

中央氣象局
第2與3、4週動力統計
預報作業之發展

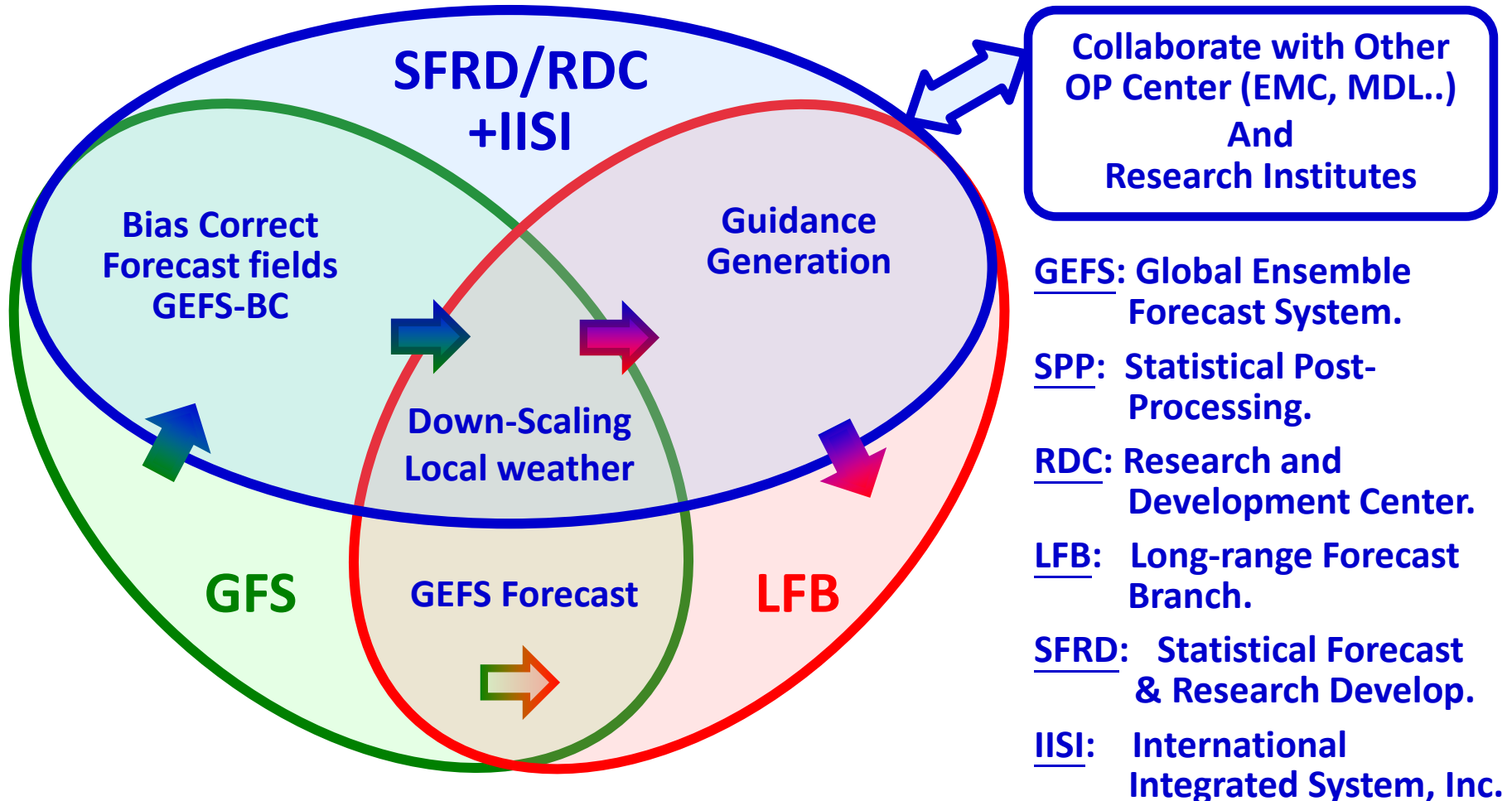
—CWB GEFS-SPP/SFRD—

科技中心：陳重功、羅存文、王志嘉

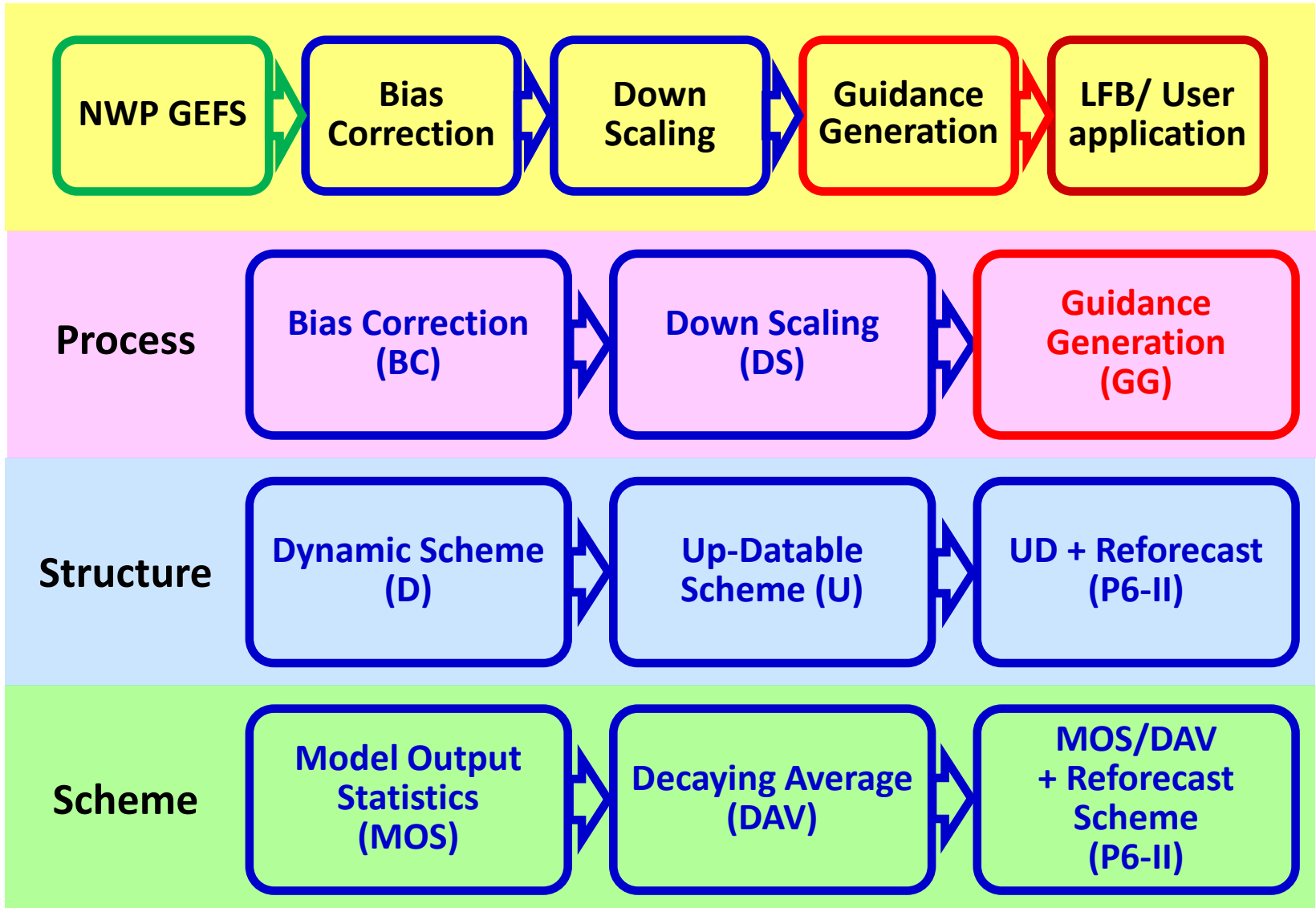
October 04, 2016

CWB GEFS-SPP功能架構示意

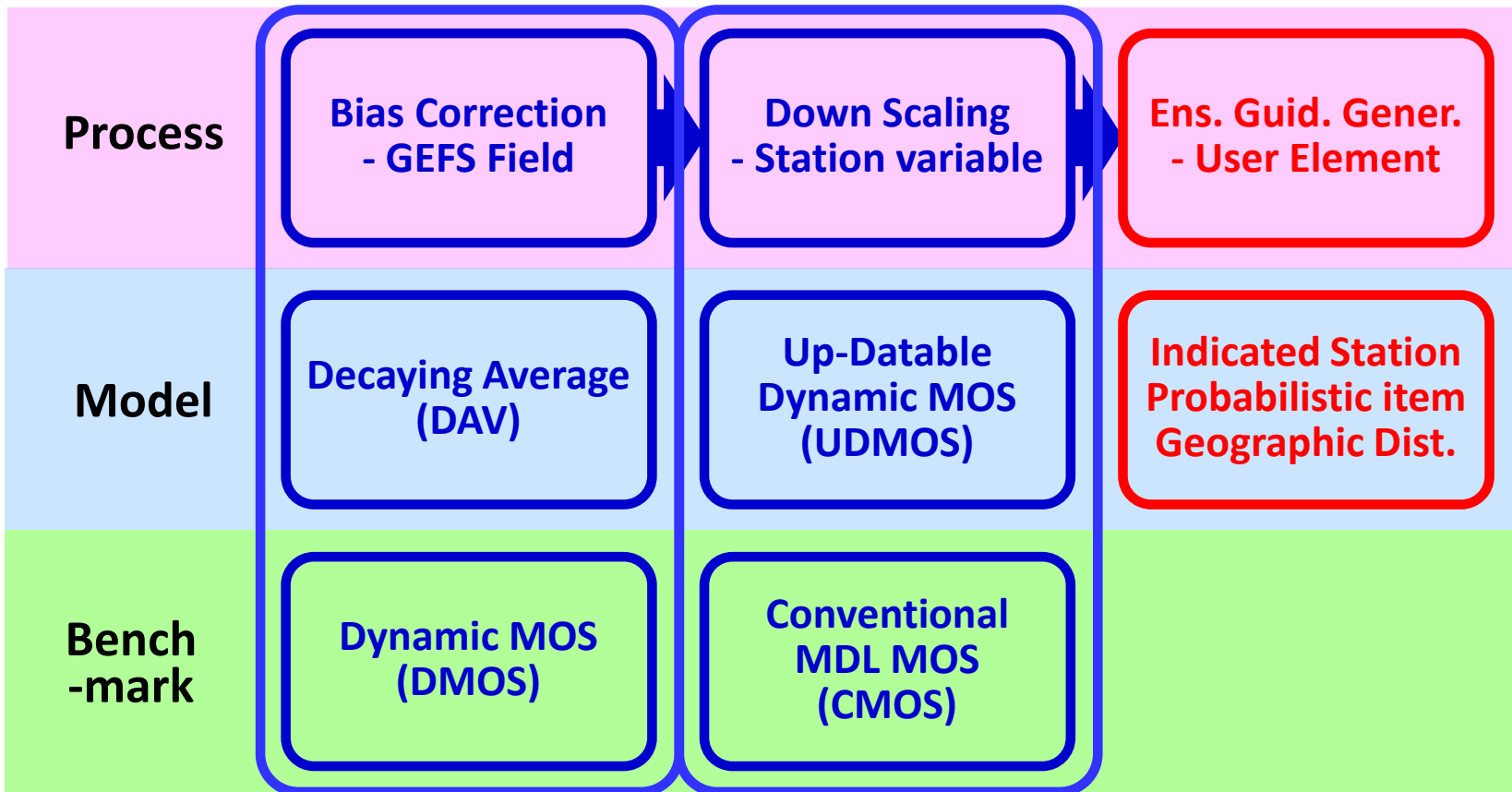
-統計預報研發組



Developing Plan of CWB GEPS-SPP (P6-I & II)



Model Development of CWB GEPS-SPP (P6-I)



@ Bias Correction開發測試 – DMOS

@ Down Scaling – CMOS for 2nd Week

- * Quantitative & Categorical Guidance**

- * Cases Verifications**

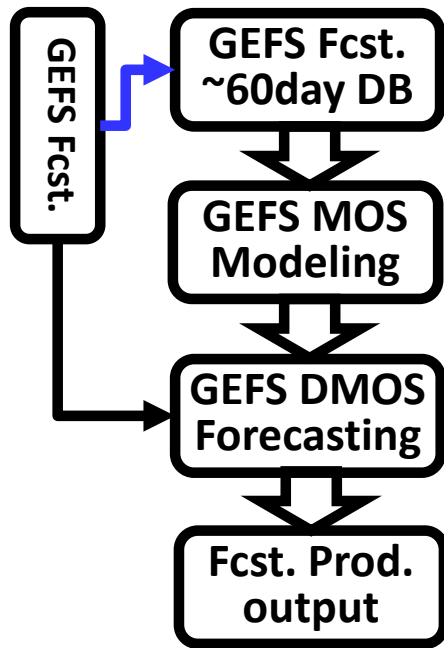
- * Extreme cases**

GEFS Field Bias Correction 開發測試

- By Dynamic MOS

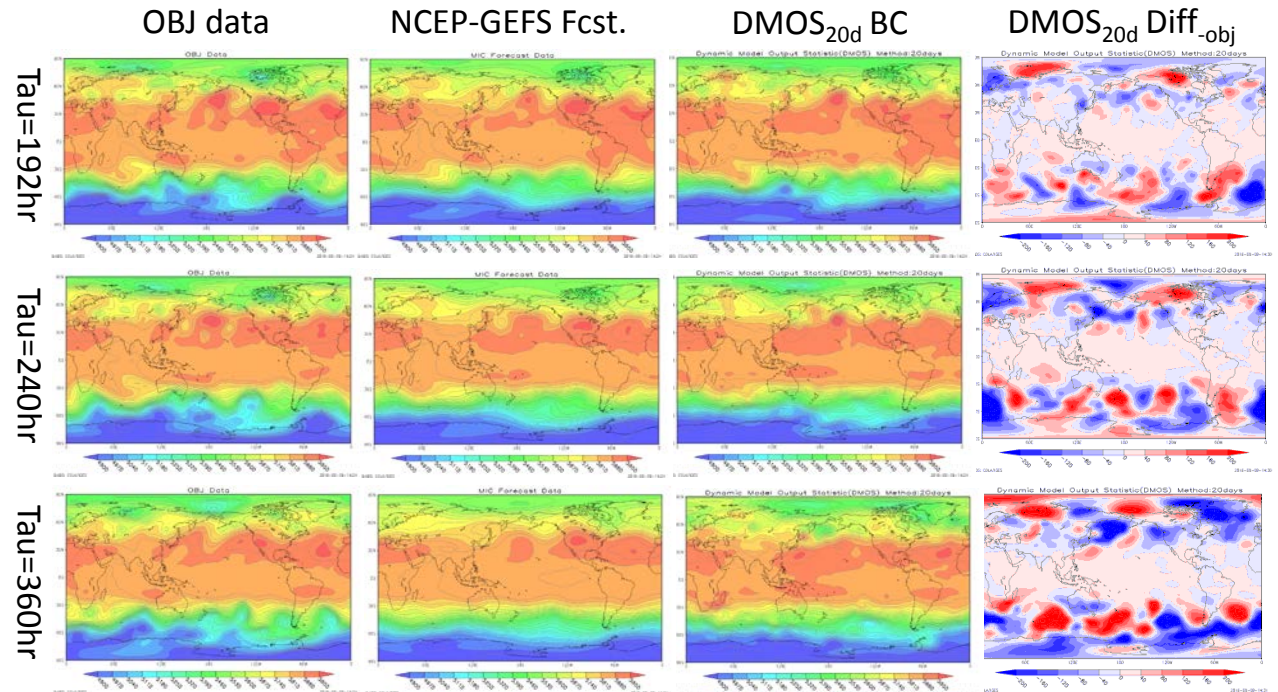
1. 以NCEP GEFS為發展模式架構目標，2. 擬完成後應用於CWB GEFS進行測試。

Dynamic MOS Sch.



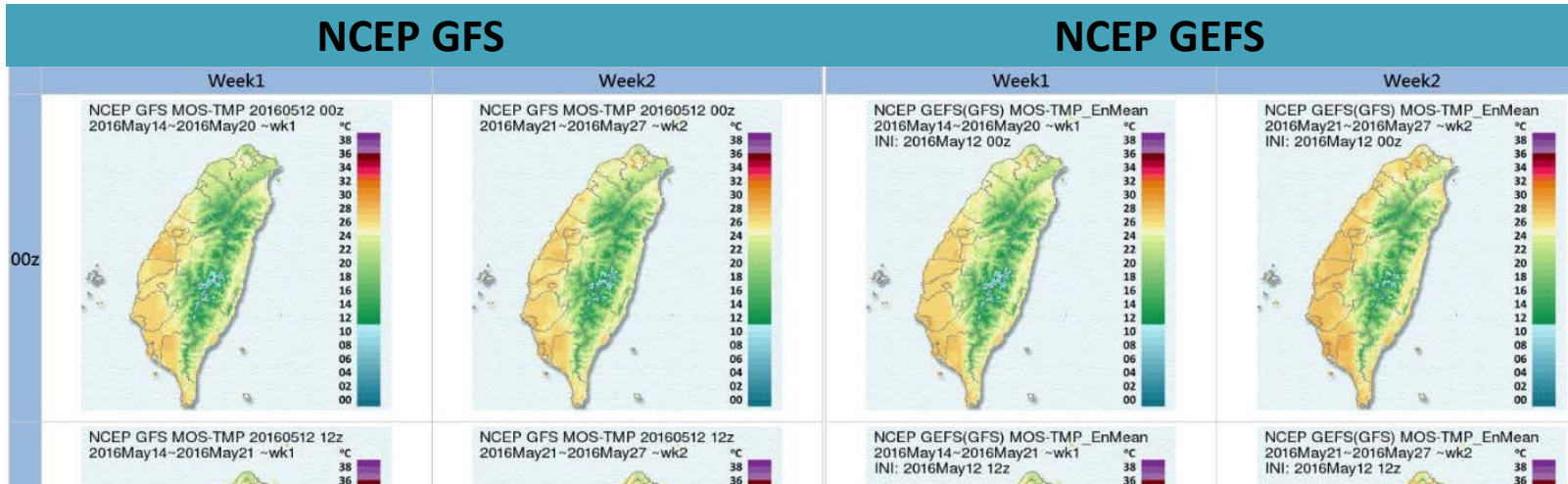
500hPa Geopotential Height

Initial Time : 2016/07/14 00Z



DS - SPP products on LFB CMF System

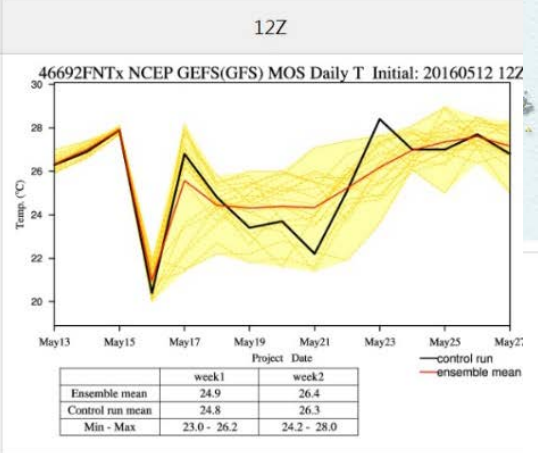
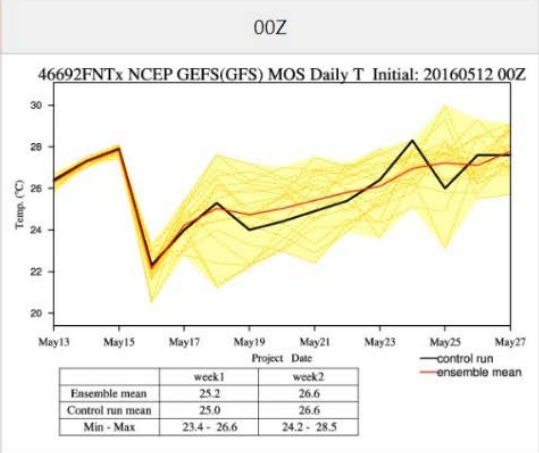
Quantitative forecast information - NCEP GEFS EnMOS(GFS)



Spatial Dis.
Weekly
Ensemble
Mean

	沿岸	平地	山區
大臺北	基隆	臺北	桶後
桃園	觀音	中壢	復興
新竹	新豐	竹東	梅花
苗栗	後龍	大河	馬都安
臺中	梧棲	臺中	梨山
南投			日月潭
彰化	鹿港	員林	
雲林	四湖	虎尾	
嘉義	宜梧	嘉義	奮起湖
臺南	臺南	善化	
高雄	高雄	美濃	表湖
屏東	墾丁	潮州	尾寮山
宜蘭	蘇澳	羅東	太平山
花蓮(北)	花蓮		天祥
花蓮(南)	靜浦		佳心
臺東	臺東		紅葉山

氣溫
00Z
12Z
NCEP GEFS MOS



Station
Forecast
evolution
Ensemble
members

註: 紅色網底代表四區代表站, 綠色網底代表局屬測站

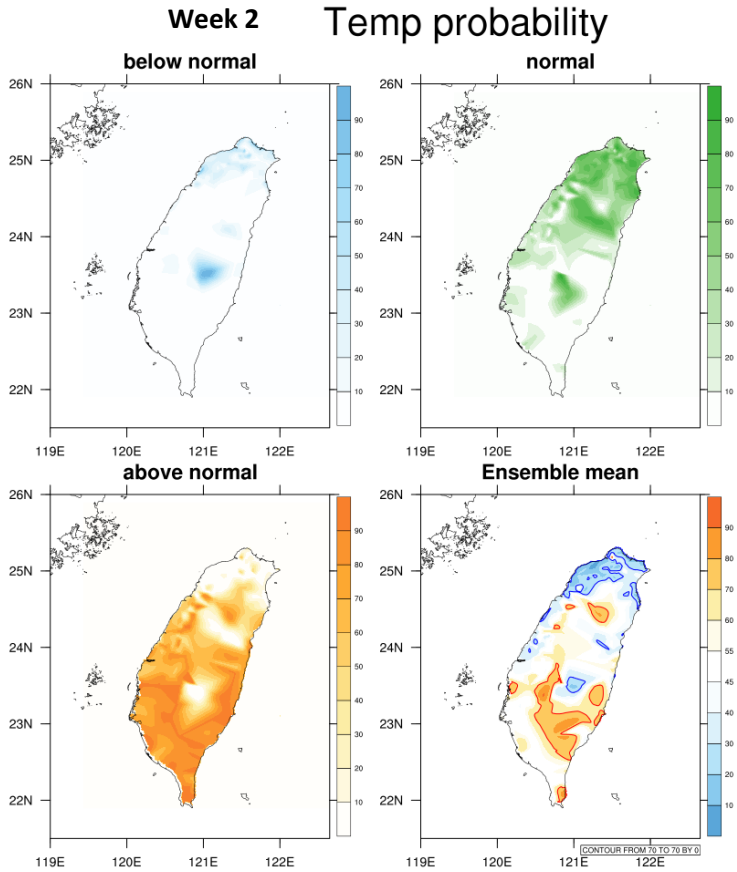
測站位置

DS - SPP products on LFB CMF System

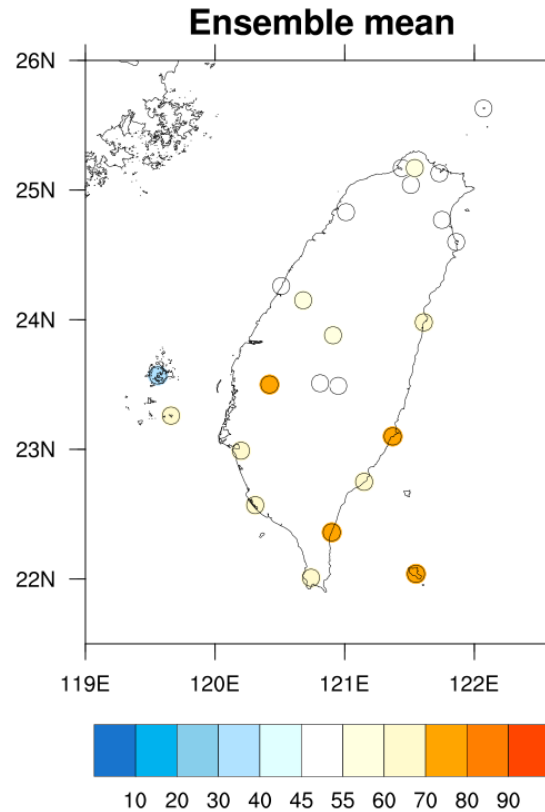
Categorical (below/normal/above) Fcst. Infor.

- NCEP GEFS EnMOS(GFS)

2-D distribution



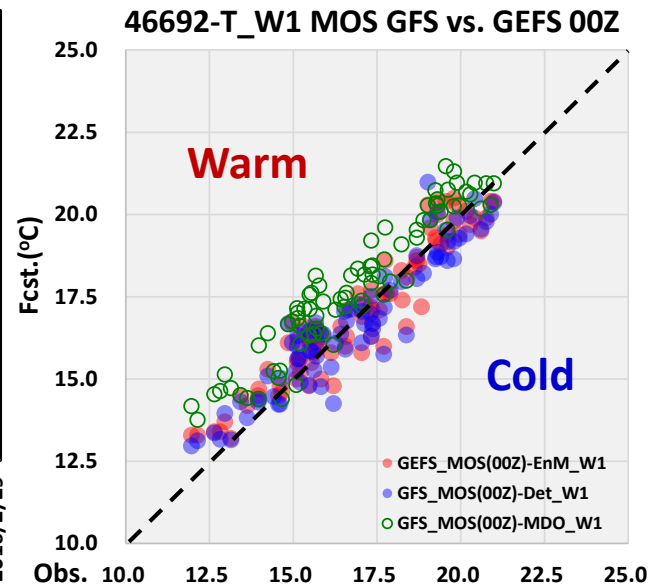
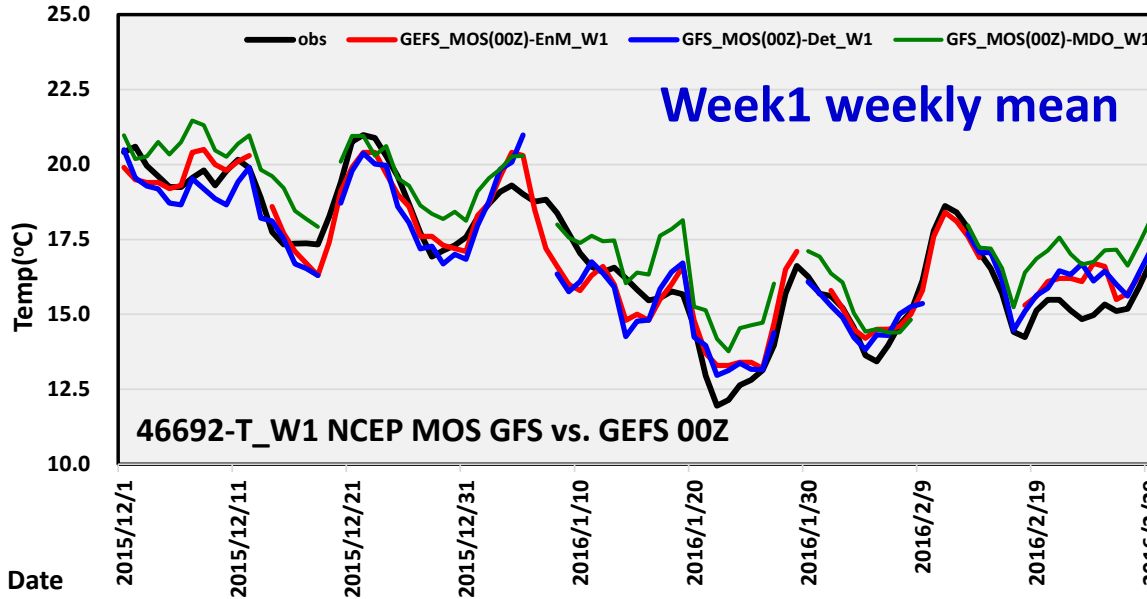
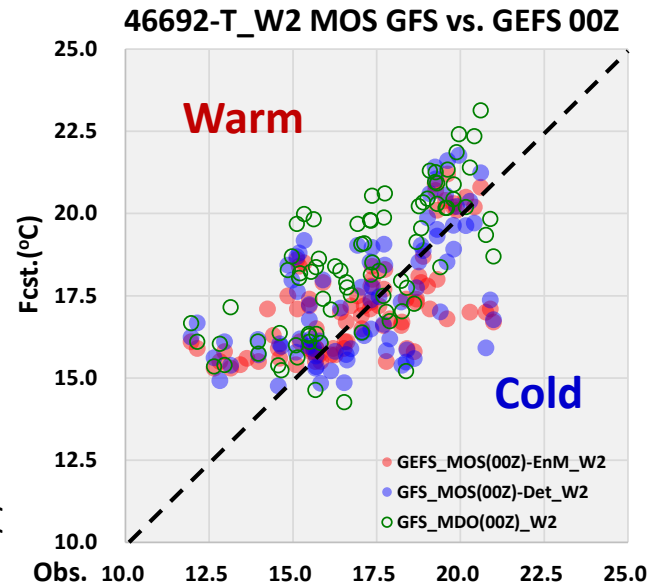
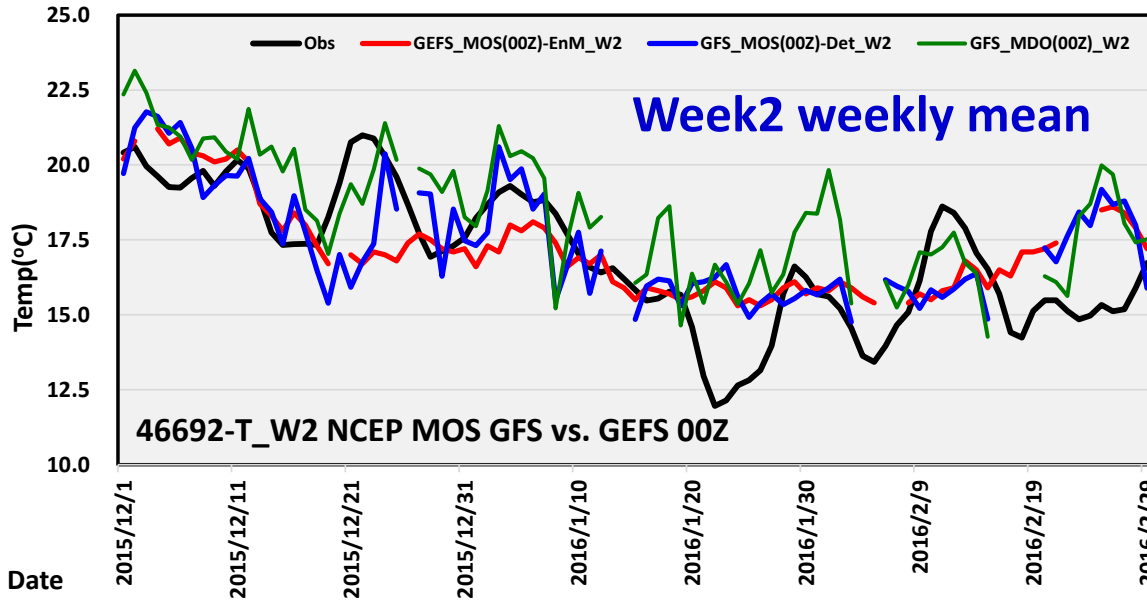
25 single station



station	blow	normal	above
PENGCHIAYU	15.2	67.3	17.5
KEELUNG	22.6	60.8	16.6
ILAN	14.1	59.7	26.3
SUAO	17.3	59	23.7
ANPU_no	7.7	65.6	26.7
CHUTZEHU	11.6	63.2	25.1
TANSHUI	19.3	64.7	16
TAIPEI	17.9	63.1	19
HSINCHU	19.7	57.2	23.1
TAICHUNG	12.1	55.4	32.4
WUCHI	20.3	62.2	17.5
JIHUYEHTAN	13.3	59	27.7
ALISHAN	8.8	77.4	13.8
YUSHAN	15.2	76.7	8.1
CHIAYI	4.5	41.3	54.2
TAINAN	11.9	59.4	28.7
KAOSIUNG	6.6	43.5	49.9
HUALIEN	6.5	53.4	40.1
CHENGKUNG	4.1	35.5	60.4
TAITUNG	10.3	47.6	42.1
TAWU	6.2	41.4	52.4
HENGCHUN	8.2	46.4	45.4
LANYU	7.7	39	53.3
PENGHU	48.4	42.1	9.4
TUNGCHITAO	16.3	43.4	40.3

SPP products /NCEP EnMOS GEF5(GFS)

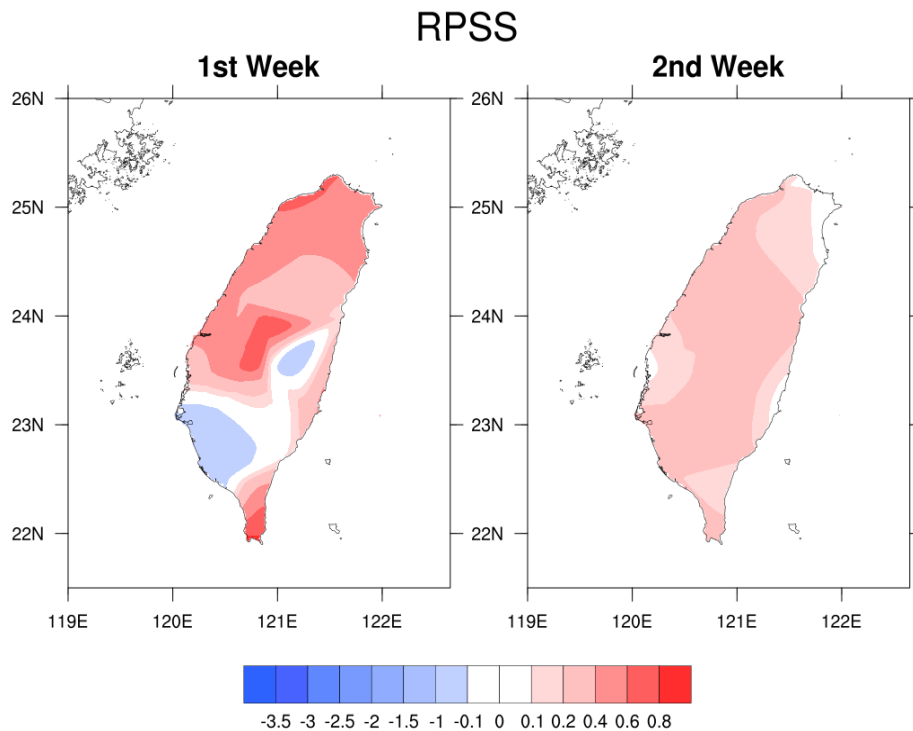
- Verification (Dec.2015~Feb.2016/Weekly) -



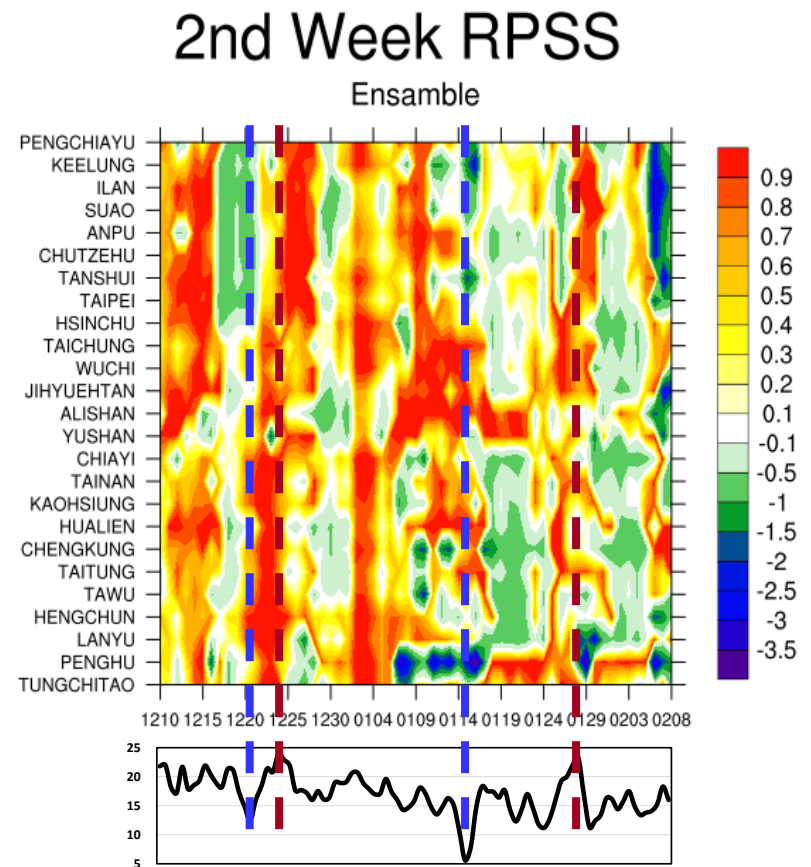
SPP products /NCEP EnMOS GEFS(GFS)

- Verification (Dec.2015~Feb.2016/Weekly) -

2-D distribution



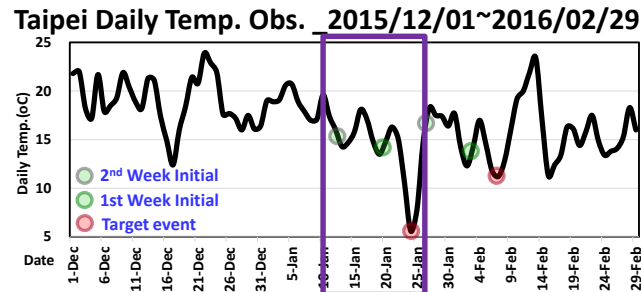
25 single station



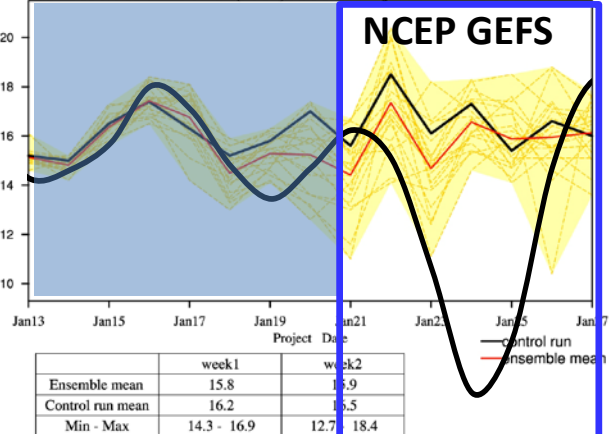
Extreme Event Fcst.

Case: Jan. 24, 2016

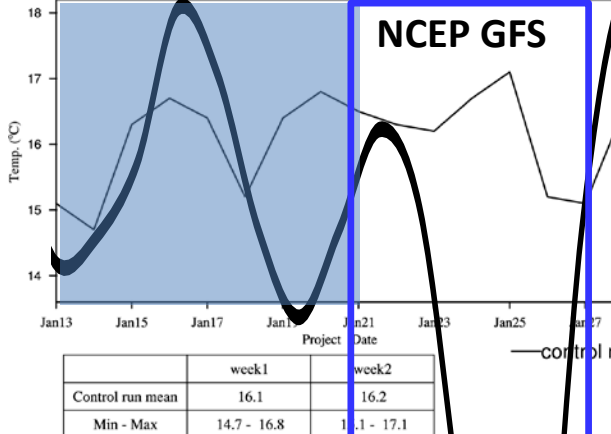
Taipei Daily Temp. 5.6°C



46692FNTx NCEP GEFS(GFS) MOS Daily T Initial: 20160112 12Z



46692FNTx NCEP GFS MOS Daily T Initial: 20160112 12Z

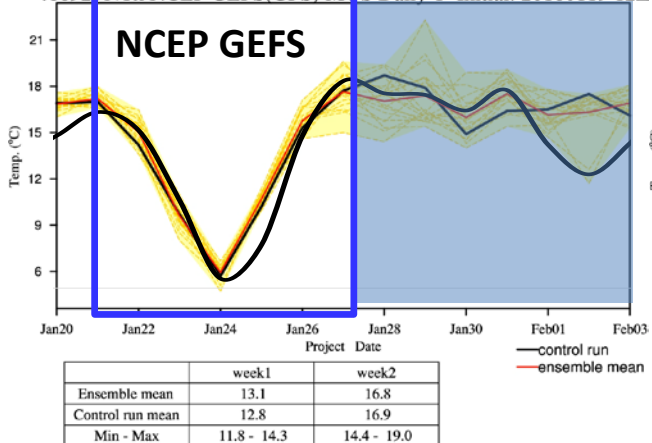


Week 2

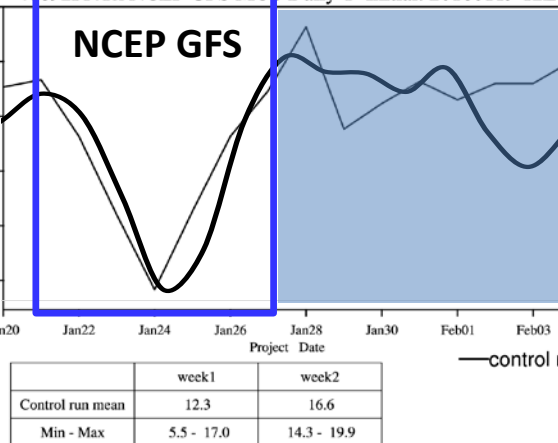
Period: Jan. 21~27		
Obs.	12.6 °C	
Fcst.	Week1	Week2
NCEP GEFS-Obs.	0.5 °C	3.3 °C
NCEP GFS-Obs.	-0.3 °C	3.6 °C

Week 1

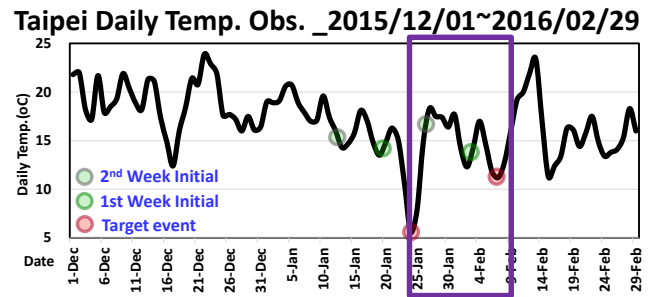
46692FNTx NCEP GEFS(GFS) MOS Daily T Initial: 20160119 12Z



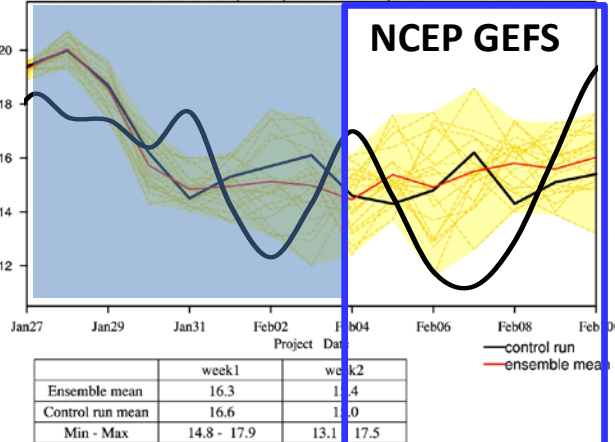
46692FNTx NCEP GFS MOS Daily T Initial: 20160119 12Z



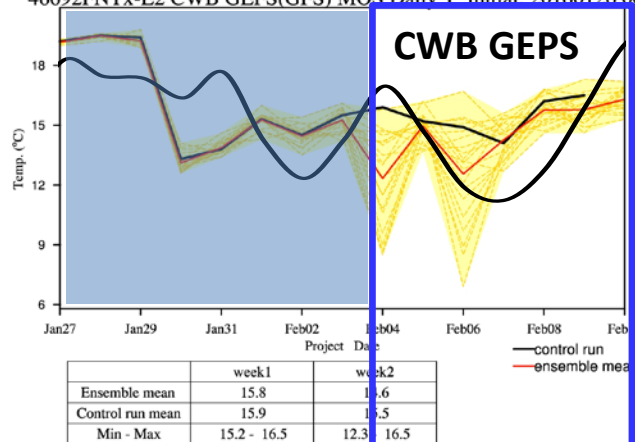
Extreme Event Fcst. Case Feb. 07, 2016 Taipei Daily Temp. 11.2°C



46692FNTx NCEP GEFS(GFS) MOS Daily T Initial: 20160126 00Z



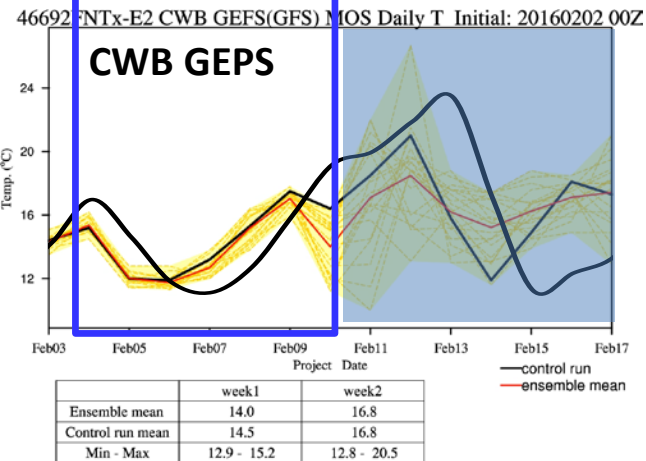
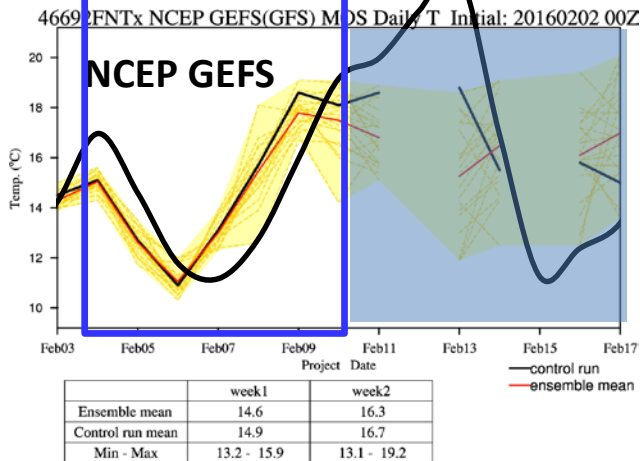
46692FNTx-E2 CWB GEFS(GFS) MOS Daily T Initial: 20160126 00Z



Week 2

Period: Feb. 04~10		
Obs.	14.7 °C	
Fcst.	Week1	Week2
NCEP GEFS-Obs.	-0.1 °C	0.3 °C
CWB GEFS-Obs.	-0.7 °C	-0.1 °C

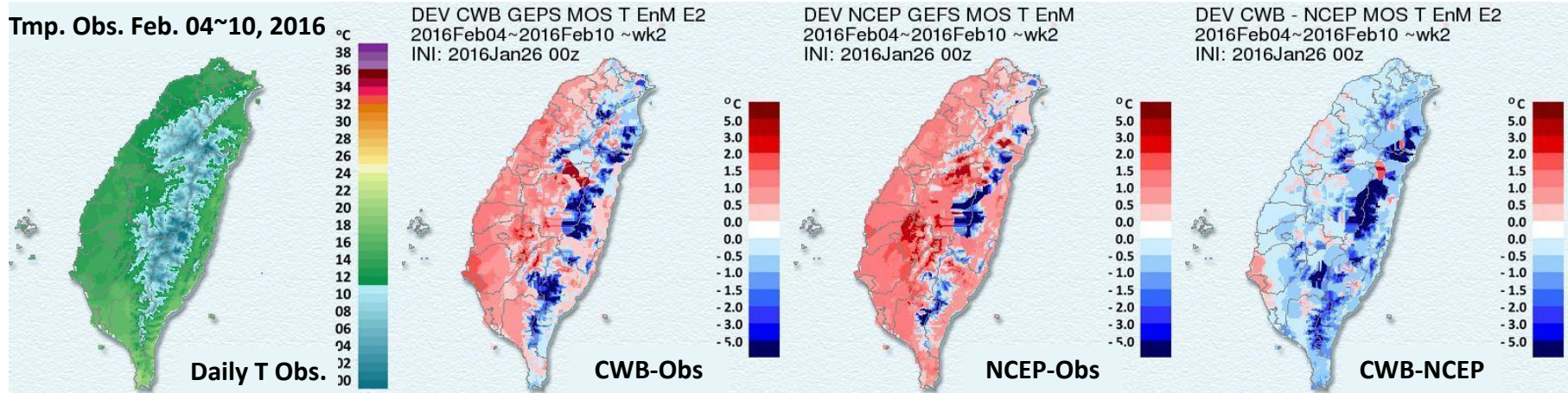
Week 1



Extreme Event Fcst.

Case Feb. 04~10, 2016

Week 2



Week 1

