

Briefing mensuel

Suivi MJO et ondes équatoriales pour le bassin SOOI

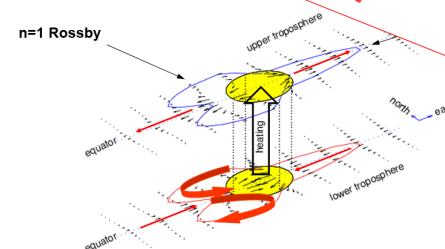
DATE : 26/01/2023

**S. Langlade, H. Vérèmes, E. Kapikian, P. Peyrillé,
Q.-P. Duong**

support produit le 24/01/2023
sur bulletin ECMWF du 23/01
et figures du 23/01

**S1 : 23 janv.-29 janv.
S2 : 30 janv.-05 févr.
S3 : 06 févr.-12 févr.
S4 : 13 févr.-19 févr.
S5 : 20 févr.-26 févr.**

**ATTENTION :
Changement de
formalisme des
semaines !!!!
S0 est devenu S1 mais
correspond toujours à la
semaine en cours.**

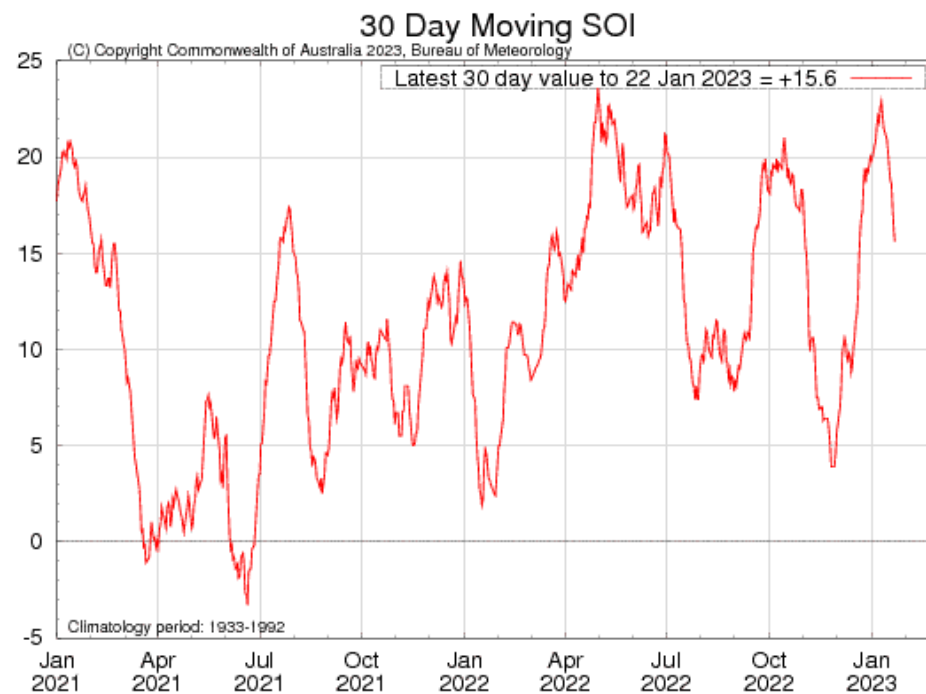
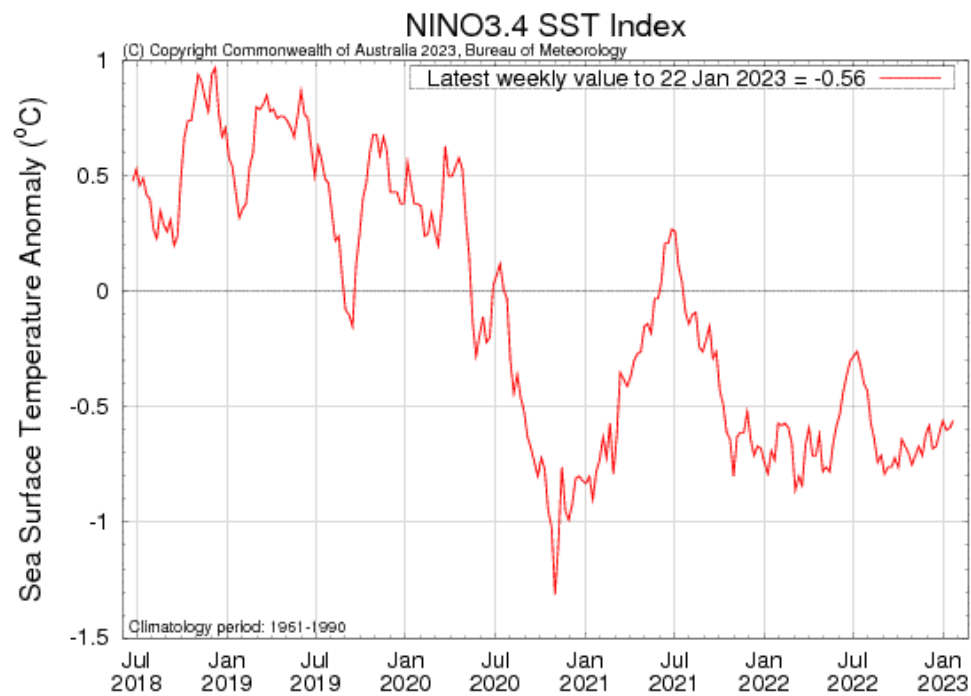


Matsuno, 1966
Webster, 1972
Gill, 1980

1. Prévision - Basse fréquence

Signal Basse Fréquence

Contexte ENSO

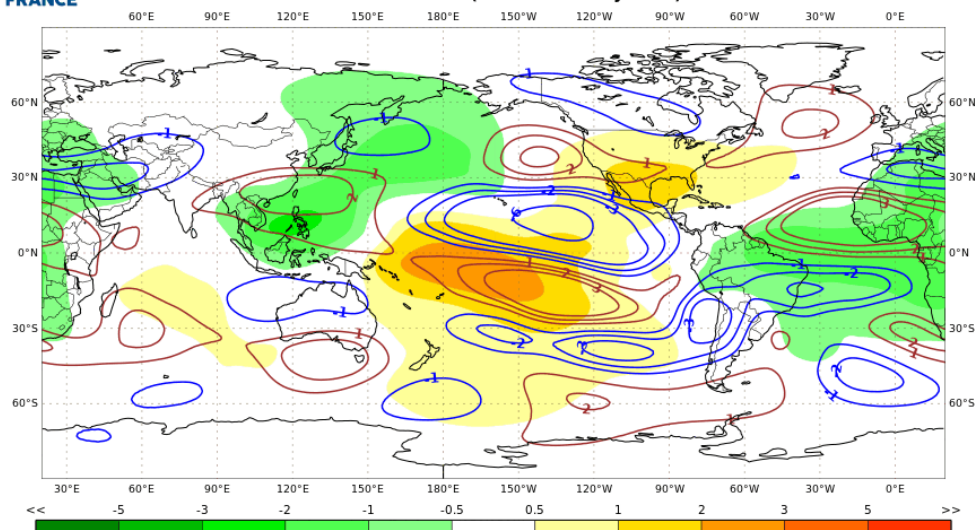


Signal Basse Fréquence

VP 200 prévu



Météo-France system 8 - Forecast
For JFM 2023 (issued January 2023)

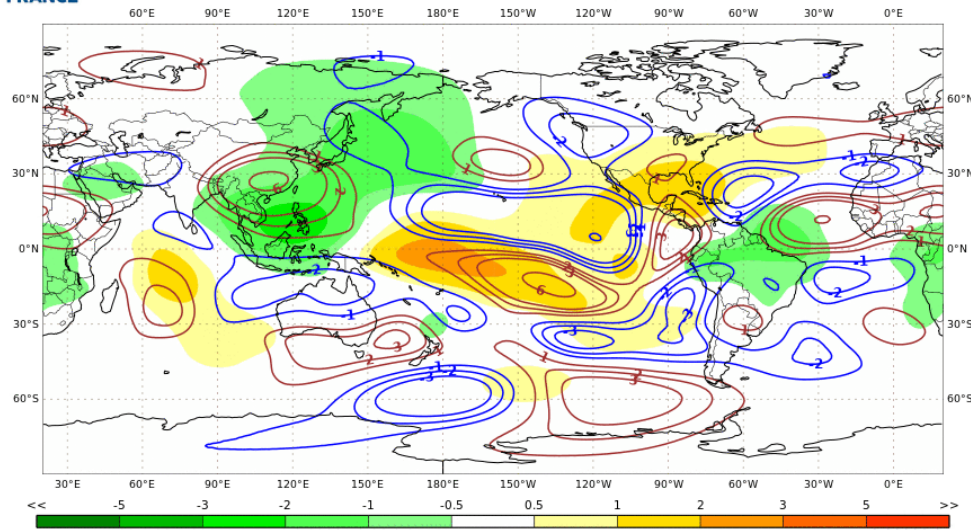


200hPa velocity potential and 200hPa streamfunction - zonal mean
3-months ensemble mean anomaly

unit : km2/s



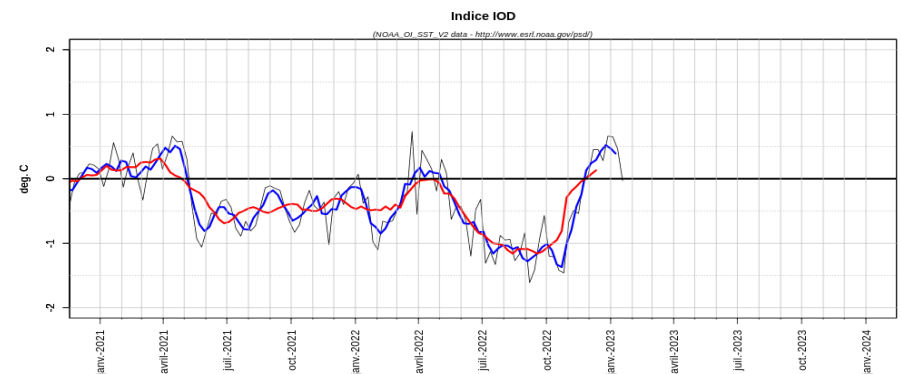
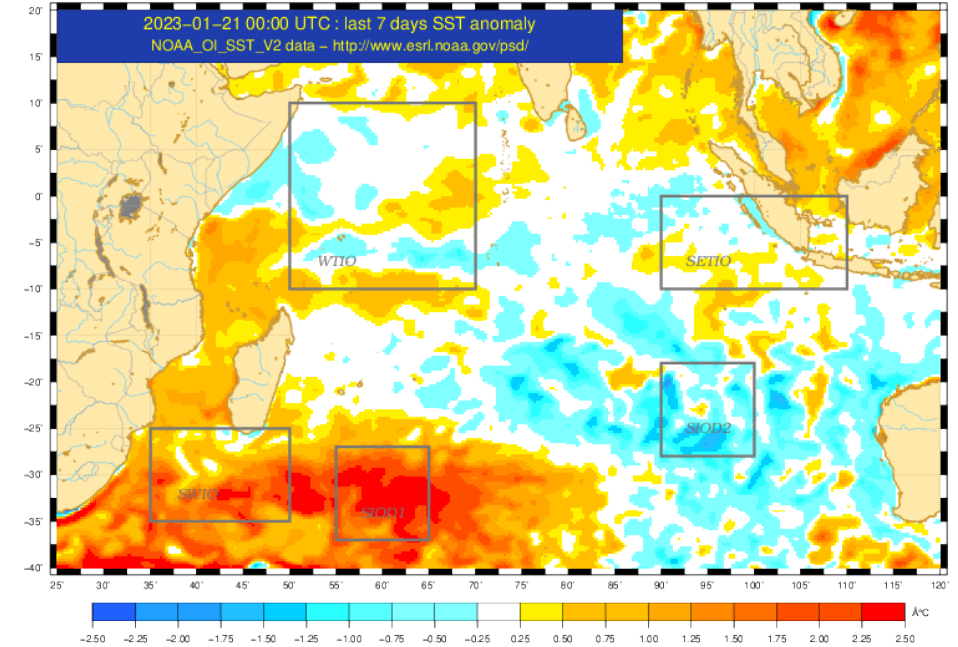
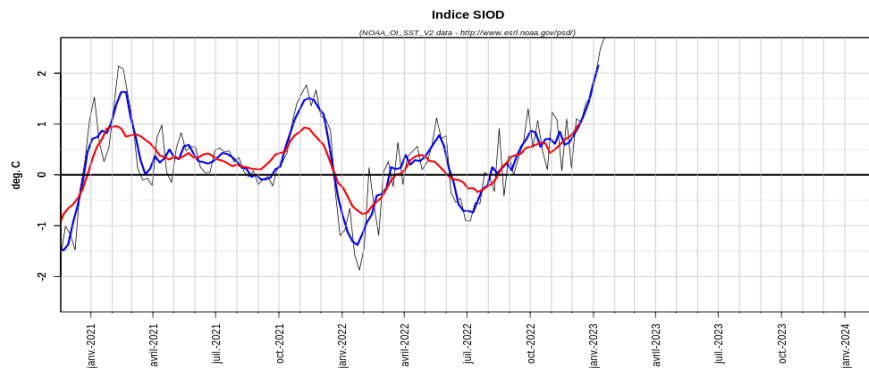
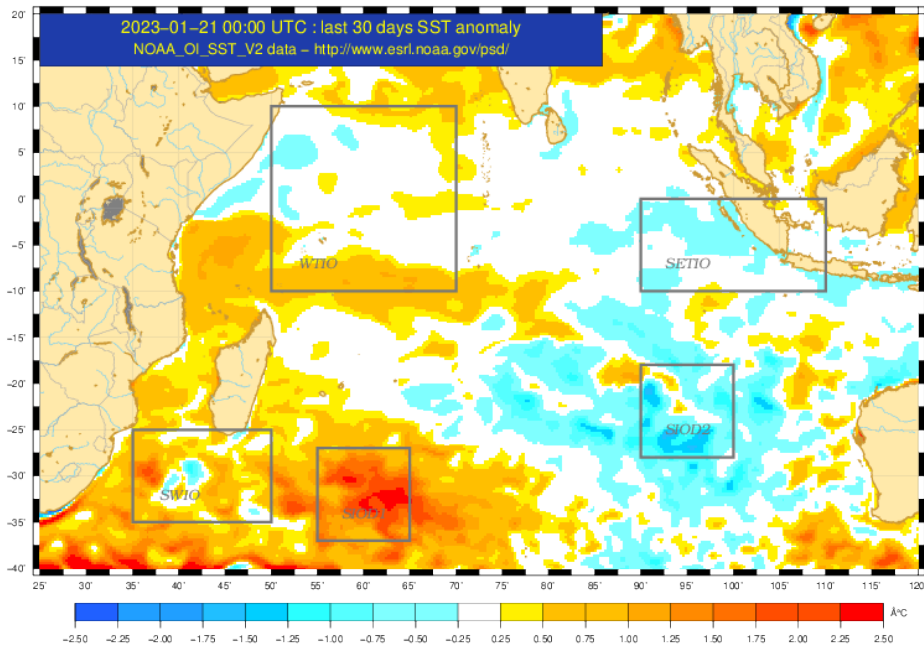
ECMWF SEAS5 - Forecast
For JFM 2023 (issued January 2023)



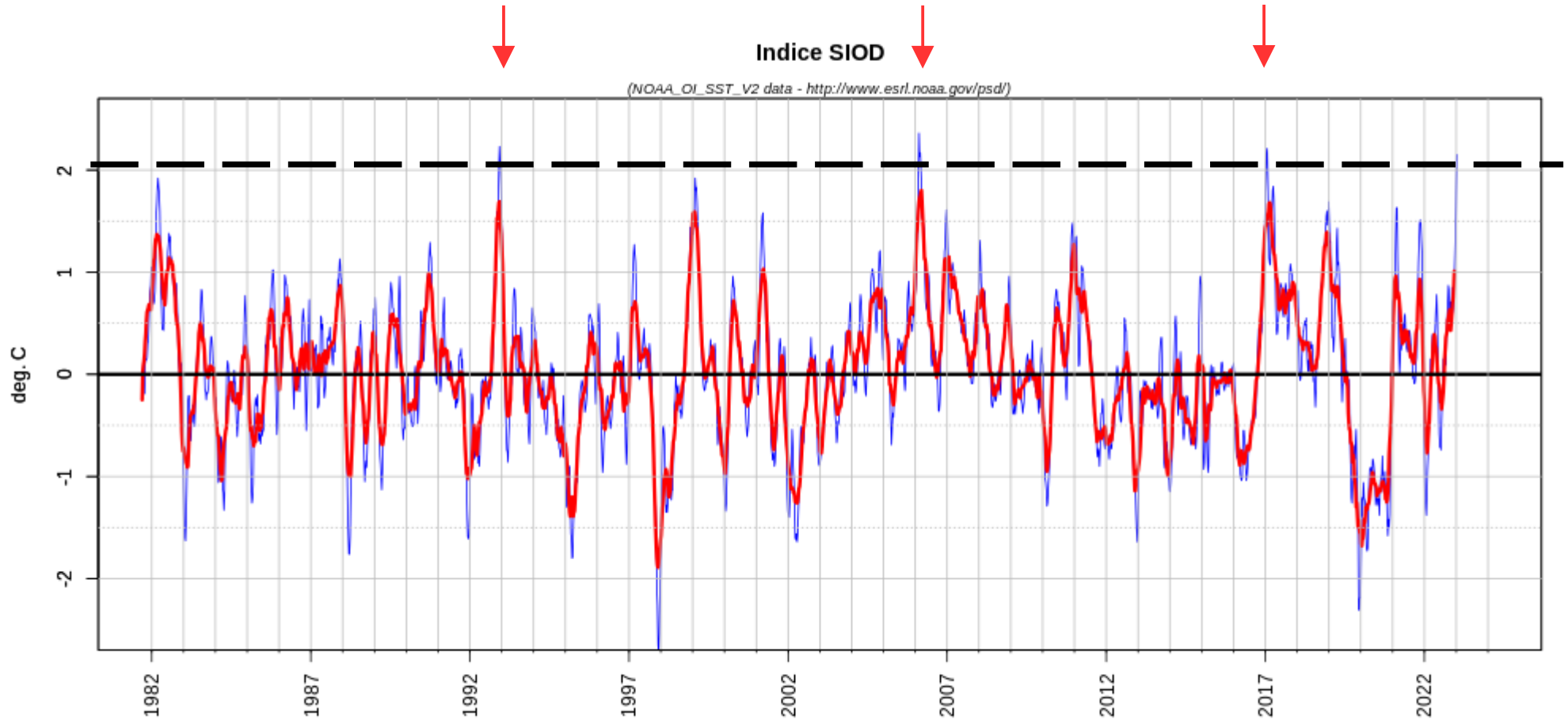
200hPa velocity potential and 200hPa streamfunction - zonal mean
3-months ensemble mean anomaly

unit : km2/s

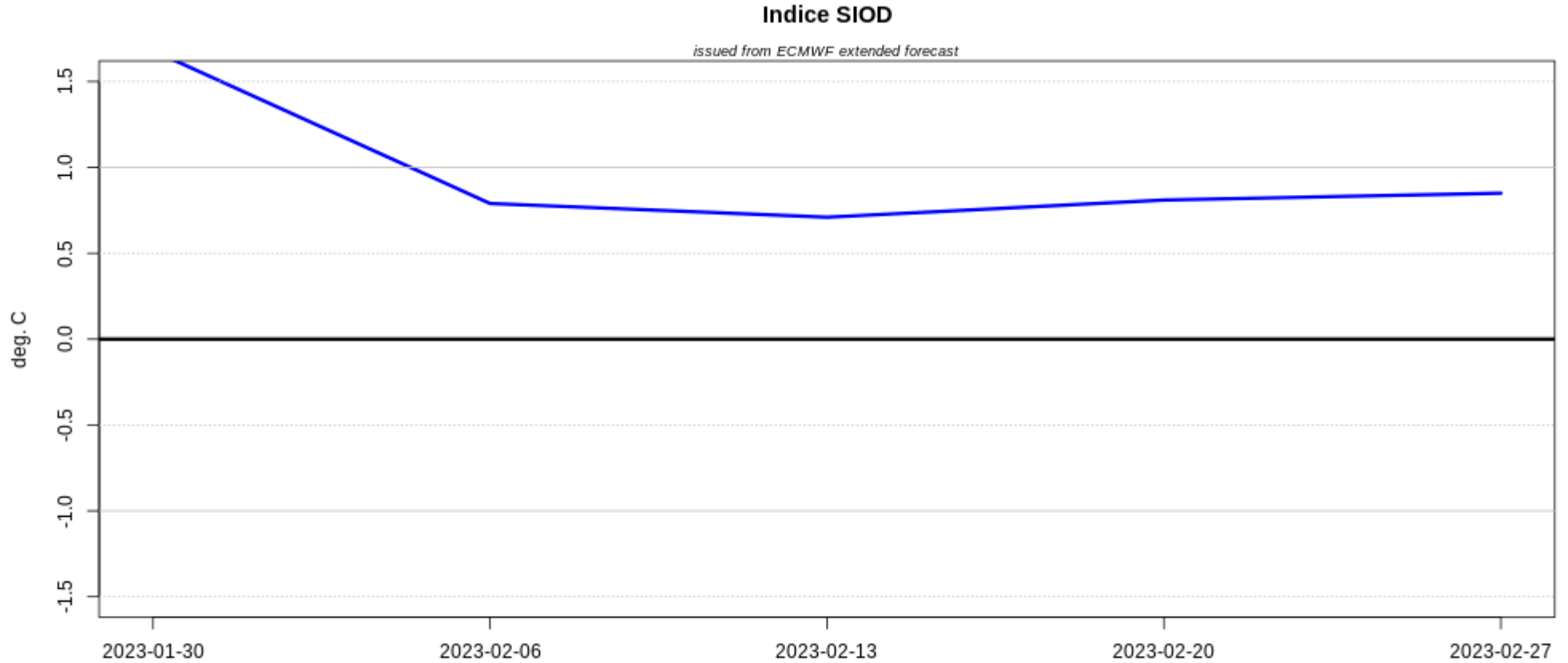
Signal Basse Fréquence - Zoom sur l'OI



Signal Basse Fréquence - Zoom sur l'OI



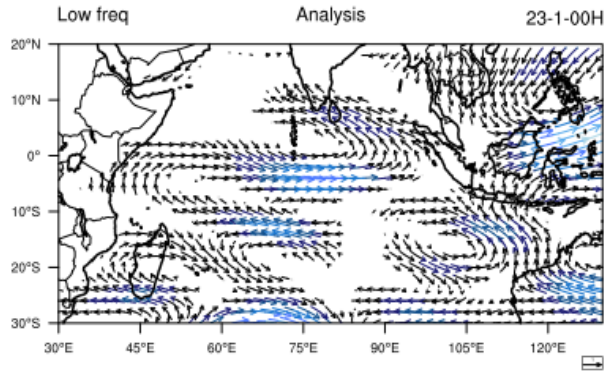
Signal Basse Fréquence – Prévision SST OI



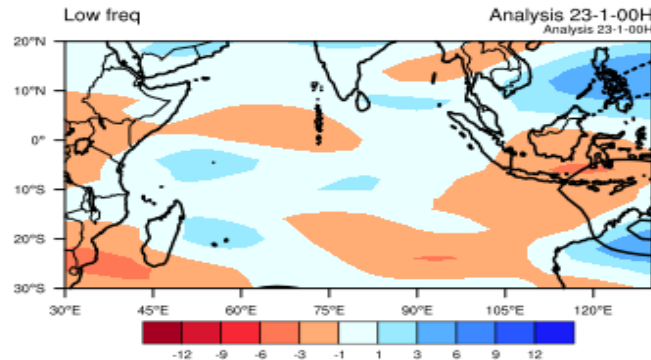
Signal Basse Fréquence - Zoom sur l'OI

U 850

J0

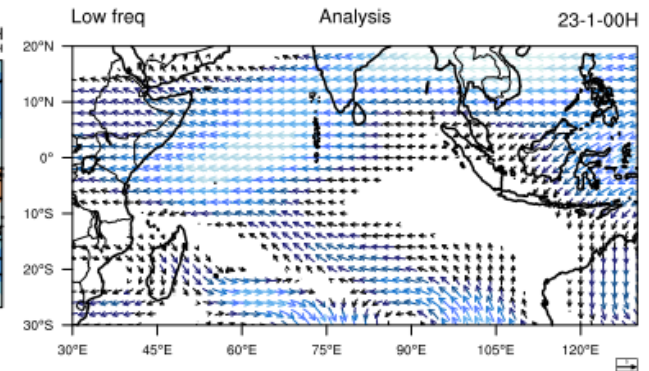


PW+SF850

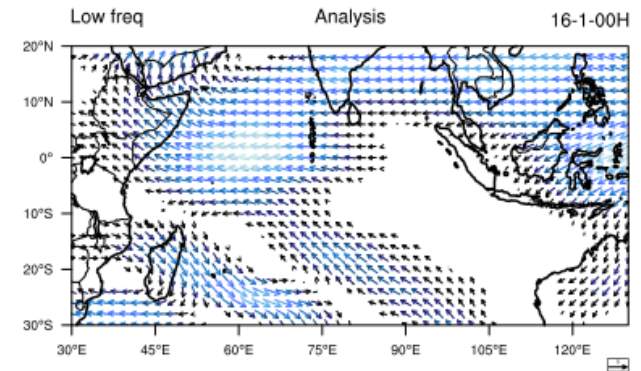
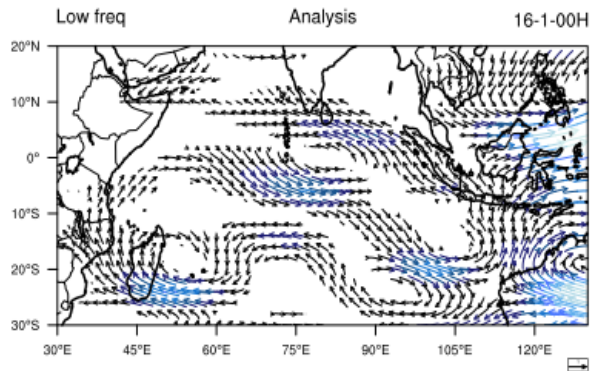


U 200

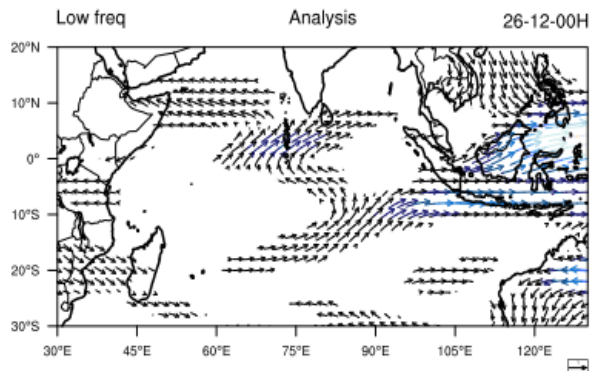
J-8



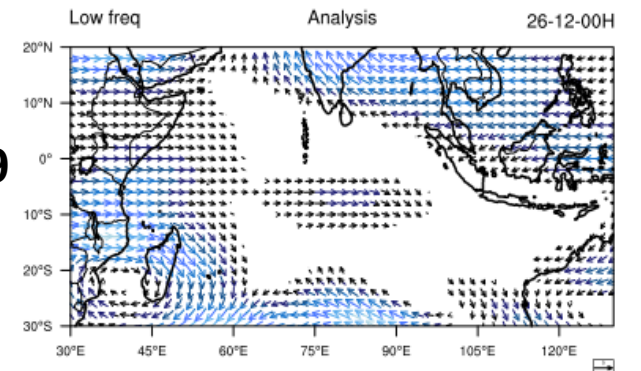
J-8



J-29

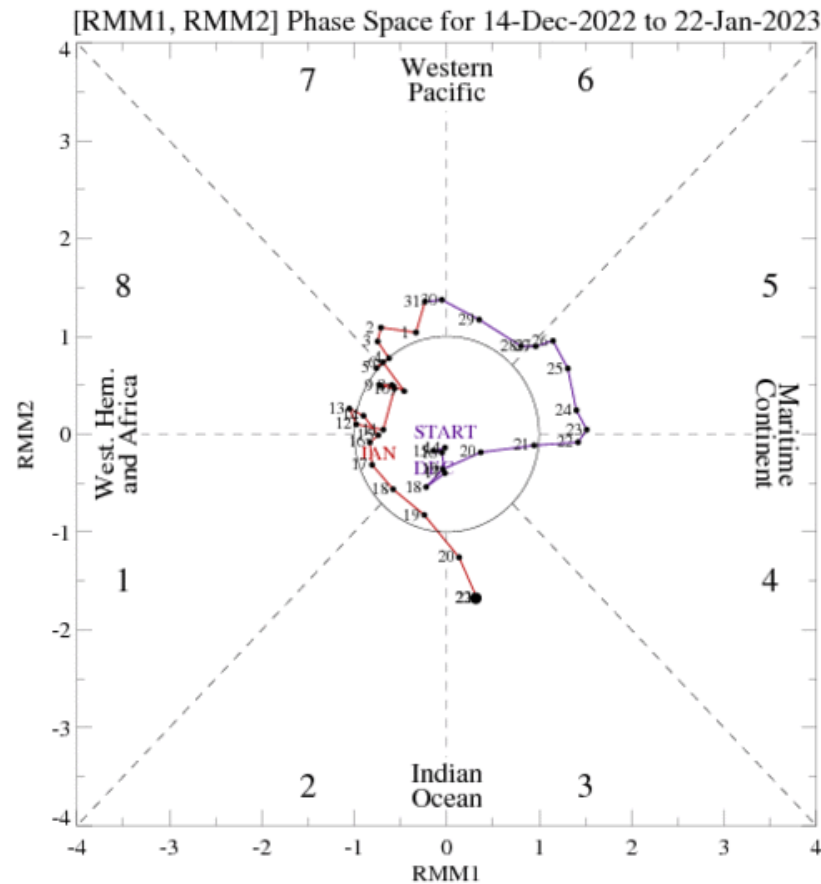


J-29



2. Prévision - MJO

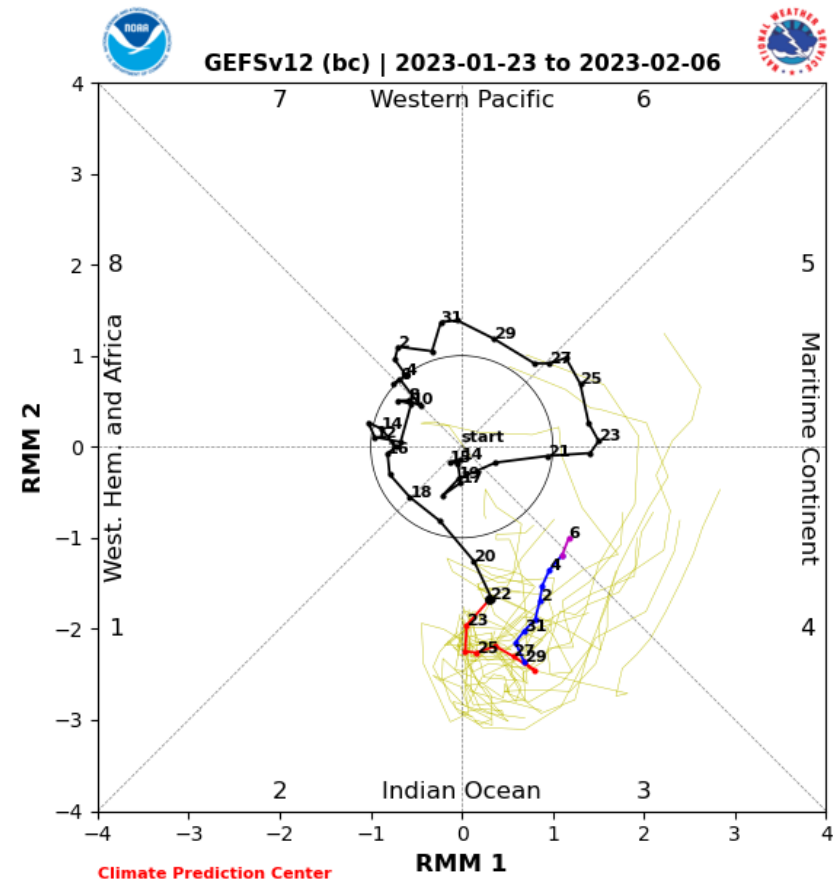
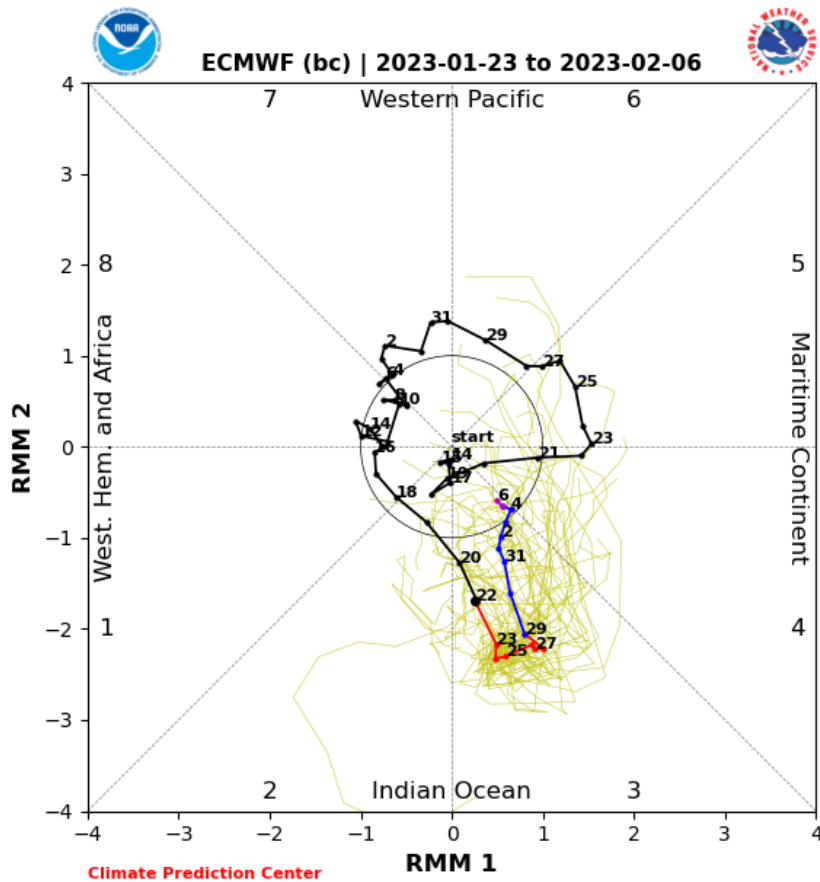
2. MJO observée, indice RMM



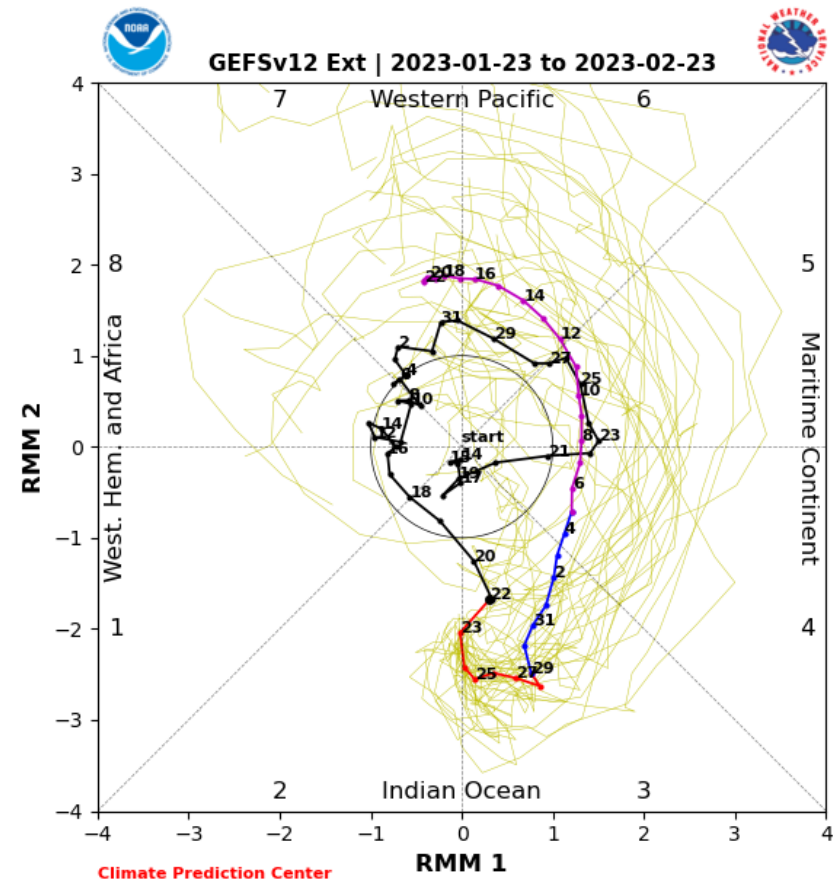
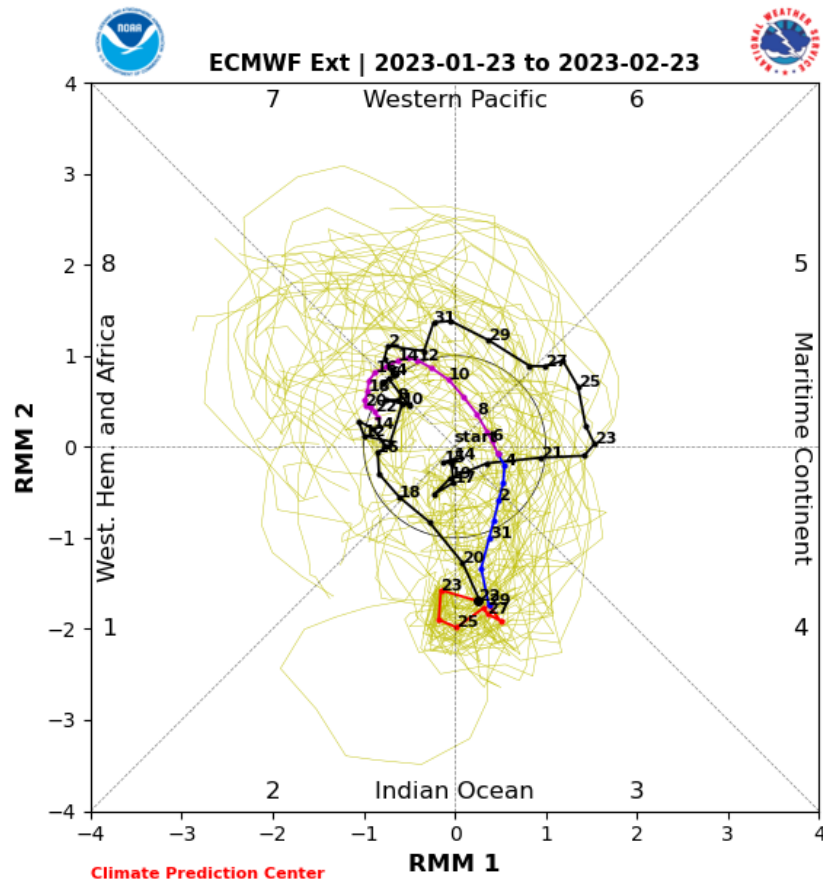
Retour sur le
dernier briefing :

	12-18 déc.	19-25 déc.	26 déc. - 1 ^{er} jan.	2-8 jan.	9-15 jan.	16-22 jan.
Phase MJO observée Intensité	2 Quasi nulle	2/3/4/5 Faible à modérée	5/6/7 Modérée à forte	7/8 Modérée à faible	8/1 Faible	1/2/3 Faible à modérée
Phase MJO prévue Intensité Confiance	2/3 Modérée Bonne	3/4 Modérée Bonne	5/6/7 Faible à mod. Moyenne	[7]/[8/1] ? Faible	[8]/[1/2] ? Faible	X

MJO prévue - Indice RMM multi modèles



MJO prévue - Indice RMM multi modèles



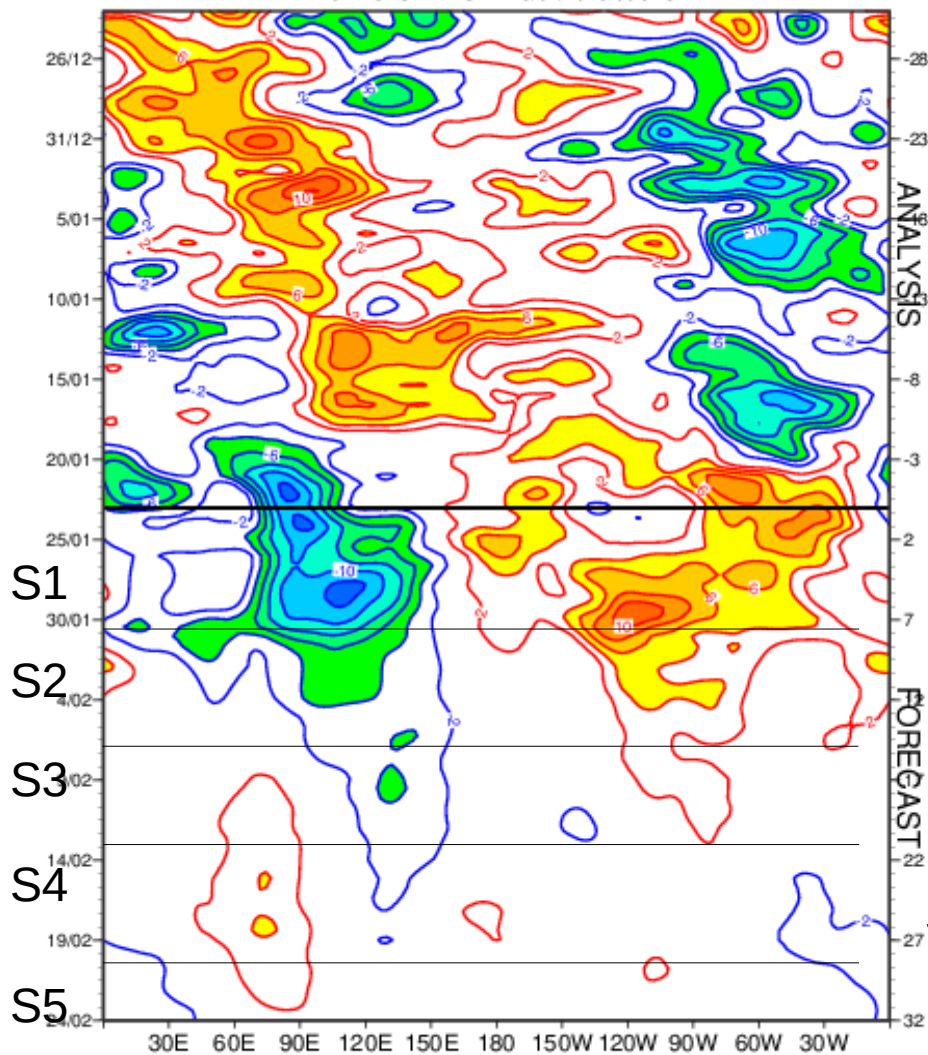
VP200 – EPS mensuel

Moyenne EPS

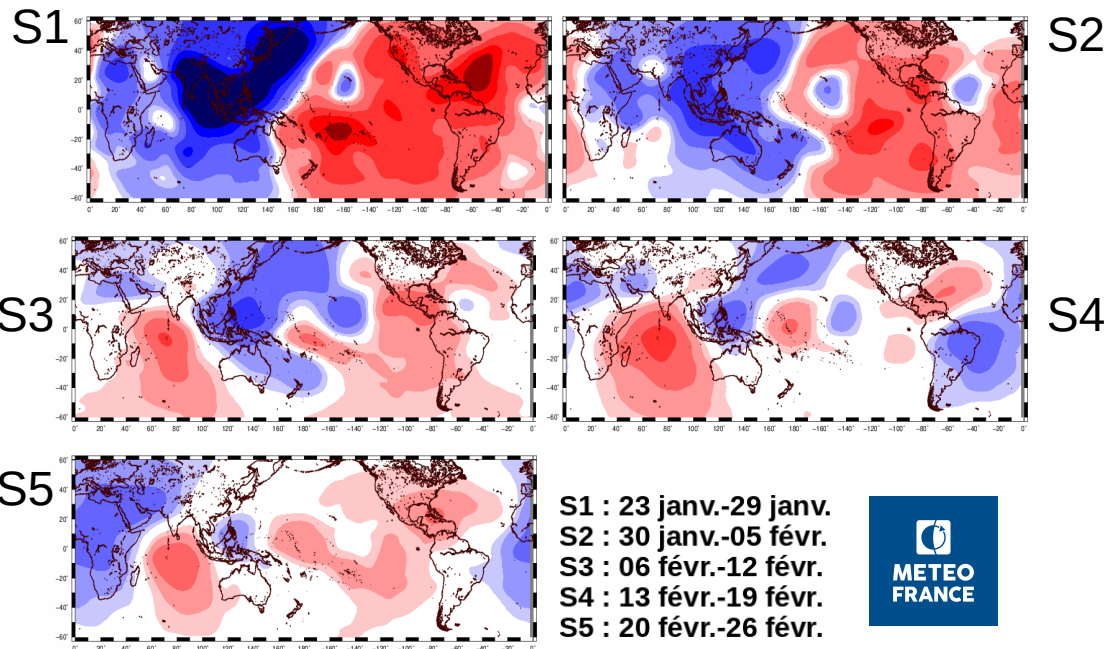
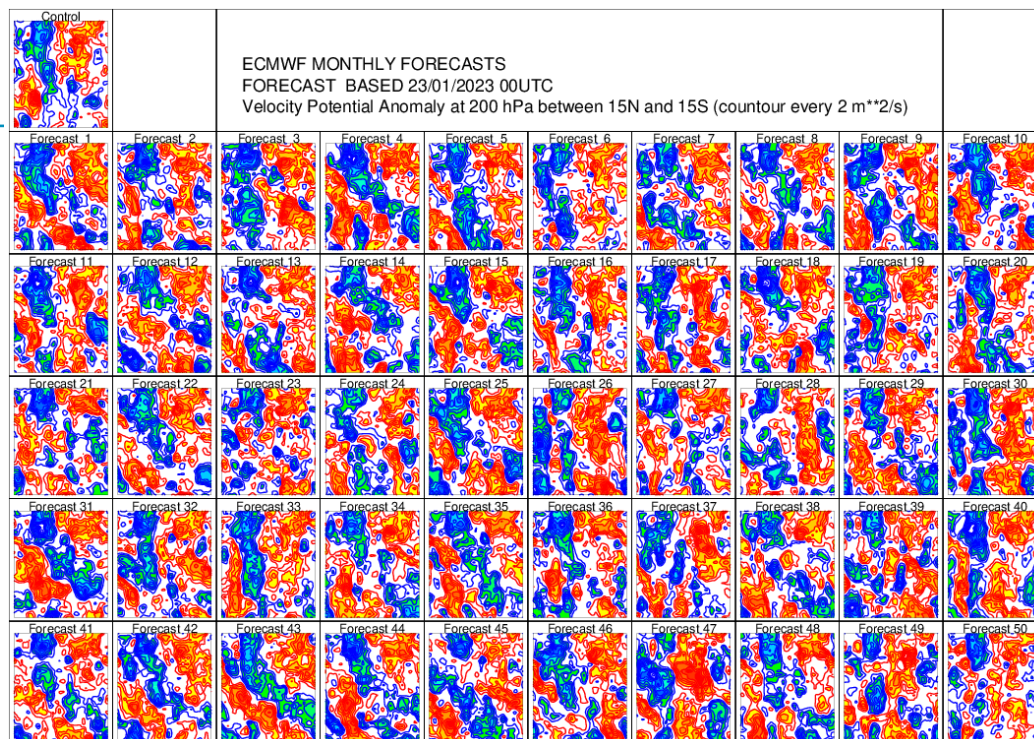
VELOCITY POTENTIAL AT 200 HPA

Ensemble mean between Lat 15S and 15N

FORECAST BASED 23/01/2023 00UTC



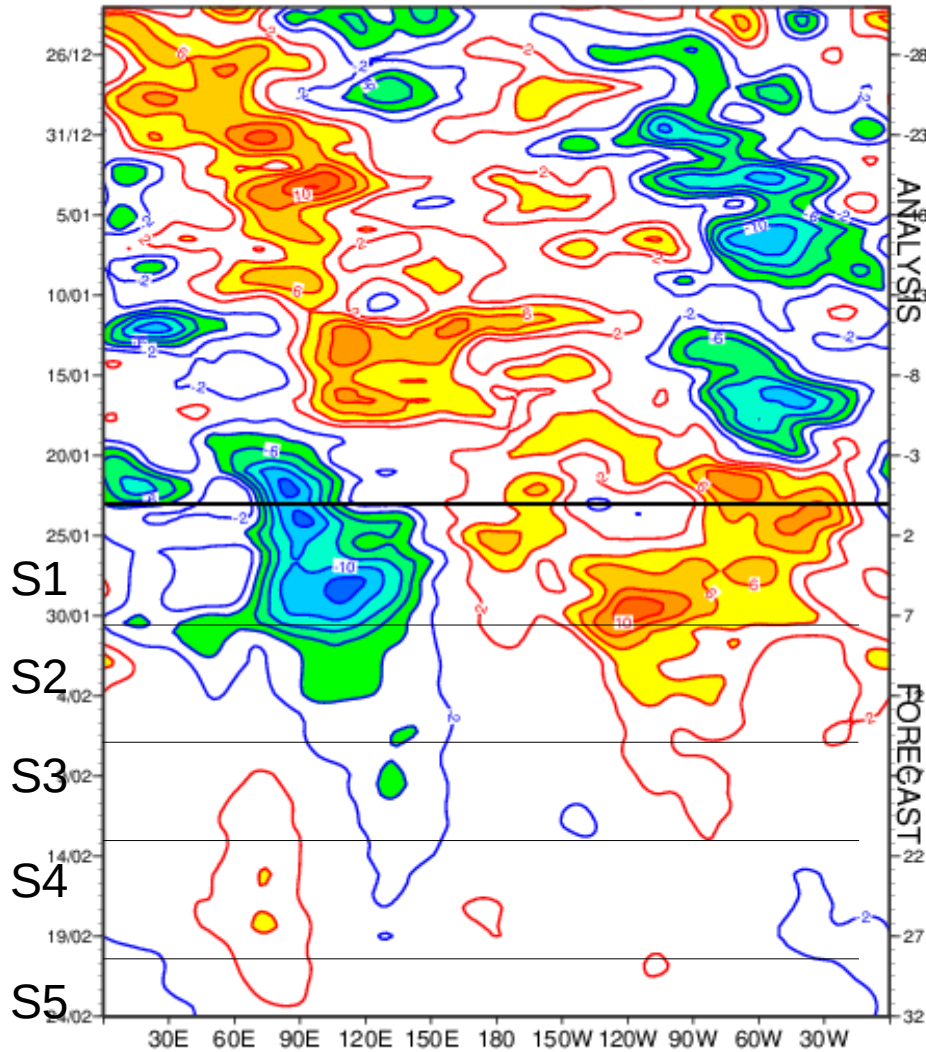
Prévisions 51 membres



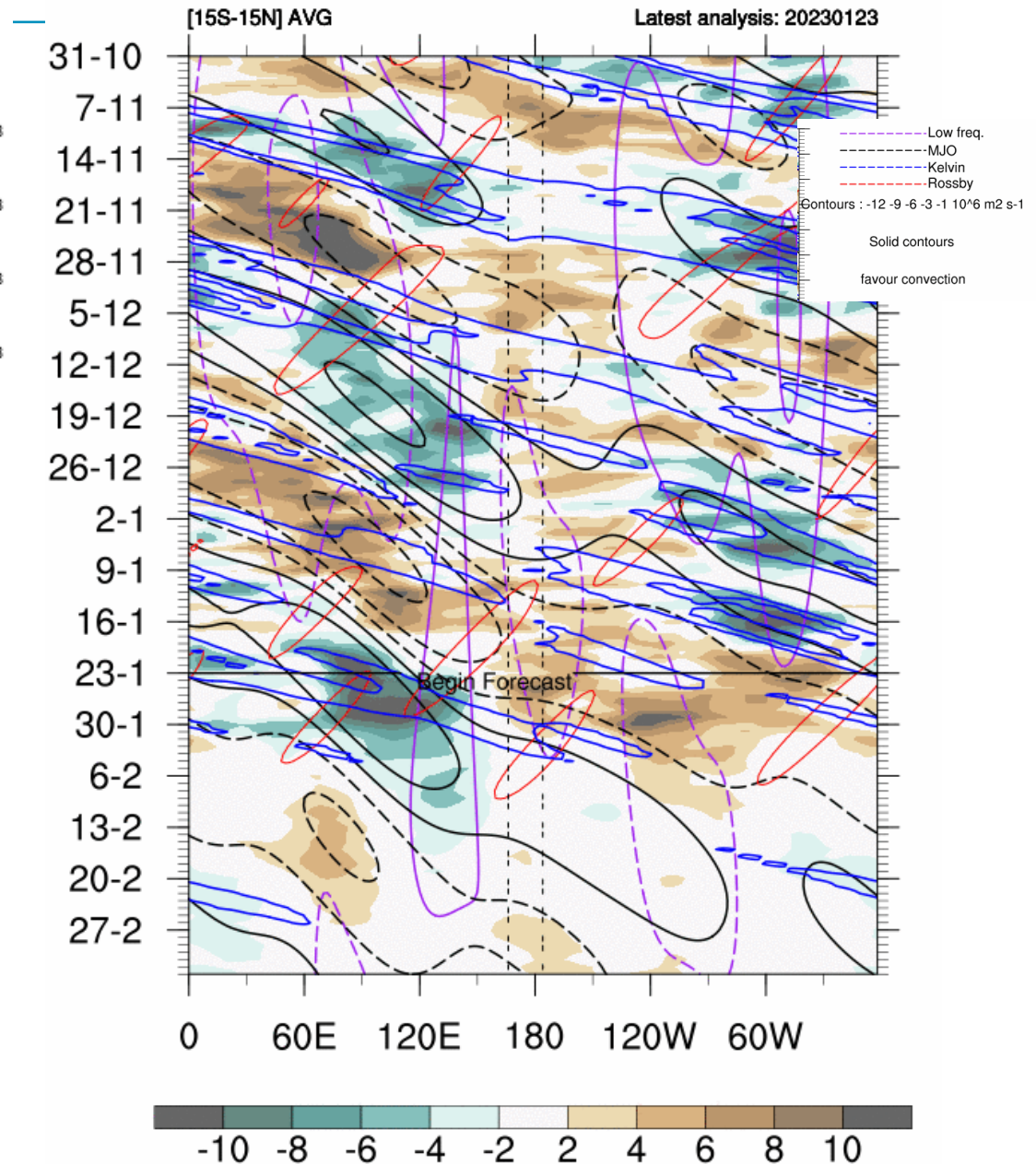
VP200 – EPS mensuel

Moyenne EPS

VELOCITY POTENTIAL AT 200 HPA
Ensemble mean between Lat 15S and 15N
FORECAST BASED 23/01/2023 00UTC

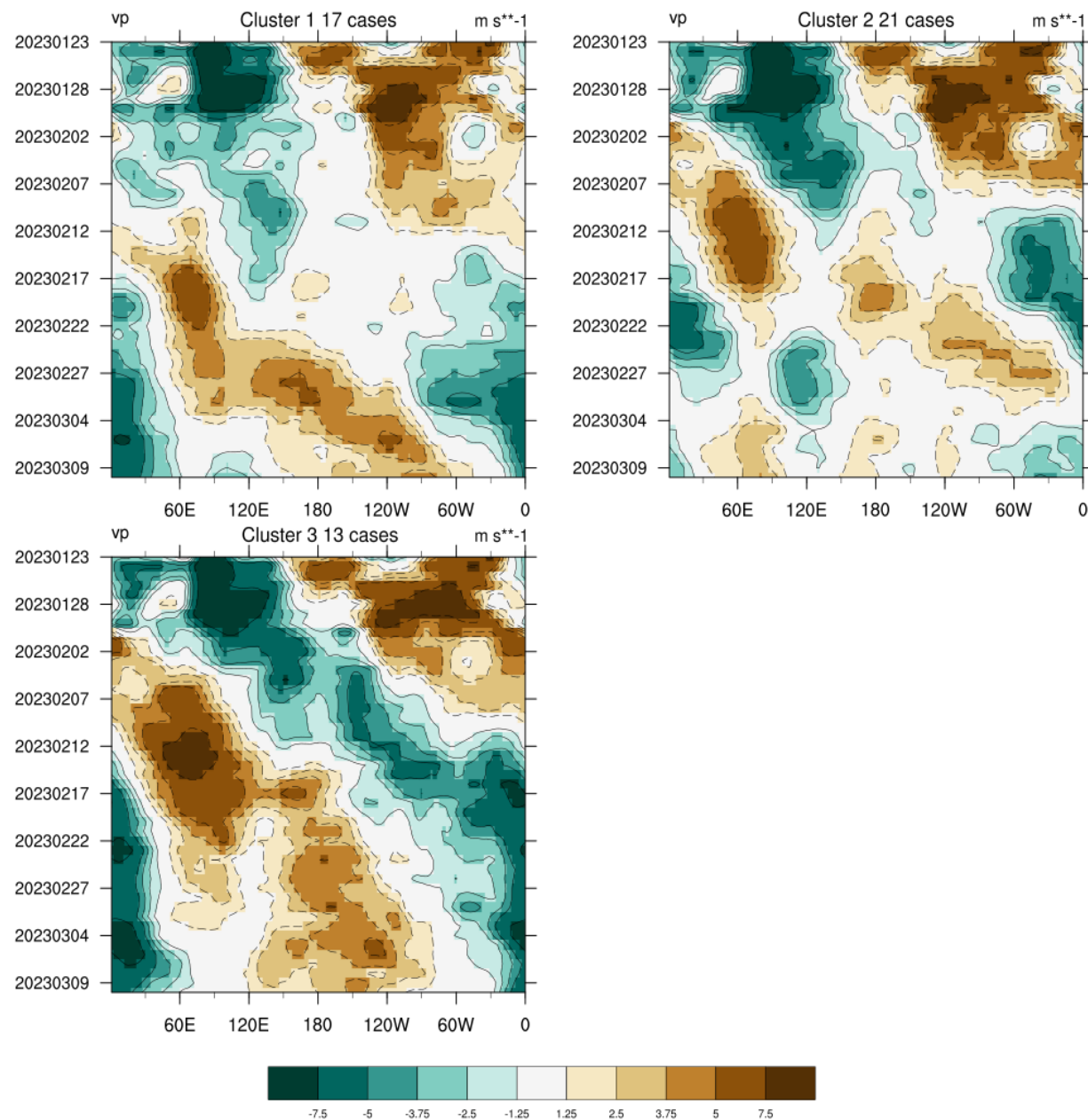


vp200 anomaly + Eq. Waves filtering



Contact: philippe.peyrille@meteo.fr

Clustering VP200



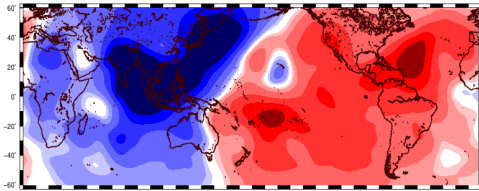
Contact: philippe.peyrille@meteo.fr

Synthèse MJO

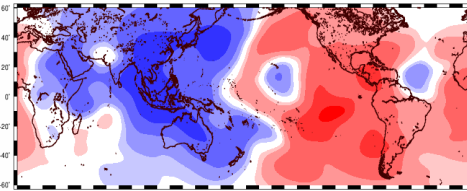
	S1	S2	S3	S4	S5
Phase MJO prévue	3	4/5	6	7	8/1
Intensité	Forte	Modérée	Faible à modérée	Faible à modérée	Faible à modérée
Confiance	Bonne	Bonne	Bonne	Moyenne	Moyenne



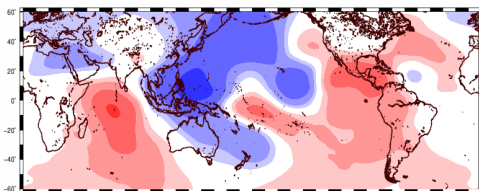
S1



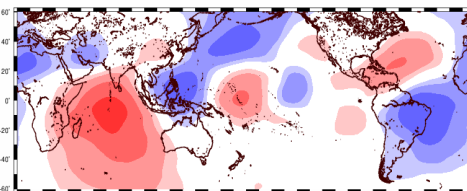
S2



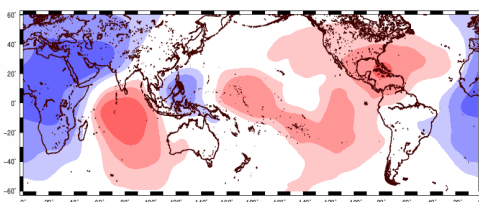
S3



S4

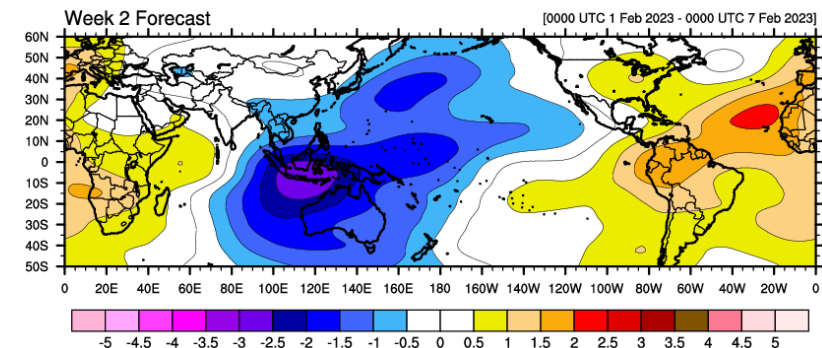
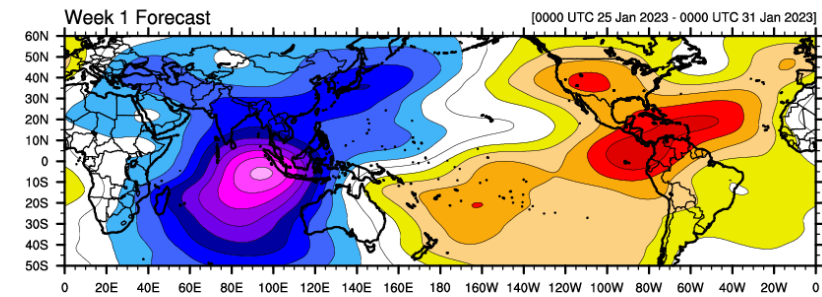
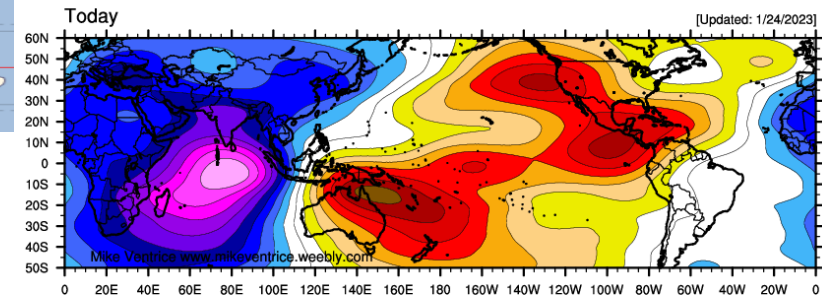


S5



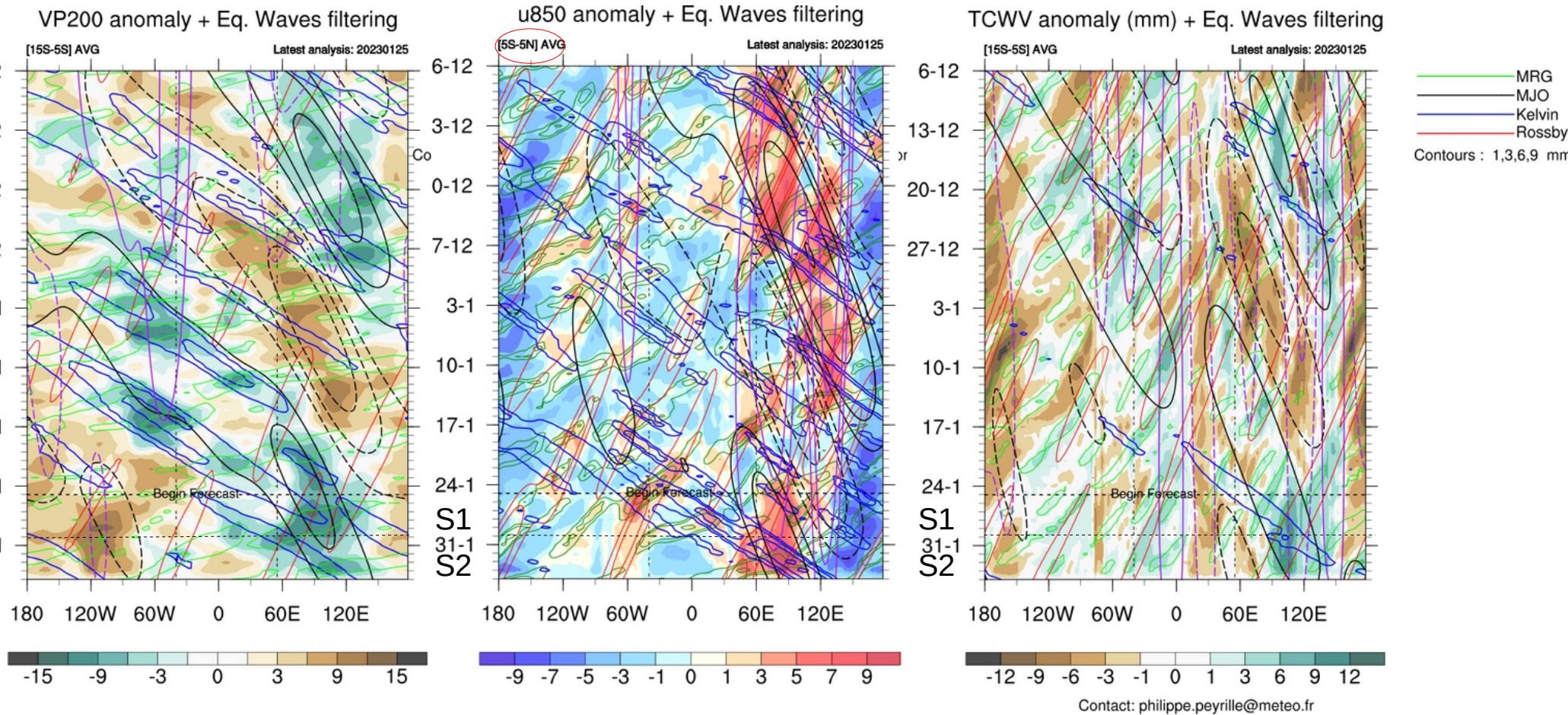
S1 : 23 janv.-29 janv.
S2 : 30 janv.-05 févr.
S3 : 06 févr.-12 févr.
S4 : 13 févr.-19 févr.
S5 : 20 févr.-26 févr.

MJO filtered VP200 Forecast



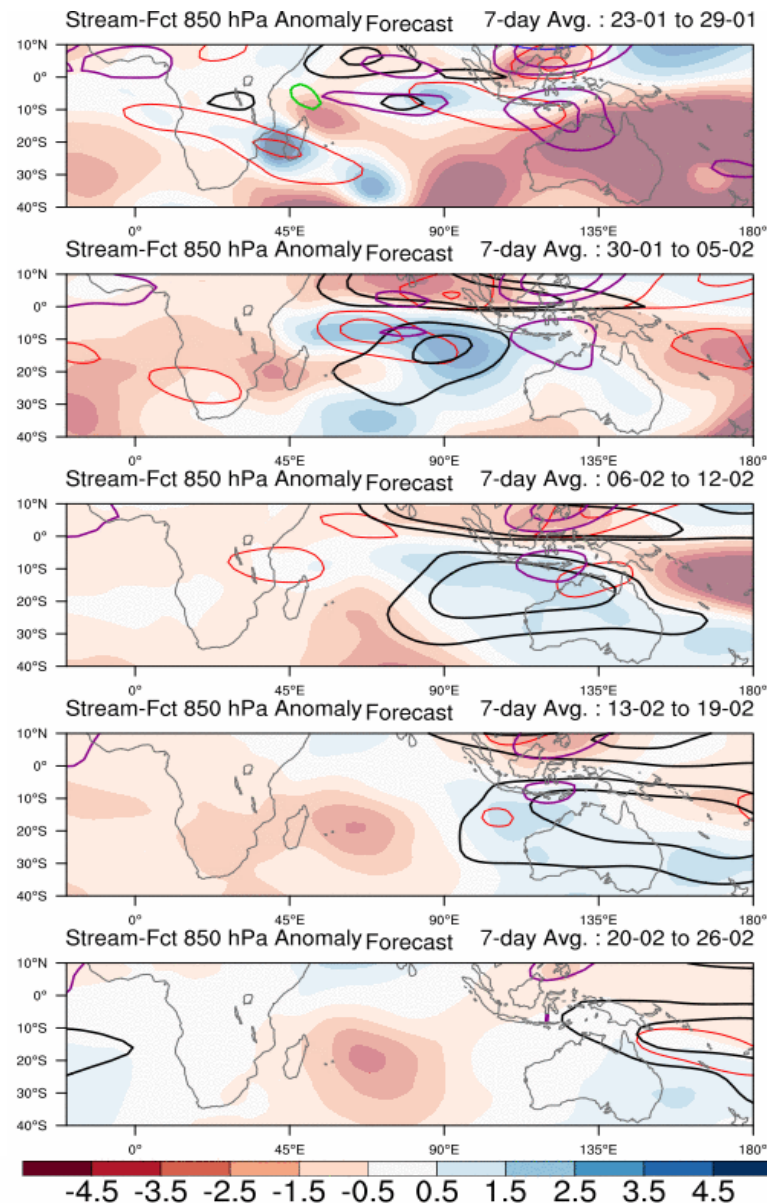
3. Prévision – Ondes équatoriales

3. Ondes équatoriales



SF850 – MJO, ER dans l'Indien

Cartes 7j



S1

S2

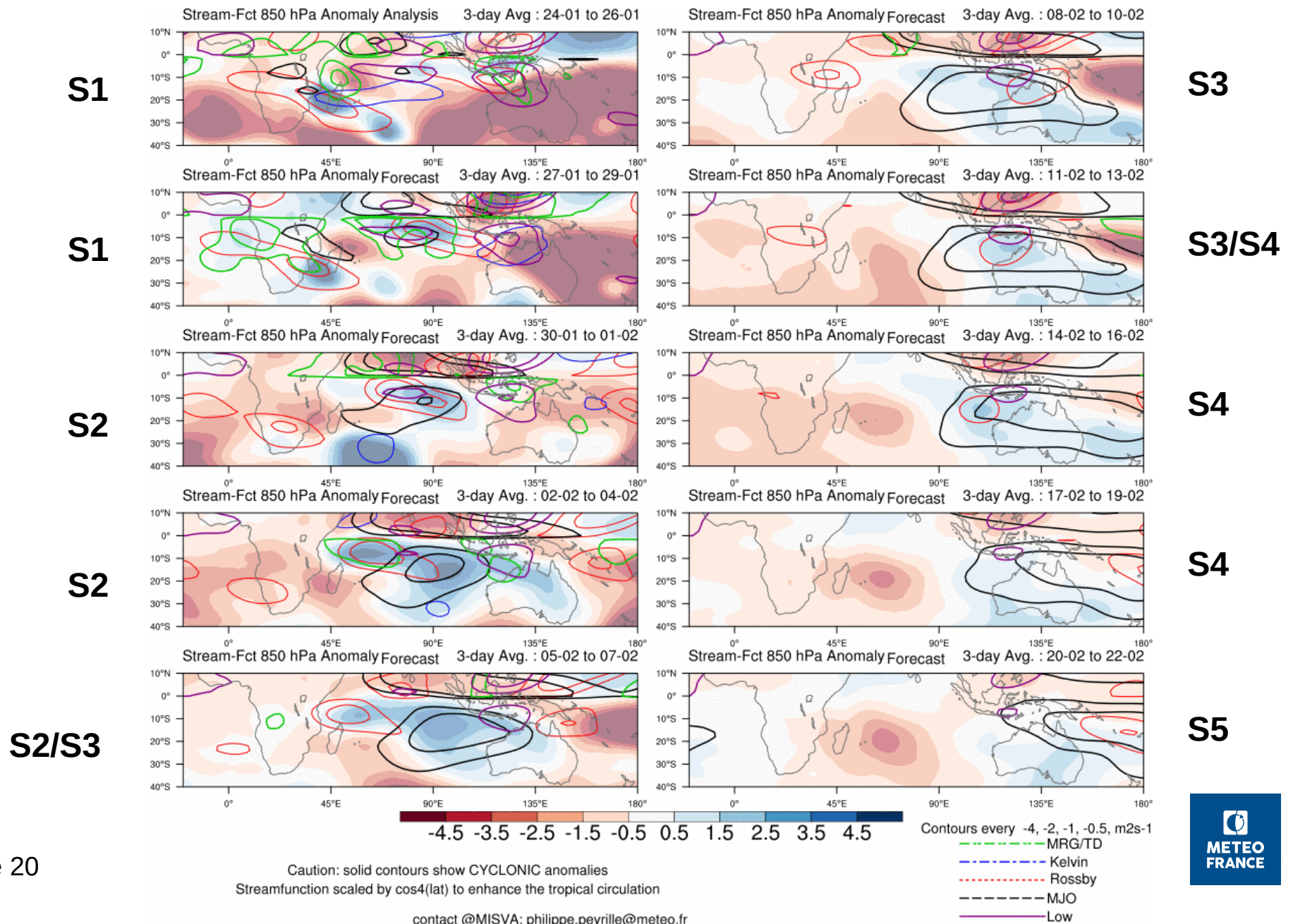
S3

S4

S5

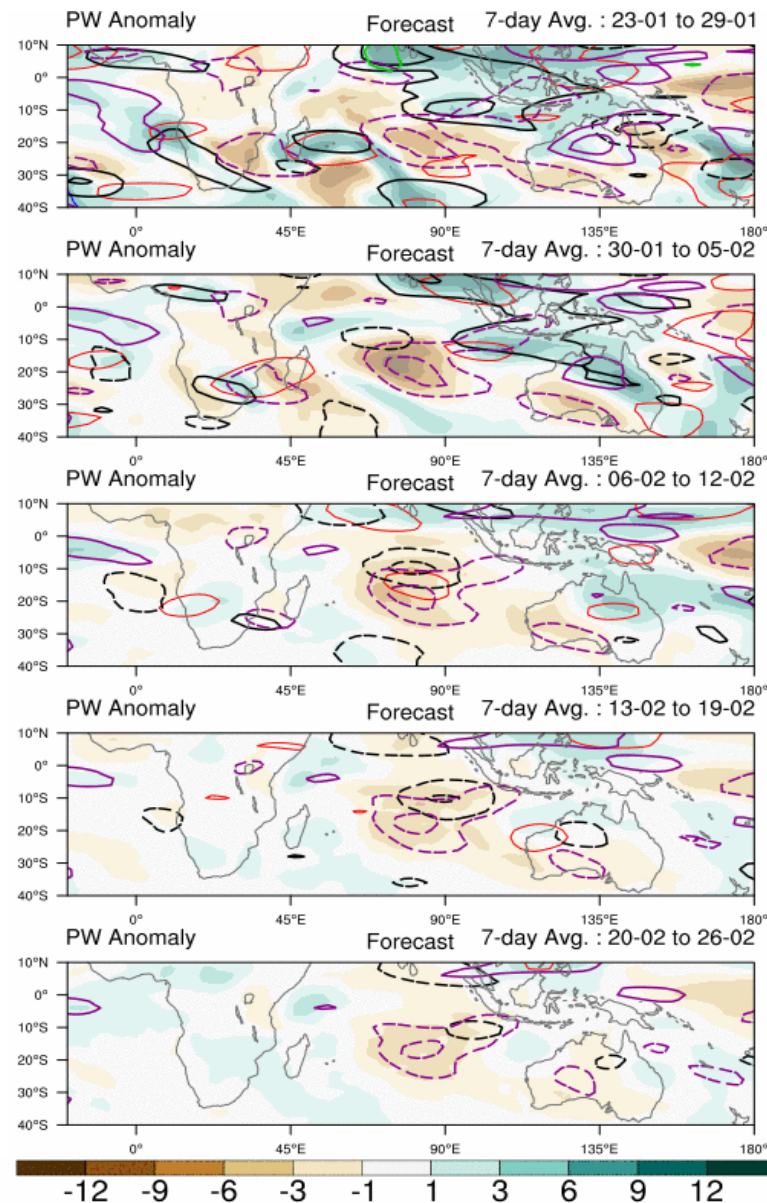
SF850 – MJO, ER dans l'Indien

Cartes 3j



PW – MJO, ER dans l'Indien

Cartes 7j



S1

S2

S3

S4

S5

Contours every 1.5, 4, 6, mm

MRG/TD

Kelvin

Rossby

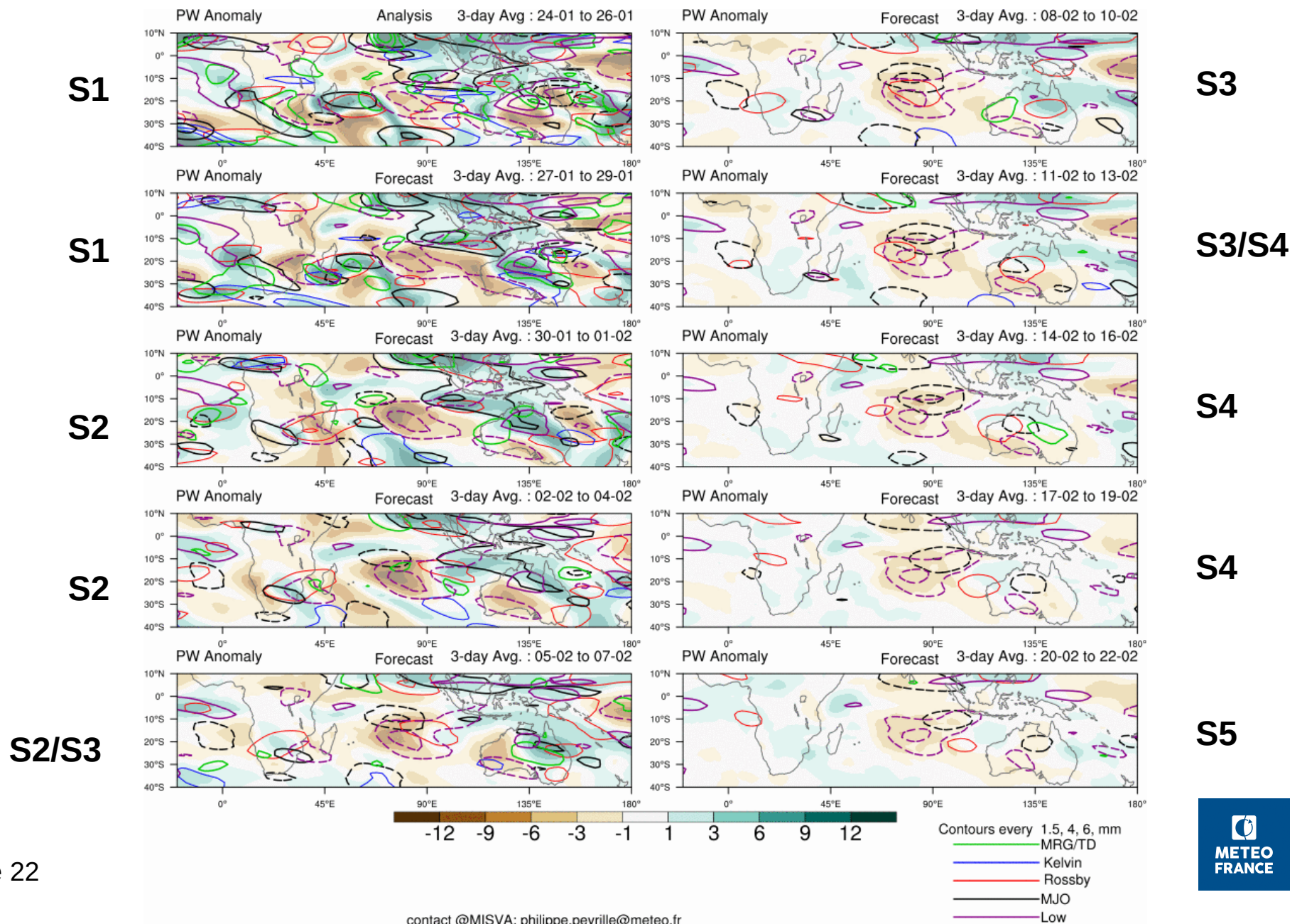
MJO

Low



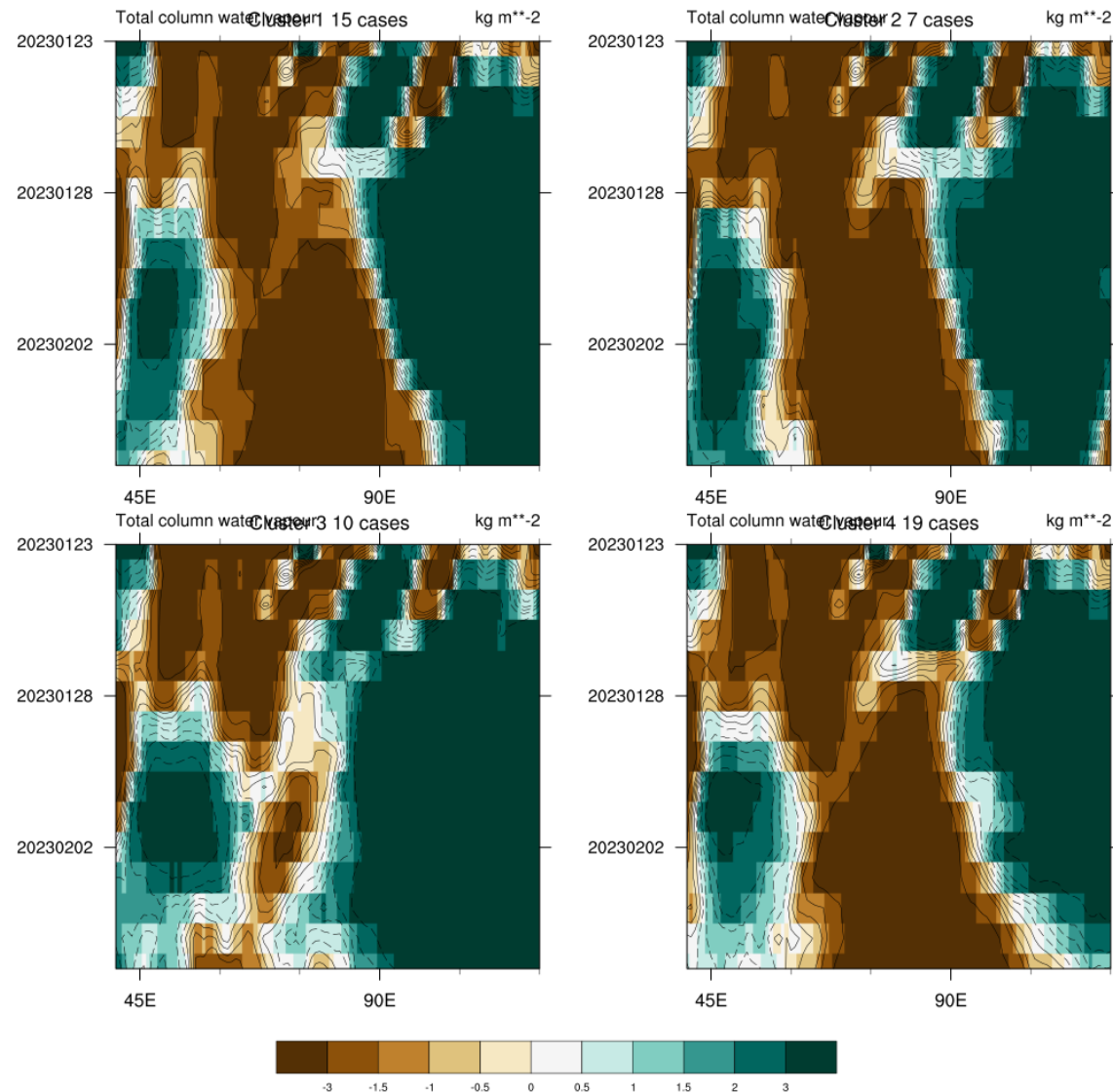
PW – MJO, ER dans l'Indien

Cartes 3j



Clustering PW

Zoom sur OI – 15S5S - S1/S2

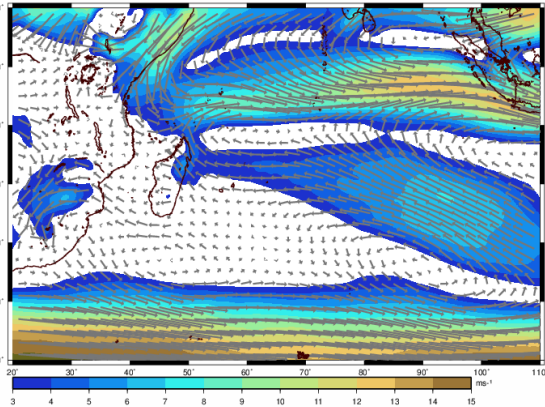


4. Impacts en temps sensible, temps sévère

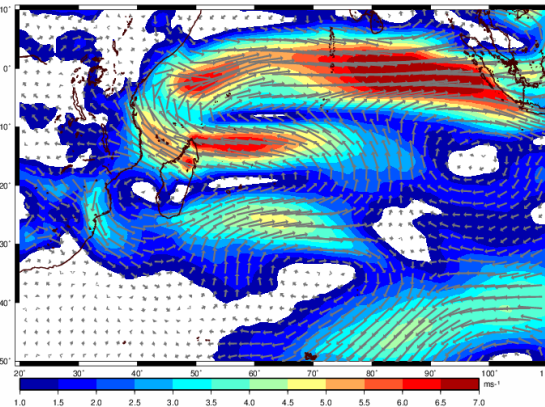
Configuration du bassin

S2

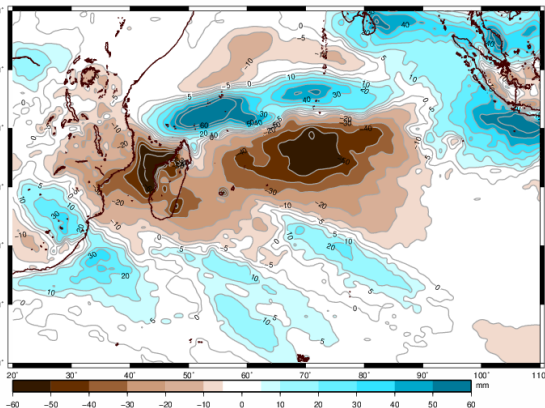
Vent 850hPa
période du 2023-01-30 au 2023-02-06
Prévision mensuelle CEPMMT base 2023-01-23



Anomalie force du vent 850hPa
période du 2023-01-30 au 2023-02-06
Prévision mensuelle CEPMMT base 2023-01-23

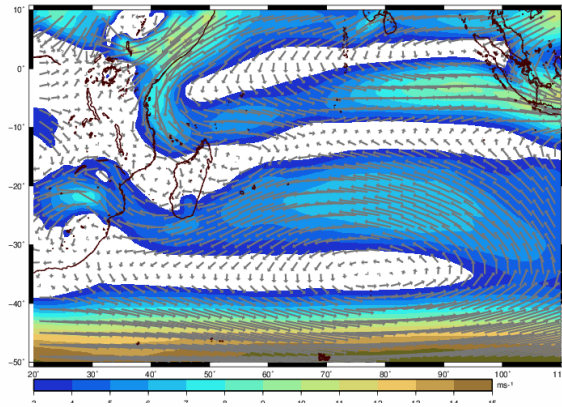


Anomalie de précipitations
période du 2023-01-30 au 2023-02-06
Prévision mensuelle CEPMMT base 2023-01-23

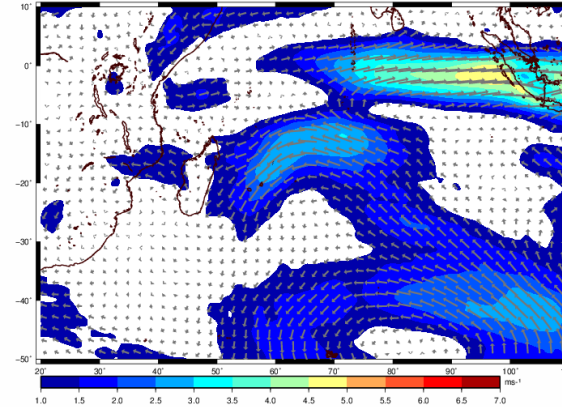


S3

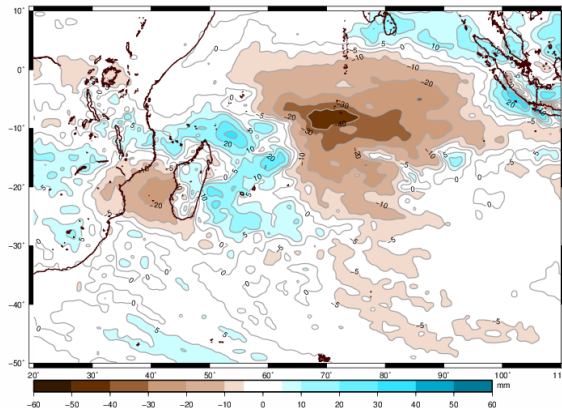
Vent 850hPa
période du 2023-02-06 au 2023-02-13
Prévision mensuelle CEPMMT base 2023-01-23



Anomalie force du vent 850hPa
période du 2023-02-06 au 2023-02-13
Prévision mensuelle CEPMMT base 2023-01-23

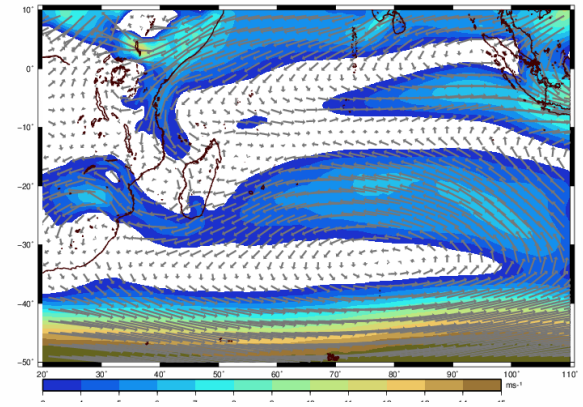


Anomalie de précipitations
période du 2023-02-06 au 2023-02-13
Prévision mensuelle CEPMMT base 2023-01-23

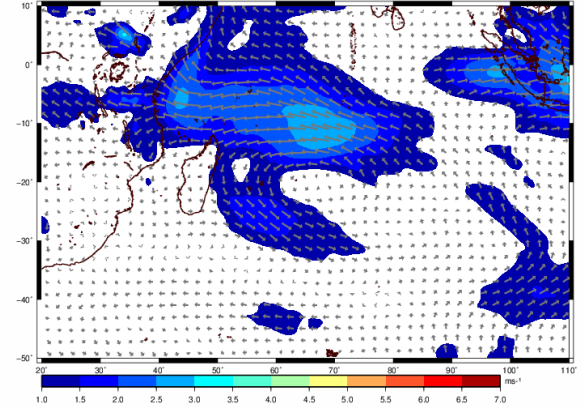


S4

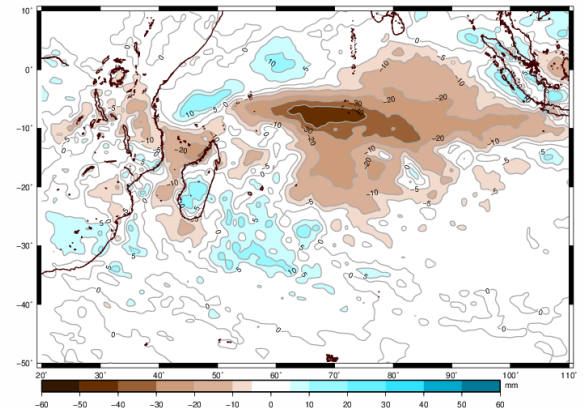
Vent 850hPa
période du 2023-02-13 au 2023-02-20
Prévision mensuelle CEPMMT base 2023-01-23



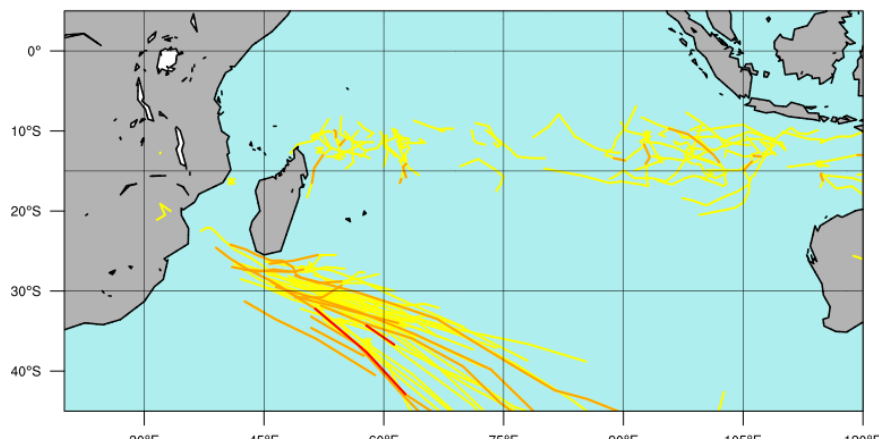
Anomalie force du vent 850hPa
période du 2023-02-13 au 2023-02-20
Prévision mensuelle CEPMMT base 2023-01-23



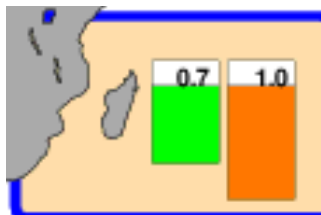
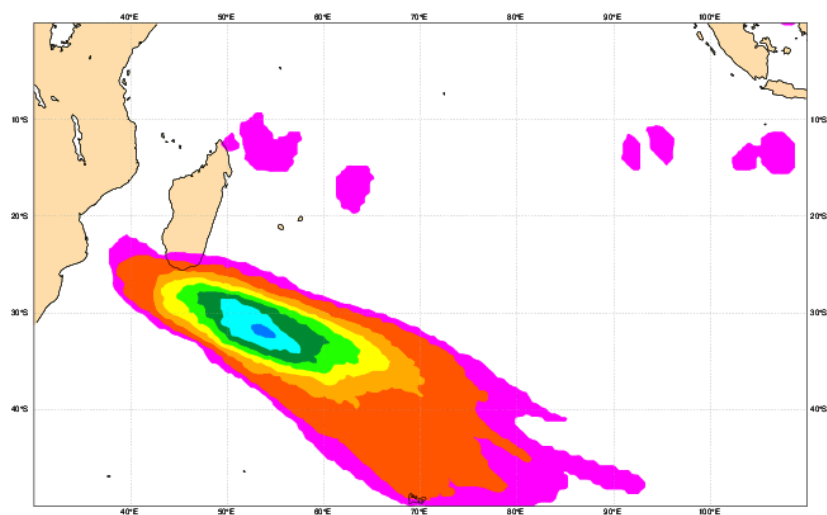
Anomalie de précipitations
période du 2023-02-13 au 2023-02-20
Prévision mensuelle CEPMMT base 2023-01-23



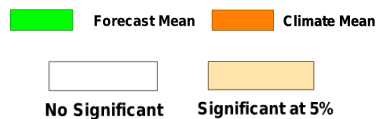
Activité cyclonique [S2]



Weekly mean Tropical Storm Strike Probability. Date: 20230123 0 UTC 1+(168-336)
Probability of a TS passing within 300km radius

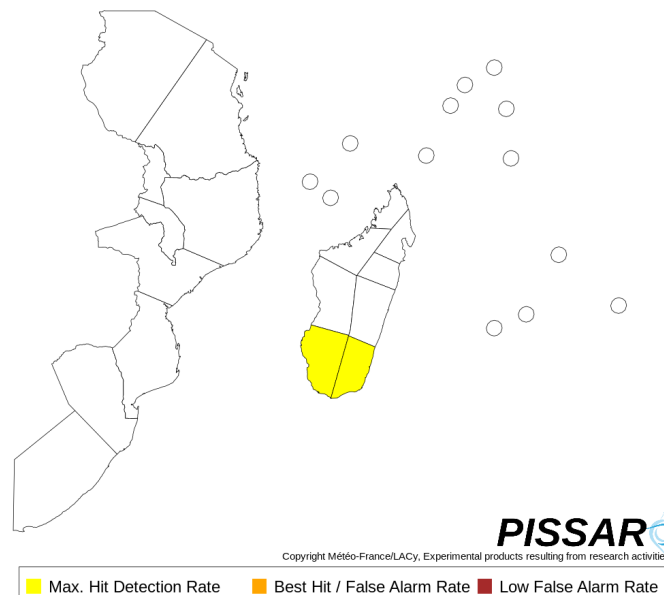


ECMWF Monthly Forecast
Accumulated Cyclone Energy



Tropical Cyclone Hazard Assessment based on ECMWF strike probability monthly forecast

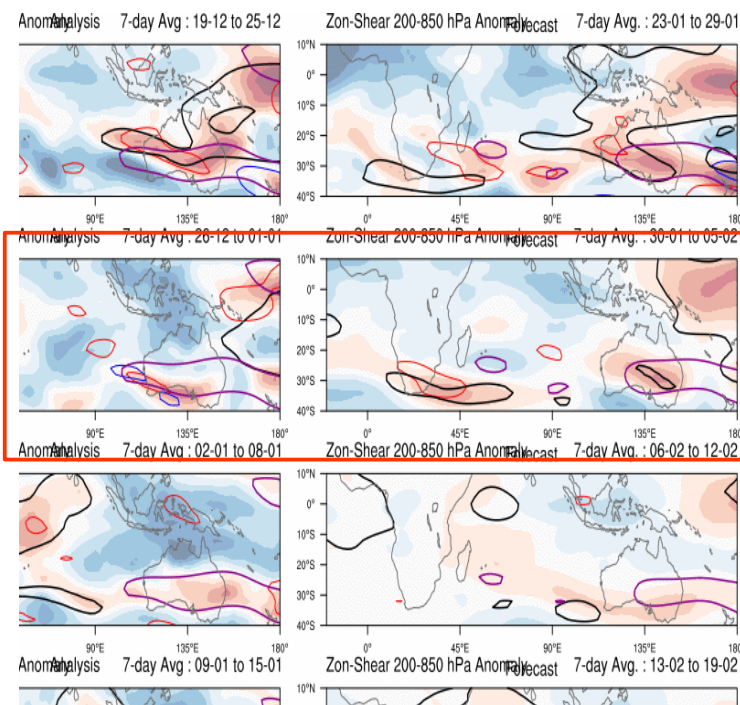
Week 2 starting 2023-01-30 ending 2023-02-06
Base : 2023-01-23 00UTC



PISSAR

Copyright Météo-France/LACy, Experimental products resulting from research activities

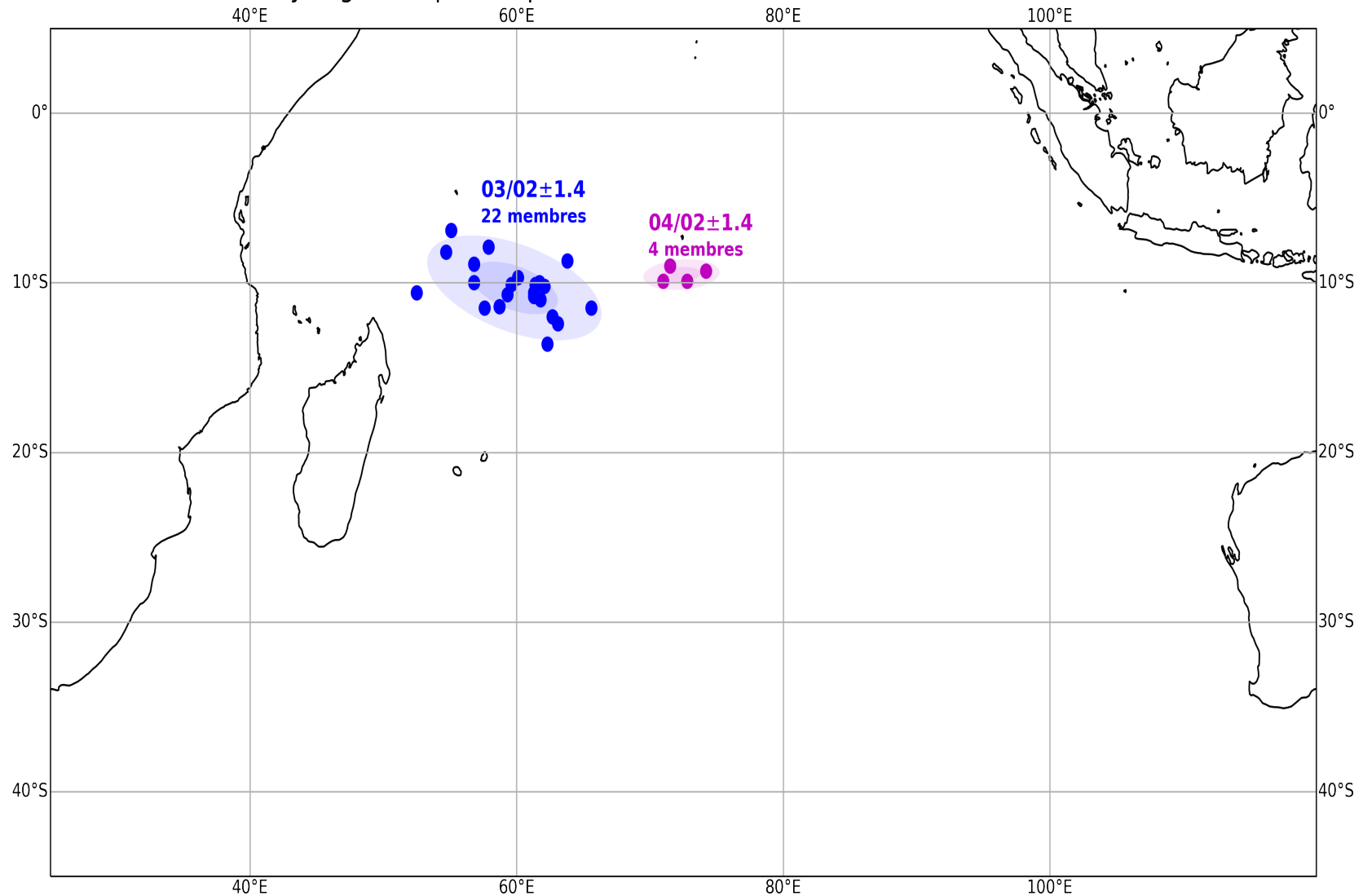
Max. Hit Detection Rate Best Hit / False Alarm Rate Low False Alarm Rate



S2

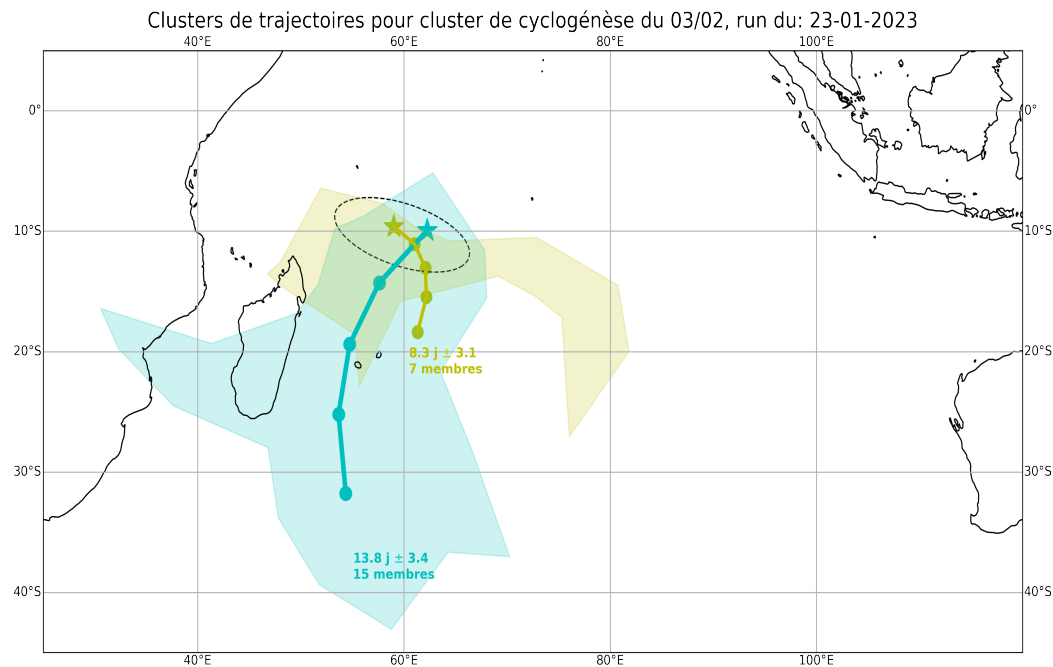
Cyclogénèses potentielles du 30/01 au 06/02

Clusters de cyclogénèse pour la période du 30-01-2023 au 06-02-2023, run du 23-01-2023

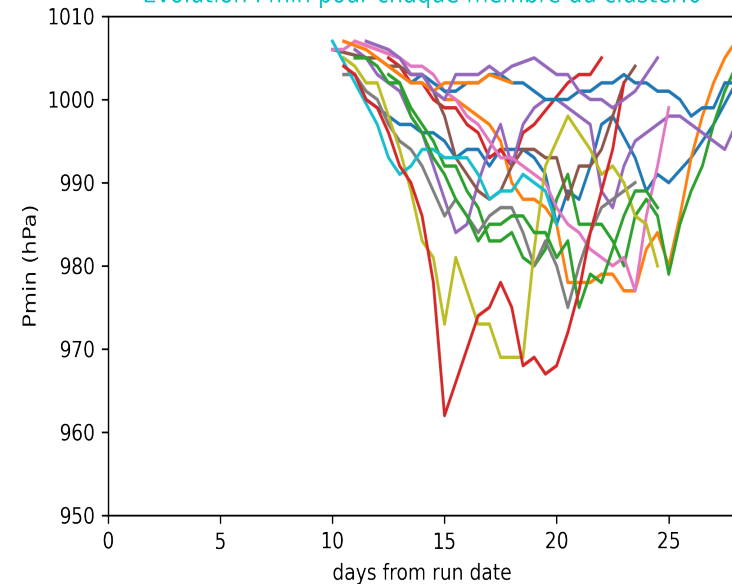


Nouveau produit – Contact : quoc-phi.duong@meteo.fr

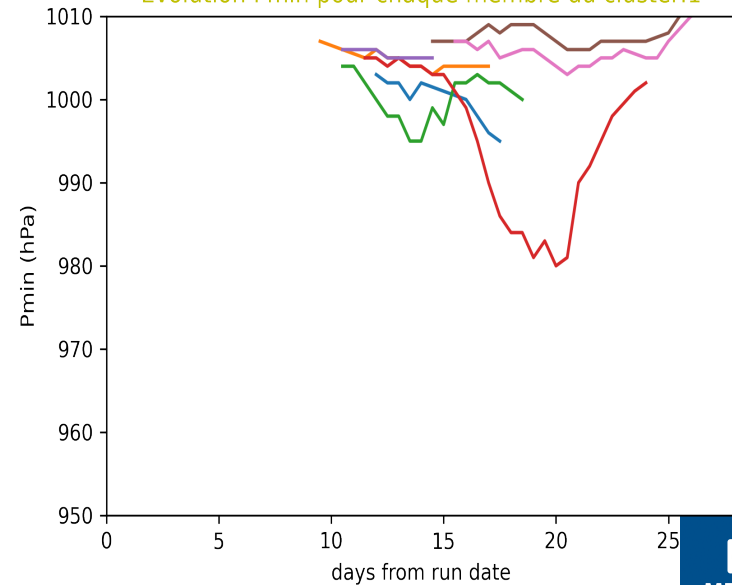
Clusters de trajectoire sur cyclogénèse potentielle du 03/02



Evolution Pmin pour chaque membre du cluster:0

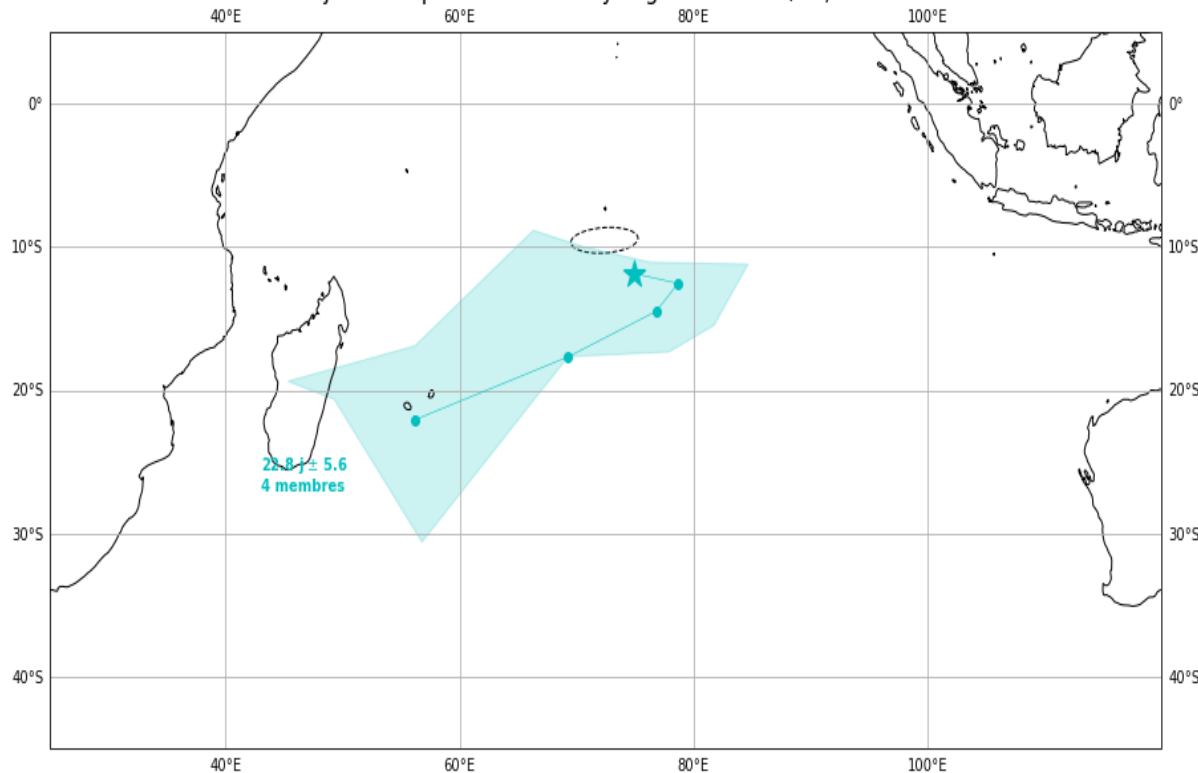


Evolution Pmin pour chaque membre du cluster:1

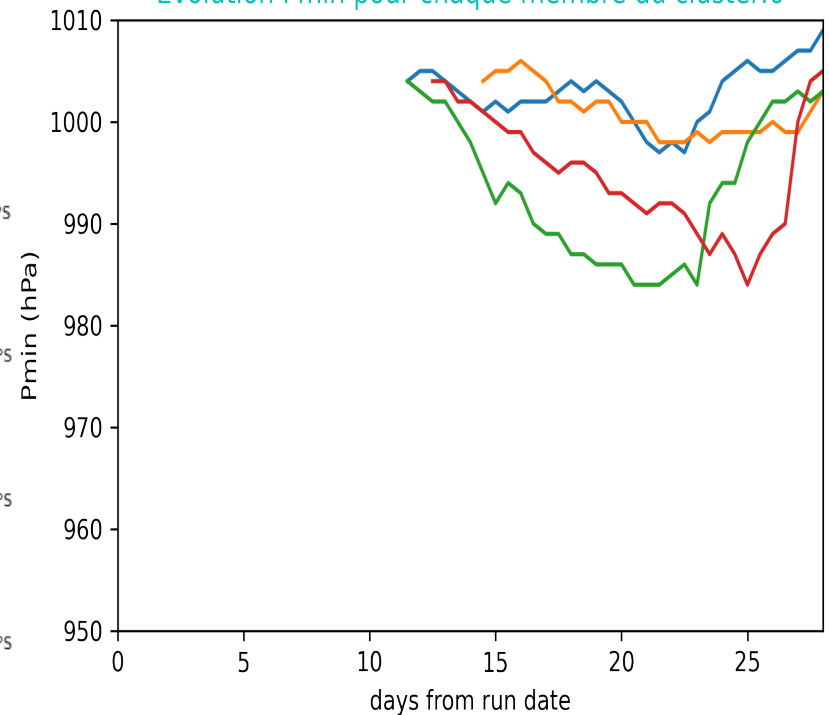


Clusters de trajectoire sur cyclogénèse potentielle du 04/02

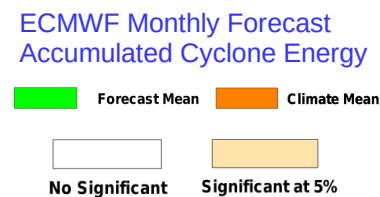
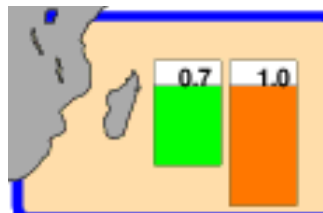
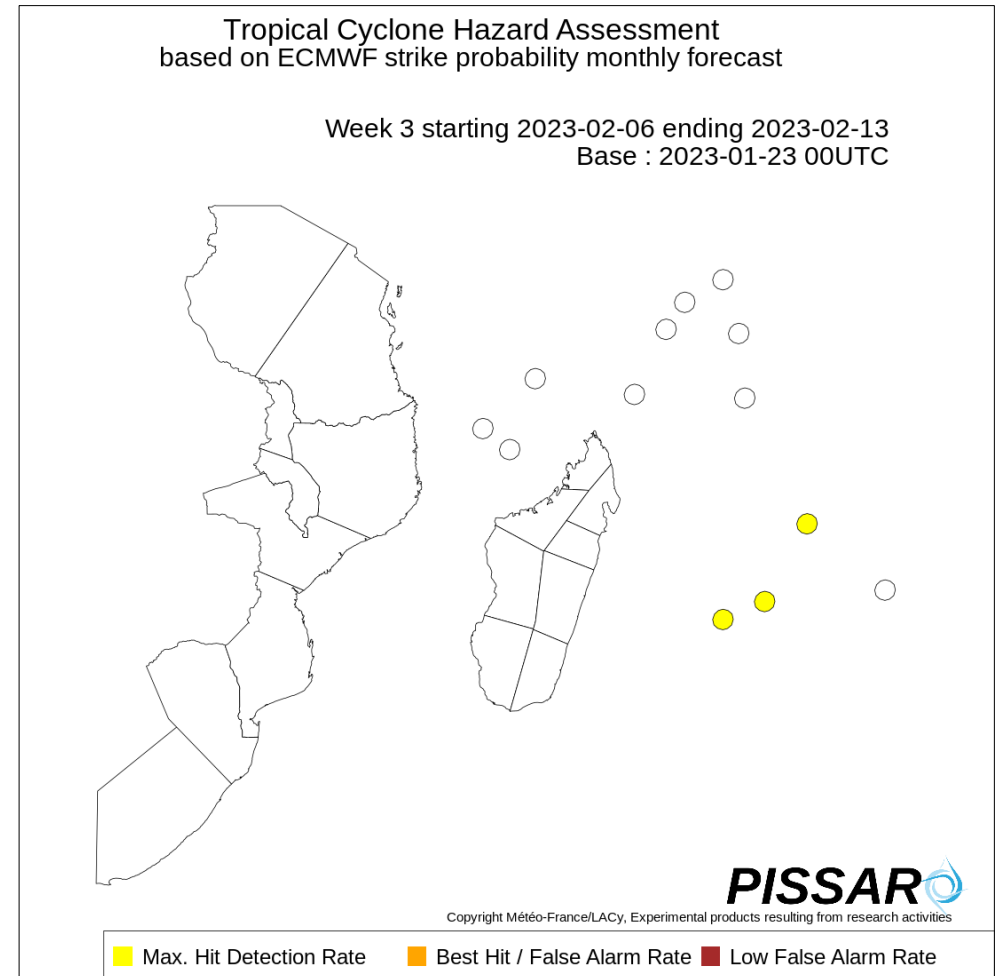
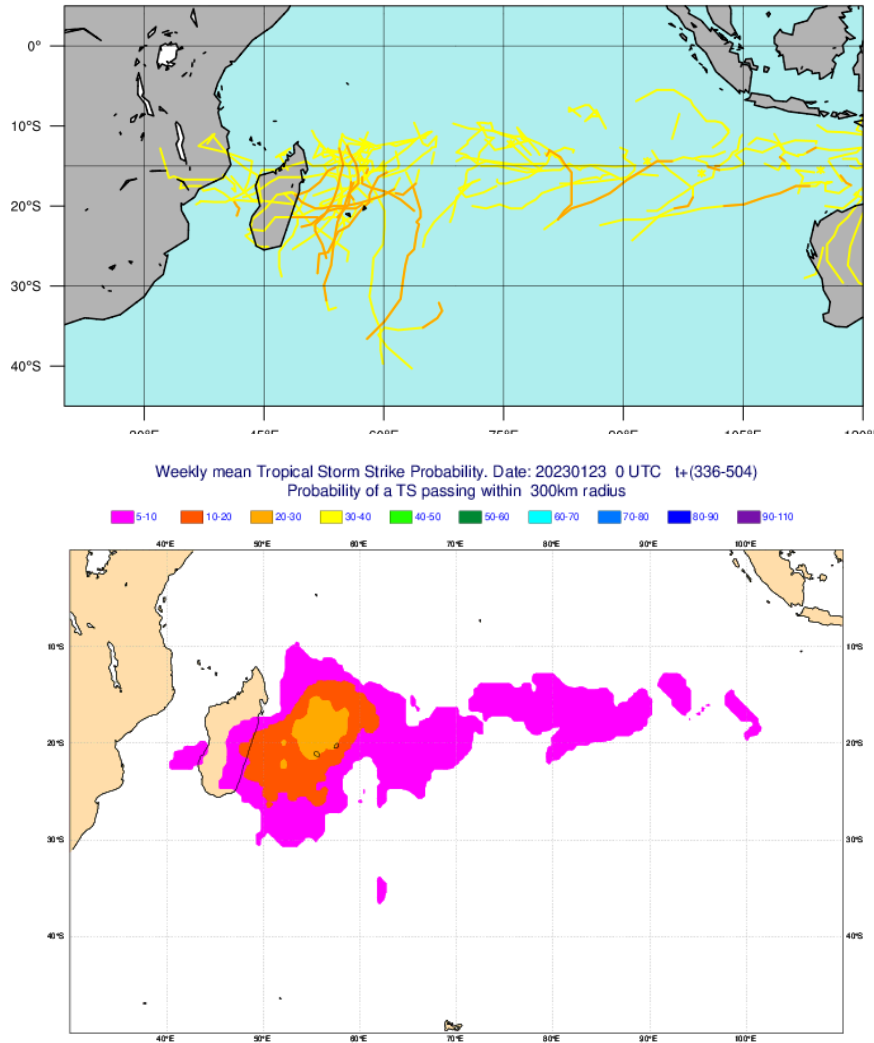
Clusters de trajectoires pour cluster de cyclogénèse du 04/02, run du: 23-01-2023



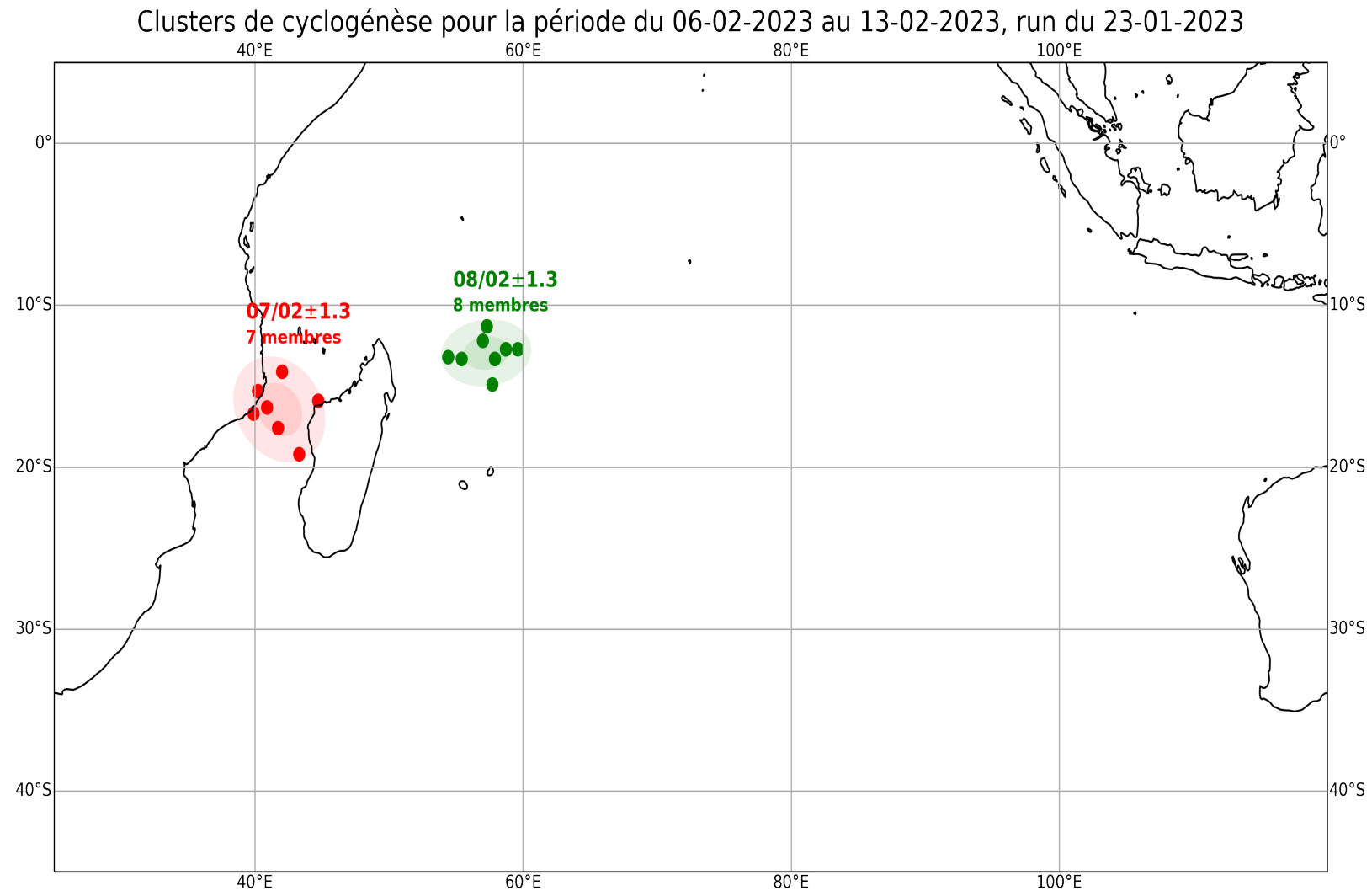
Evolution Pmin pour chaque membre du cluster:0



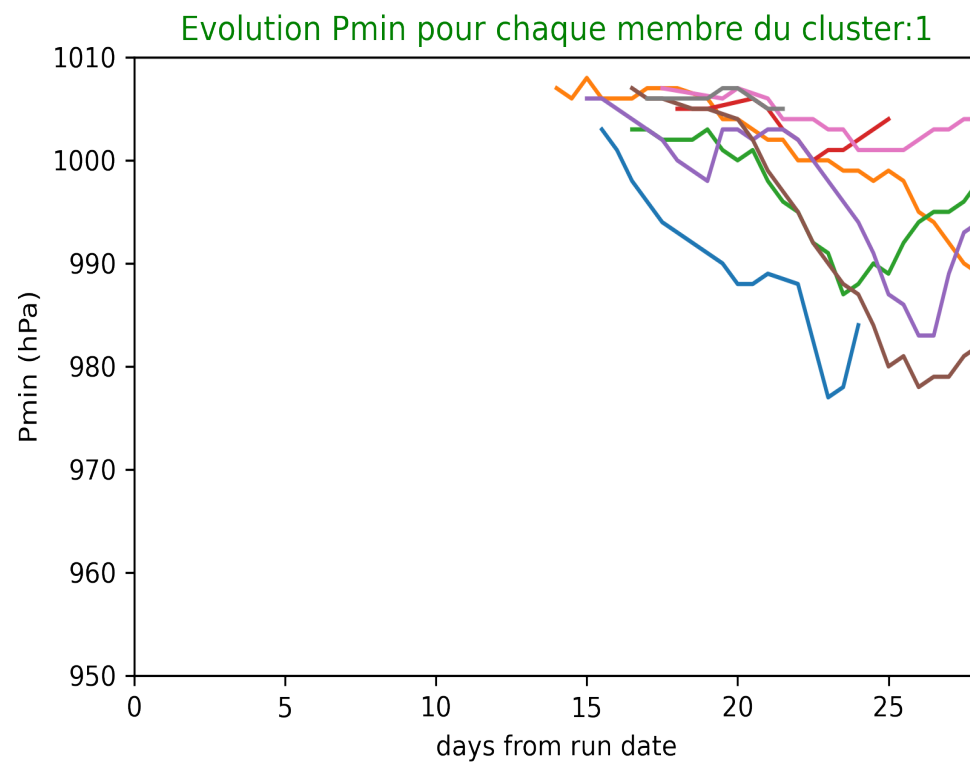
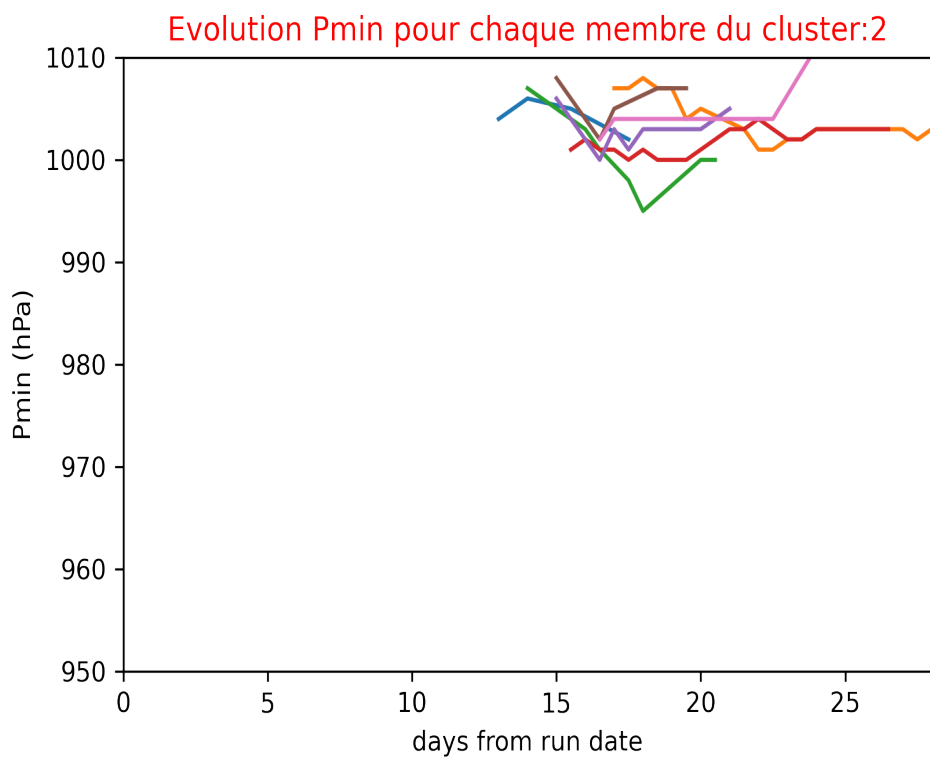
Activité cyclonique [S3]



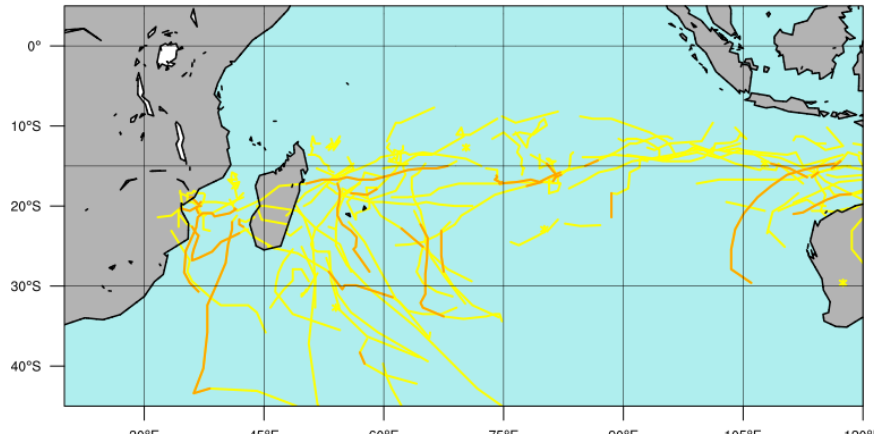
Cyclogénèses potentielles du 06/2 au 13/02



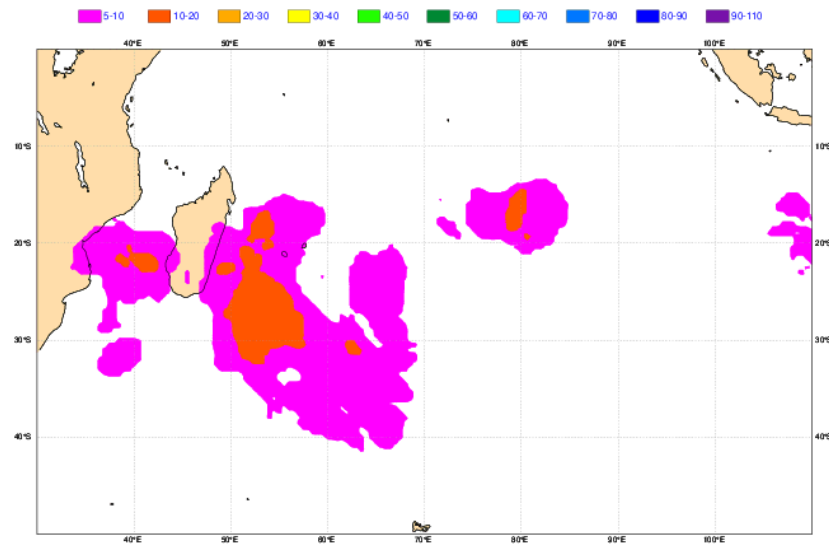
Evolution Pmin des membres



Activité cyclonique [S4]

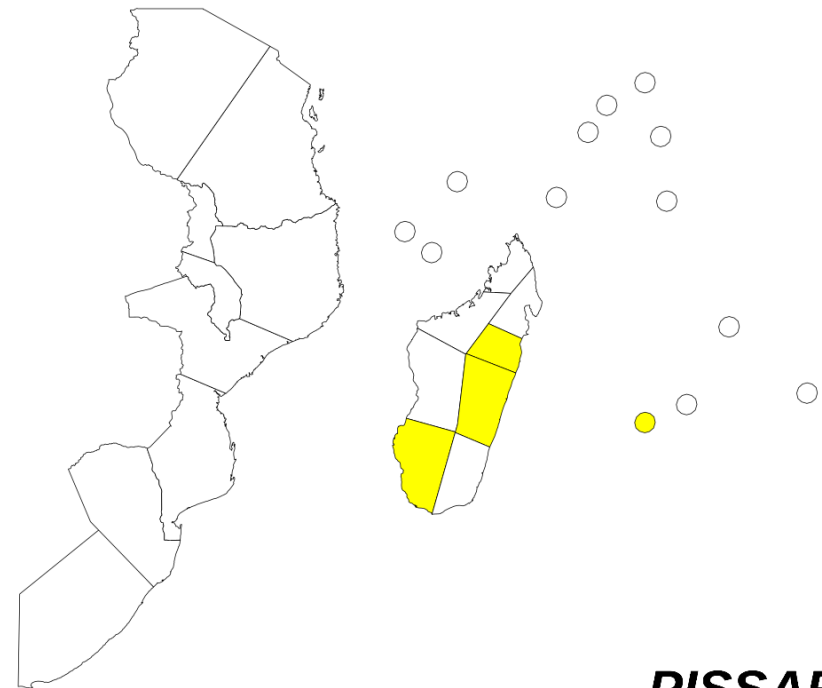


Weekly mean Tropical Storm Strike Probability. Date: 20230123 00 UTC 1+(504-672)
Probability of a TS passing within 300km radius



Tropical Cyclone Hazard Assessment based on ECMWF strike probability monthly forecast

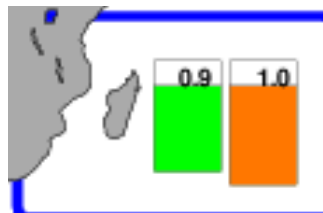
Week 4 starting 2023-02-13 ending 2023-02-20
Base : 2023-01-23 00UTC



PISSAR

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Max. Hit Detection Rate Best Hit / False Alarm Rate Low False Alarm Rate



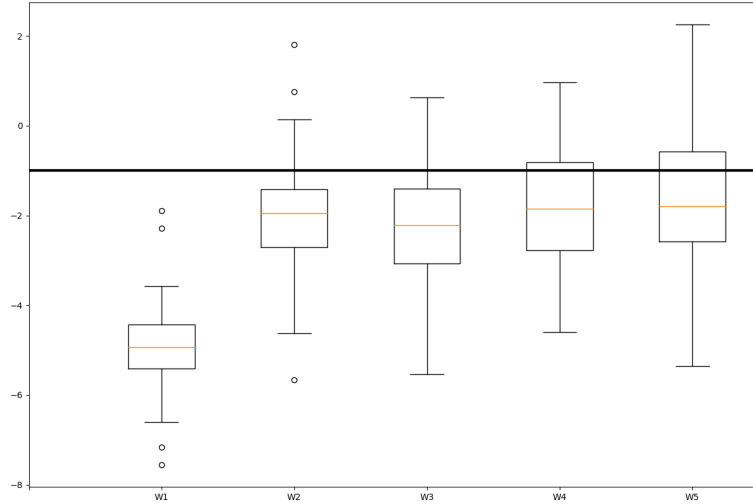
ECMWF Monthly Forecast Accumulated Cyclone Energy

Forecast Mean Climate Mean

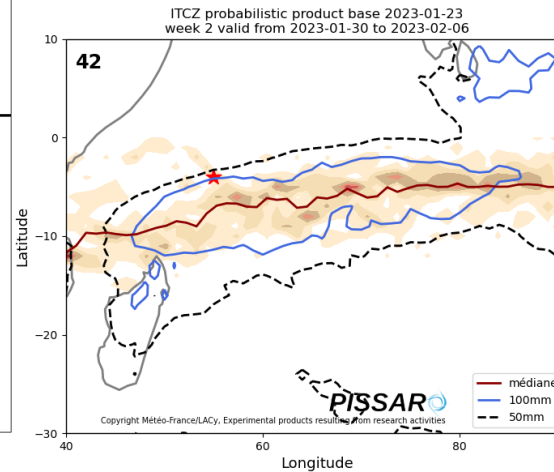
No Significant Significant at 5%

Configuration du bassin et prévision ZCIT

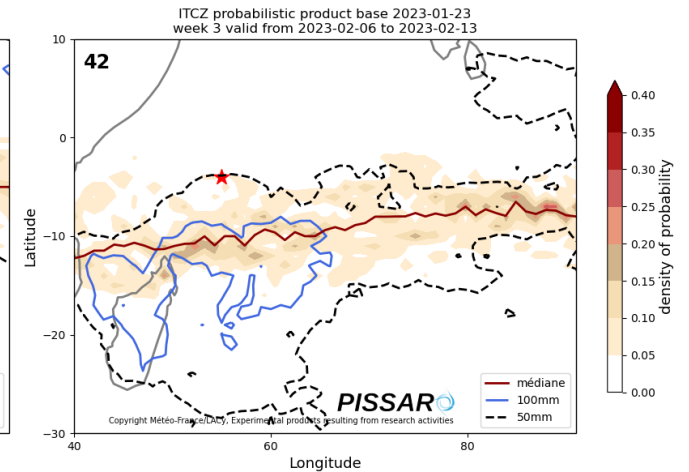
Monsoon Flux Index Monthly Forecast
base 2023-01-23



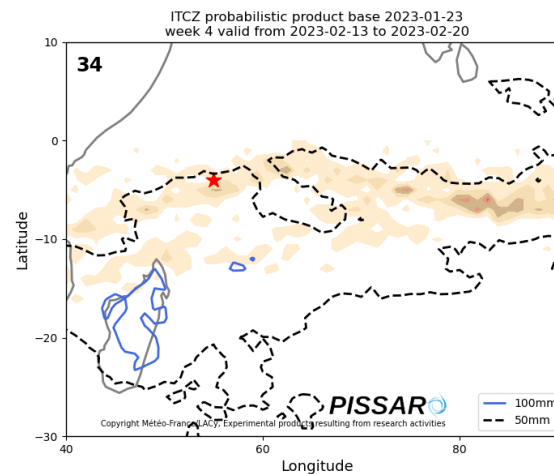
S2



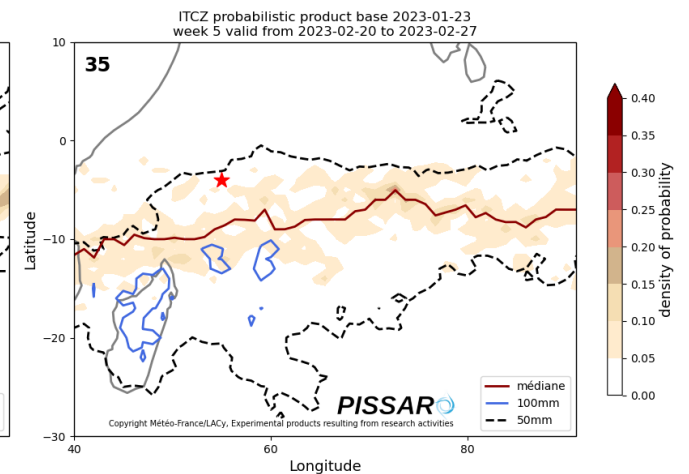
S3



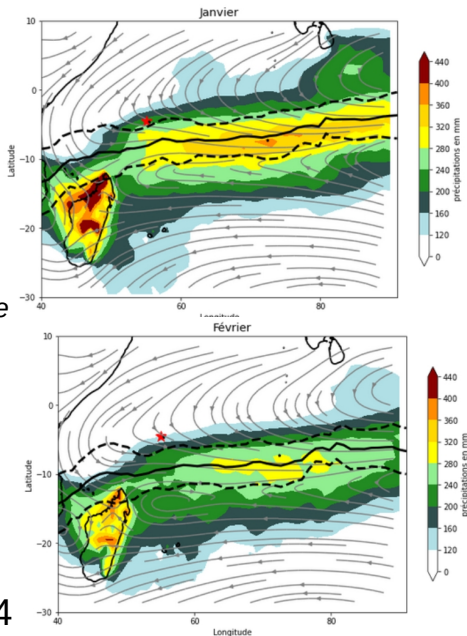
S4



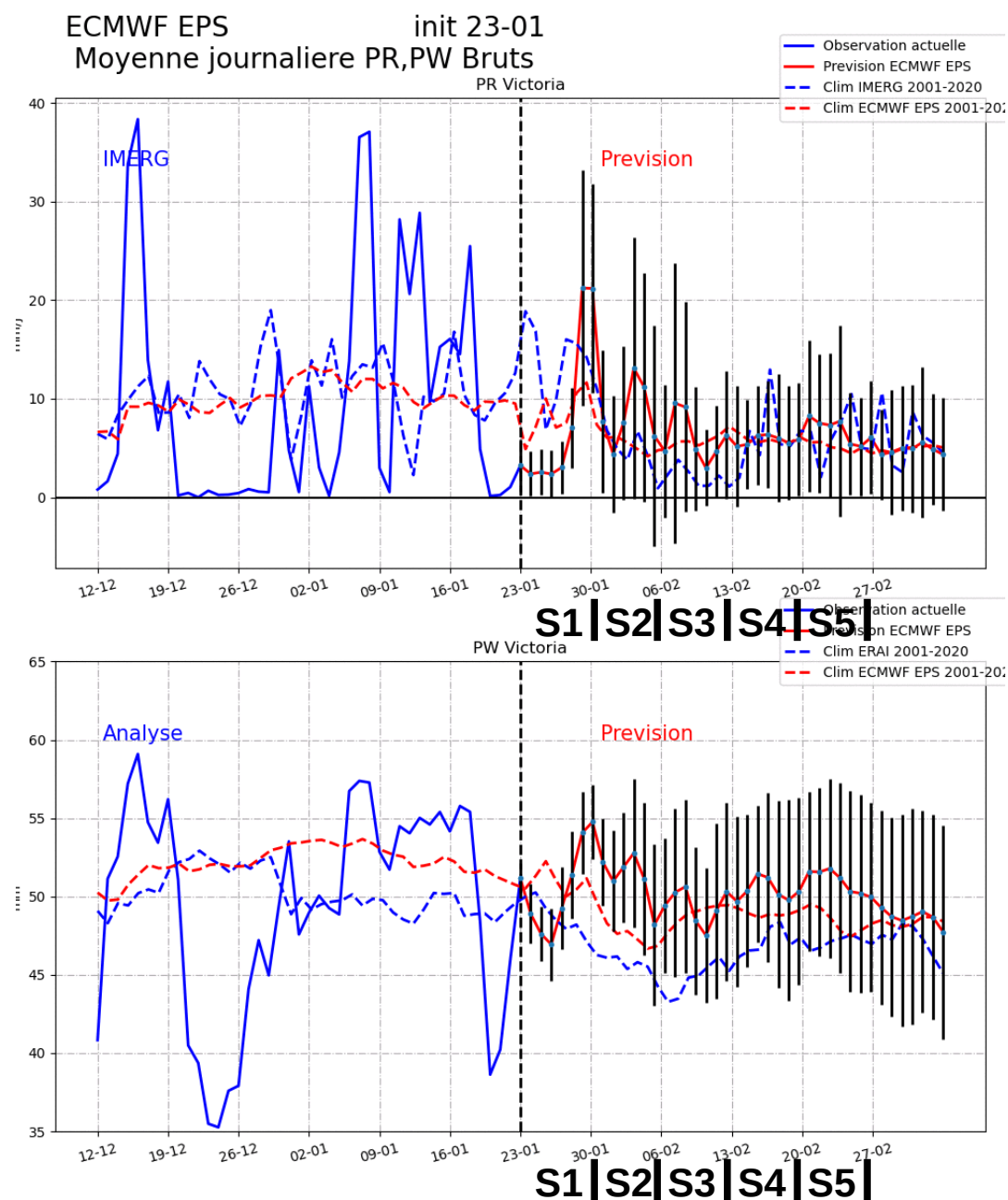
S5



Climatologie
mensuelle

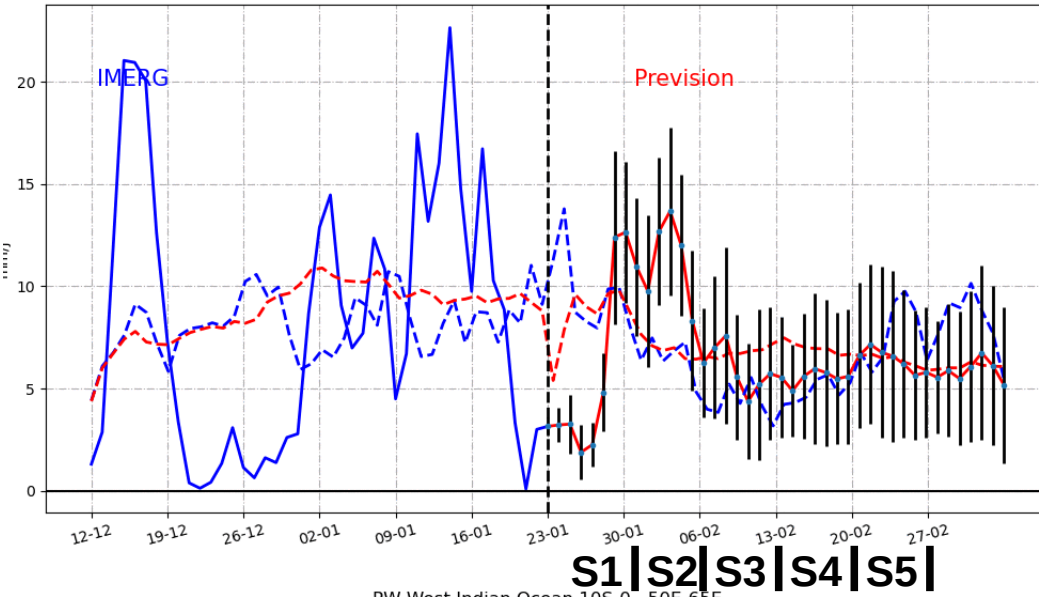


Synthèse temps sensible S2 – S4 [SEYCHELLES]

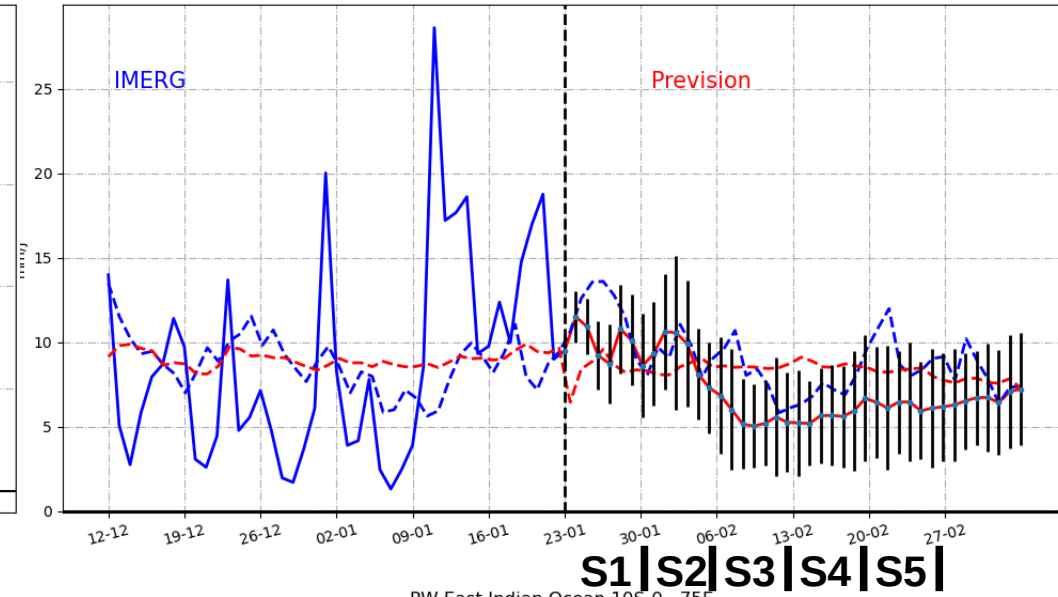


Synthèse temps sensible S2 – S4 [SEYCHELLES]

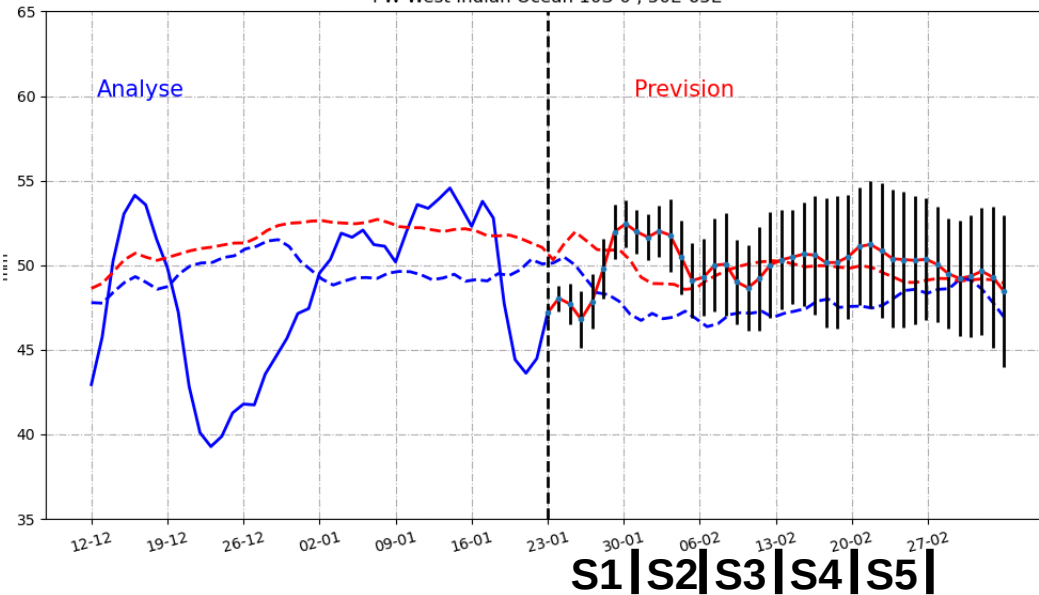
ECMWF EPS
Moyenne journaliere PR,PW Bruts
init 23-01
PR West Indian Ocean 10S-0 , 50E-65E



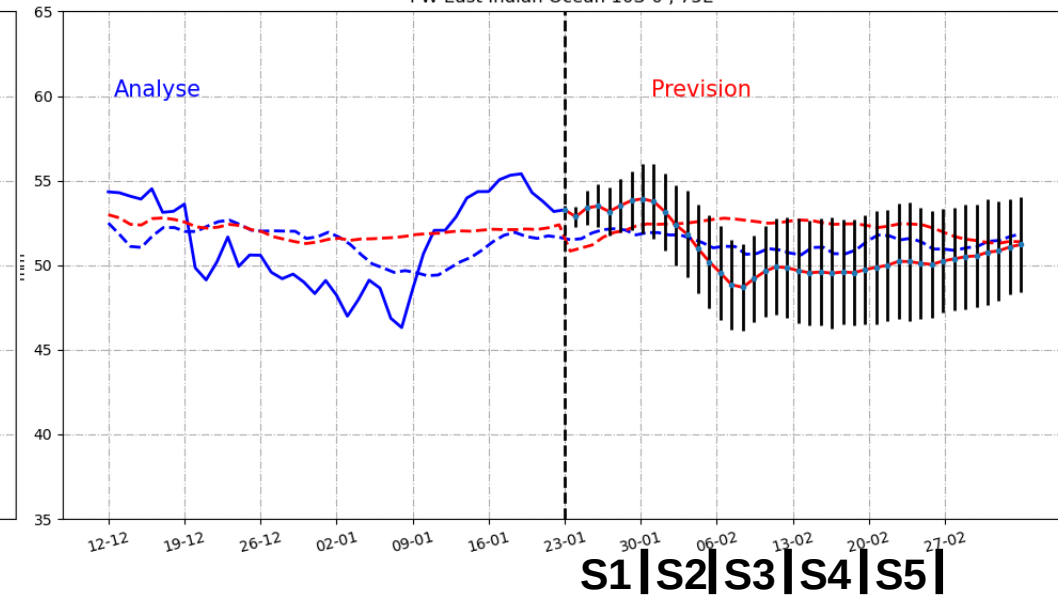
ECMWF EPS
Moyenne journaliere PR,PW Bruts
init 23-01
PR East Indian Ocean 10S-0 , 75E-95E



PW West Indian Ocean 10S-0 , 50E-65E



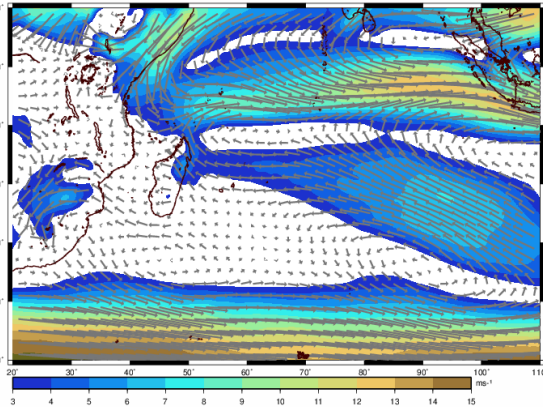
PW East Indian Ocean 10S-0 , 75E-



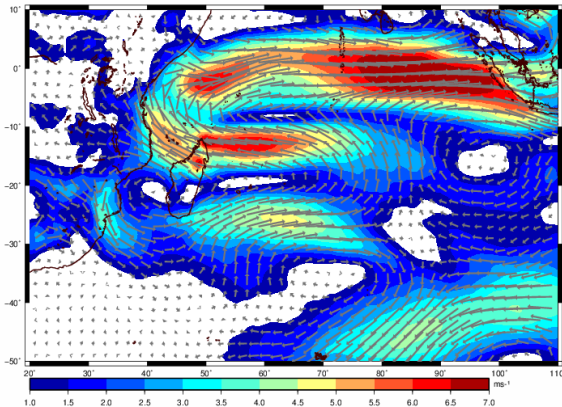
Régime de temps Réunion [S2 à S4]

S2

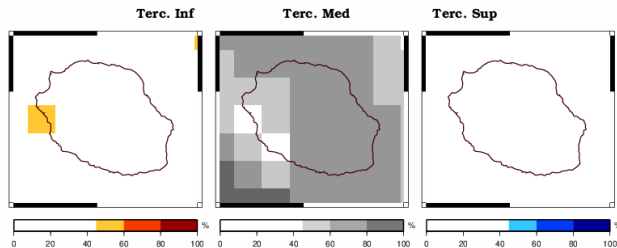
Vent 850hPa
période du 2023-01-30 au 2023-02-06
Prévision mensuelle CEPMMT base 2023-01-23



Anomalie force du vent 850hPa
période du 2023-01-30 au 2023-02-06
Prévision mensuelle CEPMMT base 2023-01-23

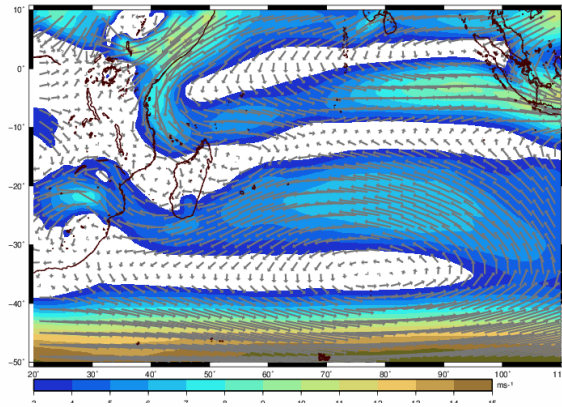


Probabilité tercile des précipitations
période du 2023-01-30 au 2023-02-06
Prévision mensuelle CEPMMT base 2023-01-23

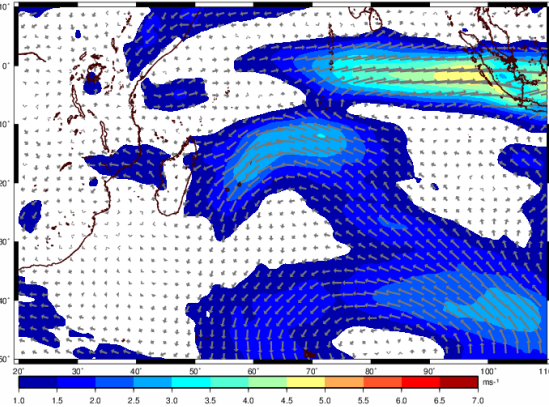


S3

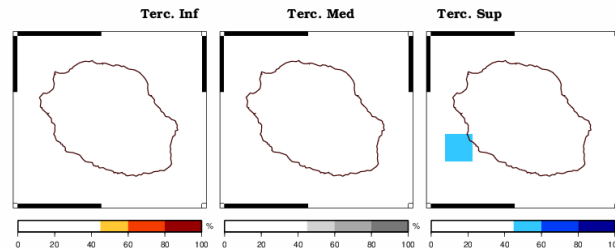
Vent 850hPa
période du 2023-02-06 au 2023-02-13
Prévision mensuelle CEPMMT base 2023-01-23



Anomalie force du vent 850hPa
période du 2023-02-06 au 2023-02-13
Prévision mensuelle CEPMMT base 2023-01-23

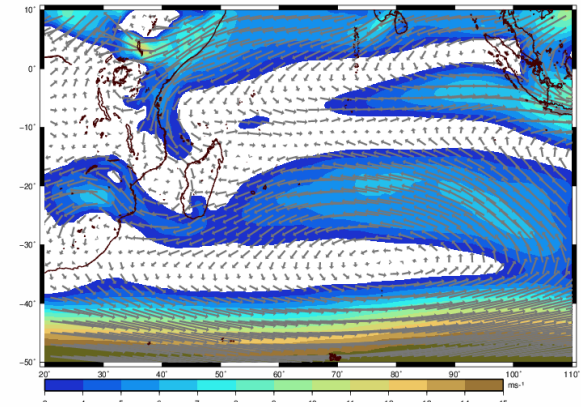


Probabilité tercile des précipitations
période du 2023-02-06 au 2023-02-13
Prévision mensuelle CEPMMT base 2023-01-23

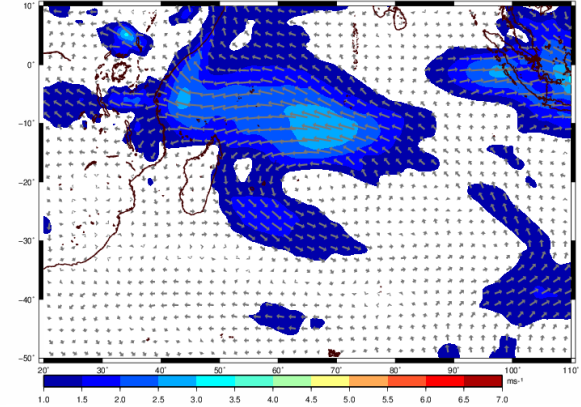


S4

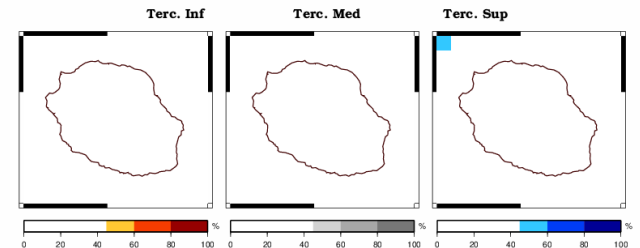
Vent 850hPa
période du 2023-02-13 au 2023-02-20
Prévision mensuelle CEPMMT base 2023-01-23



Anomalie force du vent 850hPa
période du 2023-02-13 au 2023-02-20
Prévision mensuelle CEPMMT base 2023-01-23



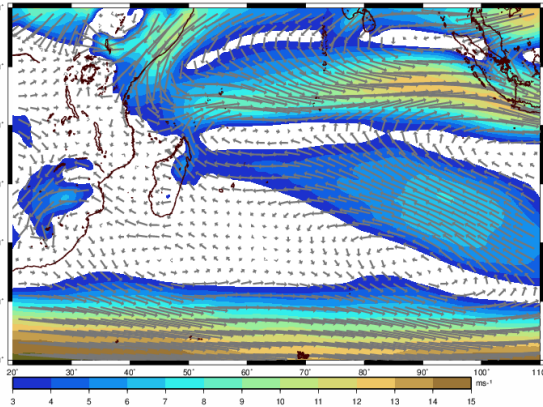
Probabilité tercile des précipitations
période du 2023-02-13 au 2023-02-20
Prévision mensuelle CEPMMT base 2023-01-23



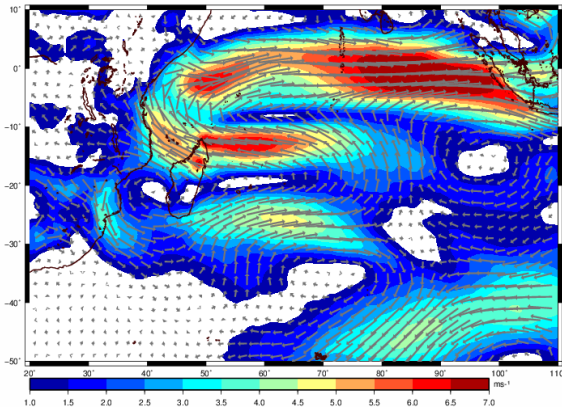
Régime de temps Mayotte [S2 à S4]

S2

Vent 850hPa
période du 2023-01-30 au 2023-02-06
Prévision mensuelle CEPMMT base 2023-01-23

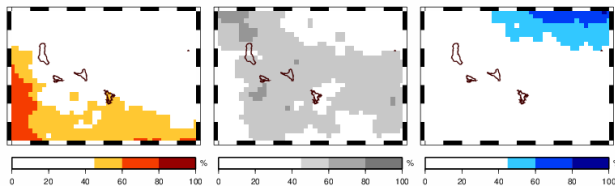


Anomalie force du vent 850hPa
période du 2023-01-30 au 2023-02-06
Prévision mensuelle CEPMMT base 2023-01-23



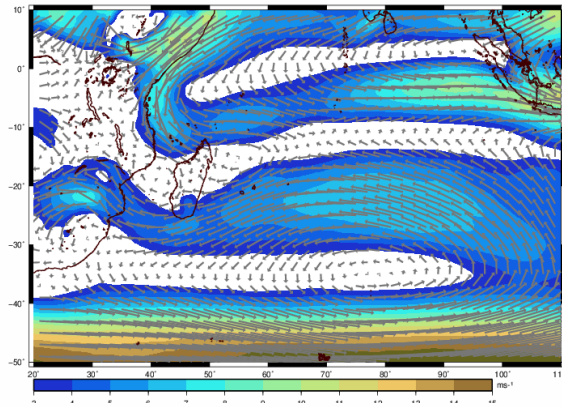
Probabilité tercile des précipitations
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Prévision mensuelle CEPMMT base 2023-01-23

Terc. Inf Terc. Med Terc. Sup

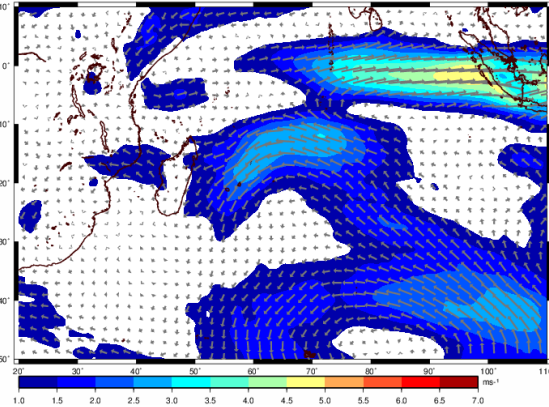


S3

Vent 850hPa
période du 2023-02-06 au 2023-02-13
Prévision mensuelle CEPMMT base 2023-01-23

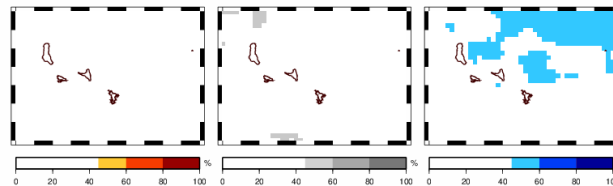


Anomalie force du vent 850hPa
période du 2023-02-06 au 2023-02-13
Prévision mensuelle CEPMMT base 2023-01-23



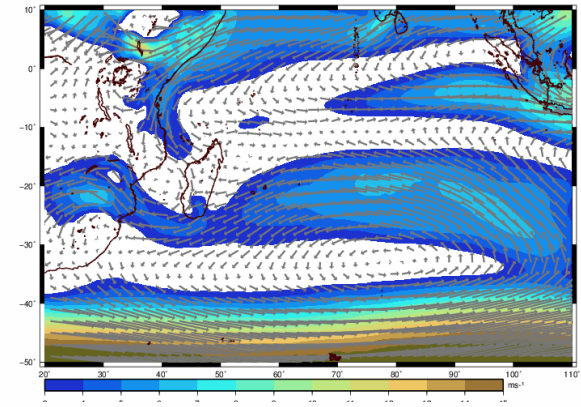
Probabilité tercile des précipitations
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Prévision mensuelle CEPMMT base 2023-01-23

Terc. Inf Terc. Med Terc. Sup

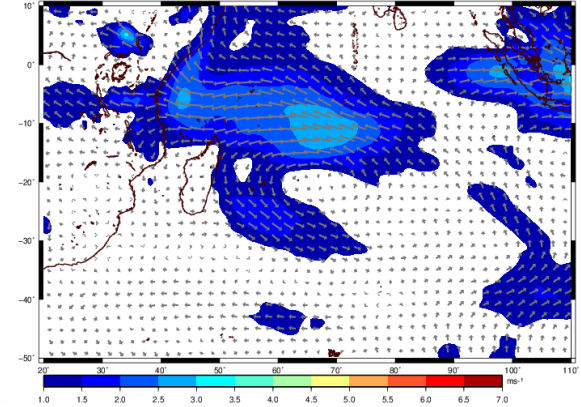


S4

Vent 850hPa
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Prévision mensuelle CEPMMT base 2023-01-23

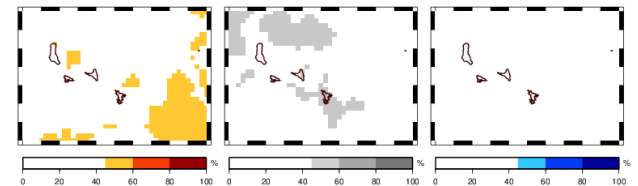


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Prévision mensuelle CEPMMT base 2023-01-23

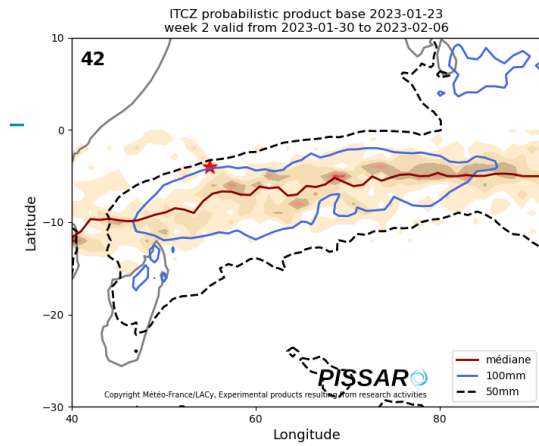


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Prévision mensuelle CEPMMT base 2023-01-23

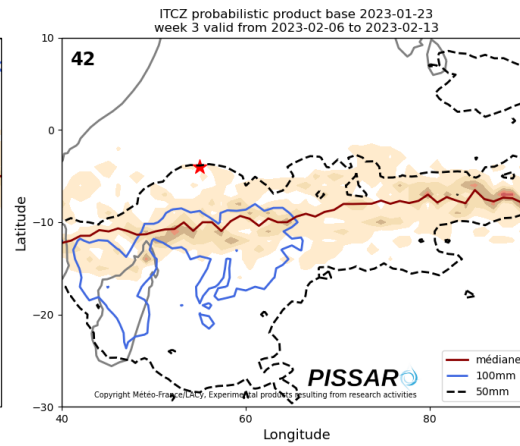
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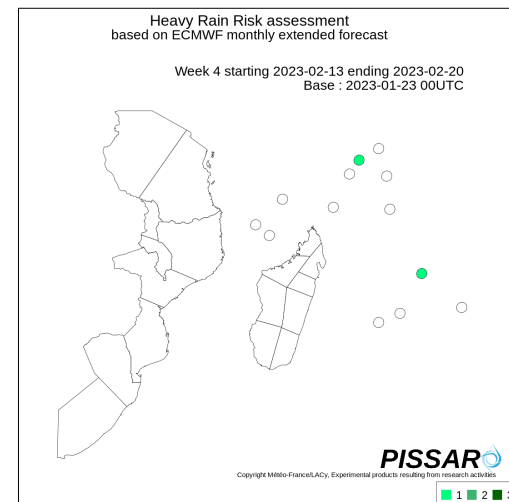
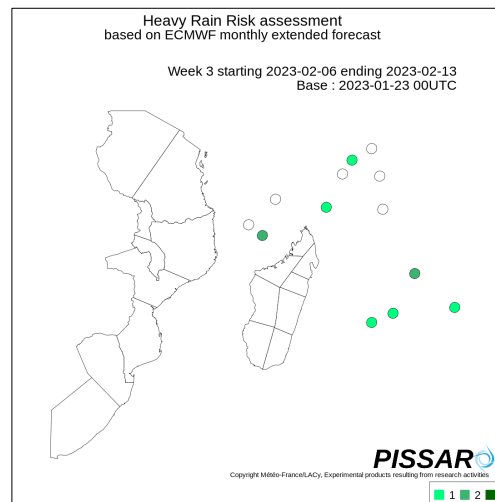
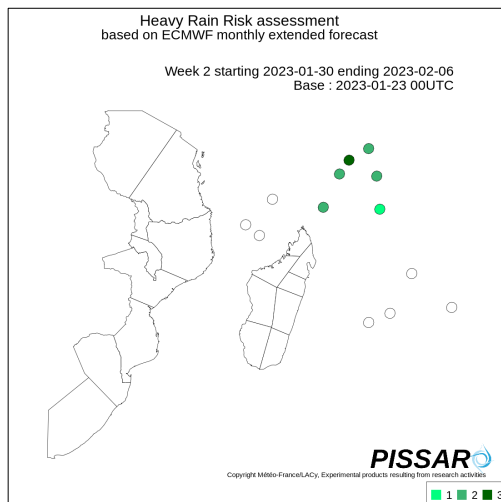
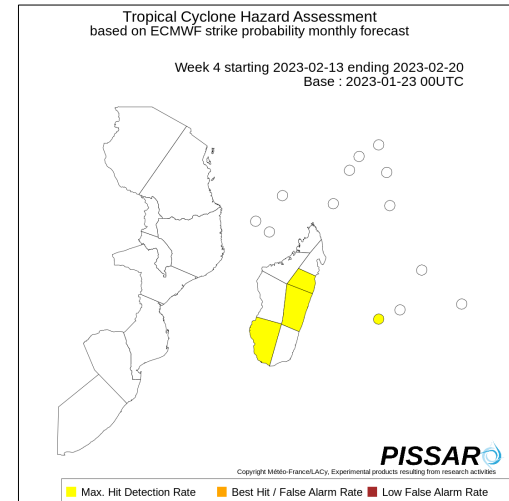
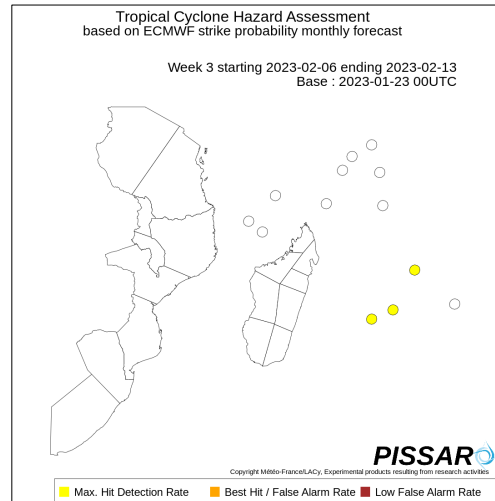
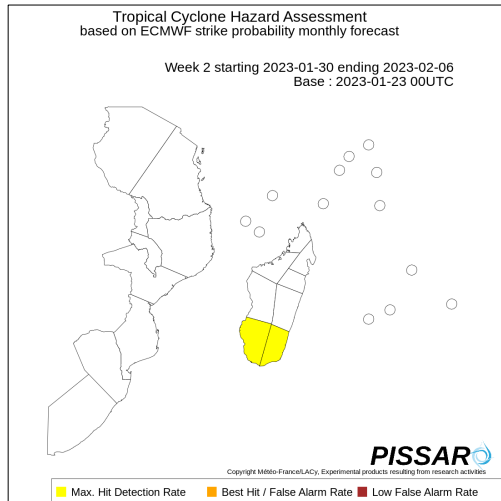
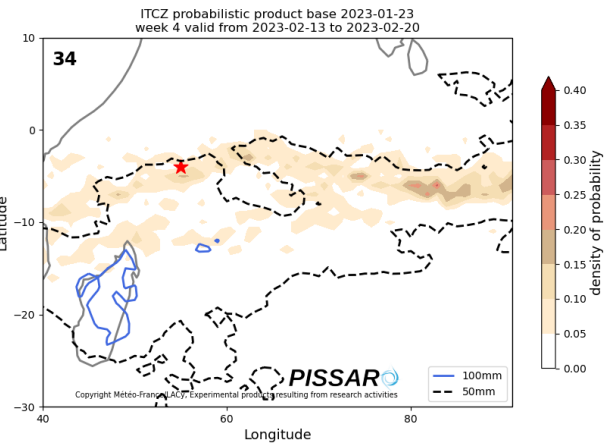
S2



S3



S4





Briefing mensuel

Suivi MJO et ondes équatoriales pour le bassin SOOI

Sources :

<http://www.bom.gov.au/climate/enso/>
<http://seasonal.meteo.fr/sites/data/Modeles/>
<https://cds.climate.copernicus.eu#!/home>
<http://regionalclimate-change.sc/swiocof/SST/>
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<https://www.cpc.ncep.noaa.gov/products/>
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http://www.atmos.albany.edu/student/ventrice/real_time/
<https://misva.aeris-data.fr/products/>