香港天文台
HONG KONG OBSERVATORY

Update on ACNF Web Portal

P Cheung, Hong Kong Observatory

WMO VCP Training Workshop

8-11 December 2020

ACNF

- **Asian Consortium for NWP Forecast**
  - **WMO RA II Pilot Project**
    - **to Develop Support for NMHS**
    - **in Numerical Weather Prediction**

Project Background

- Project Aims
  - To develop a consortium comprising NWP operators and product providers to support and assist NMHSs in their full use of NWP products
  - To foster development of NWP activities in provision of weather services, including forecasts and warnings.

- Steered by a Coordination Group comprising experts from participating Members, with experts of Hong Kong, China (HKO) and Republic of Korea (KMA) serving as coordinators.

- A web portal called the “Asian Consortium for NWP Forecasts” (ACNF) being developed by HKO

VCP Training Workshops to introduce NWP development and knowledge sharing on use and interpretation of NWP models

ACNF Web Portal (acnf.weather.gov.hk)

- On-line resources and information
  - Realtime prognostic products from RAII Members (HKO, KMA, CMA, and JMA)
    - NWP charts
    - City-specific NWP websites
  - Resources of community NWP models
    - Source codes, case data, use guide
    - Pointers of software packages for use with NWP

ACNF Web Portal Update

World Meteorological Organization

Asian Consortium for NWP Forecast (ACNF)

WMO RA II Pilot Project to Develop Support for NMHS in Numerical Weather Prediction

- News
- Real-time NWP Products
- Community NWP Models
- Tools for NWP
- ACNF Training Materials

ACNF Training Materials

Courses

- WMO VCP Training Workshop on Use and Interpretation of Mesoscale NWP for High-impact Weather Forecasting, 2016
- WMO VCP Training Workshop on Data Assimilation and Mesoscale Ensemble Forecasting, 2014
- WMO VCP Training Workshop on the Latest Developments on the Use and Interpretation of Numerical Weather Prediction (NWP) Models, 2012

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Community NWP Models

- JMA Non-Hydrostatic Model (JMA-NHM)
  - Model Documentation
  - User Guide and Tutorial
  - Download Area (source code and case data)

- CMA GRAPES
  - User Guide and Tutorial
  - Download Area (source code and case data)

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Tools for NWP

Plotting

- PANDAH
- NCAR Graphics Command Language(NCL)
- GrADS
- OpenGrADS
- McIDAS-V

Softwre Libraries

- wgrib and wgrib2
- NCEP GRIB-1 and GRIB-2 decoding/encoding libraries
- NetCDF

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Real-time NWP Model Products

Prognostic Charts

- Prognostic Charts from HKO, KMA, CMA and JMA
- External Sites
  - EPS Products
    - JMA medium-range EPS Web site
  - Tropical Cyclone Forecast Products
    - TIGGE Tropical Cyclone Ensemble Forecast Information

SWFDP Products

- KMA
- CMA
- JMA

RAII City-Specific NWP Forecast

- Hong Kong, China
  - Bhutan
  - Cambodia
  - Hong Kong
  - Kazakhstan
  - Kyrgyz Republic
  - Laos
  - Mongolia
  - Myanmar
  - Nepal
  - Vietnam
  - Thailand
- Japan(Password required)
- Korea(Select Meteogram or EPSgram)

Model Data Download

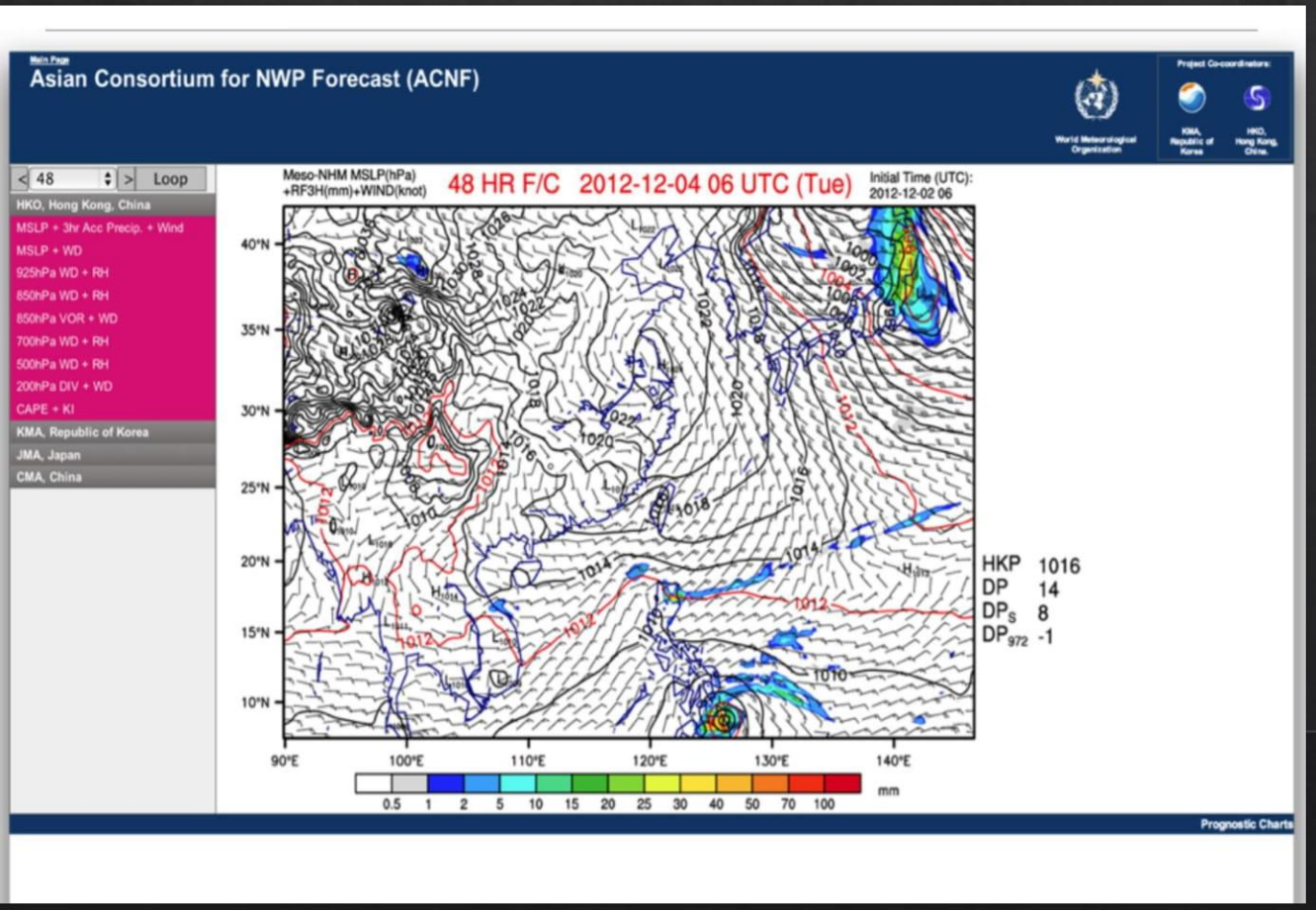
- HKO NWP Data Download(Password required)
- JMA High Resolution GSM Data Service
- JMA NWP GPV Products (GRIB and Map Image)
- NOMADS at NCEP
- CMA Data Service

Hosted by the
Hong Kong Observatory
of Hong Kong, China

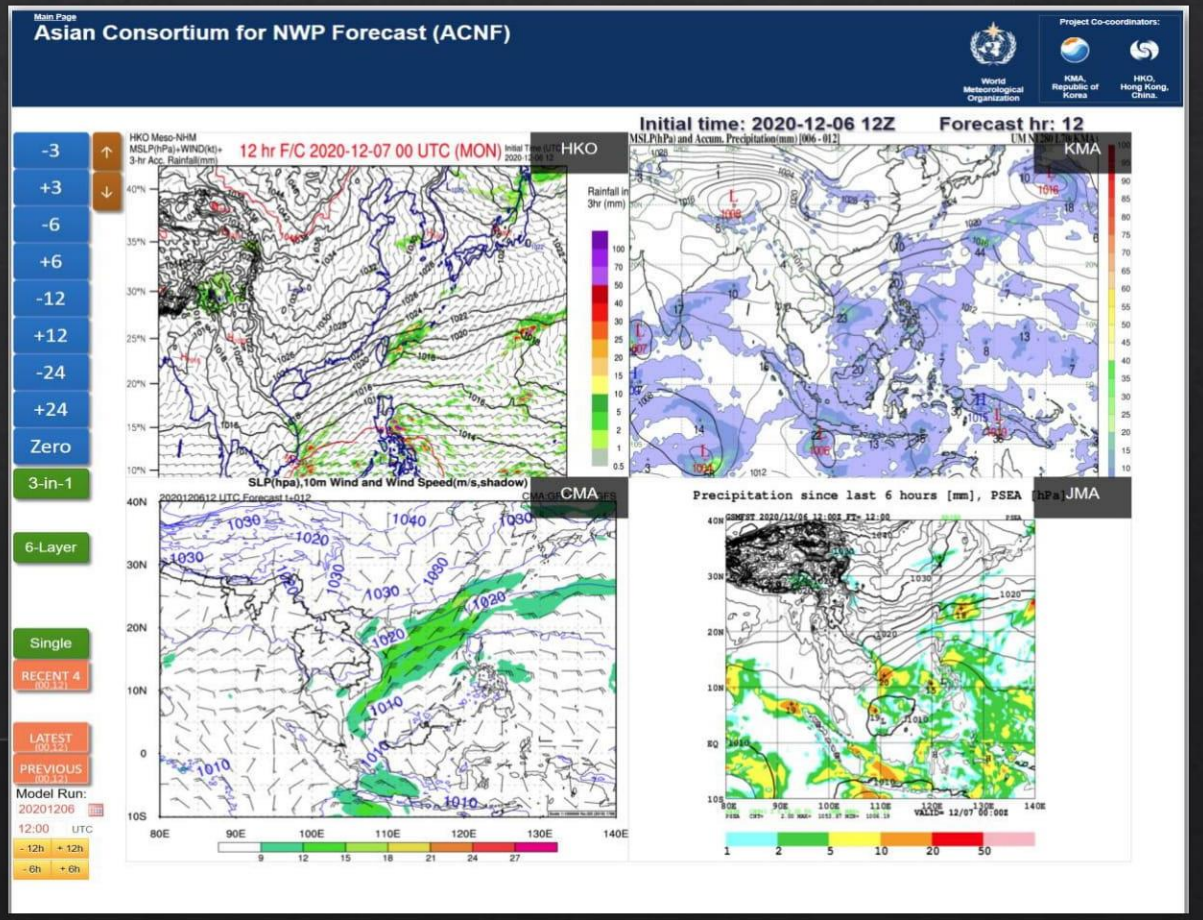
香港天文台 HONG KONG OBSERVATORY

NWP Charts, a facelift

Old



New



Main Page

Asian Consortium for NWP Forecast (ACNF)

World Meteorological Organization

Project Co-coordinators:
KMA, Republic of Korea
HKO, Hong Kong, China.

-3
+3
-6
+6
-12
+12
-24
+24
Zero
3-in-1

6-Model
6-Layer

RECENT 4 (00,12)
LATEST (00,12)
PREVIOUS (00,12)

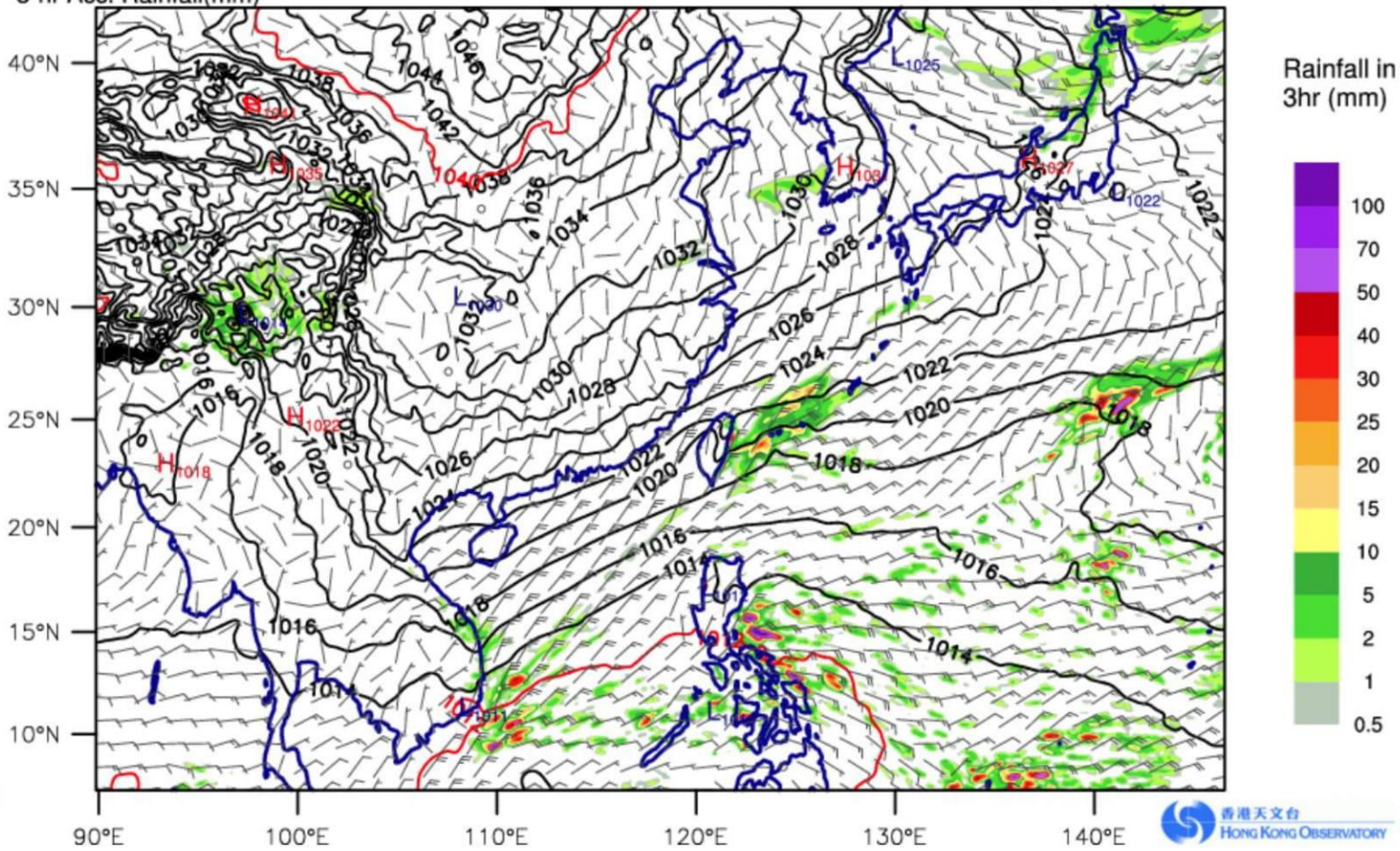
Model Run:
20201206
12:00 UTC
- 12h + 12h
- 6h + 6h

Initial time: 2020-12-06 12Z **Forecast hr: 12**

HKO Meso-NHM
MSLP(hPa)+WIND(kt)+
3-hr Acc. Rainfall(mm)

12 hr F/C 2020-12-07 00 UTC (MON)

Initial Time (UTC): 2020-12-06 12



Single chart view

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Single
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Model Run:
20201206
12:00 UTC
- 12h + 12h
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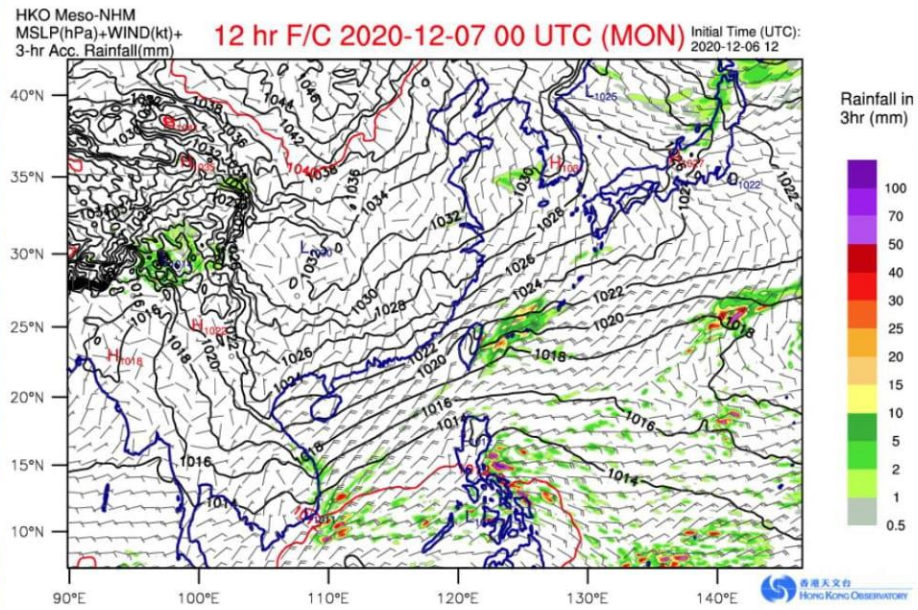
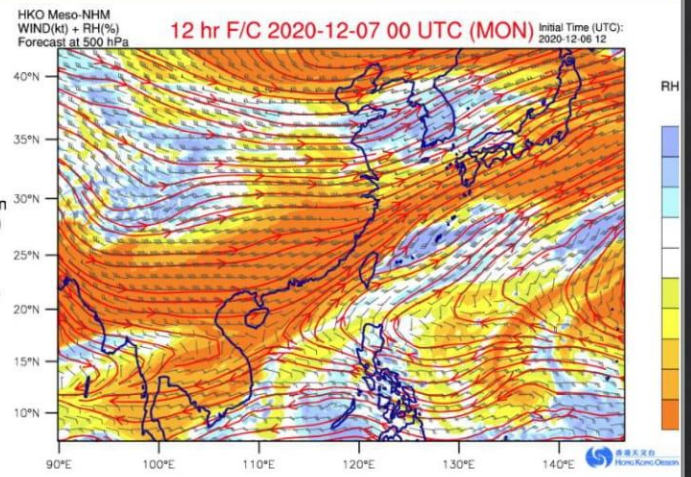
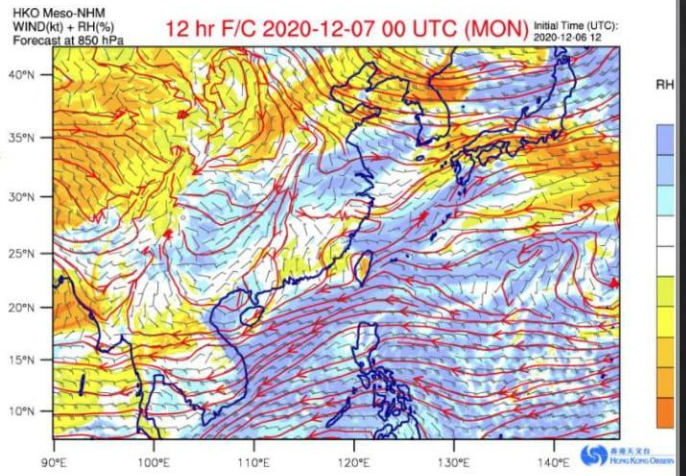
Initial time: 2020-12-06 12Z Forecast hr: 12







3 layer view

Main Page

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Initial time: 2020-12-06 12Z Forecast hr: 12

-3
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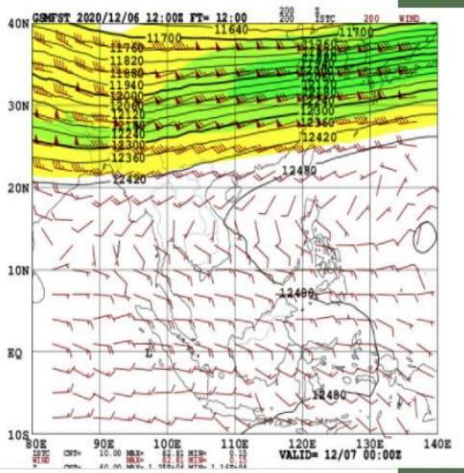
-6
+6
-12
+12
-24
+24
Zero
3-in-1

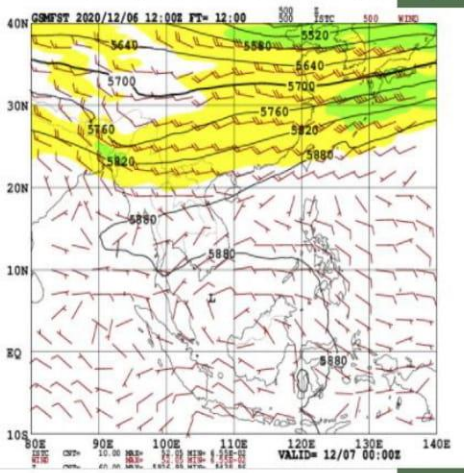
6-Model

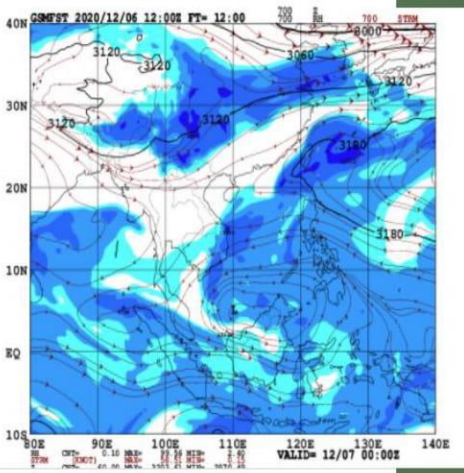
Single
RECENT 4 (00,12)

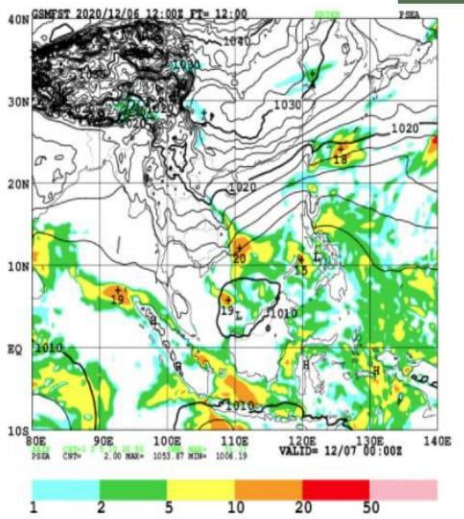
LATEST (00,12)
PREVIOUS (00,12)

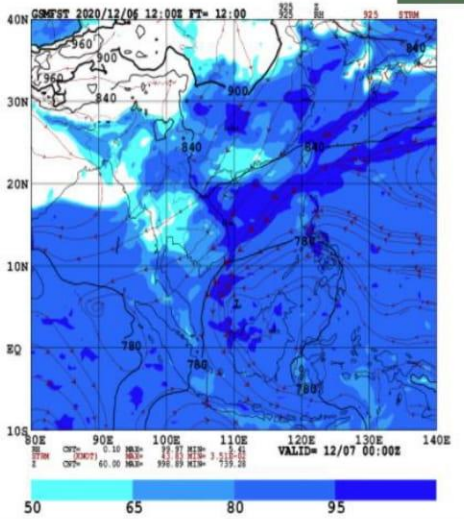
Model Run:
20201206
12:00 UTC
- 12h + 12h
- 6h + 6h

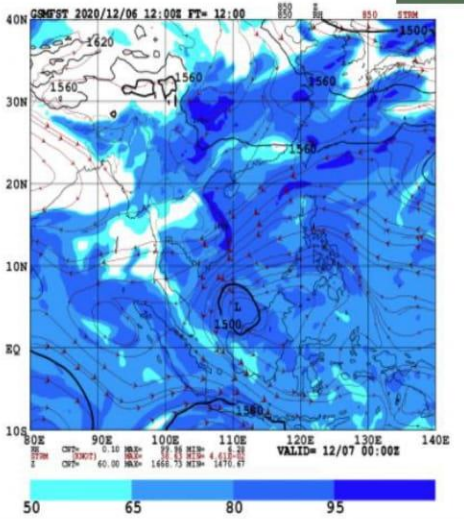












6 layer view

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Initial time: 2020-12-06 12Z **Forecast hr: 12**

-3 ↑

+3 ↓

-6

+6

-12

+12

-24

+24

Zero

3-in-1

6-Layer

Single

RECENT 4 (00,12)

LATEST (00,12)

PREVIOUS (00,12)

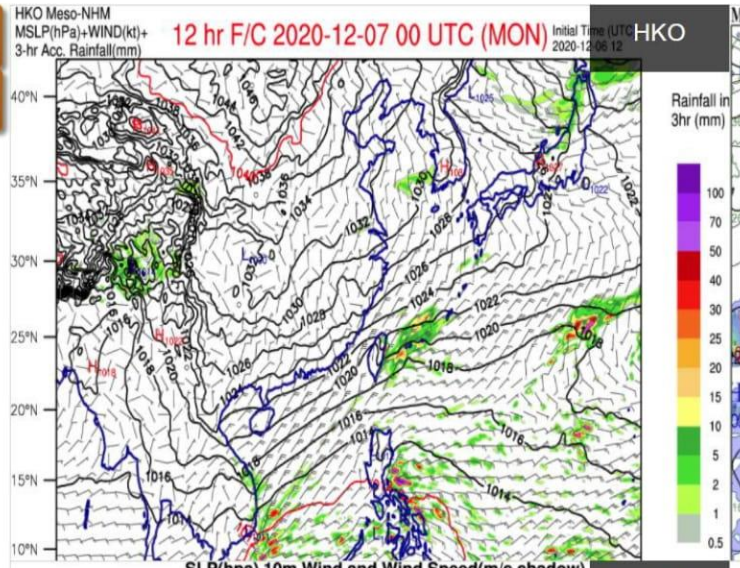
Model Run:

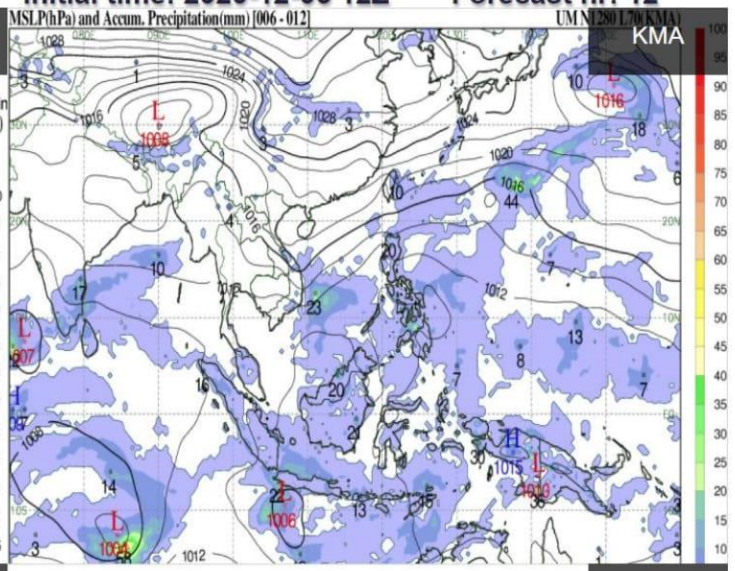
20201206

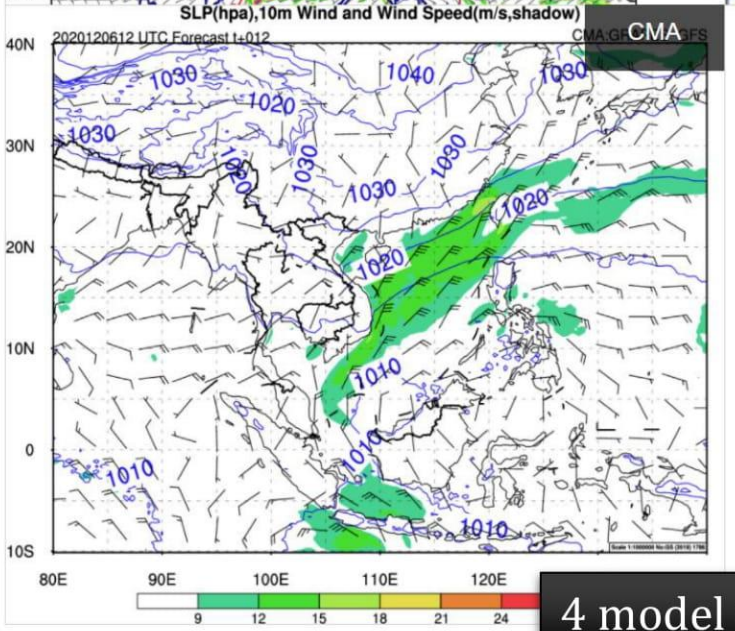
12:00 UTC

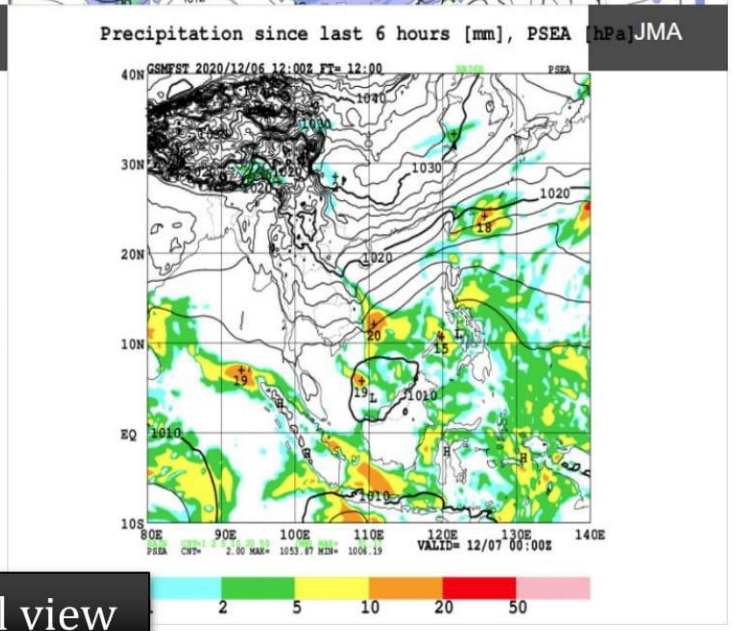
- 12h + 12h

- 6h + 6h









4 model view

Main Page

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KMA, Republic of Korea

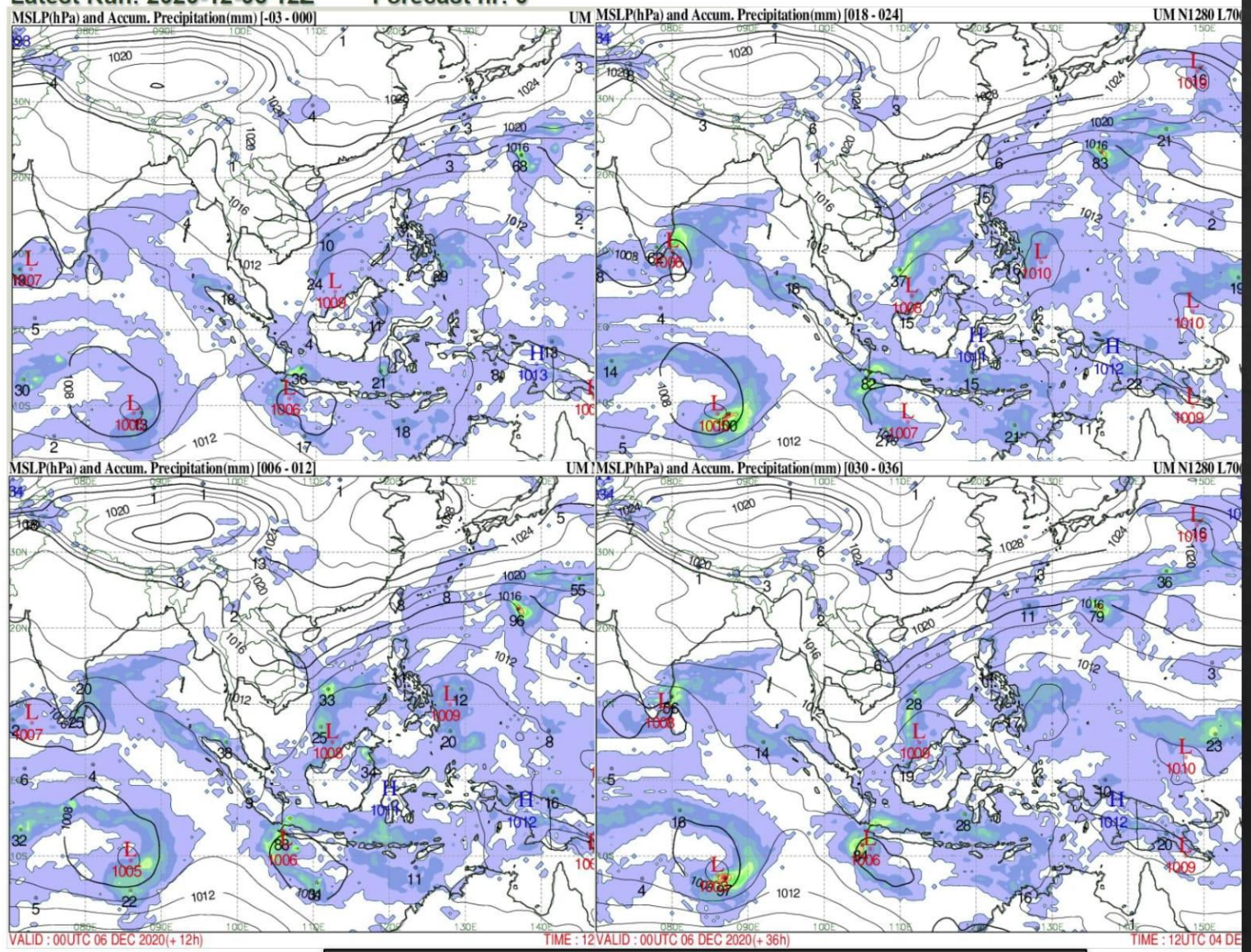
HKO, Hong Kong, China.

Latest Run: 2020-12-06 12Z **Forecast hr: 0**

-3
+3
-6
+6
-12
+12
-24
+24
Zero
3-in-1
4-in-1
6-Model
6-Layer

Single
RECENT 4 (00,12)

Model Run:
20201206
12:00 UTC
- 12h + 12h
- 6h + 6h

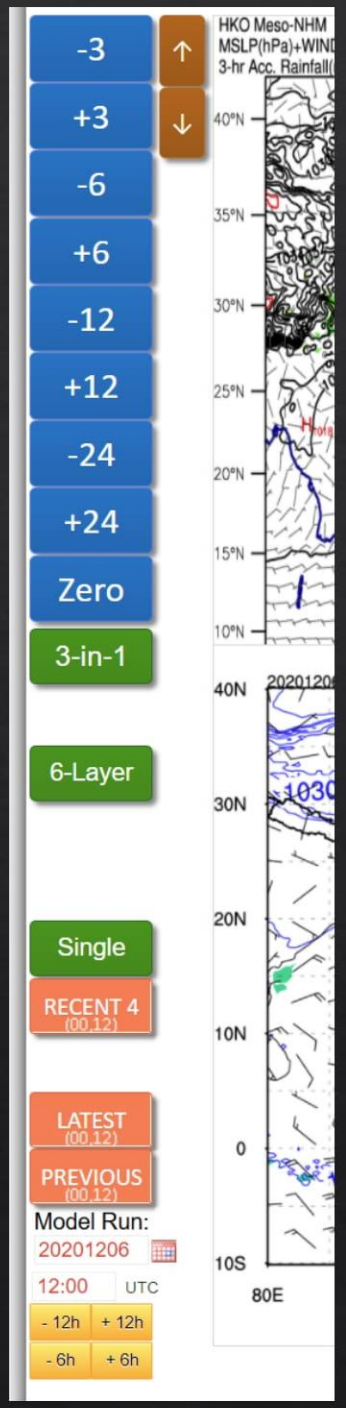


Recent 4 model runs at the same valid time

Time control

Layout control

Model run control



Product Selection

X | Primary | Additional | User Guide

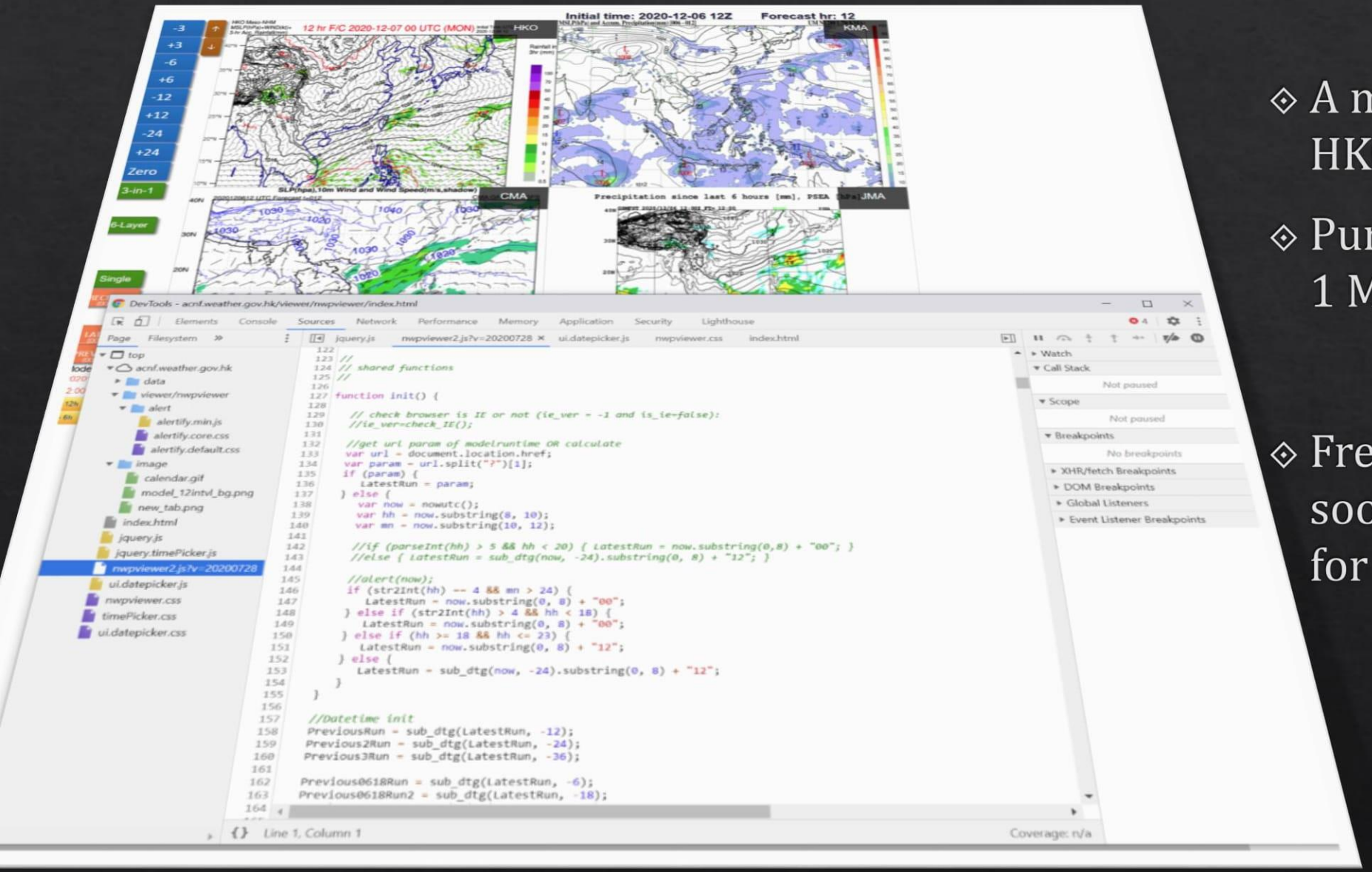
Sync	HKO	KMA	CMA	JMA
200 ->	200 Div+UV	200 Div+UV	200 UV	200 UV
500 ->	500 RH+UV	500 GPH	500 UV	500 UV
700 ->	700 RH+T+UV	700 Div+UV	700 RH UV	700 RH+UV
850 ->	850 RH+T+UV	850 Conv	850 RH UV	850 RH+UV
850 ->	850 VT+T+UV			
925 ->	925 RH+T+UV		925 RH UV	925 RH+UV
SF-RF ->	SF RF+P+UV	SF Rain	SURF Rain	SURF Rain

X | Primary | Additional

HKO | KMA | CMA | JMA

- CAPE+KI
- MFLUX 700
- MFLUX 850
- MFLUX 925
- SFC WIND
- SFC GUST

ACNF NWP Viewer



- A miniature version of HKO's NWPViewer
- Purely Javascript, less than 1 MB
- Free source code available soon on ACNF web portal, for easy local adaptation

https://acnf.weather.gov.hk

Open Discussions and Sharing