CONAGUA
Comisión Nacional del Agua

SMN

SEMARNAT

SECRETARÍA DE MEDIO AMBIENTE Y RECURSOS NATURALES

Usage of NAEFS Products in Mexico

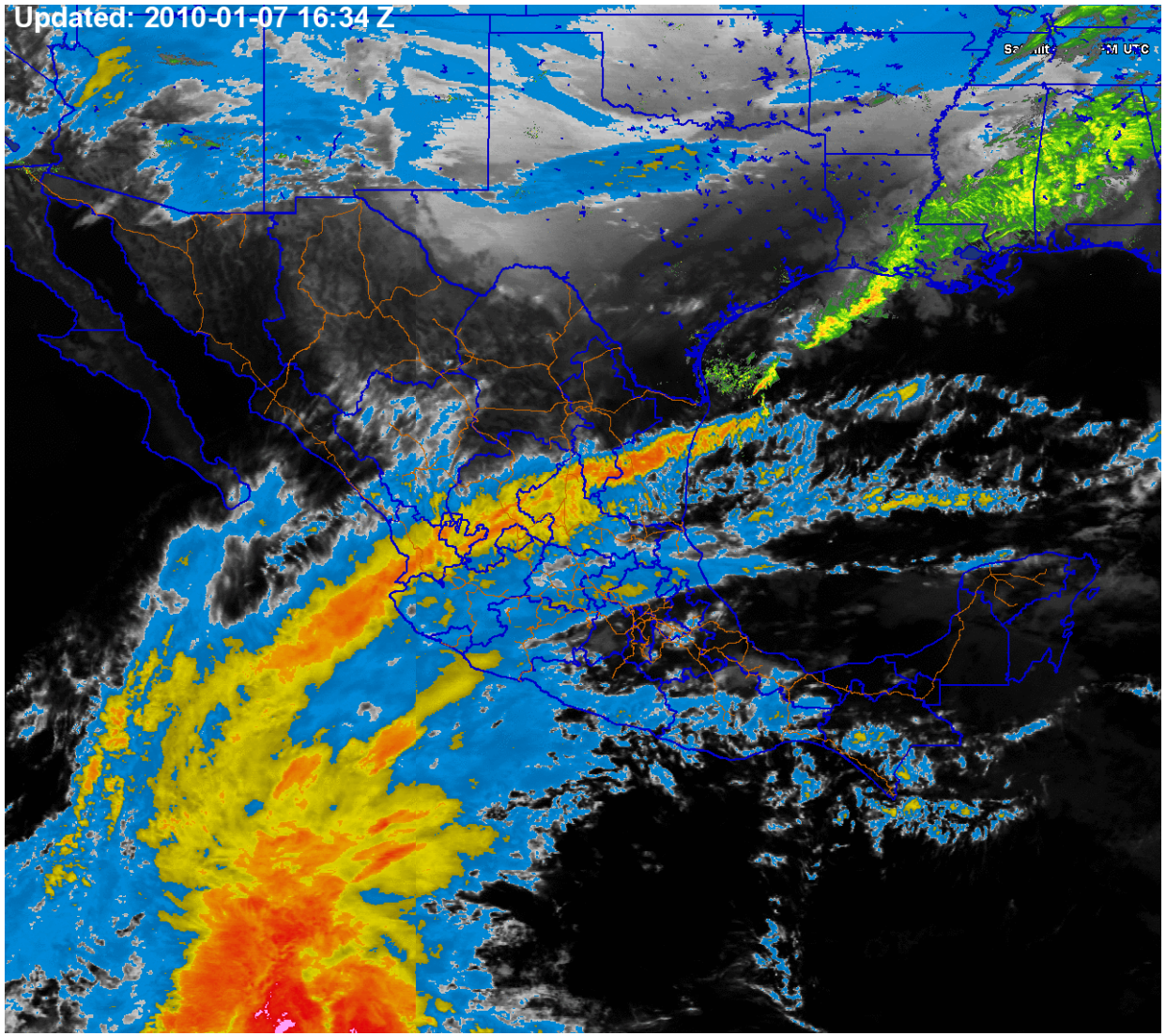
SMN Mexican Weather Service

May 18 . 2010

NAEFS apply to cases of study

- Artic Blast during January 2010
- Several Storm Event in Michoacan-Mexico-DF during february 2010
- Special Bulletin in Cutzamala (direct to autorithies of National Water Comission)

Air Mass Artic Blast in Northern Hemisphere during January 2010

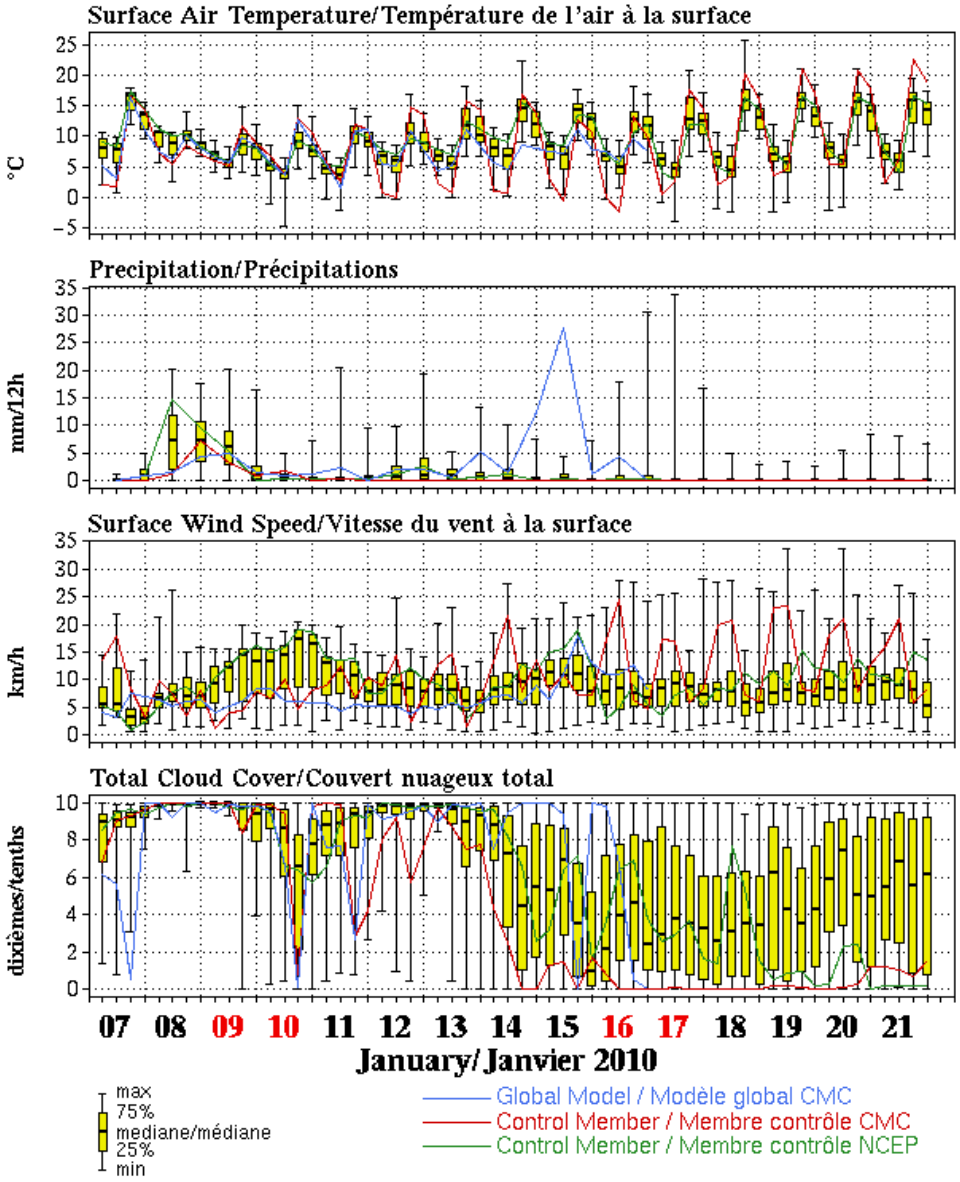


Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

Ensemble and Deterministic Forecasts issued 7 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 7 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

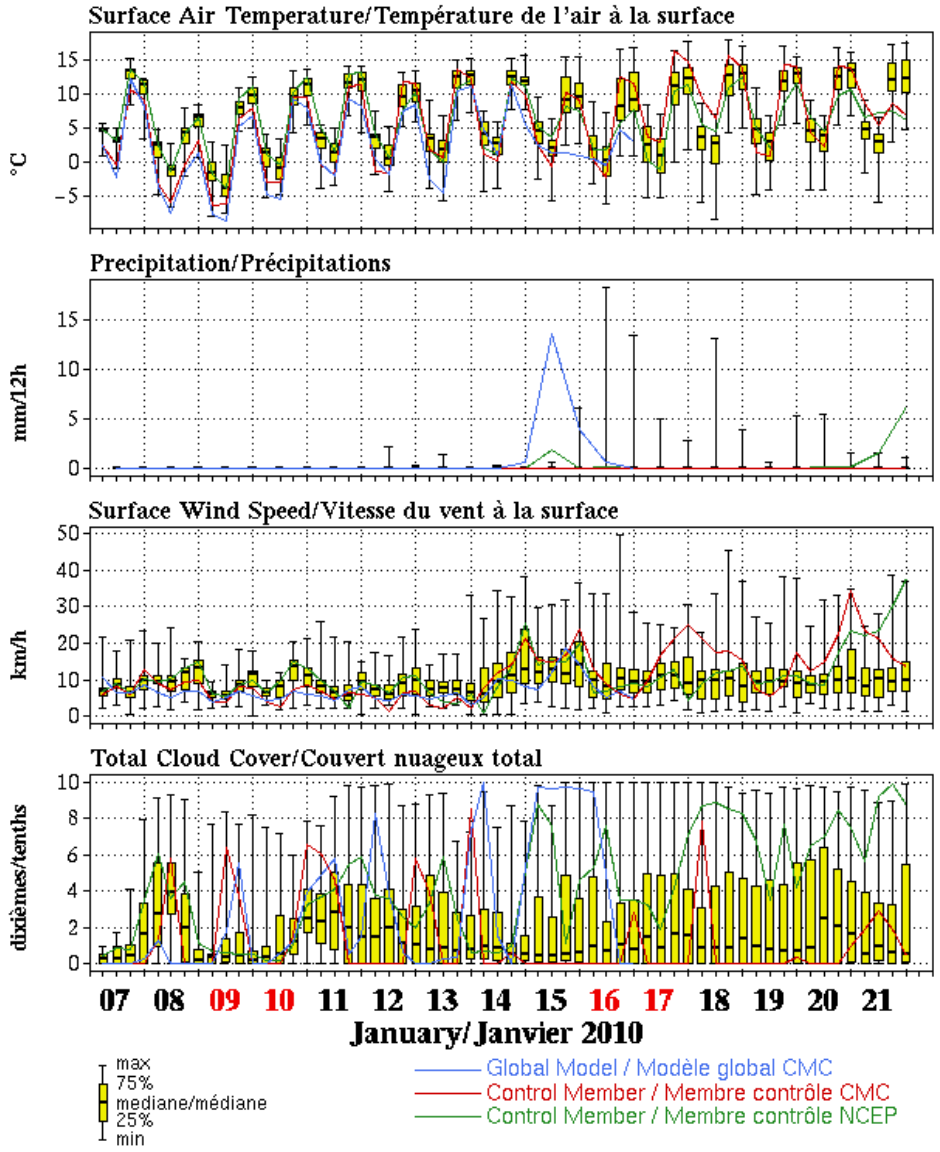


Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

Ensemble and Deterministic Forecasts issued 7 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 7 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

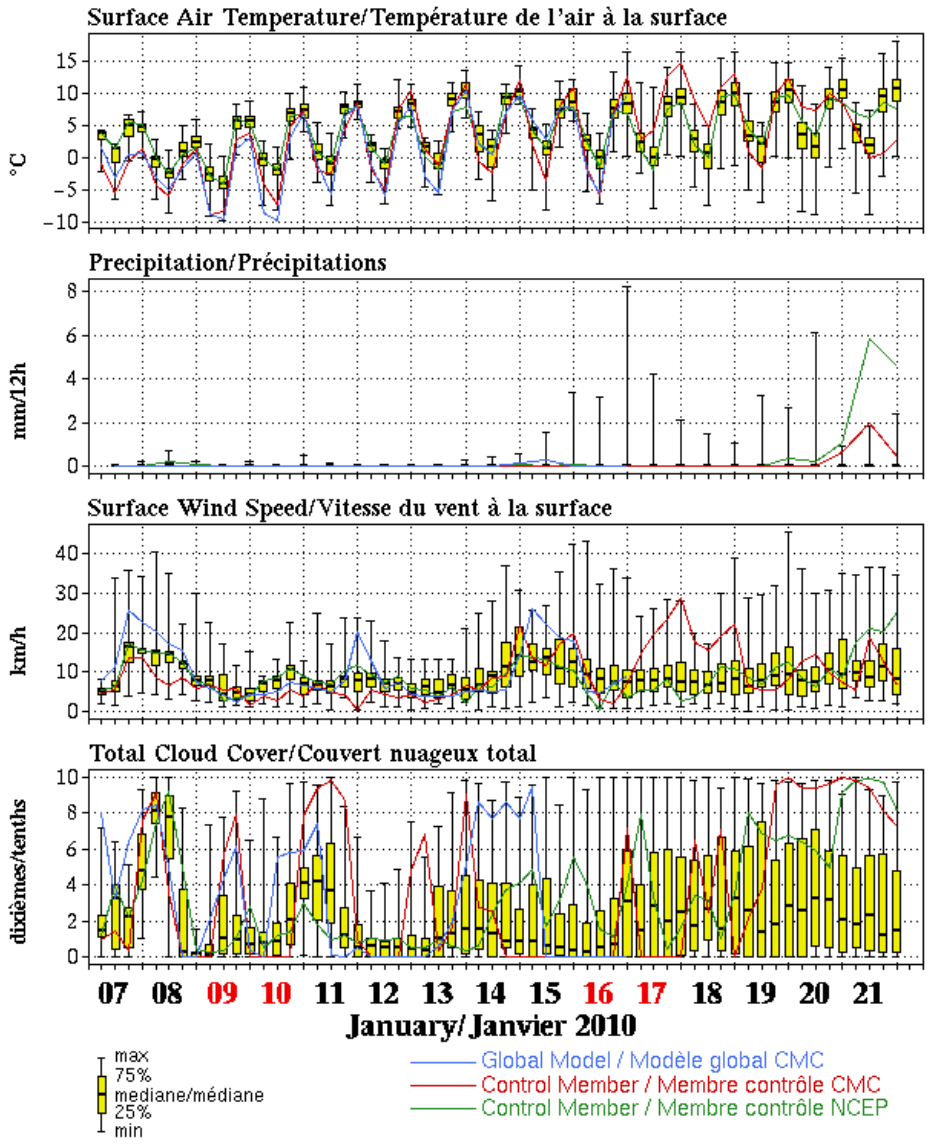
CHHUAHUA (CUU) 28.65 N 106.09 W/O



Centre météorologique canadien Canadian Meteorological Centre

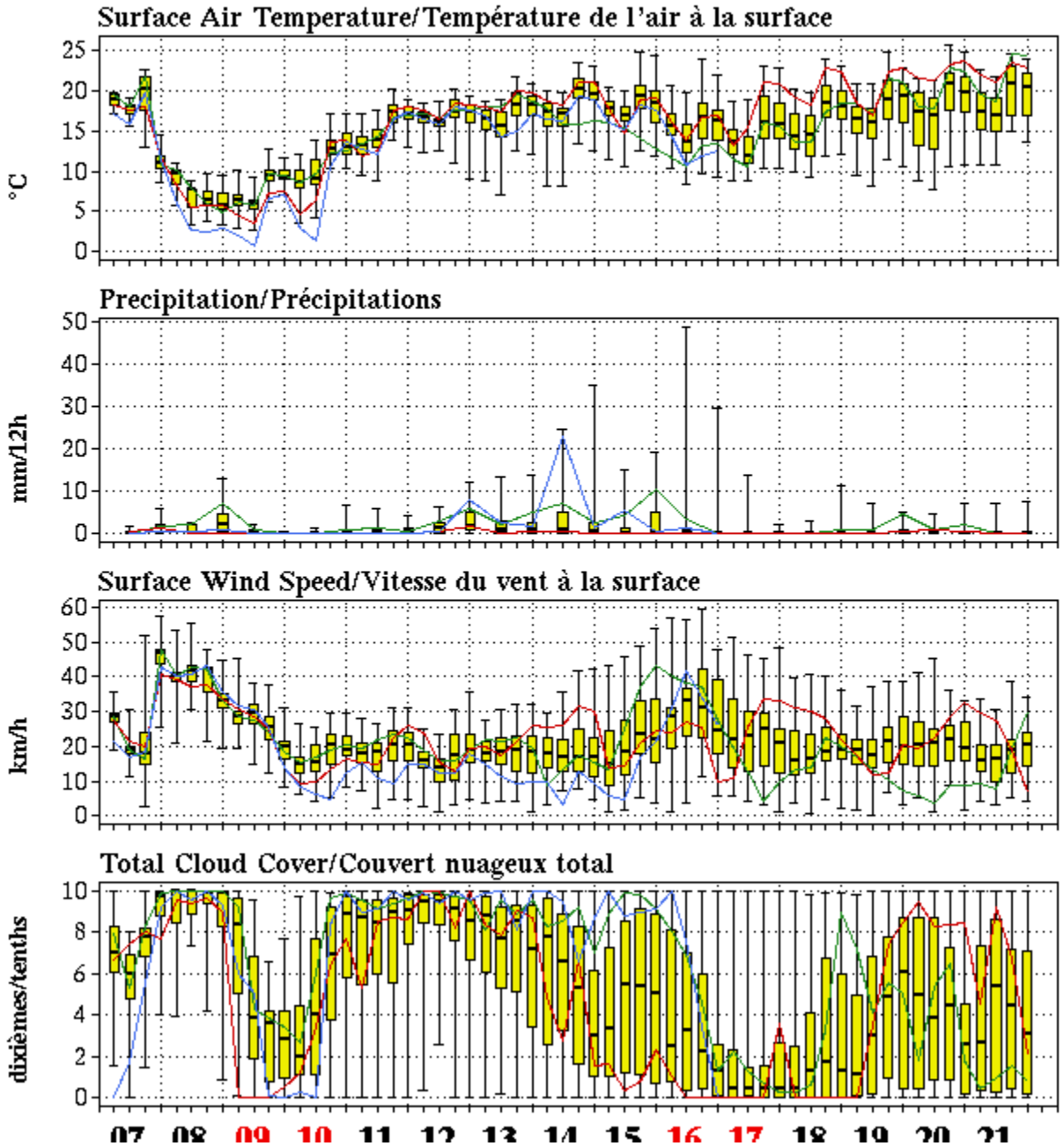
Ensemble and Deterministic Forecasts issued 7 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 7 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD JUAREZ (JURZ) 31.74 N 106.52 W/O



Ensemble and Deterministic Forecasts issued 7 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 7 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

MATAMOROS (MAM) 25.86 N 97.5 W/O



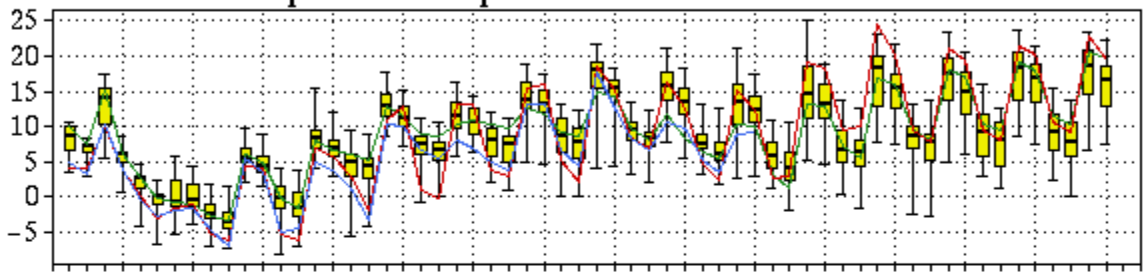
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

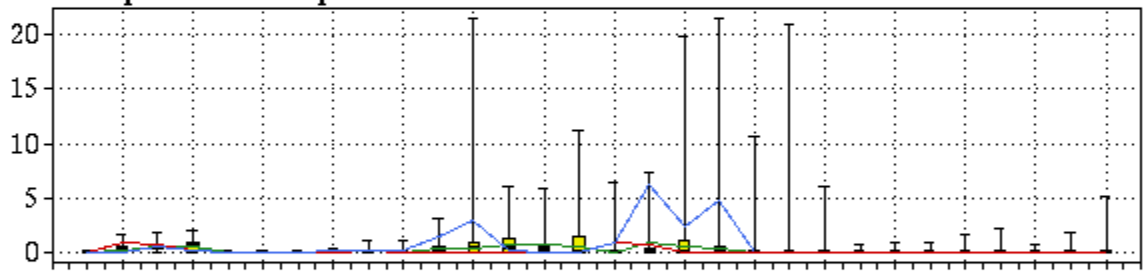
Ensemble and Deterministic Forecasts issued 7 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 7 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

MONTERREY (MTY) 25.7 N 100.32 W/O

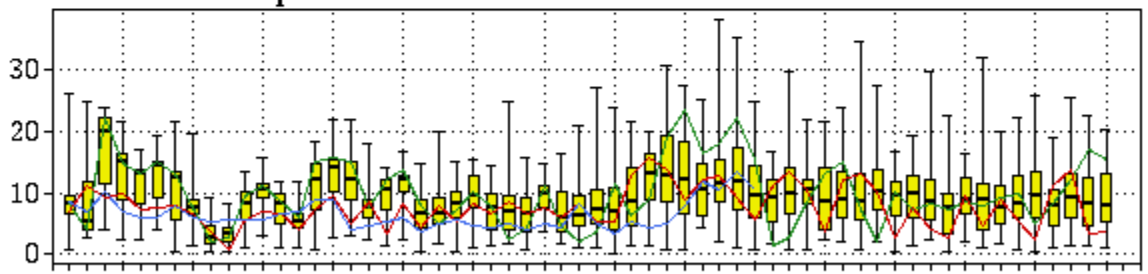
Surface Air Temperature/Température de l'air à la surface



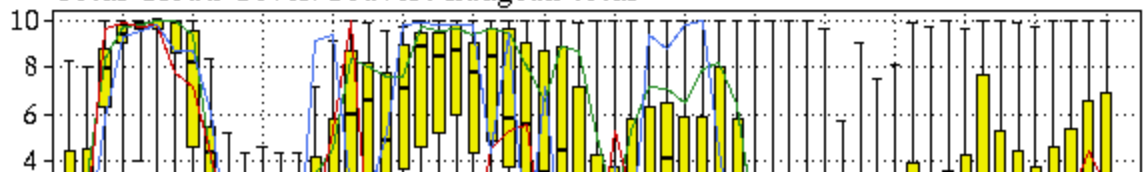
Precipitation/Précipitations



Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



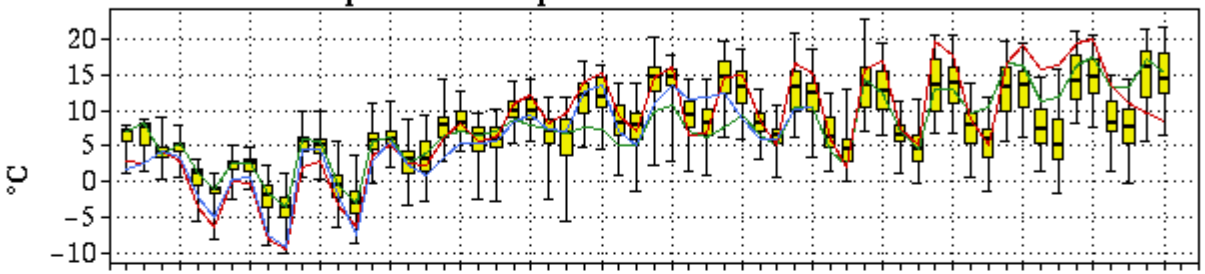
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

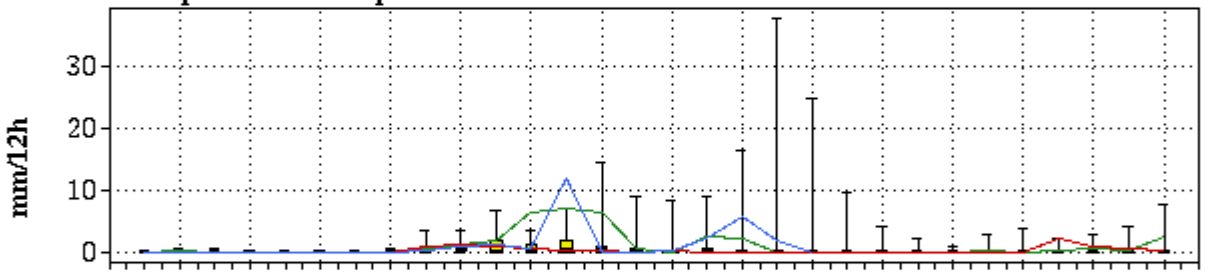
Ensemble and Deterministic Forecasts issued 7 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 7 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

PIEDRAS NEGRAS (PDS) 28.71 N 100.57 W/O

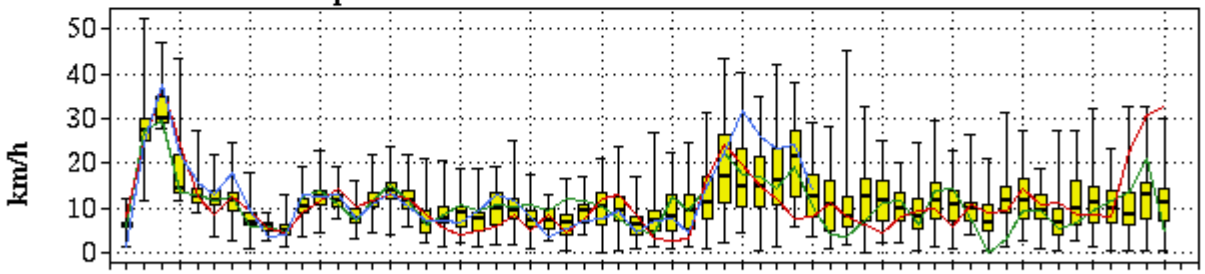
Surface Air Temperature/Température de l'air à la surface



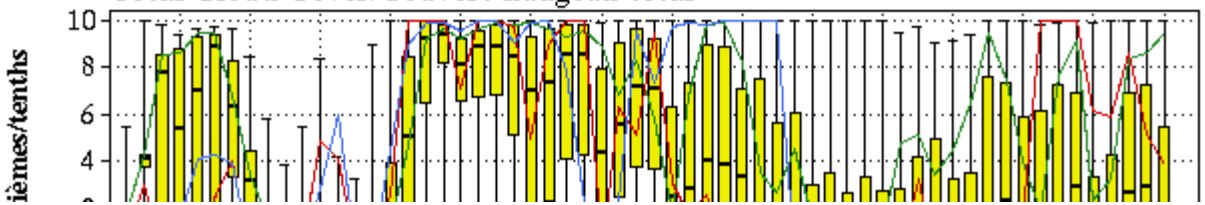
Precipitation/Précipitations



Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



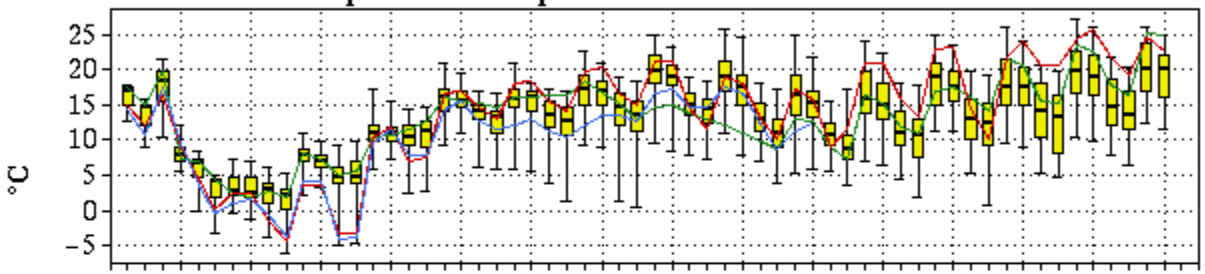
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

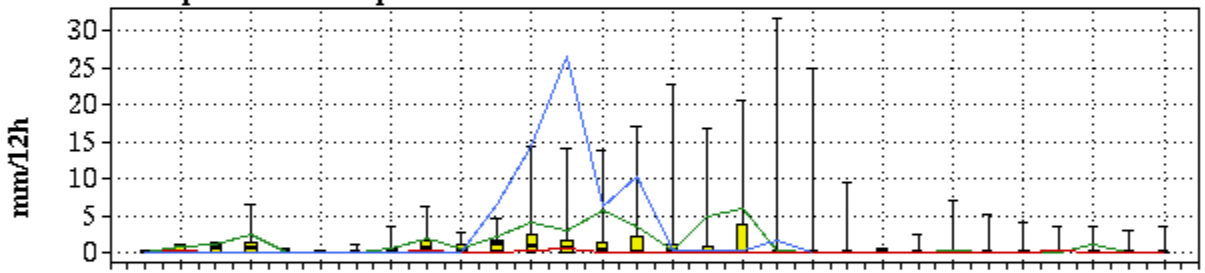
Ensemble and Deterministic Forecasts issued 7 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 7 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

REYNOSA (REX) 26.07 N 98.28 W/O

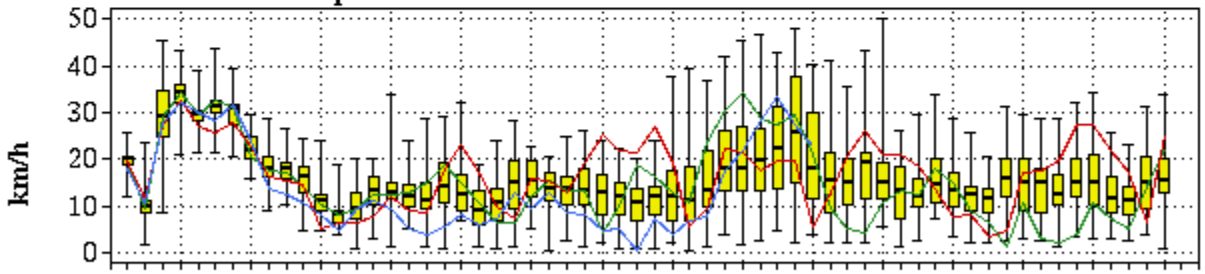
Surface Air Temperature/Température de l'air à la surface



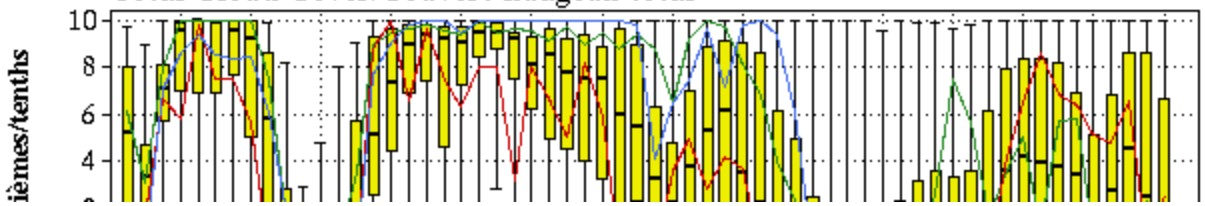
Precipitation/Précipitations

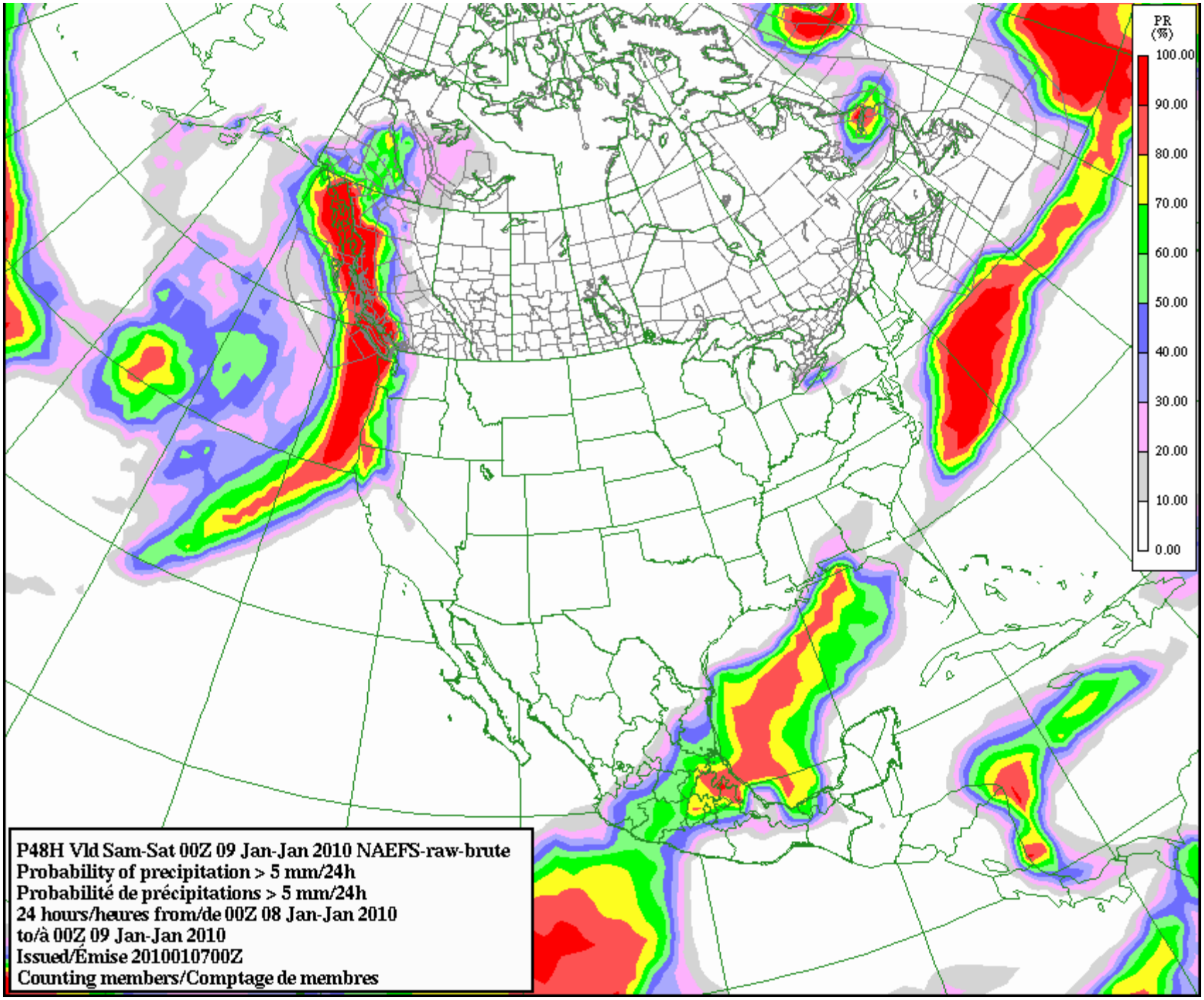


Surface Wind Speed/Vitesse du vent à la surface



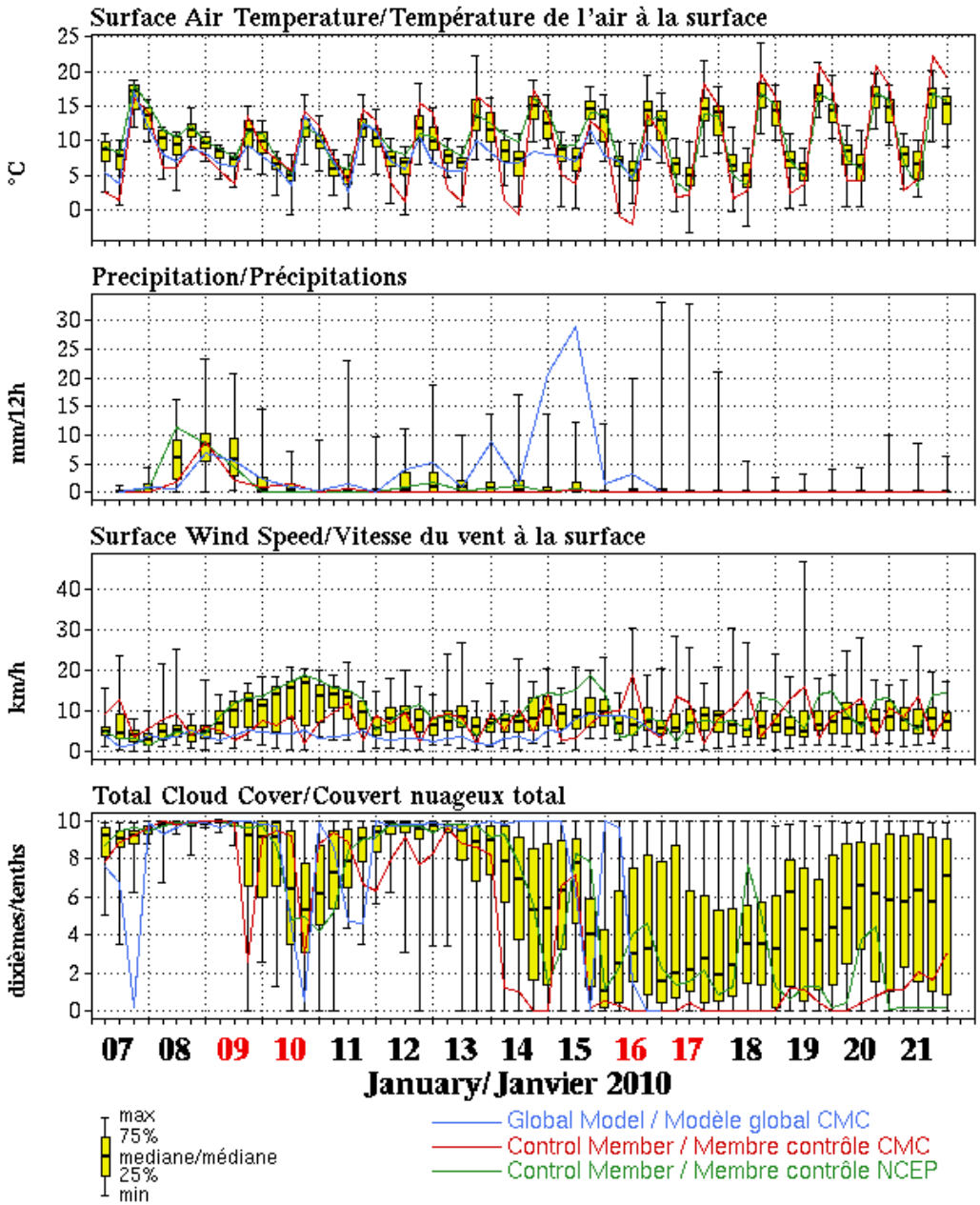
Total Cloud Cover/Couvert nuageux total

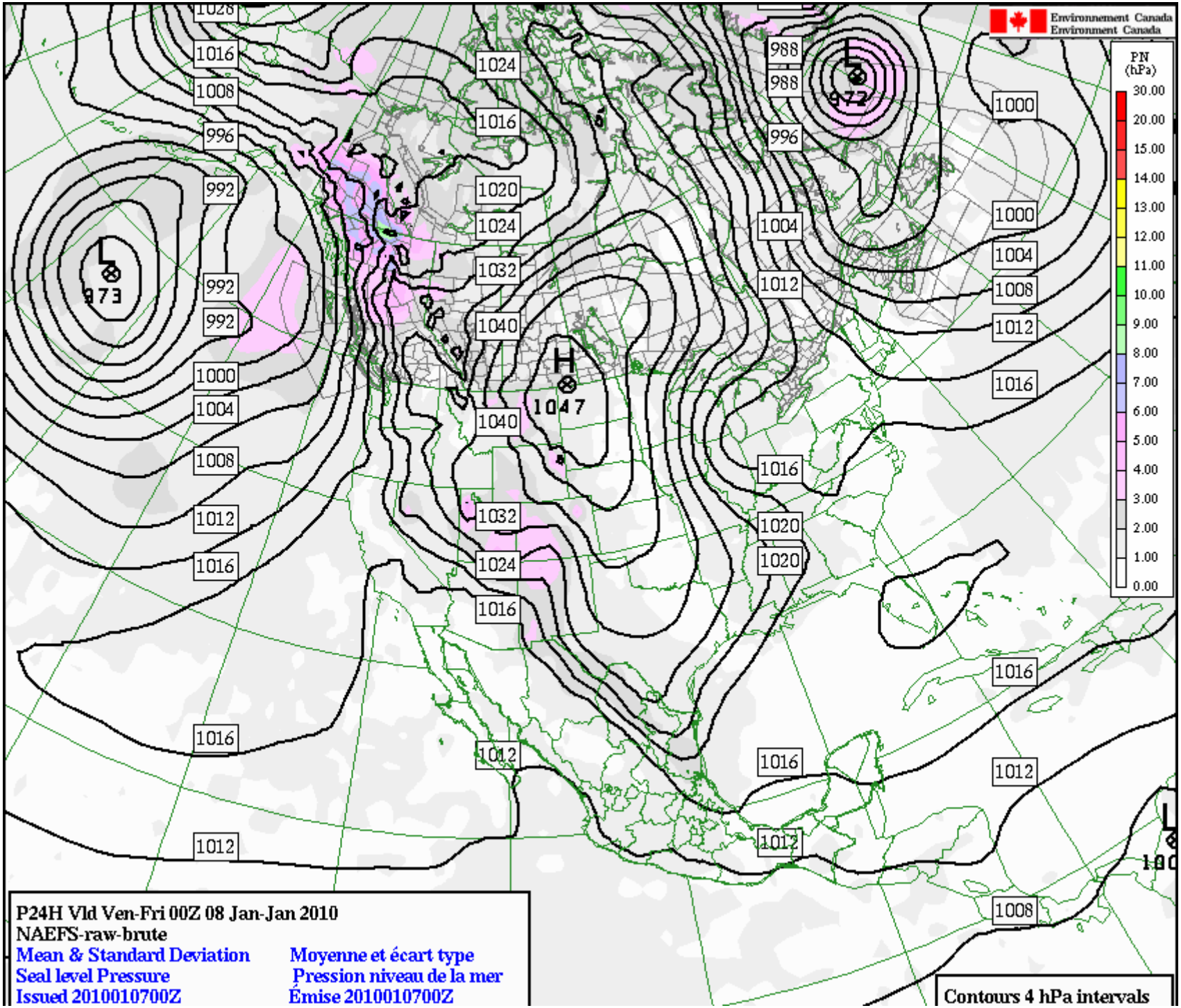


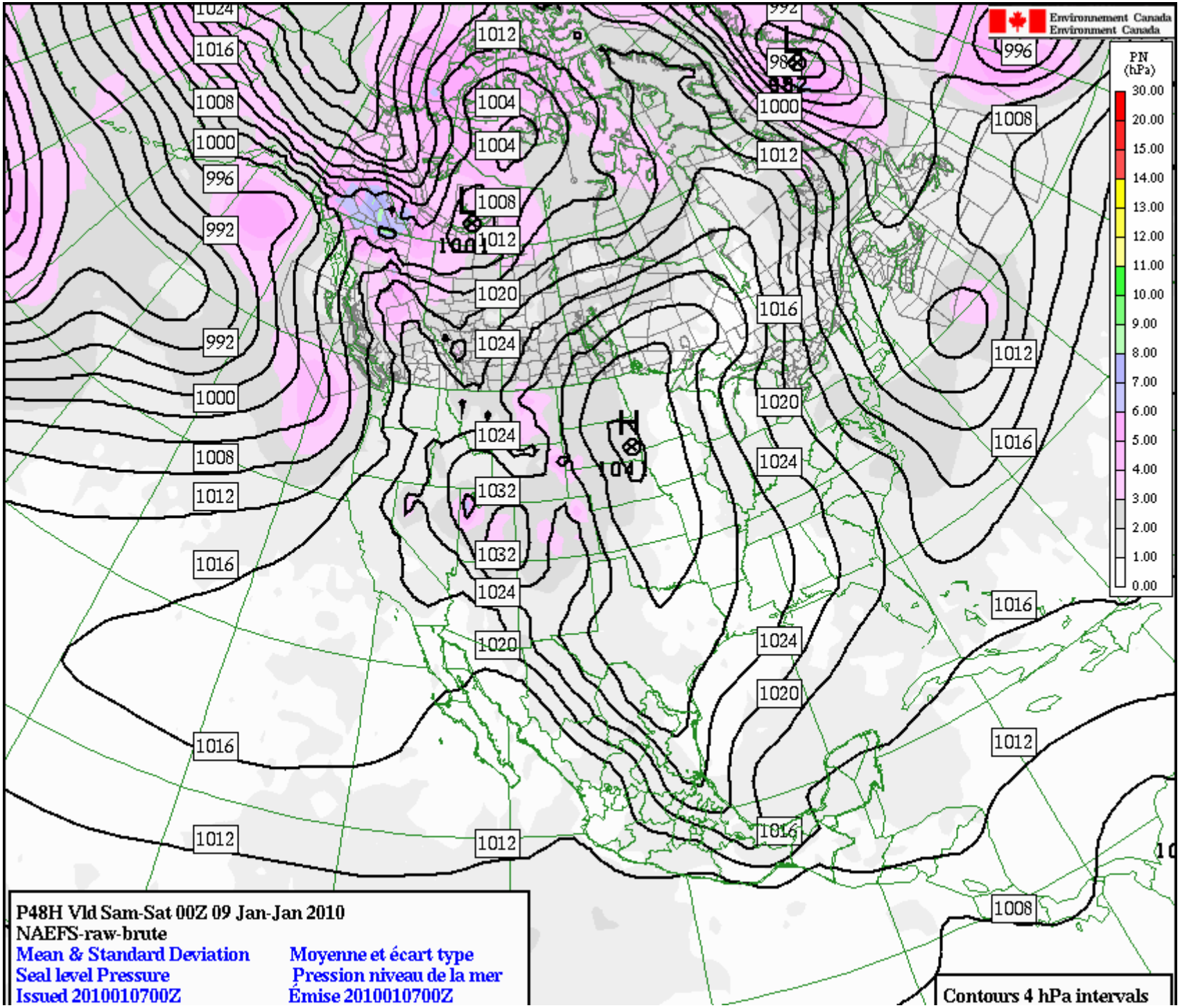

PR
(%)
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
P48H Vld Sam-Sat 00Z 09 Jan-Jan 2010 NAEFS-raw-brute
Probability of precipitation > 5 mm/24h
Probabilité de précipitations > 5 mm/24h
24 hours/heures from/de 00Z 08 Jan-Jan 2010
to/à 00Z 09 Jan-Jan 2010
Issued/Émise 2010010700Z
Counting members/Comptage de membres

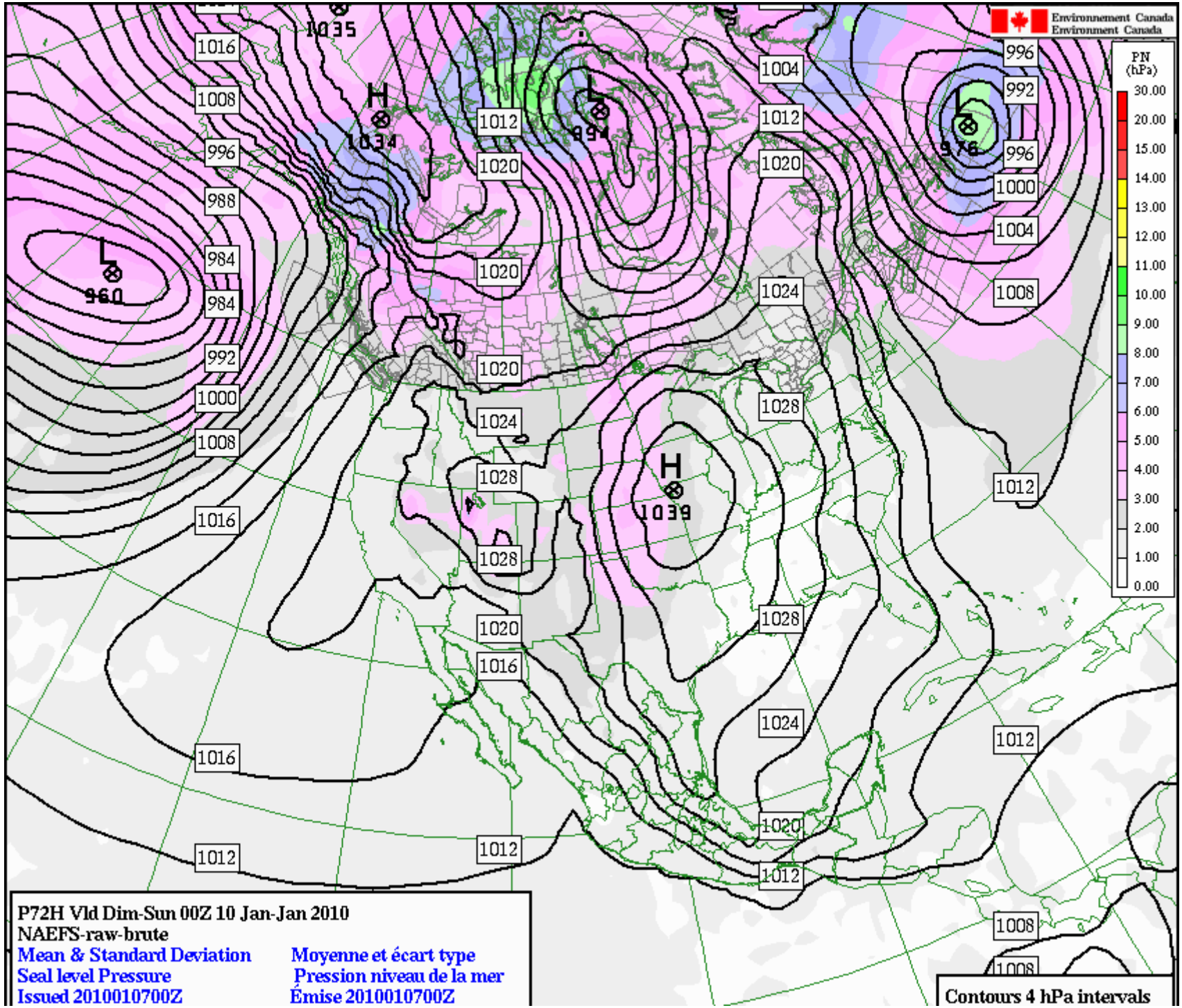
Ensemble and Deterministic Forecasts issued 7 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 7 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

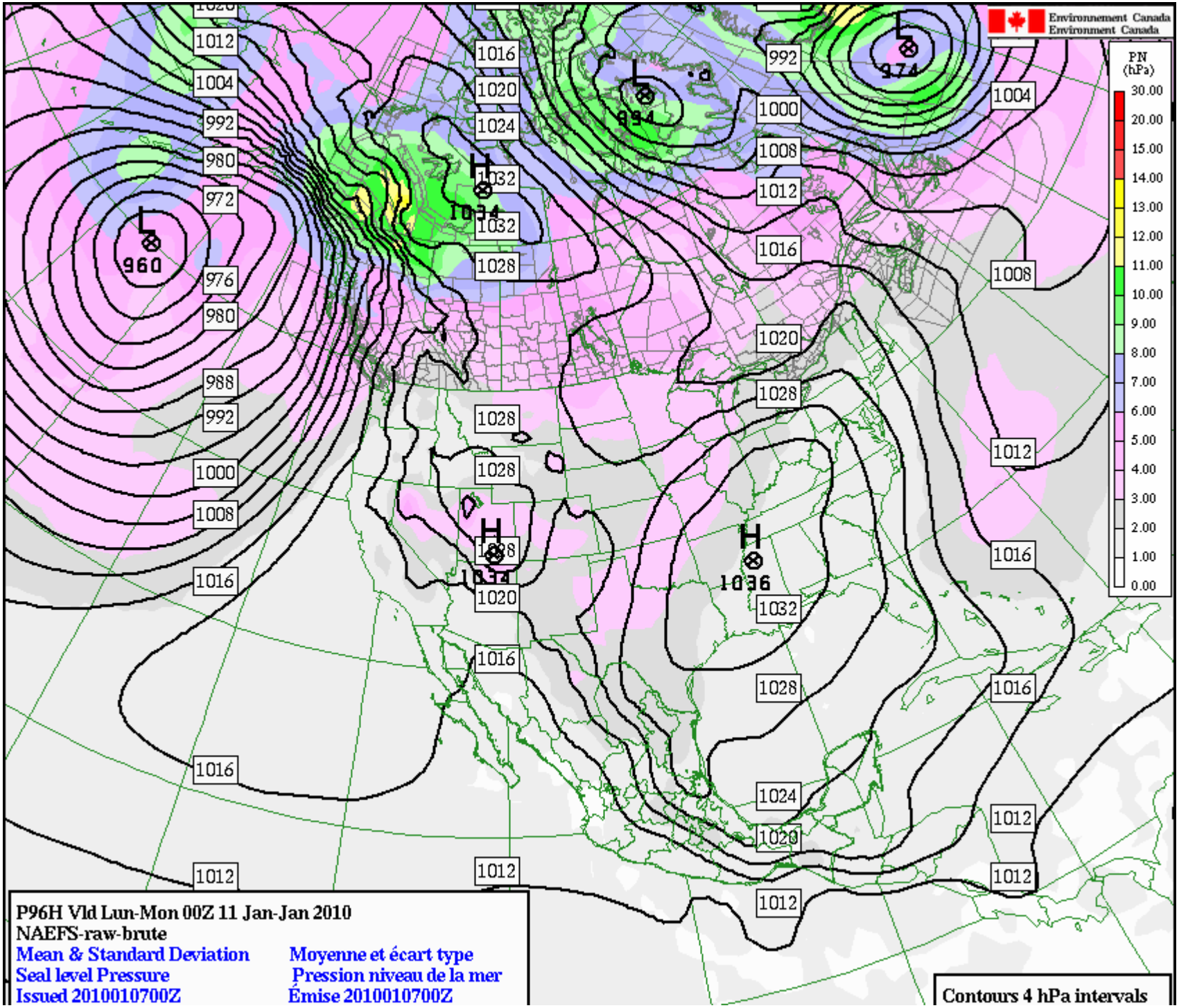
TOLUCA (TLC) 19.29 N 99.65 W/O

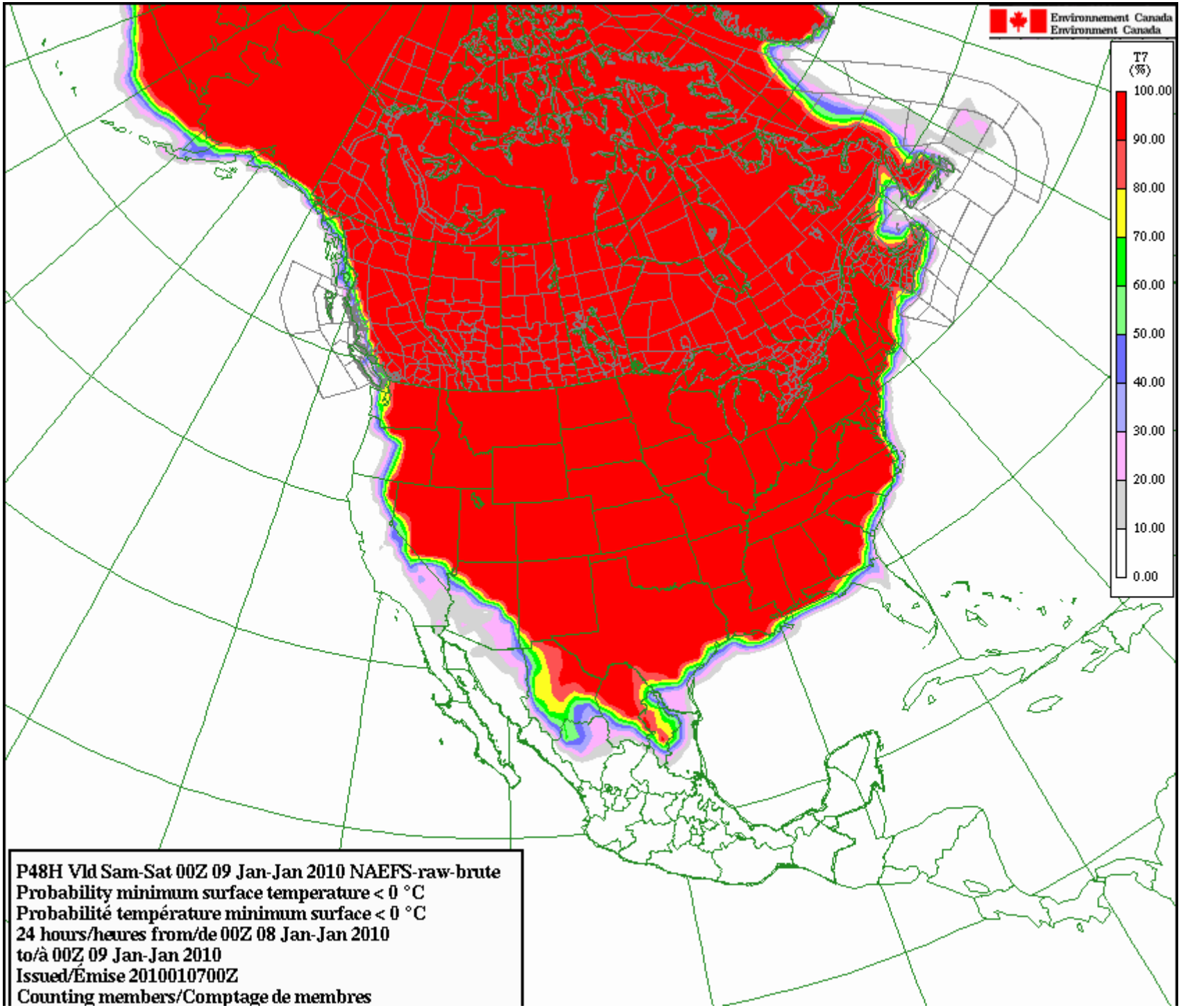


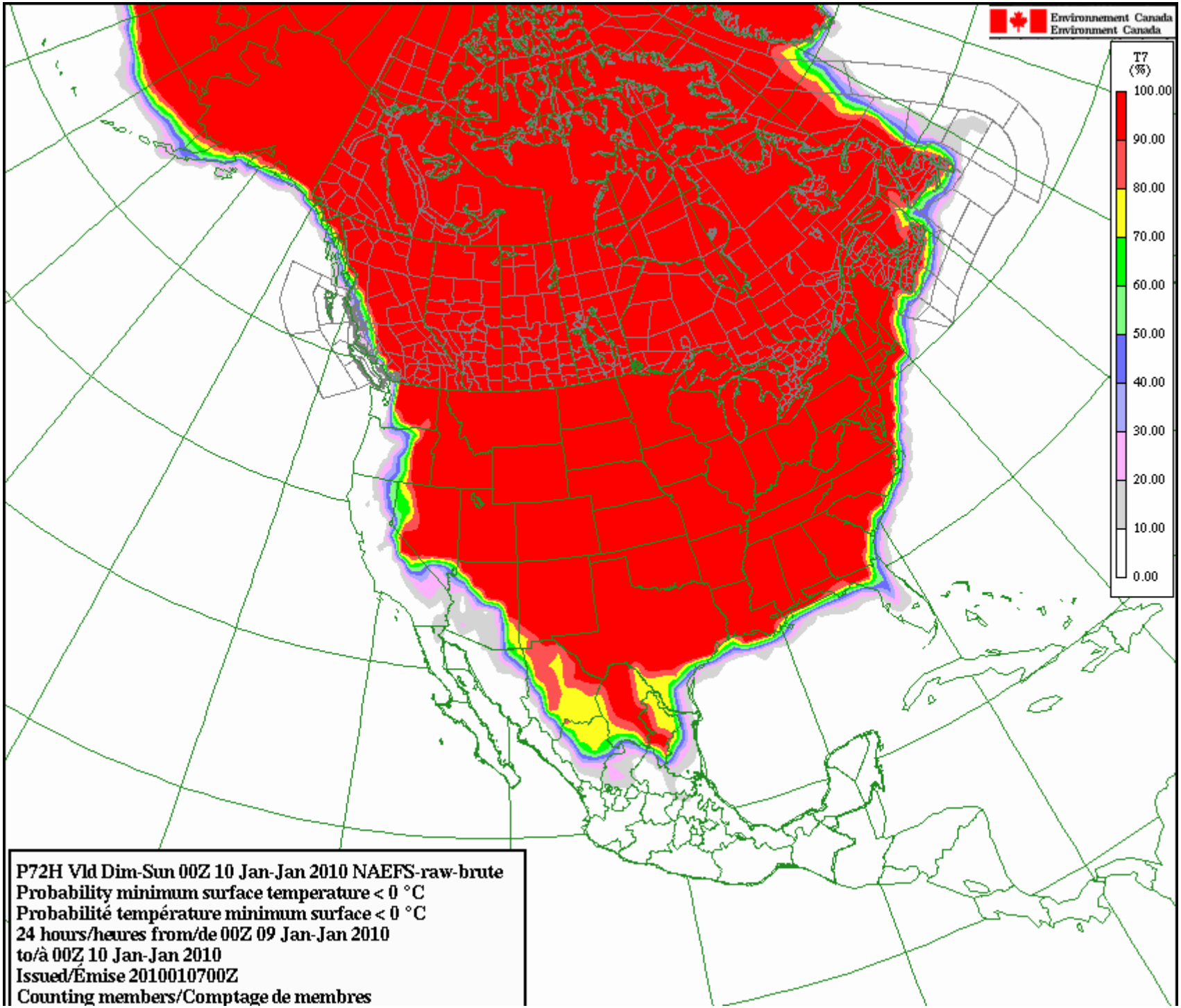

Environnement Canada
Environment Canada
PN (hPa)
30.00
20.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1028
1016
1008
996
992
992
1000
1004
1008
1012
1016
1016
1012
1012
1024
1016
1020
1024
1032
1040
1040
1032
1024
1016
1012
988
988
996
1004
1012
1016
1020
1020
1016
1012
1000
1000
1004
1008
1012
1016
1016
1012
1008
973
1047
972
P24H Vld Ven-Fri 00Z 08 Jan-Jan 2010
NAEFS-raw-brute
Mean & Standard Deviation
Seal level Pressure
Issued 2010010700Z
Moyenne et écart type
Pression niveau de la mer
Émise 2010010700Z
Contours 4 hPa intervals

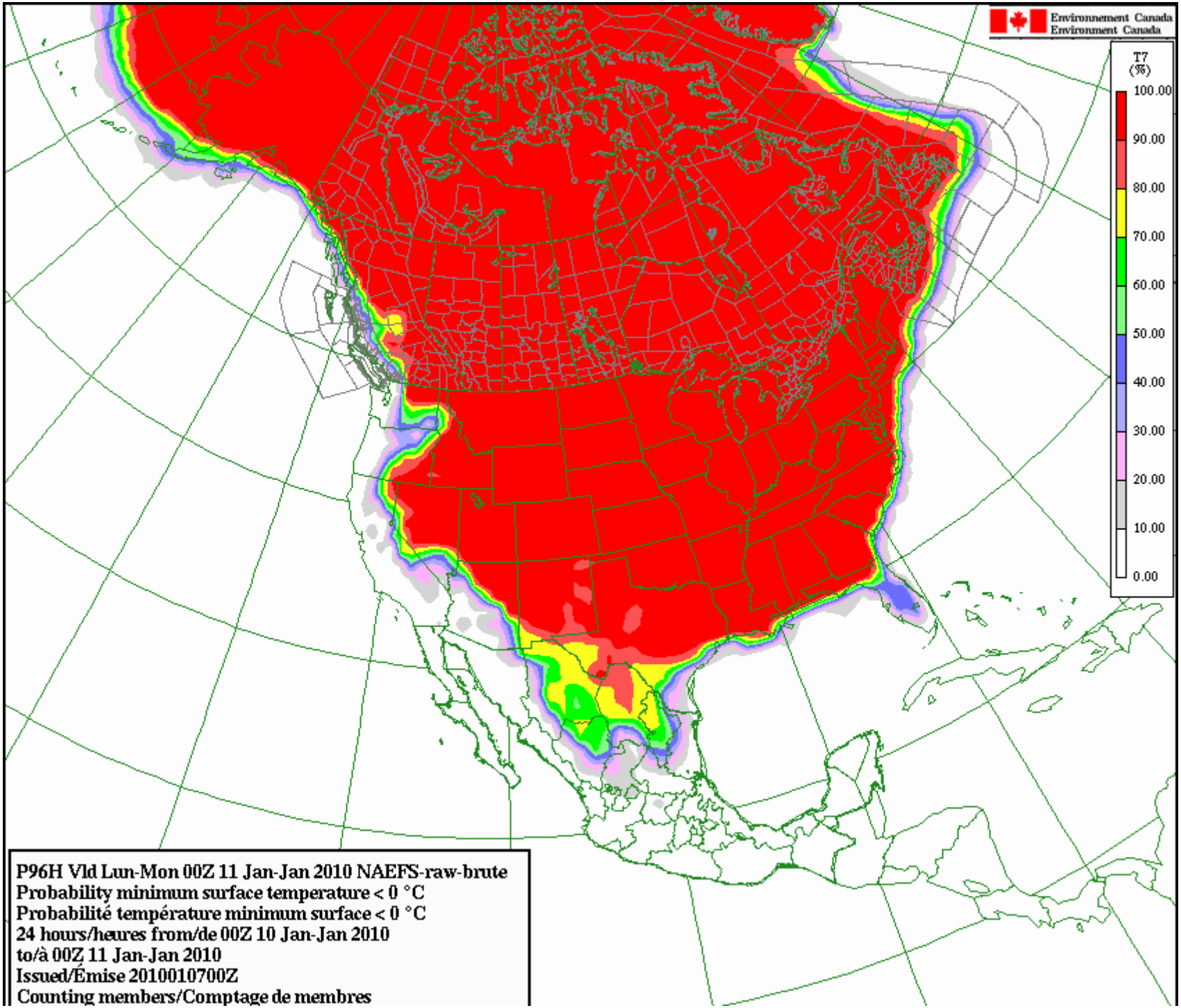

Environnement Canada
Environment Canada
PN (hPa)
30.00
20.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
P48H Vld Sam-Sat 00Z 09 Jan-Jan 2010
NAEFS-raw-brute
Mean & Standard Deviation
Seal level Pressure
Issued 20100107 00Z
Moyenne et écart type
Pression niveau de la mer
Émise 20100107 00Z
Contours 4 hPa intervals


Environnement Canada
Environnement Canada
PN (hPa)
30.00
20.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1035
1034
994
976
960
1039
P72H Vld Dim-Sun 00Z 10 Jan-Jan 2010
NAEFS-raw-brute
Mean & Standard Deviation
Seal level Pressure
Issued 2010010700Z
Moyenne et écart type
Pression niveau de la mer
Émise 2010010700Z
Contours 4 hPa intervals

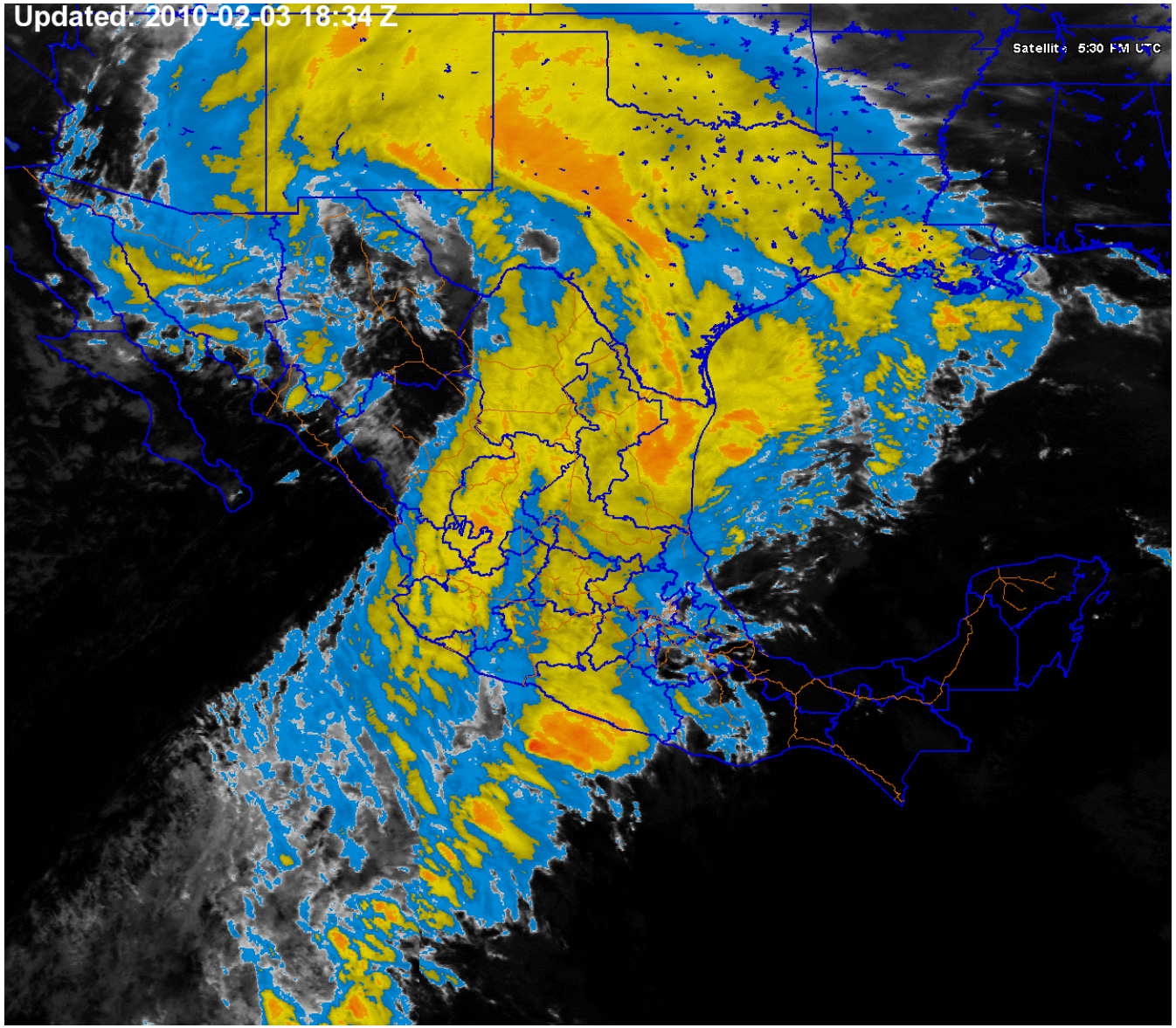

Environnement Canada
Environment Canada
PN
(hPa)
30.00
20.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
P96H Vld Lun-Mon 00Z 11 Jan-Jan 2010
NAEFS-raw-brute
Mean & Standard Deviation
Seal level Pressure
Issued 2010010700Z
Moyenne et écart type
Pression niveau de la mer
Émise 2010010700Z
Contours 4 hPa intervals

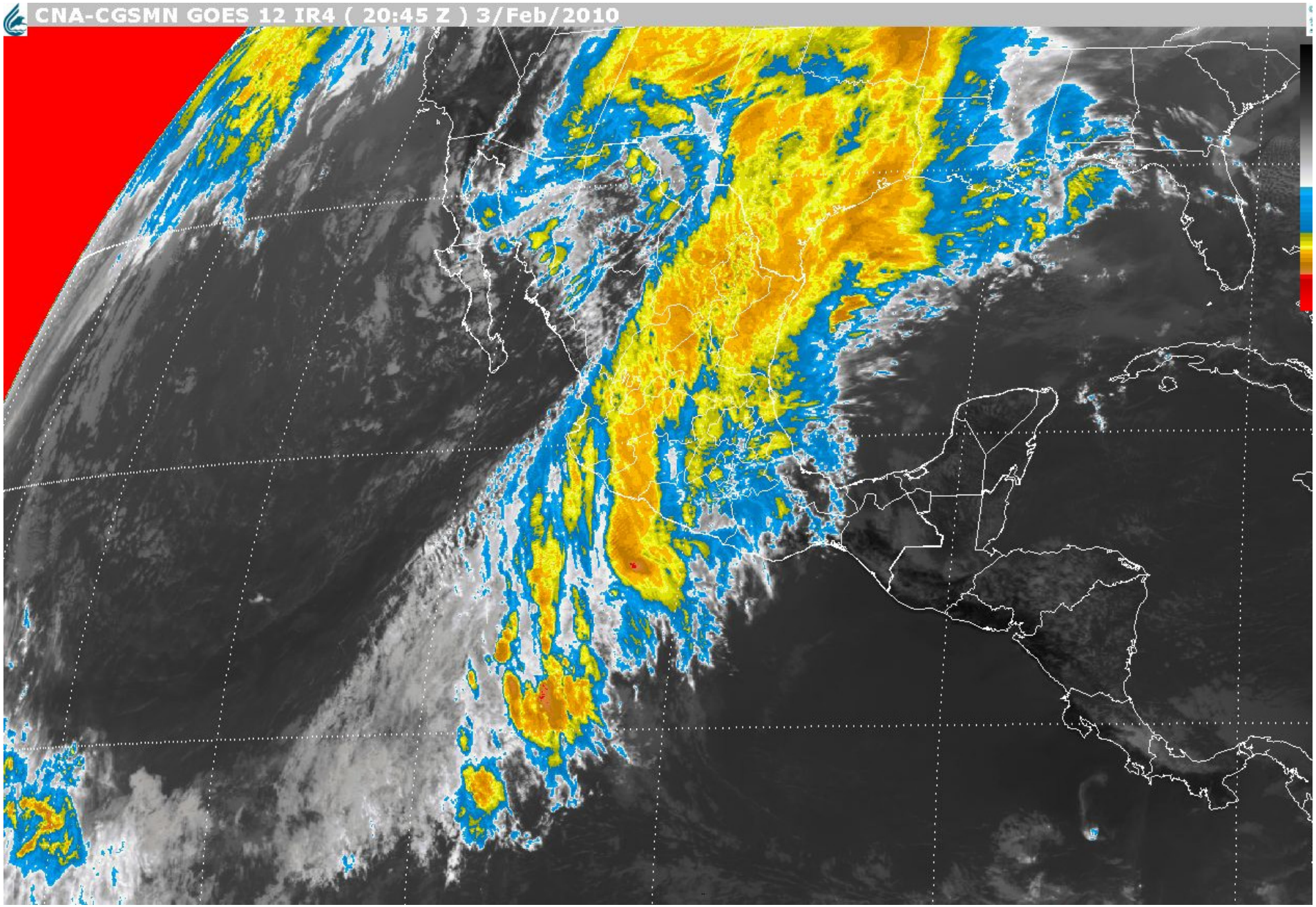

Environnement Canada
Environment Canada
T7
(%)
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
P48H Vld Sam-Sat 00Z 09 Jan-Jan 2010 NAEFS-raw-brute
Probability minimum surface temperature < 0 °C
Probabilité température minimum surface < 0 °C
24 hours/heures from/de 00Z 08 Jan-Jan 2010
to/à 00Z 09 Jan-Jan 2010
Issued/Émise 2010010700Z
Counting members/Comptage de membres

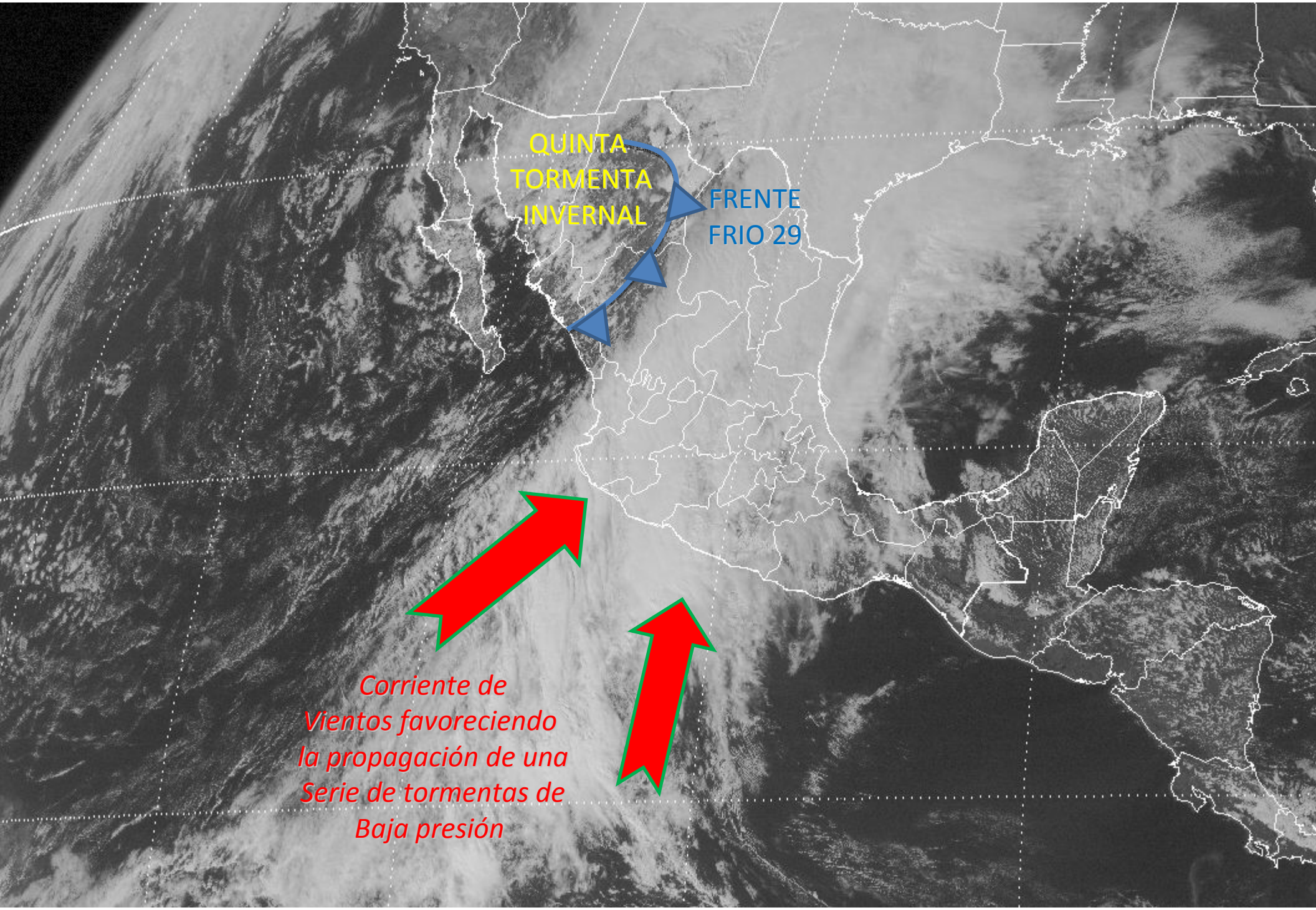

Environnement Canada
Environment Canada
T7
(%)
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
P72H Vld Dim-Sun 00Z 10 Jan-Jan 2010 NAEFS-raw-brute
Probability minimum surface temperature < 0 °C
Probabilité température minimum surface < 0 °C
24 hours/heures from/de 00Z 09 Jan-Jan 2010
to/à 00Z 10 Jan-Jan 2010
Issued/Émise 2010010700Z
Counting members/Comptage de membres

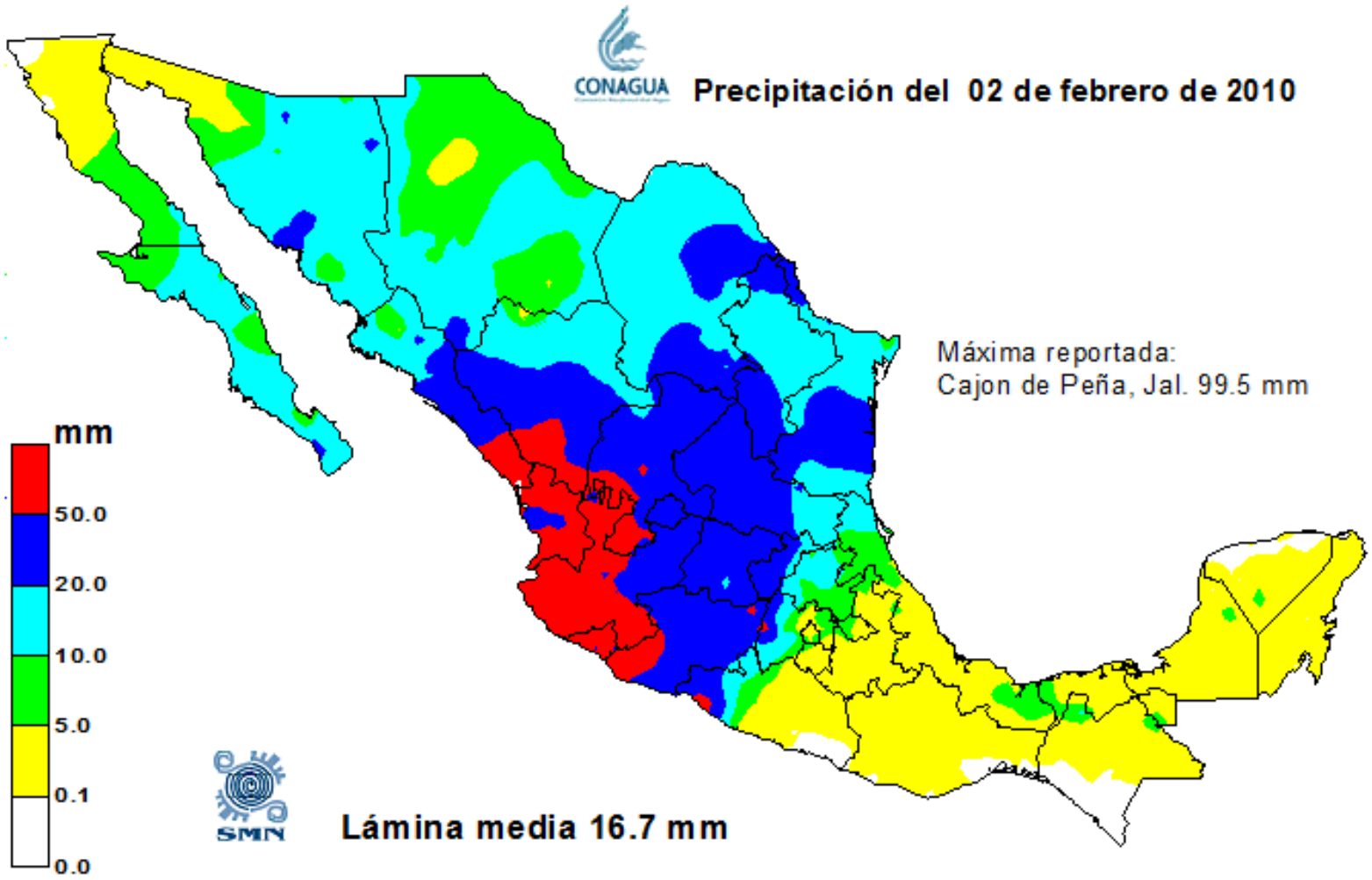

Environnement Canada
Environment Canada
T7
(%)
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
P96H Vld Lun-Mon 00Z 11 Jan-Jan 2010 NAEFS-raw-brute
Probability minimum surface temperature < 0 °C
Probabilité température minimum surface < 0 °C
24 hours/heures from/de 00Z 10 Jan-Jan 2010
to/à 00Z 11 Jan-Jan 2010
Issued/Émise 2010010700Z
Counting members/Comptage de membres

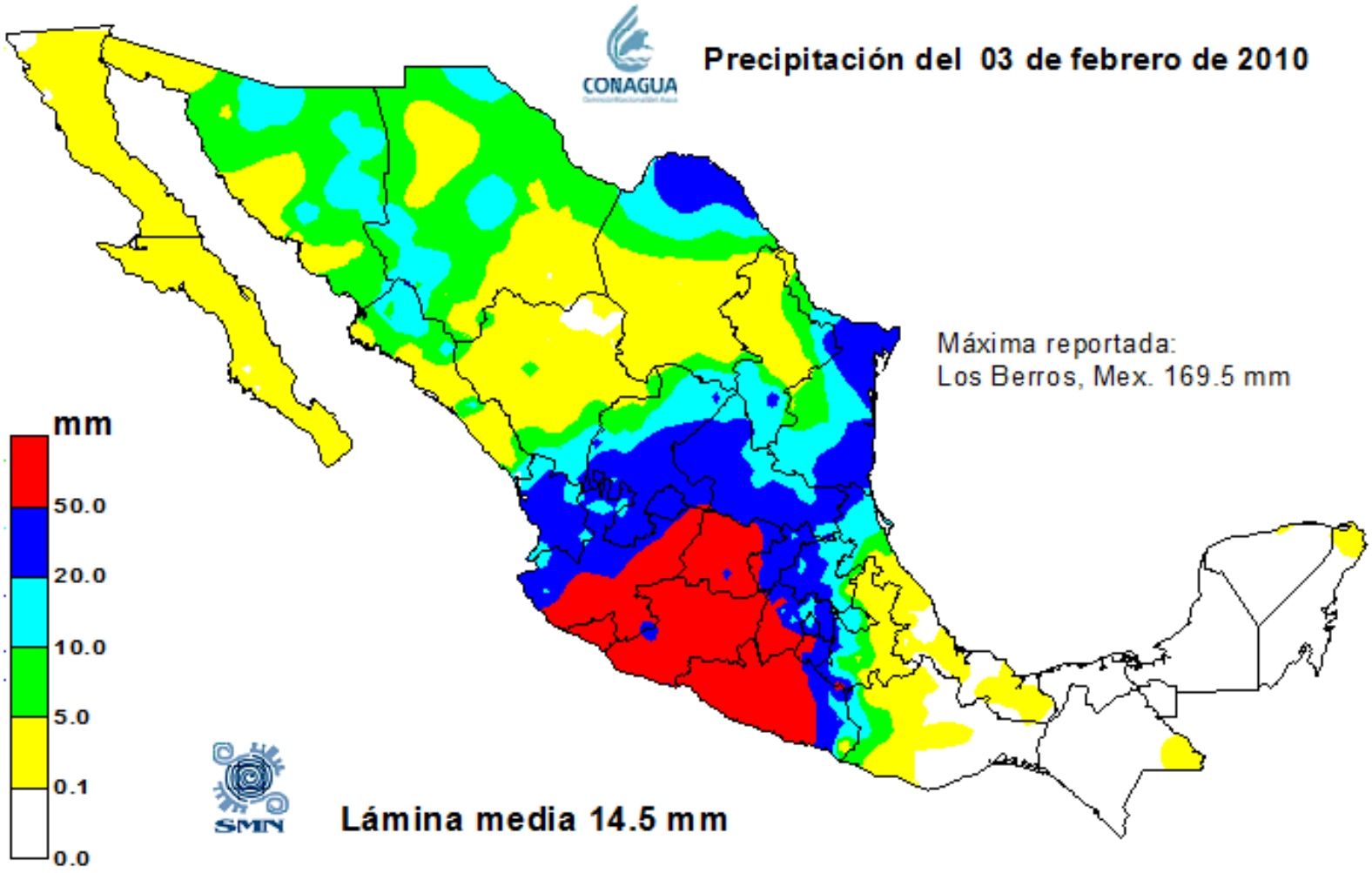
Several Storm Event in Michoacan-Mexico-DF during february 2010

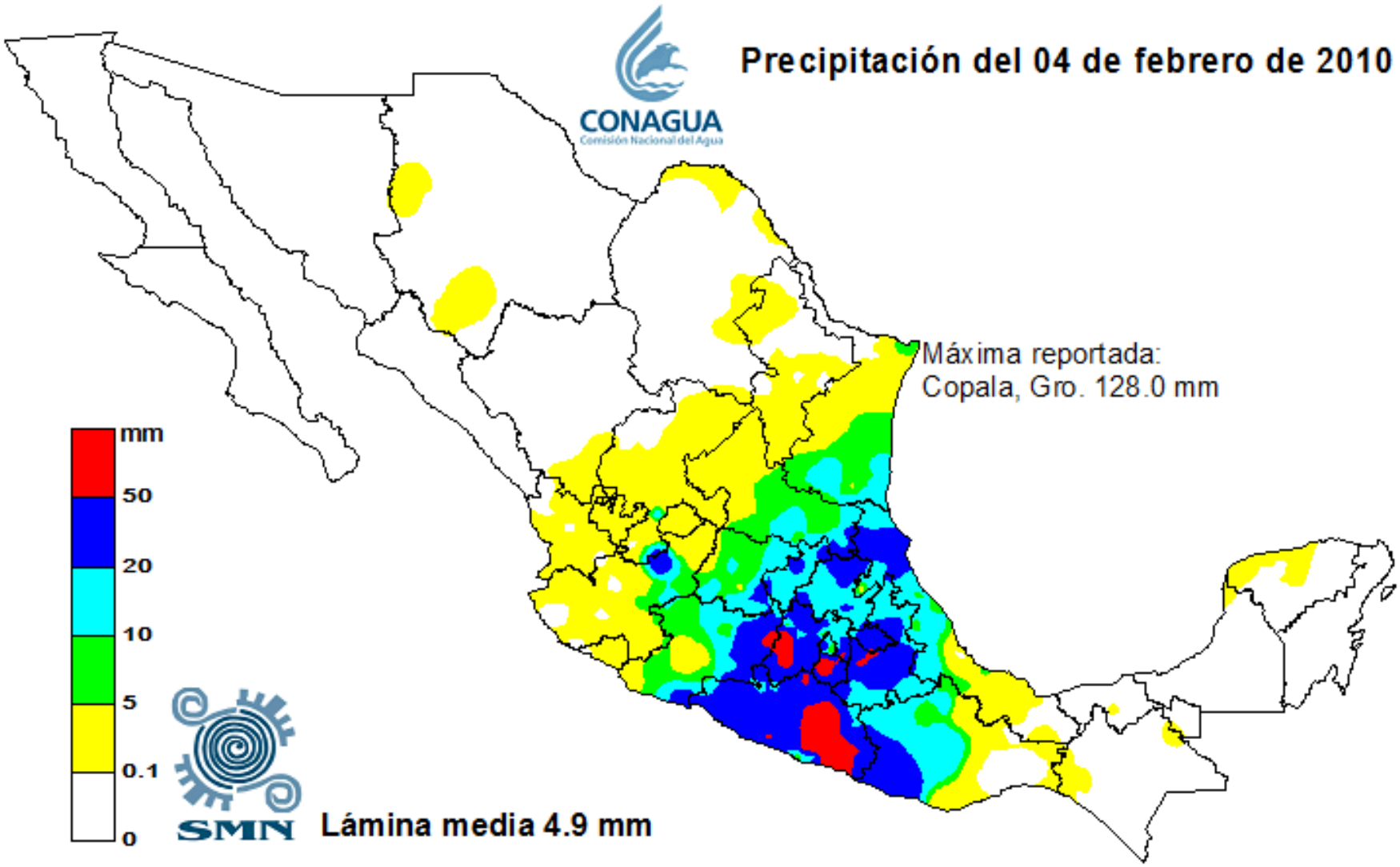


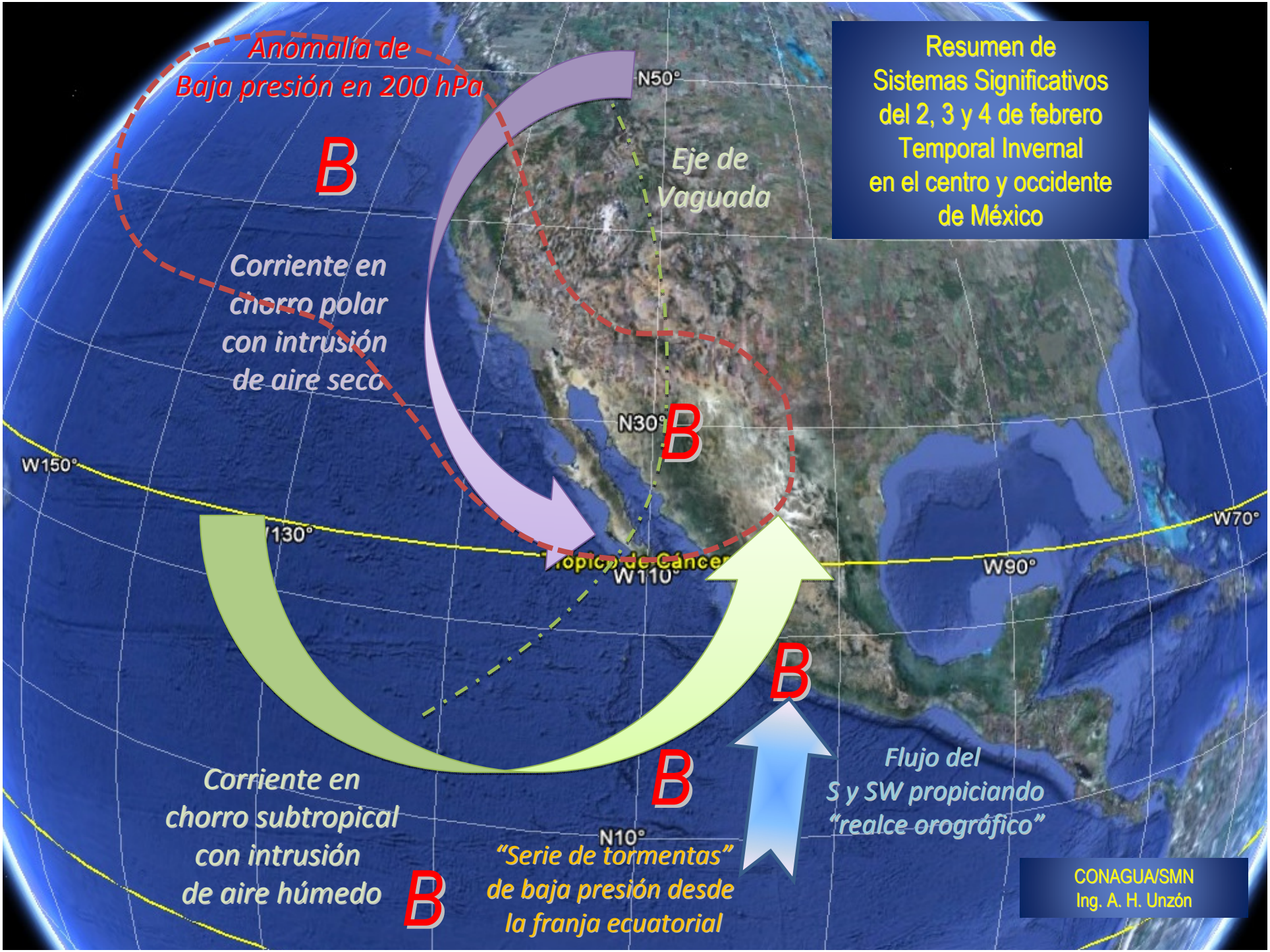

CNA-CGSMN GOES 12 IR4 (20:45 Z) 3/Feb/2010


QUINTA
TORMENTA
INVERNAL
FRENTE
FRIO 29
Corriente de
Vientos favoreciendo
la propagación de una
Serie de tormentas de
Baja presión

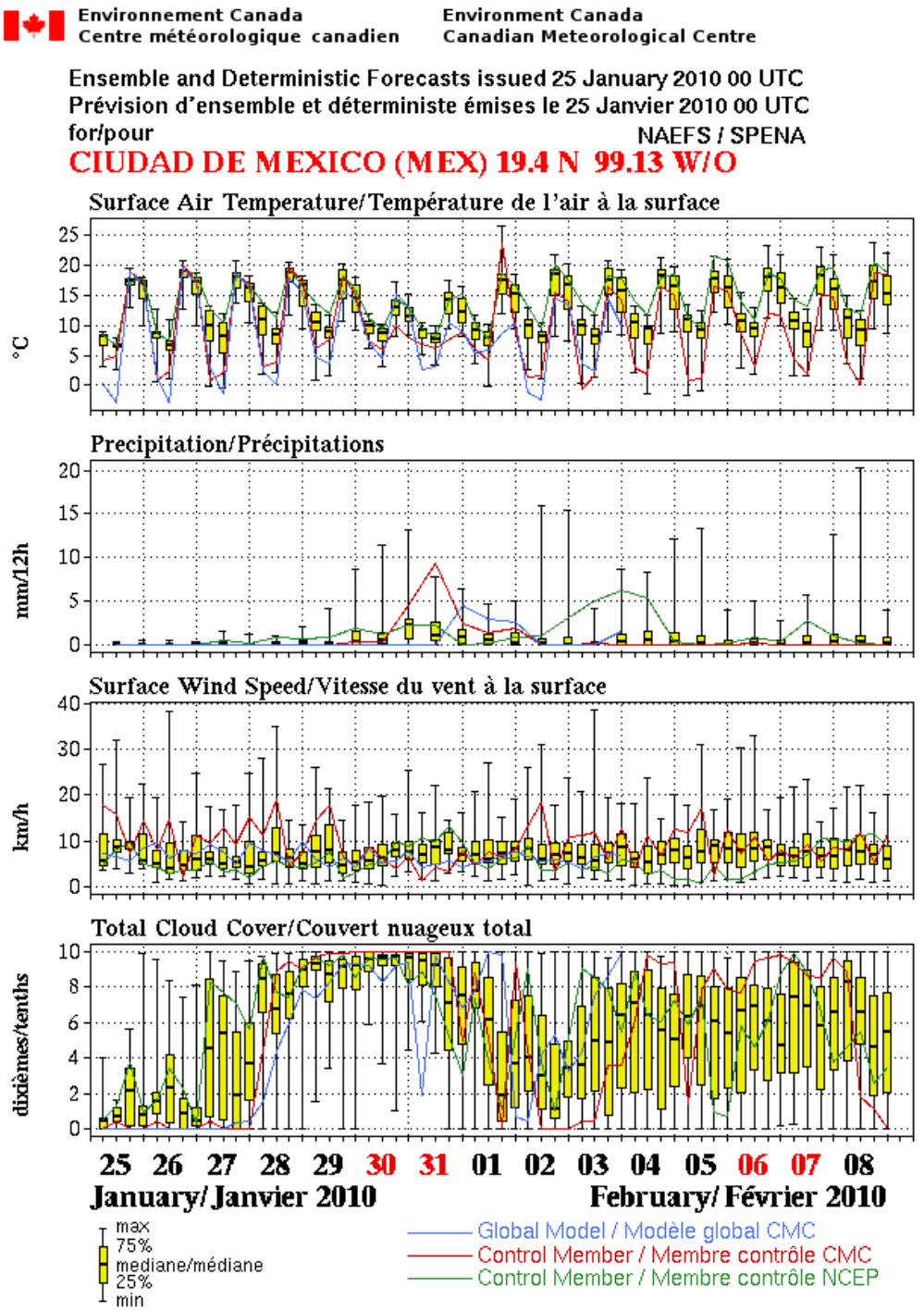

CONAGUA
Precipitación del 02 de febrero de 2010
Máxima reportada:
Cajon de Peña, Jal. 99.5 mm
mm
50.0
20.0
10.0
5.0
0.1
0.0
SMN
Lámina media 16.7 mm


CONAGUA
Precipitación del 03 de febrero de 2010
Máxima reportada:
Los Berros, Mex. 169.5 mm
mm
50.0
20.0
10.0
5.0
0.1
0.0
SMN
Lámina media 14.5 mm


CONAGUA
Comisión Nacional del Agua
Precipitación del 04 de febrero de 2010
Máxima reportada:
Copala, Gro. 128.0 mm
mm
50
20
10
5
0.1
0
SMN
Lámina media 4.9 mm


Anomalía de
Baja presión en 200 hPa
B
Corriente en
chorro polar
con intrusión
de aire seco
N50°
Eje de
Vaguada
Resumen de
Sistemas Significativos
del 2, 3 y 4 de febrero
Temporal Invernal
en el centro y occidente
de México
N30°
B
W150°
W130°
W110°
W90°
W70°
B
B
B
Flujo del
S y SW propiciando
"realce orográfico"
Corriente en
chorro subtropical
con intrusión
de aire húmedo
B
N10°
"Serie de tormentas"
de baja presión desde
la franja ecuatorial
CONAGUA/SMN
Ing. A. H. Unzón

epsograms


Environnement Canada
Centre météorologique canadien
Environment Canada
Canadian Meteorological Centre
Ensemble and Deterministic Forecasts issued 25 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 25 Janvier 2010 00 UTC
for/pour
NAEFS / SPENA
CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O
Surface Air Temperature/Température de l'air à la surface
°C
Precipitation/Précipitations
mm/12h
Surface Wind Speed/Vitesse du vent à la surface
km/h
Total Cloud Cover/Couvert nuageux total
dixièmes/tenths
25 26 27 28 29 30 31 01 02 03 04 05 06 07 08
January/ Janvier 2010
February/ Février 2010
max
75%
mediane/médiane
25%
min
Global Model / Modèle global CMC
Control Member / Membre contrôle CMC
Control Member / Membre contrôle NCEP

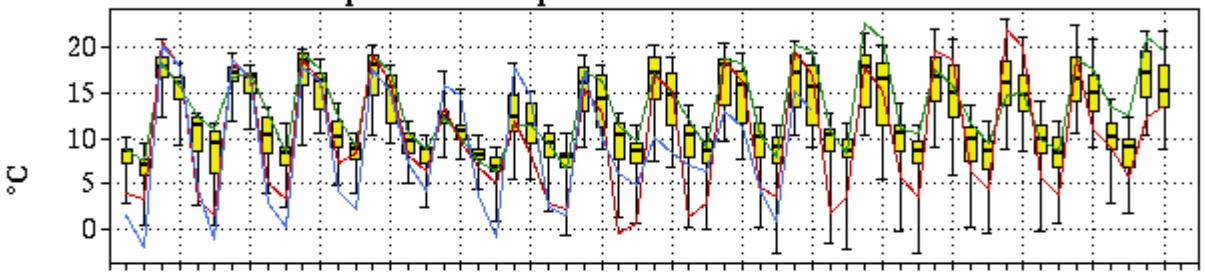
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

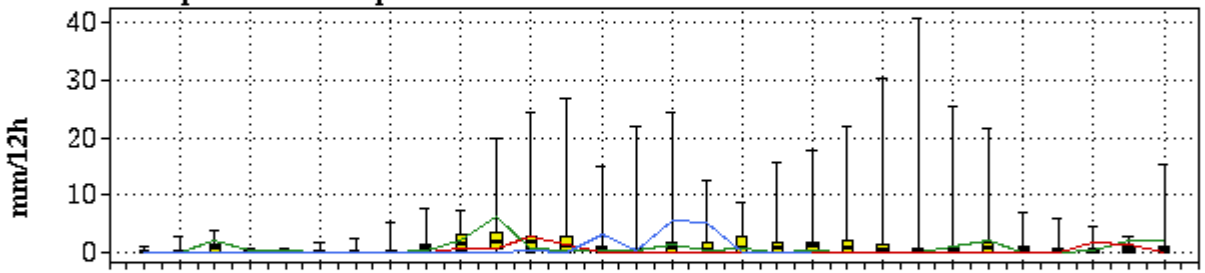
Ensemble and Deterministic Forecasts issued 26 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 26 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

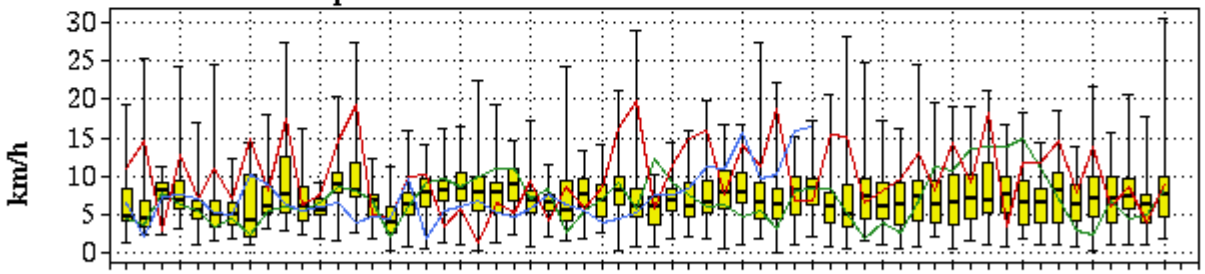
Surface Air Temperature/Température de l'air à la surface



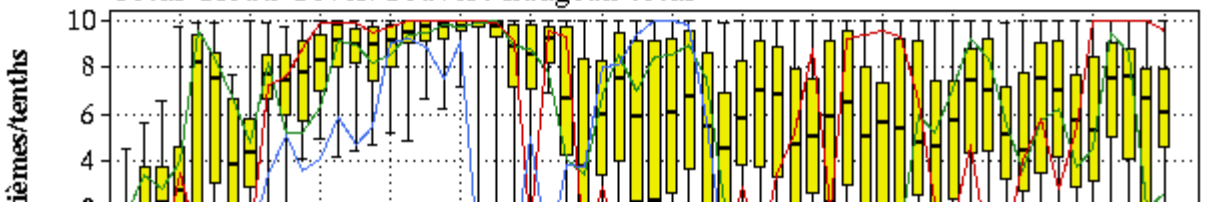
Precipitation/Précipitations



Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



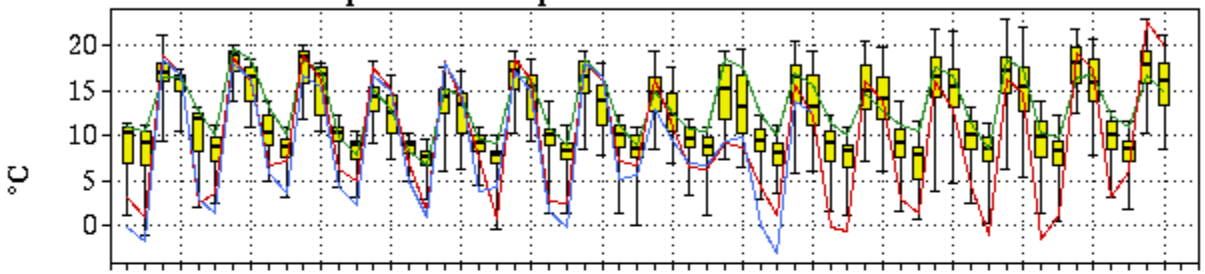
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

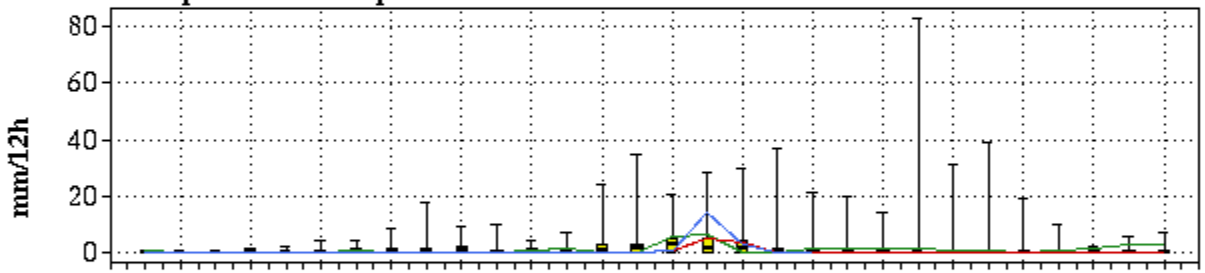
Ensemble and Deterministic Forecasts issued 27 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 27 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

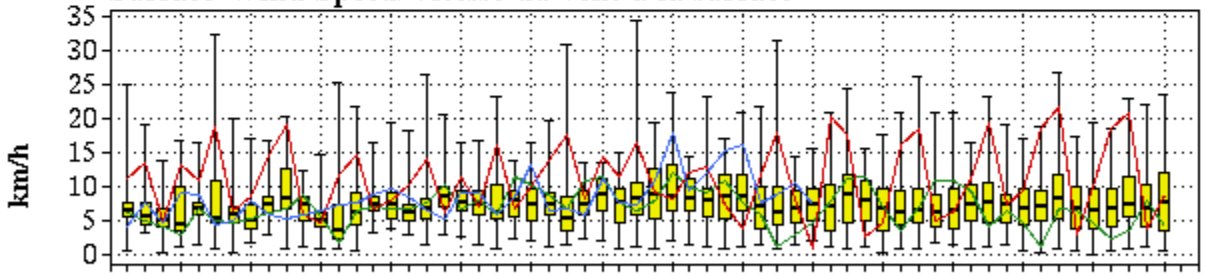
Surface Air Temperature/Température de l'air à la surface



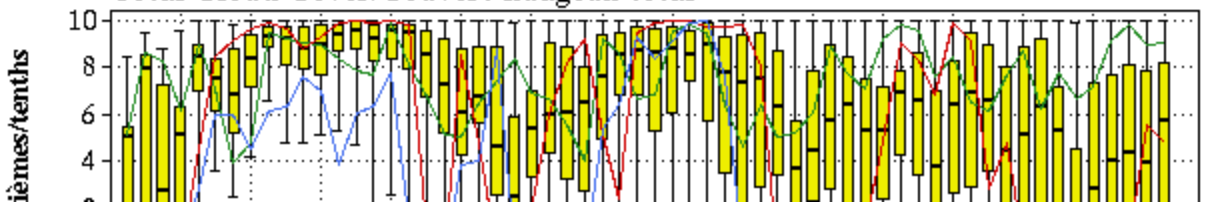
Precipitation/Précipitations



Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



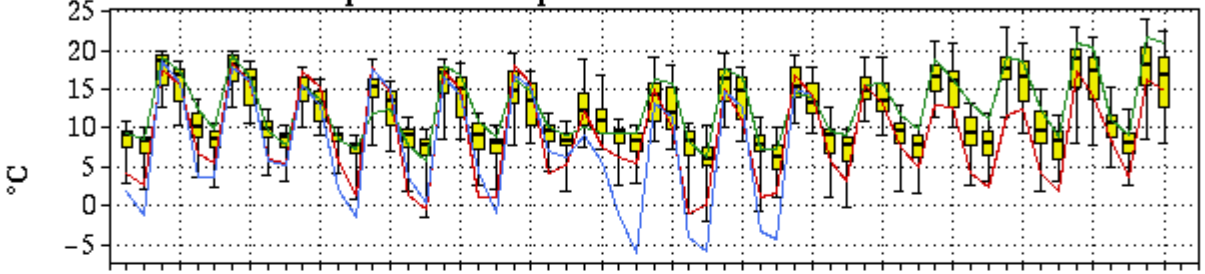
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

Ensemble and Deterministic Forecasts issued 28 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 28 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

Surface Air Temperature/Température de l'air à la surface



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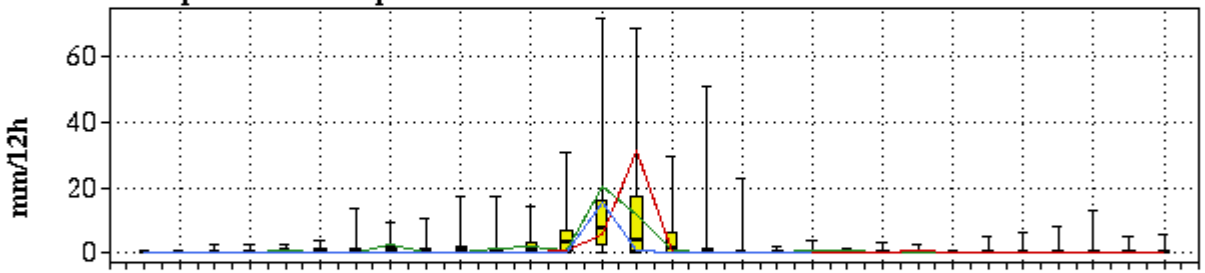
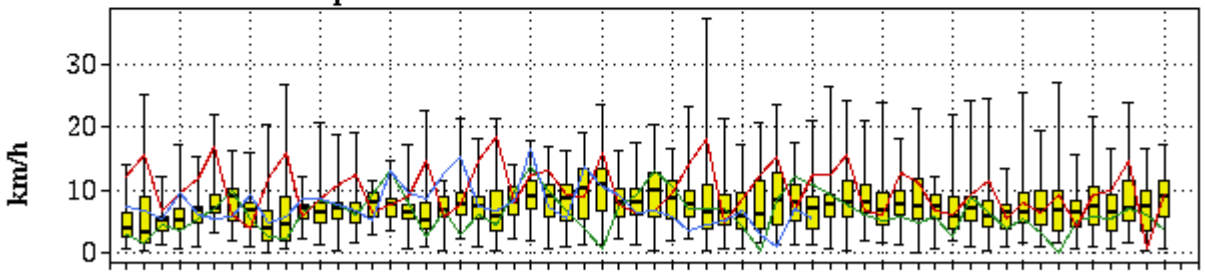
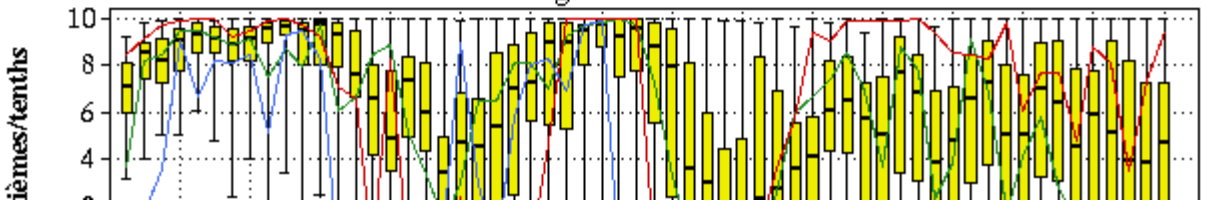


Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



Environnement Canada
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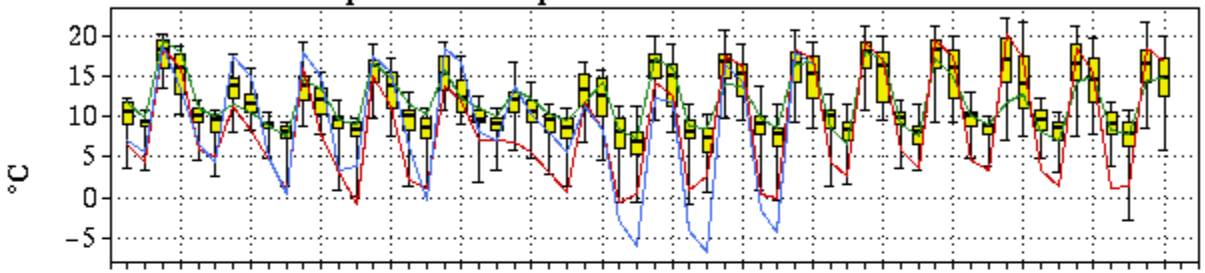
Canadian Meteorological Centre

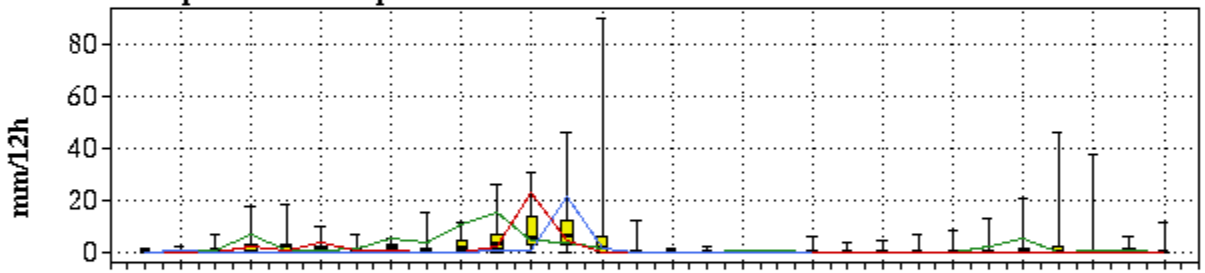
Ensemble and Deterministic Forecasts issued 29 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 29 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

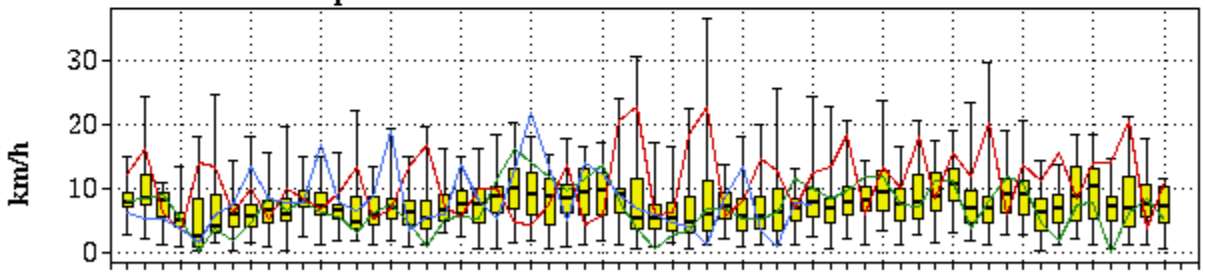
Surface Air Temperature/Température de l'air à la surface



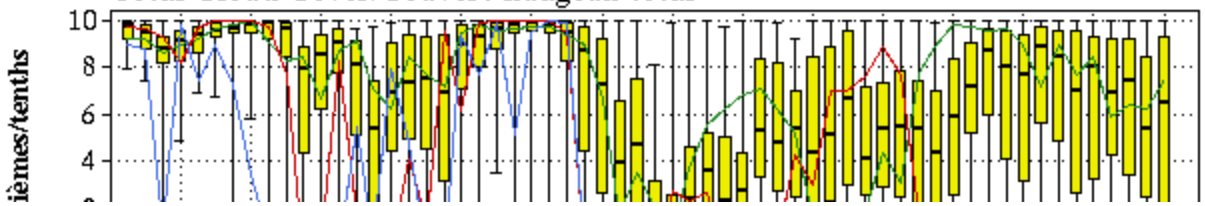
Precipitation/Précipitations



Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



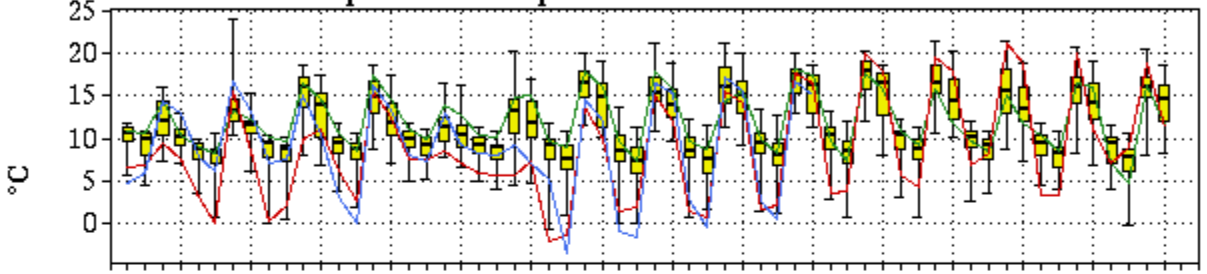
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

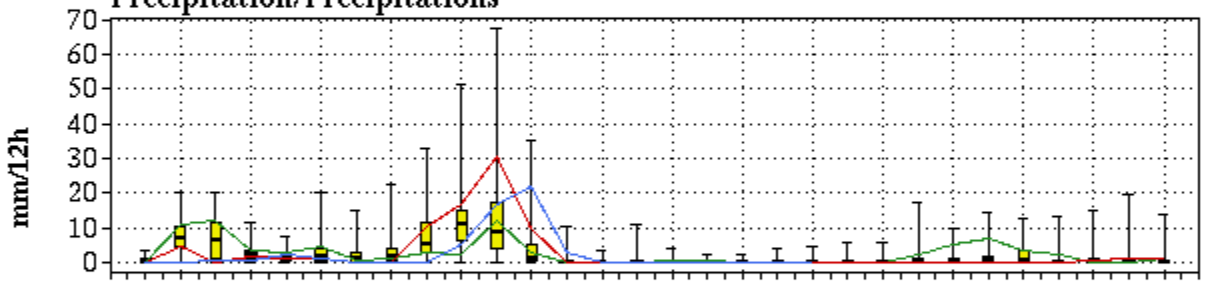
Ensemble and Deterministic Forecasts issued 30 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 30 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

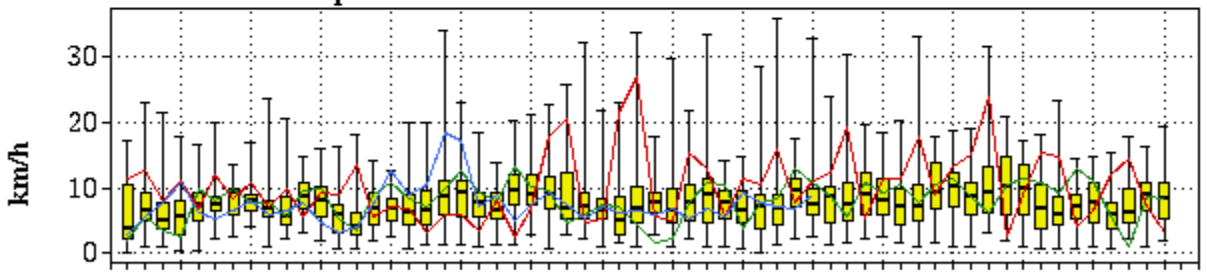
Surface Air Temperature/Température de l'air à la surface



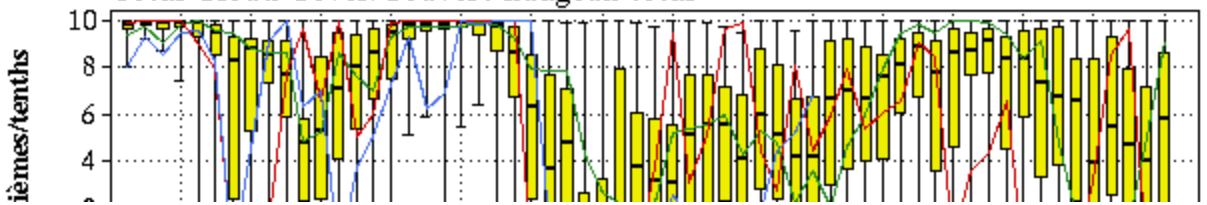
Precipitation/Précipitations



Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



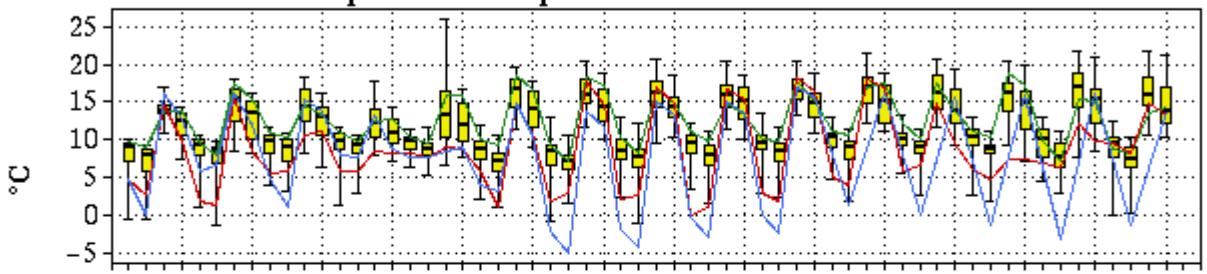
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

Ensemble and Deterministic Forecasts issued 31 January 2010 00 UTC
Prévision d'ensemble et déterministe émises le 31 Janvier 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

Surface Air Temperature/Température de l'air à la surface



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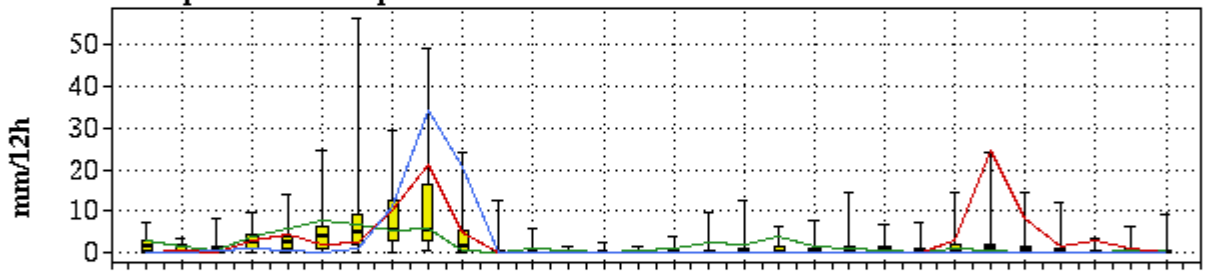
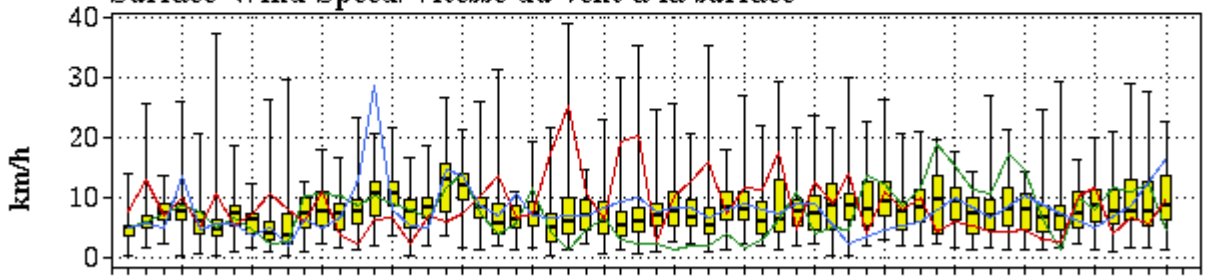
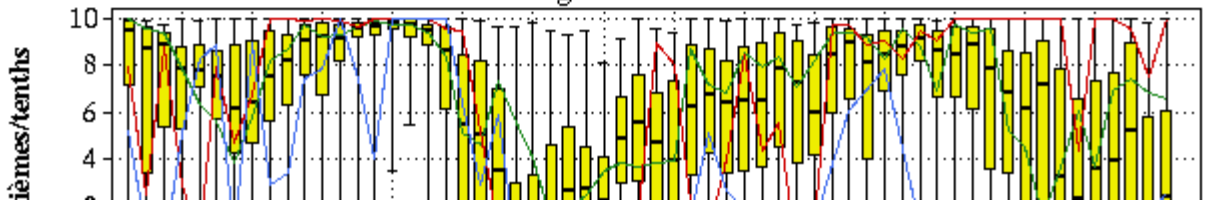


Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



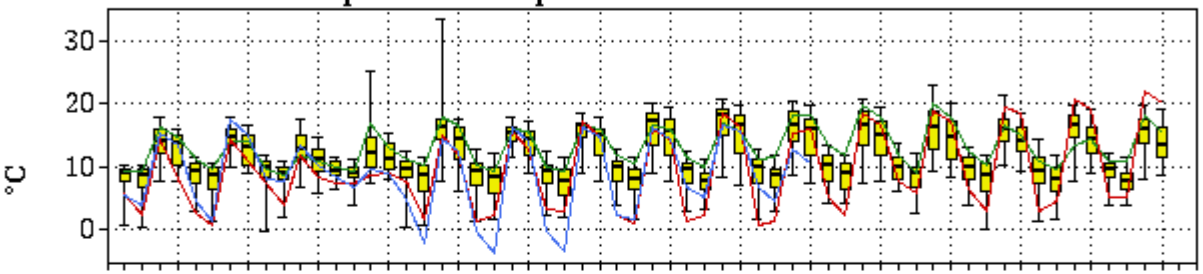
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

Ensemble and Deterministic Forecasts issued 1 February 2010 00 UTC
Prévision d'ensemble et déterministe émises le 1 Février 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

Surface Air Temperature/Température de l'air à la surface



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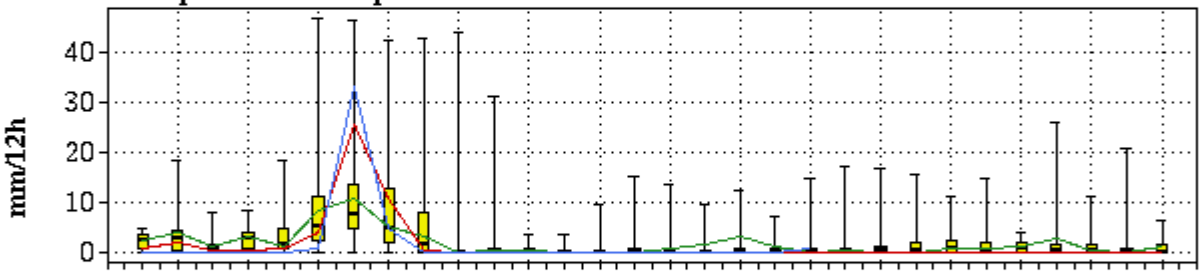
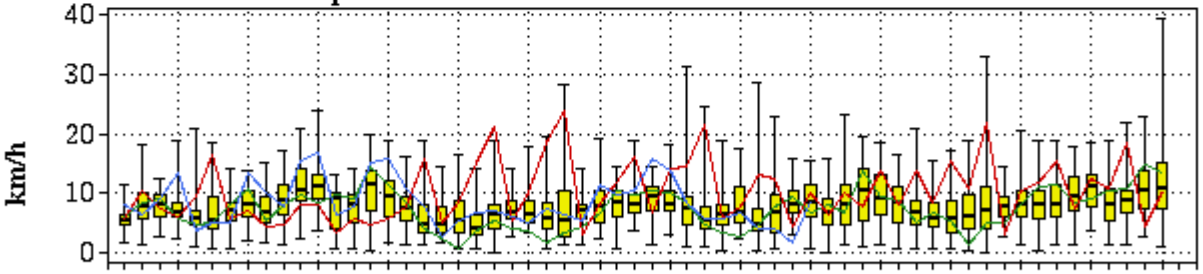
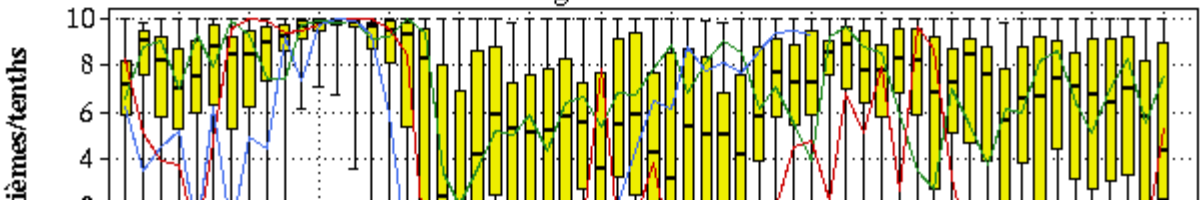


Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



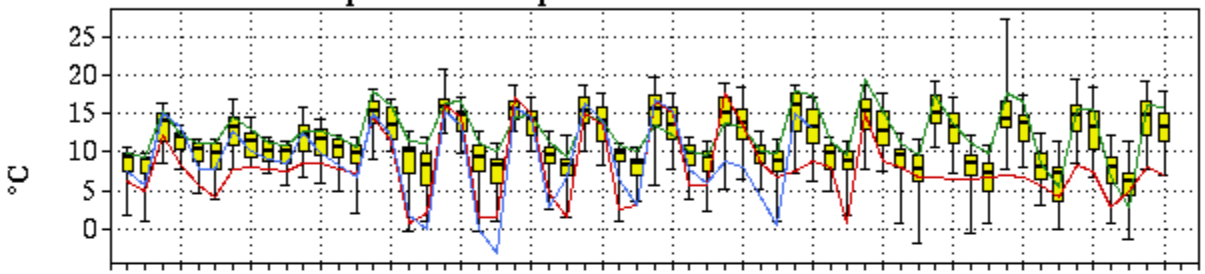
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

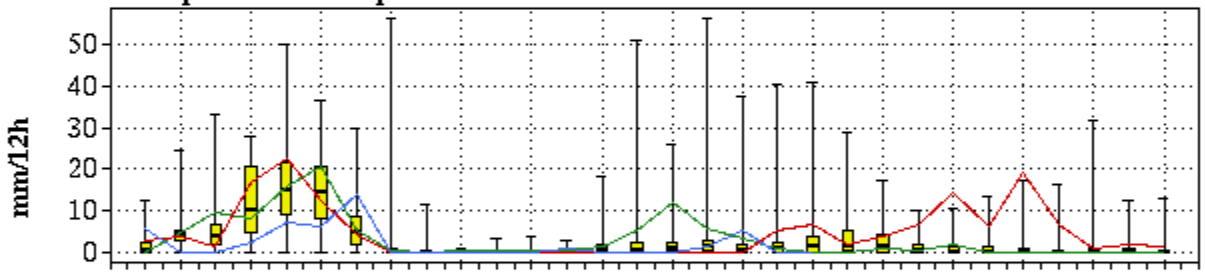
Ensemble and Deterministic Forecasts issued 2 February 2010 00 UTC
Prévision d'ensemble et déterministe émises le 2 Février 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

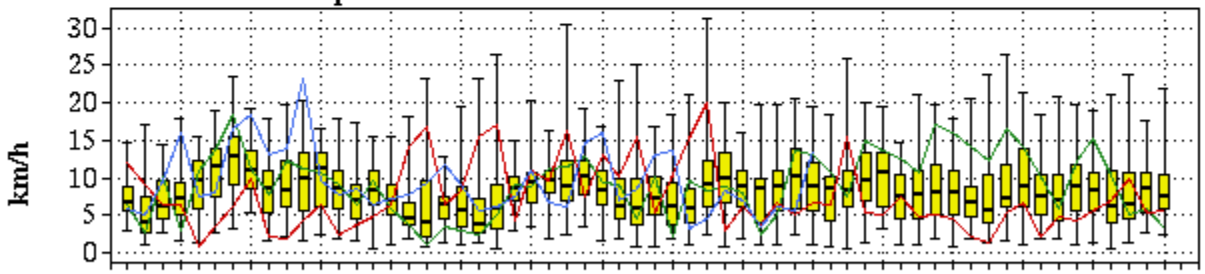
Surface Air Temperature/Température de l'air à la surface



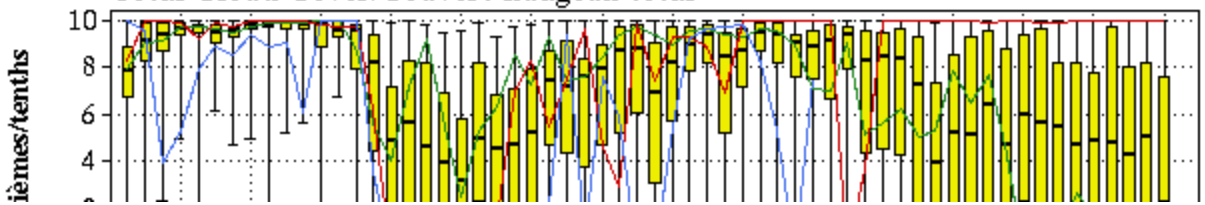
Precipitation/Précipitations



Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



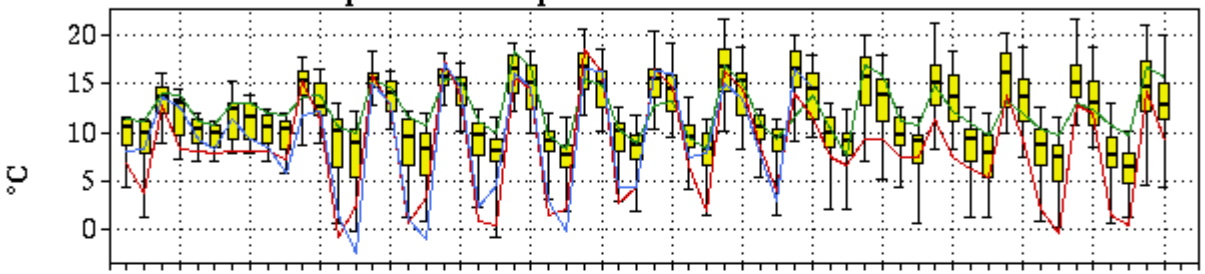
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

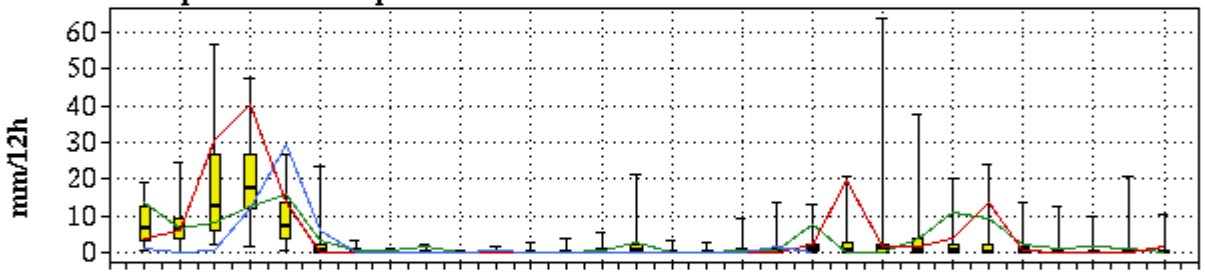
Ensemble and Deterministic Forecasts issued 3 February 2010 00 UTC
Prévision d'ensemble et déterministe émises le 3 Février 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

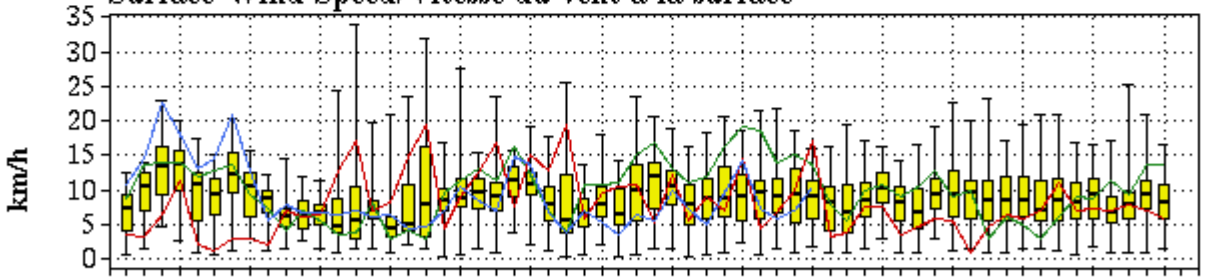
Surface Air Temperature/Température de l'air à la surface



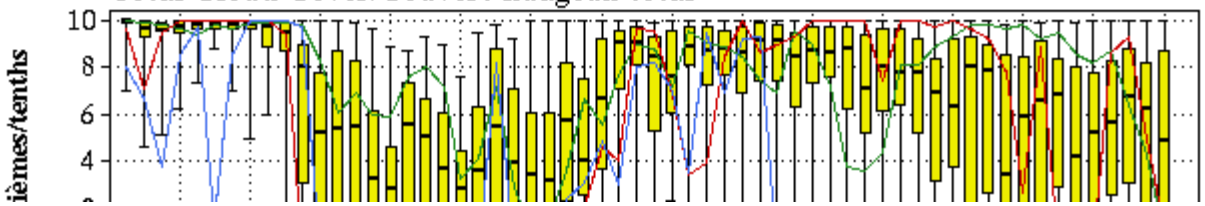
Precipitation/Précipitations



Surface Wind Speed/Vitesse du vent à la surface



Total Cloud Cover/Couvert nuageux total



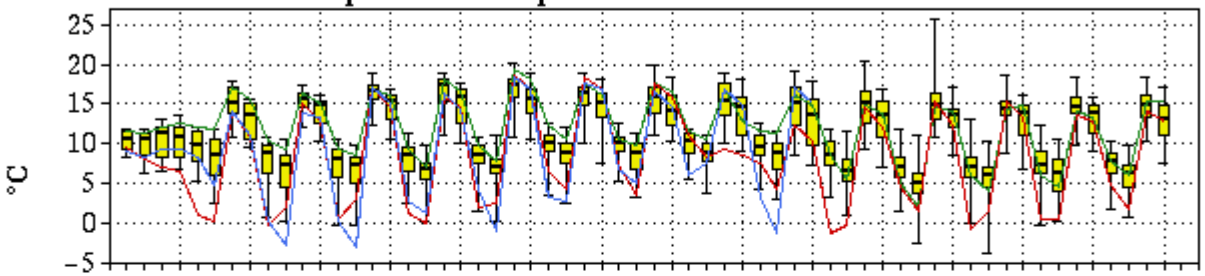
Environnement Canada
Centre météorologique canadien

Environment Canada
Canadian Meteorological Centre

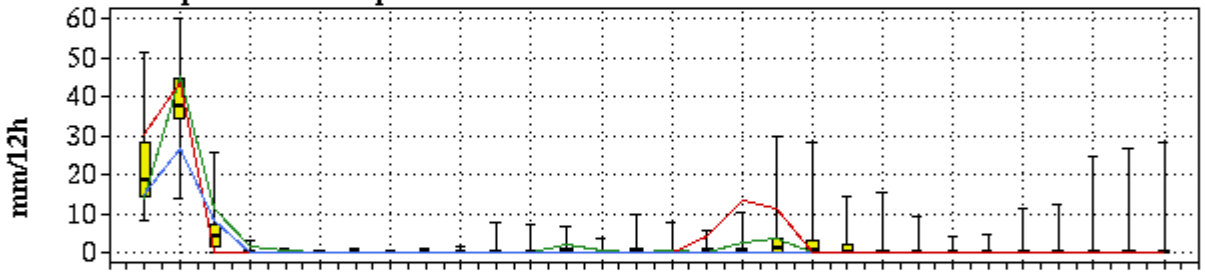
Ensemble and Deterministic Forecasts issued 4 February 2010 00 UTC
Prévision d'ensemble et déterministe émises le 4 Février 2010 00 UTC
for/pour NAEFS / SPENA

CIUDAD DE MEXICO (MEX) 19.4 N 99.13 W/O

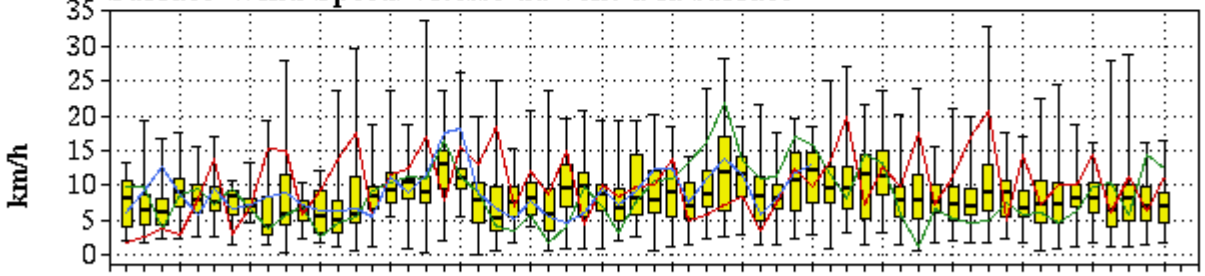
Surface Air Temperature/Température de l'air à la surface



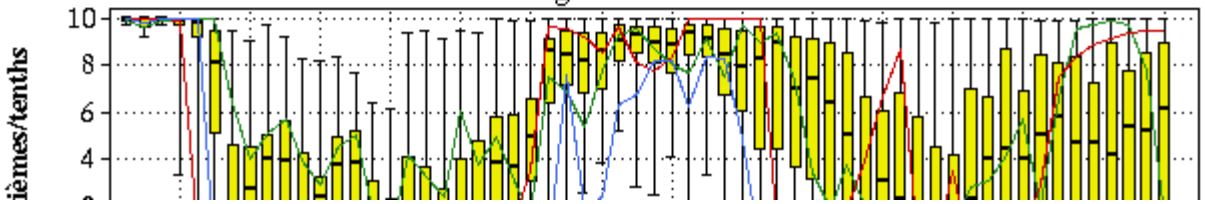
Precipitation/Précipitations

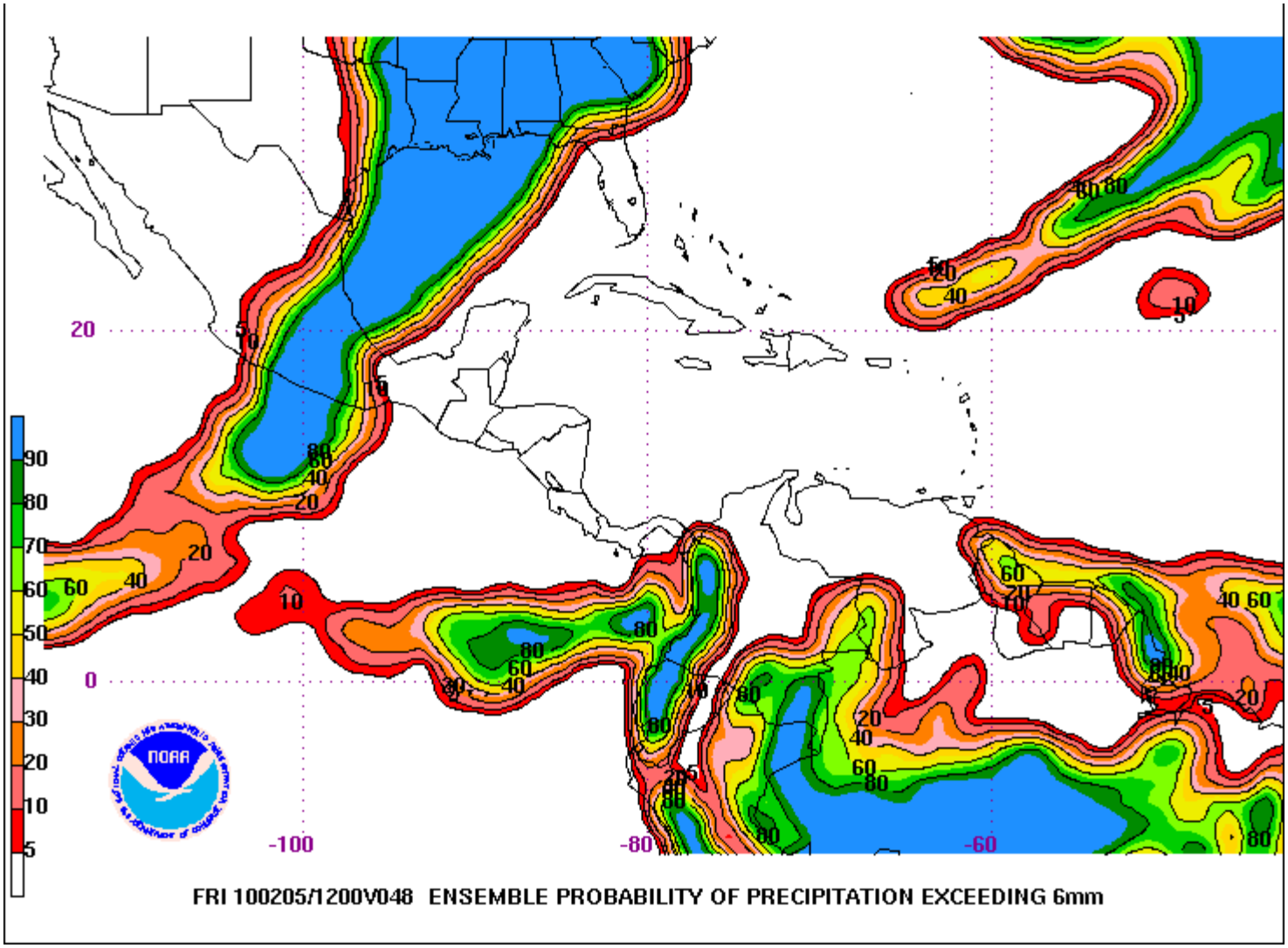


Surface Wind Speed/Vitesse du vent à la surface

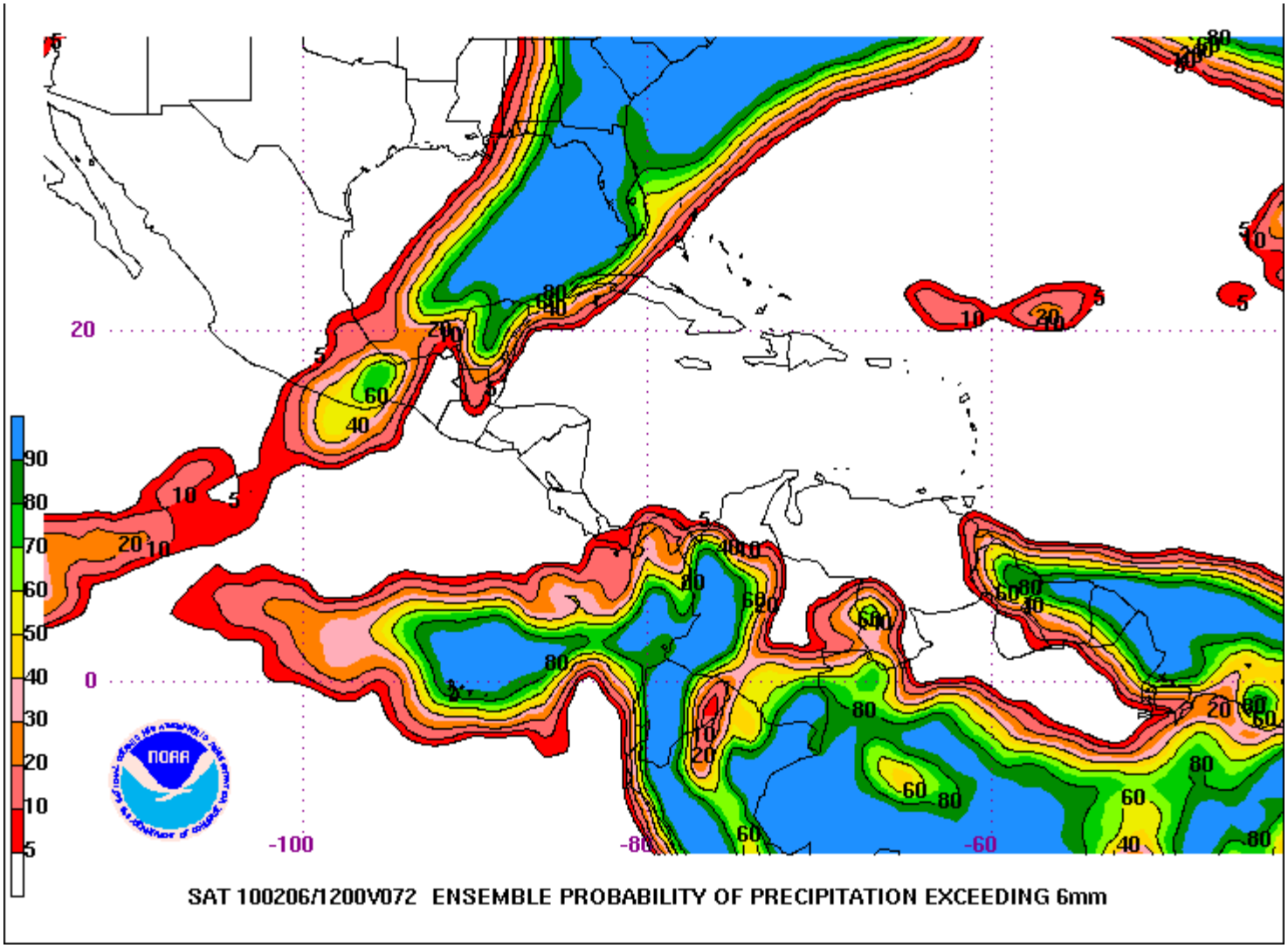


Total Cloud Cover/Couvert nuageux total





FRI 100205/1200V048 ENSEMBLE PROBABILITY OF PRECIPITATION EXCEEDING 6mm


20
0
-100
-80
-60
90
80
70
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50
40
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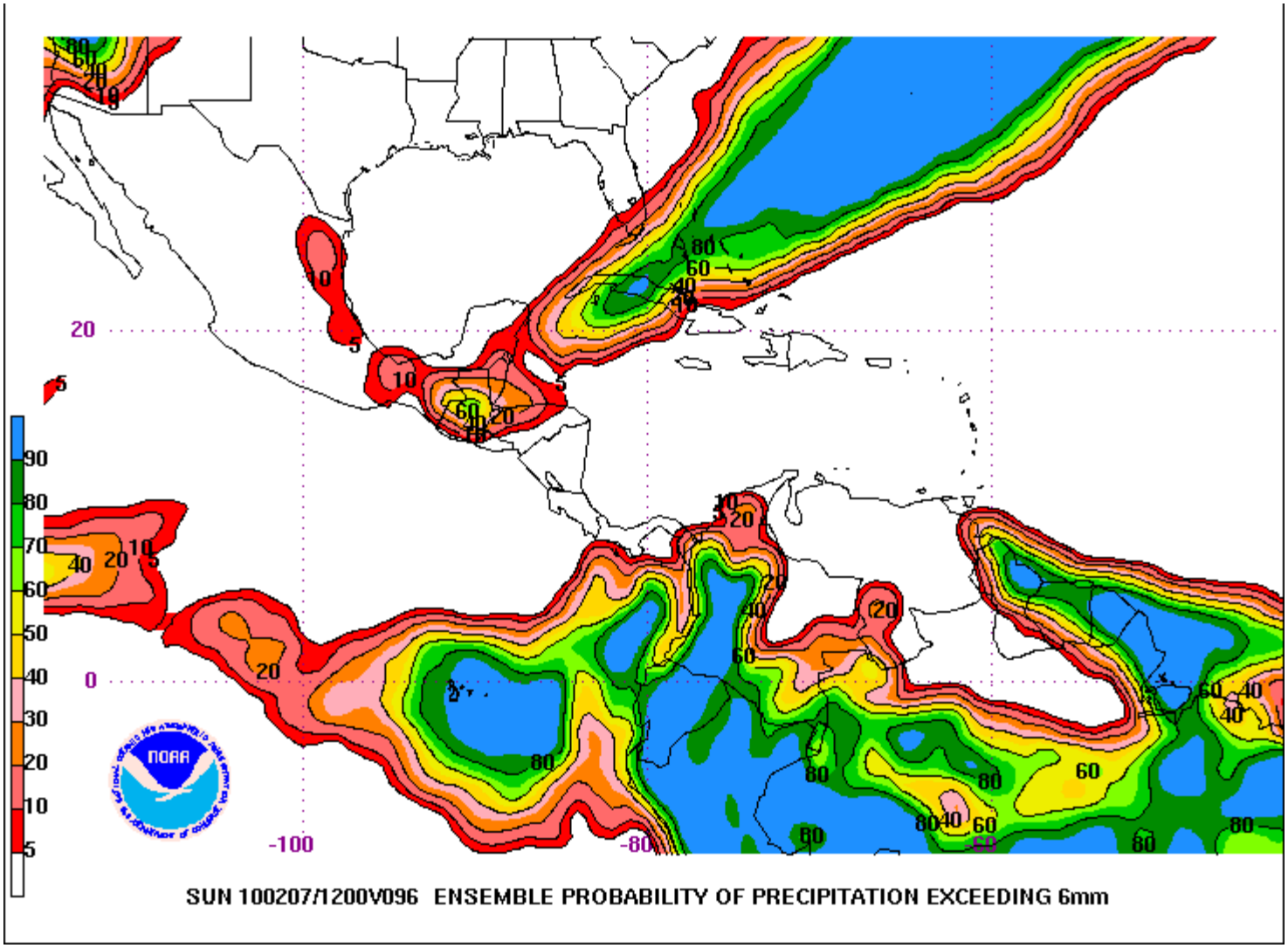
10
5
NOAA
SAT 100206/1200V072 ENSEMBLE PROBABILITY OF PRECIPITATION EXCEEDING 6mm



SUN 100207/1200V096 ENSEMBLE PROBABILITY OF PRECIPITATION EXCEEDING 6mm

Special Bulletin in Cutzamala (direct to autorithies of National Water Comission)

CONAGUA
Comisión Nacional del Agua

SEMARNAT
SECRETARÍA DE MEDIO AMBIENTE Y RECURSOS NATURALES

Informe Meteorológico Especial para la Dirección General
Pronóstico para el Valle de México y zona del Cutzamala a 72 horas

México, D.F. a 18 de mayo de 2010

Coordinación General del Servicio Meteorológico Nacional
Subgerencia de Pronóstico Meteorológico

Sistemas significativos:

1) Vaguada se extiende del Norte hacia el Centro de la Republica Mexicana.

2) Corriente de vientos máximos cruza hacia el Centro del país hasta la Península de Yucatán desde el Pacífico hacia el interior de la República.

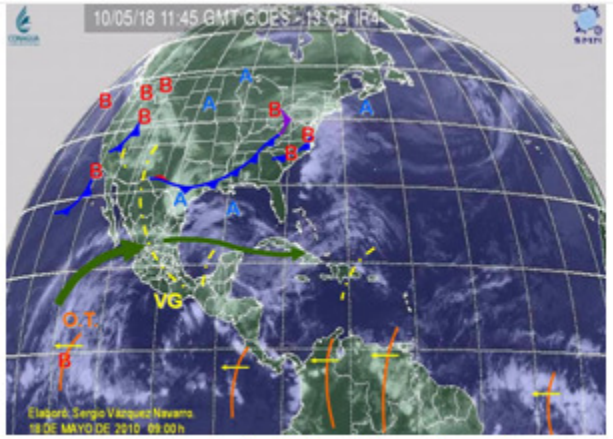


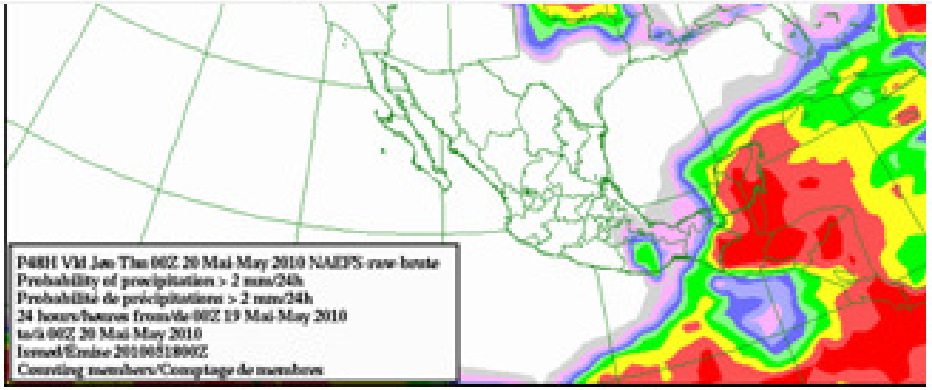
Figura 1. Imagen de satélite de hoy a las 09 horas

Probabilidades de lluvia a 12-24, 36-48 y 60-72 horas

Pronóstico para hoy

Para el día de hoy (día 18), dominará cielo de despejado a medio nublado, baja probabilidad de lluvia menor de 10% en la Ciudad de México y en el Cutzamala.

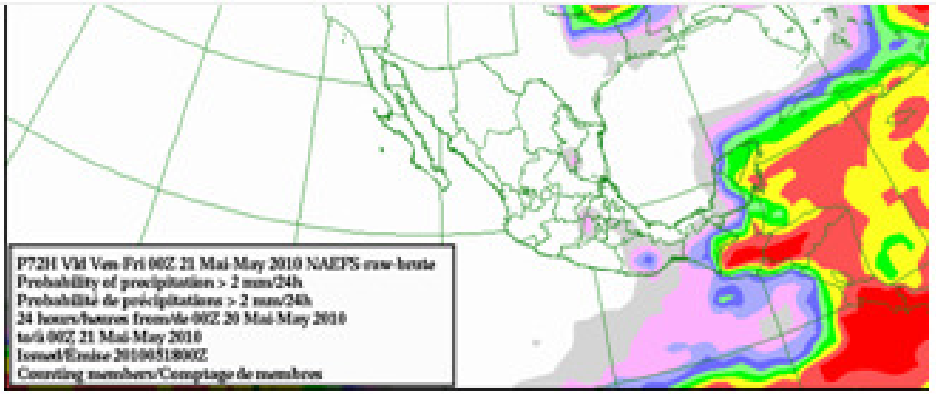
Figura 3. NAEFS a 24 h



Pronóstico para mañana

Para mañana (día 19), dominará cielo de despejado a medio nublado, baja probabilidad de lluvia 20% en la Ciudad de México y menor de 10% en el Cutzamala.

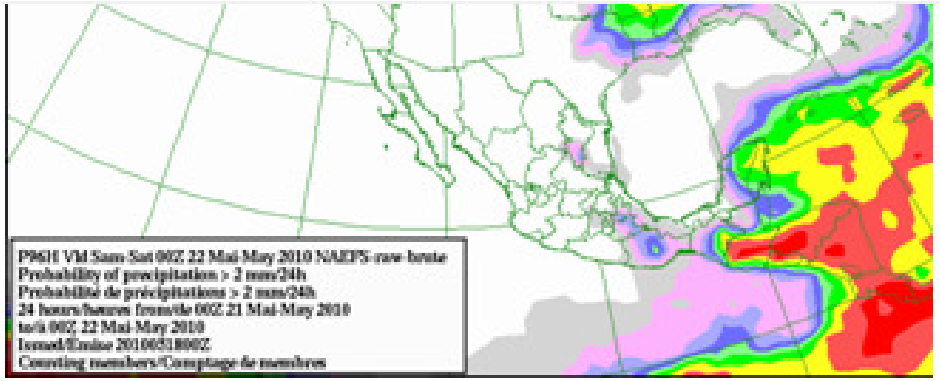
Figura 4. NAEFS a 48 h



Pronóstico para pasado mañana

Durante el día 20, baja probabilidad de lluvia 20% en la Ciudad de México y menor de 10% en el Cutzamala.

Figura 5. NAEFS a 72 h



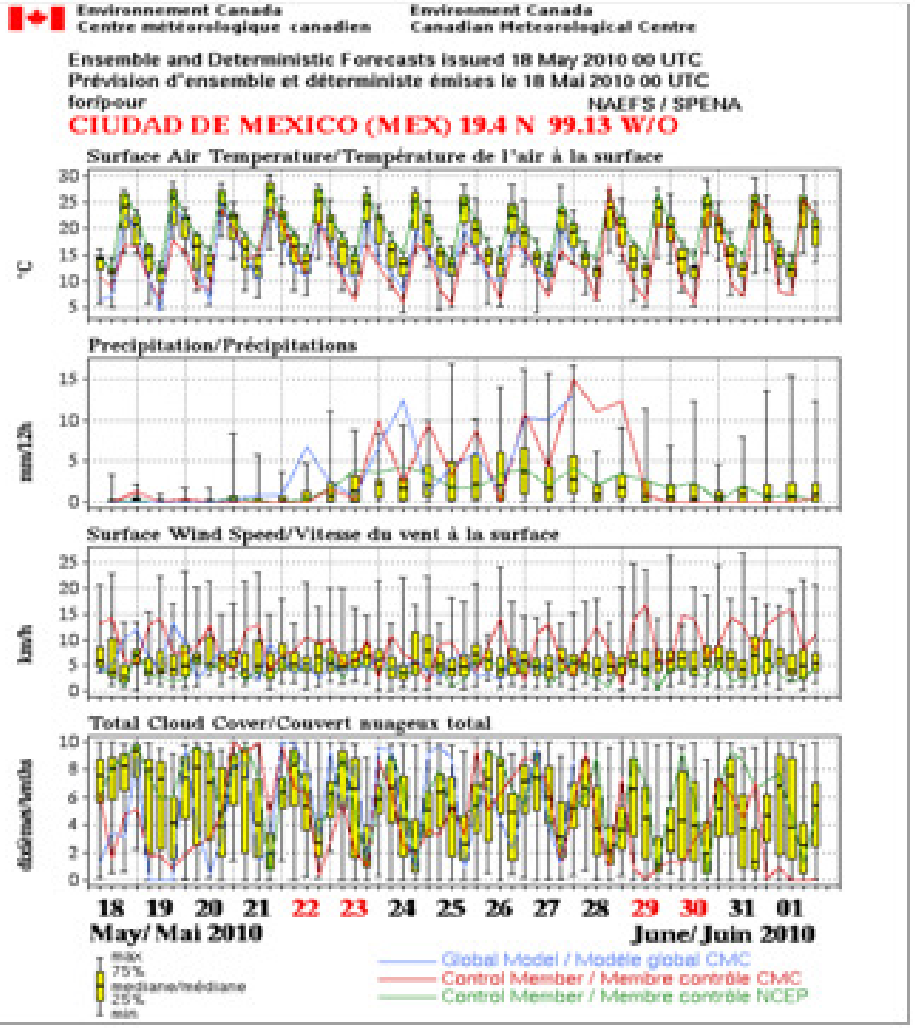
Ensamble del modelo NAEFS

Ciudad de México

Potencial de lluvias de 5 a 10 mm del 18 al 24 de mayo.

Potencial de lluvias de 10 a 30 mm del 25 de mayo al 01 de junio.

El modelo resuelve lluvias de moderadas a fuertes del 25 al 27 de mayo con un mayor valor de agua precipitable.



Elaboró: Ing. Alberto Hernández Unzón

Subgerencia de Pronóstico Meteorológico

CONAGUA Comisión Nacional del Agua | SMN

SEMARNAT

SECRETARÍA DE MEDIO AMBIENTE Y RECURSOS NATURALES

PRONÓSTICO LLUVIA – VALLE DE MÉXICO

PROBABILIDAD DE LLUVIA (MODELO DE ENSAMBLE - NAEFS)
Con Umbral Superior a 2 mm / 24 Horas

INTERVALO 24 HRS.	LUGAR	PORCENTAJE	SISTEMA RELEVANTE
18 AL 19 DE FEBRERO	CIUDAD DE MÉXICO	60-70 %	-ZONA DE INESTABILIDAD -VAGUADA