoring and application using FY-3 and other meteorological satellite Data.

Natural disaster and environment monitoring and analysis



SMART



Multi-satellites Supporting

Data Application Tools

Users can login to www.nsmc.org.cn/en/ to download the FY Satellite Weather Application Platform (SWAP) and the FY Satellite Environmental and Ecological Monitoring System (SMART) to process and display FY satellite data.

SWAP & SMART

<http://www.nsmc.org.cn/service/en/emergency/tools.html>



The screenshot displays the FENGYUN Satellite Data Center website. The header includes the site name and logo, along with navigation links like 'Welcome: gaohao', 'Quit', 'My Orders', 'My Cart', 'NSMC', 'Contact us', and 'Help'. A main navigation bar contains 'SATELLITES', 'DATA', 'IMAGES', 'PRODUCTS', 'DOCUMENTS', and 'TOOLS'. The 'Data download' section is active, showing a list of software tools. The 'SMART' and 'SWAP' entries are highlighted with a yellow box. The footer contains logos for the China Meteorological Administration and NSMC, along with contact information and copyright notices.

Software	Details	Download times
FYDataService (DataDownload)	Details	[881]
FENGYUN Toolkit v1.1 (Preprocessing)	Details	[0]
SMART	Details	[496]
SWAP	Details	[4731]

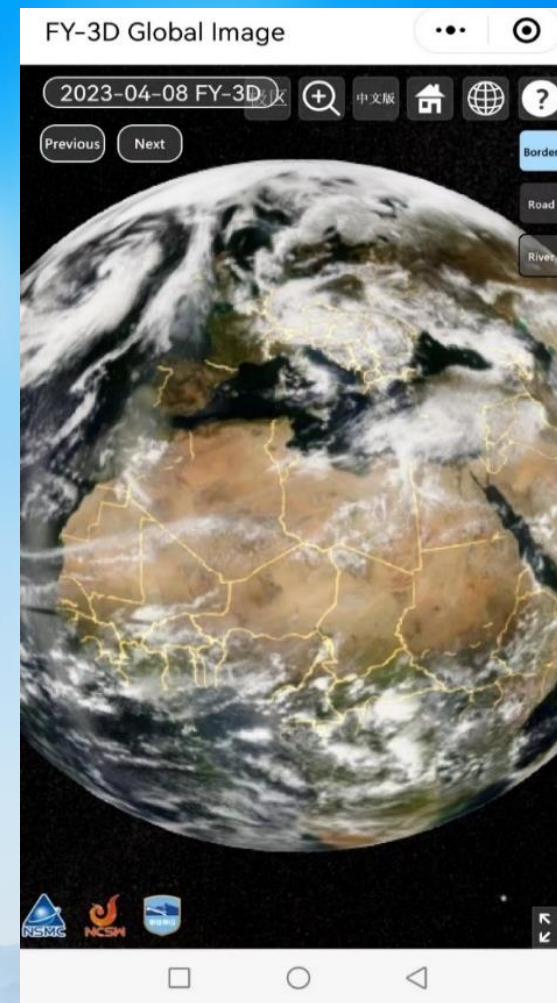
Total4, Page: 1/1 PageSize 10

Mobility applications -WeChat apple

FY-4B full disk



FY-4B live video





CONTENTS

1. FengYun Satellite Program Overview
2. FengYun Satellite Data Access
3. **Typical Applications and Examples**
4. FengYun Satellite Application Tools
5. Actions and Plans



风云气象卫星服务全球129个国家和地区

Fengyun meteorological satellite serve 129 countries and regions



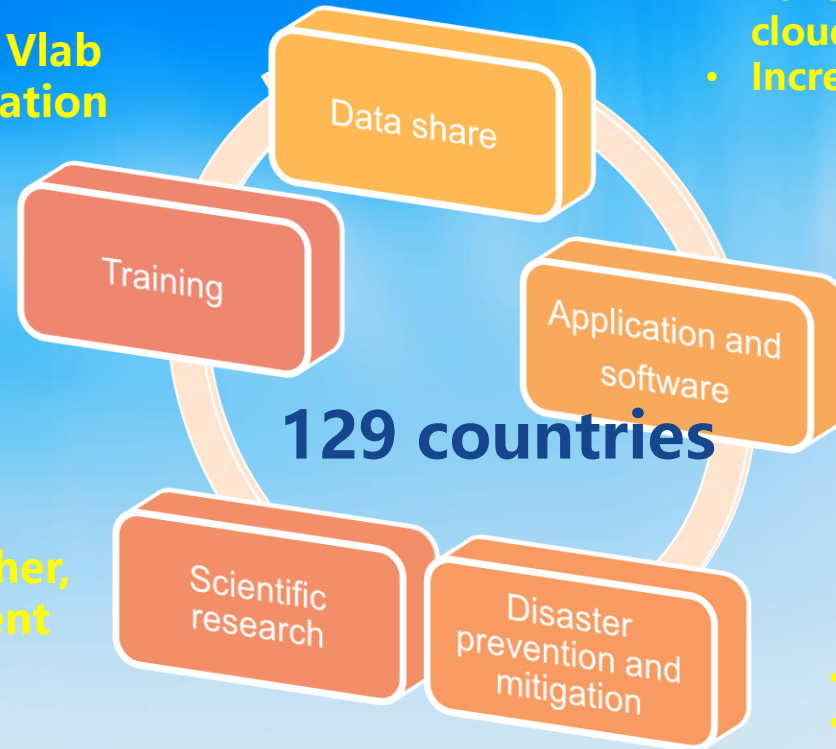
Data Receiving
Equipment Handover in
Malaysia



FY-2H DB Station Installation
in Bangladesh

FY Satellite Services for Sustainable Development

- Strengthen cooperation with Vlab
- Training courses on FY application and data usage



- Bilateral and international scientific cooperation on weather, climate change and environment detection, etc.
- Built virtual scientific research community

- Bilateral and international data exchange
- Give helps on DB and CMACast data receiving
- Built a data sharing service based on public cloud
- Increase data and products

- Improve platforms based on GEO and LEO data face to Asia-Oceania area and Global observation
- Provide useful software and toolkit

- Strengthen cooperation on FY_ESM
- Increase response data and products

2023 FengYun Satellite User Conference

Meeting time: November 13 to 15, 2023

Meeting location: Xiamen, Fujian Province, China



<http://sac347.nsmc.org.cn/nsmc/en/home/index.html>



**FENGYUN Satellite User
Conference (FYSUC)**

[Home](#) [Agenda](#) [About NSMC](#)

FengYun Satellite User Conference 2023

November 13 to 15, 2023
Xiamen, Fujian Province,
China

[Agenda](#)

The purpose of the conference is to establish a platform for international users of FengYun satellites, facilitating in-depth discussions regarding their applications and requirements, promoting the global integrated application of FengYun satellites to achieve maximum benefits across various application areas, and mitigating the impacts of hazardous weather, water, or climate events.

Useful links to FY satellite data and applications

- Nation Satellite Meteorological Center: <http://www.nsmc.org.cn/en>
- FENGYUN satellite data center: <http://data.nsmc.org.cn>
- FENGYUN Earth: <http://fyearth.nsmc.org.cn/>
- FENGYUN satellite data ftp server (user account required): <ftp://ftp.nsmc.org.cn>
- FENGYUN satellite data analysis platform: <http://rsapp.nsmc.org.cn/geofy/en/>
- FY-4A animation: <http://fy4.nsmc.org.cn/portal/en/theme/FY4A.html>
- SWAP2.0 test version (English): http://rsapp.nsmc.org.cn/test_geofy/en
- FY-3 Global Daily Image: <https://fy4.nsmc.org.cn/mips/index.html>

Together
For Better

谢

谢!

Make the data better and easier to use !