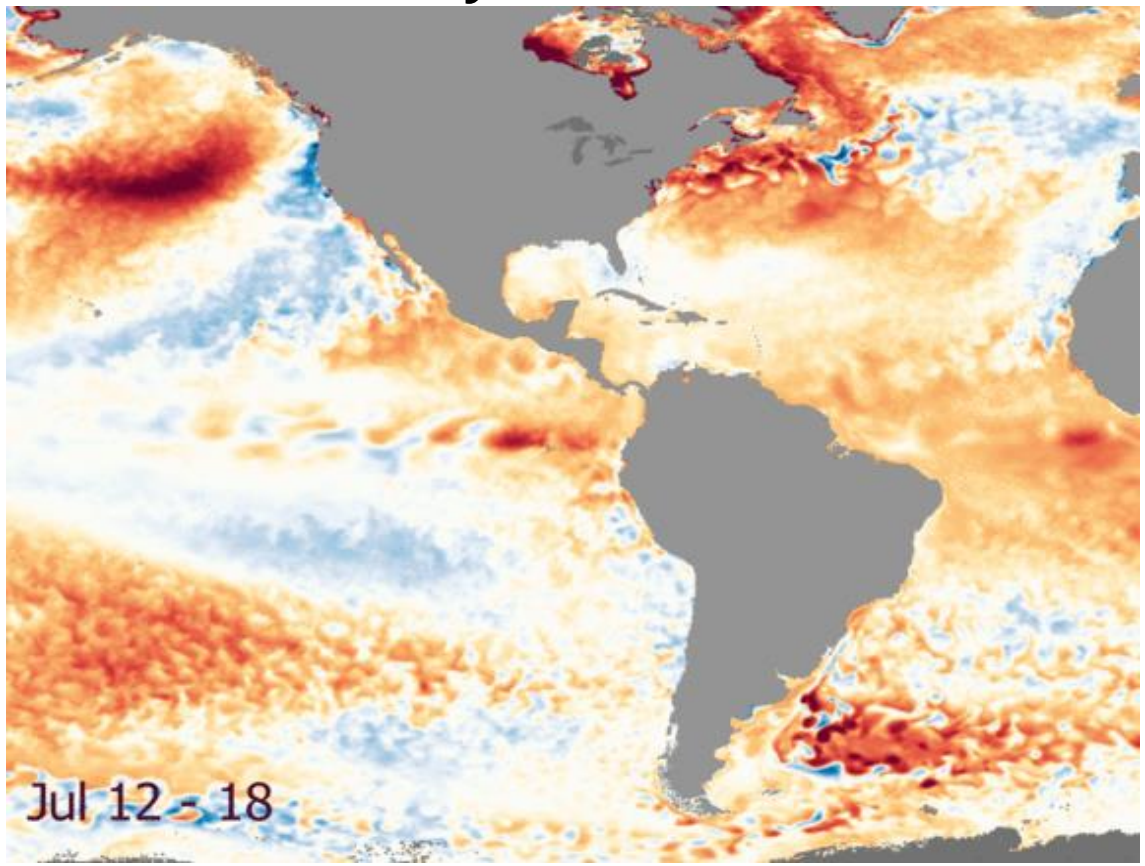
Monthly Regional Focus Group Session

Wednesday 18 August 2021

Sea Surface Temperatures

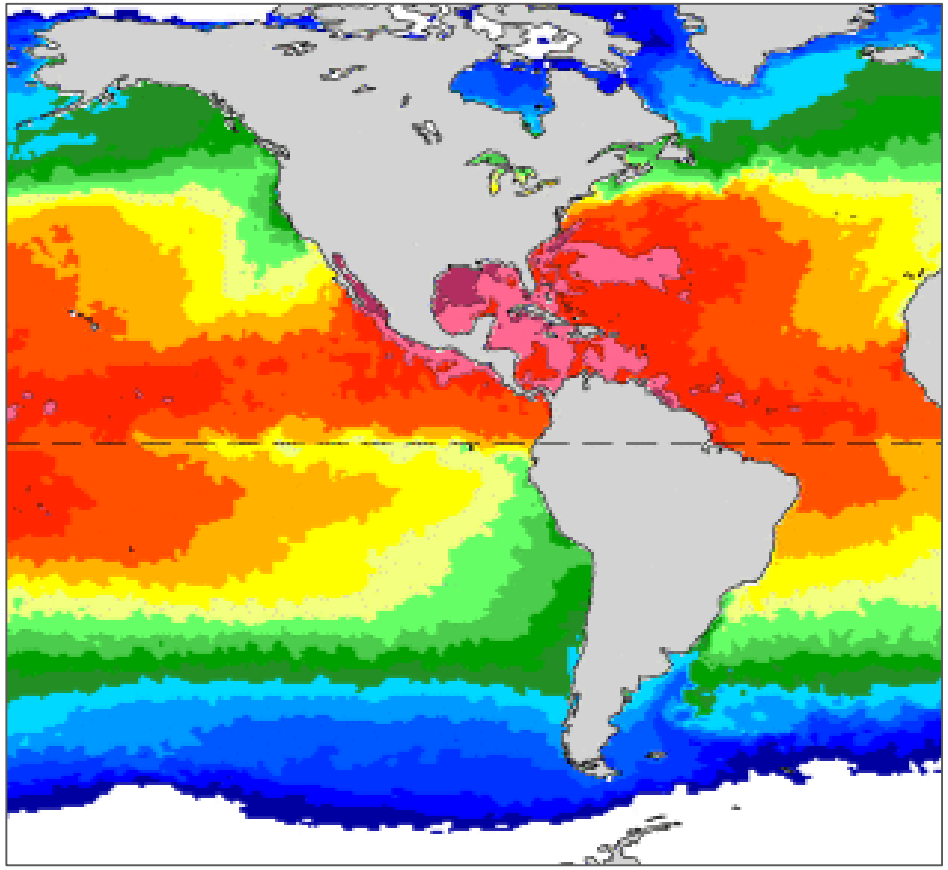
Anomaly Evolution



OISST, NOAA NNVL

https://www.nnvl.noaa.gov/view/globaldata.html#SSTA

Daily SST Aug 16

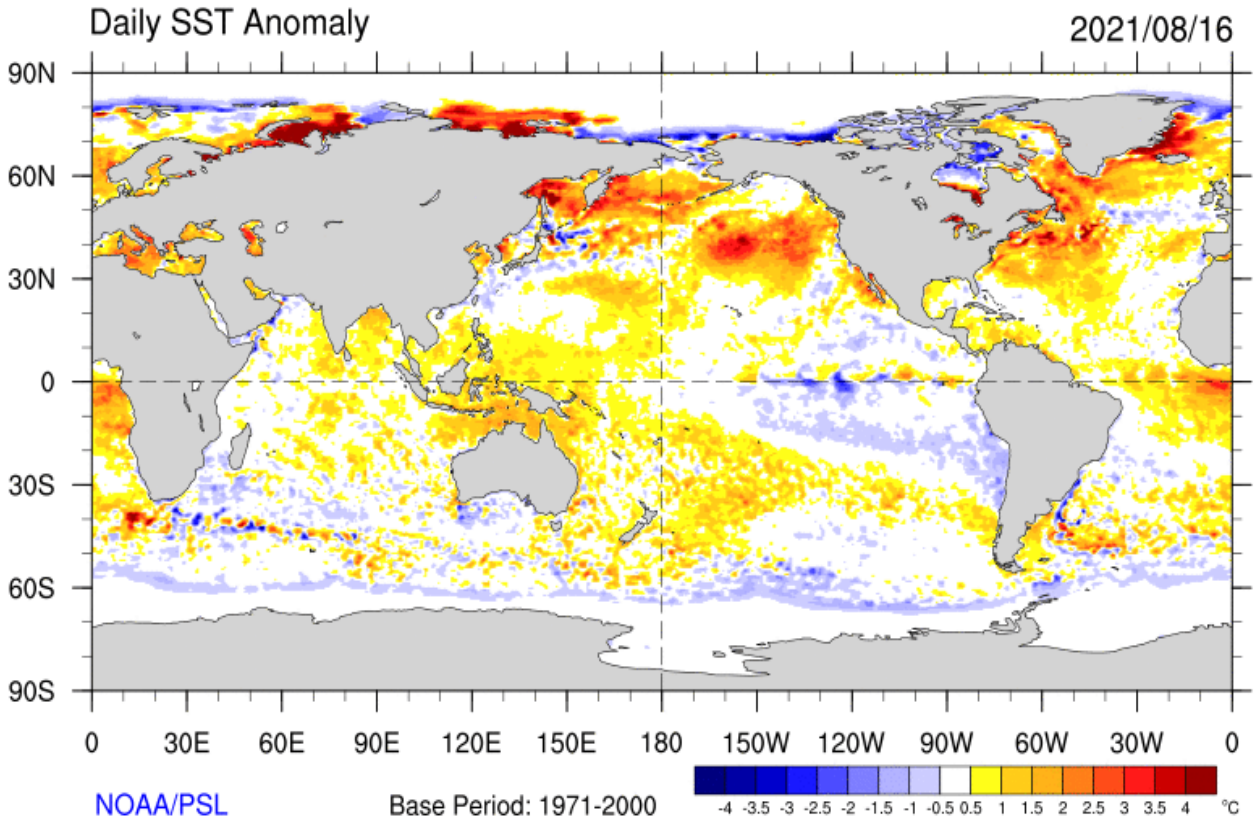


PSL

https://psl.noaa.gov/map/clim/sst.shtml

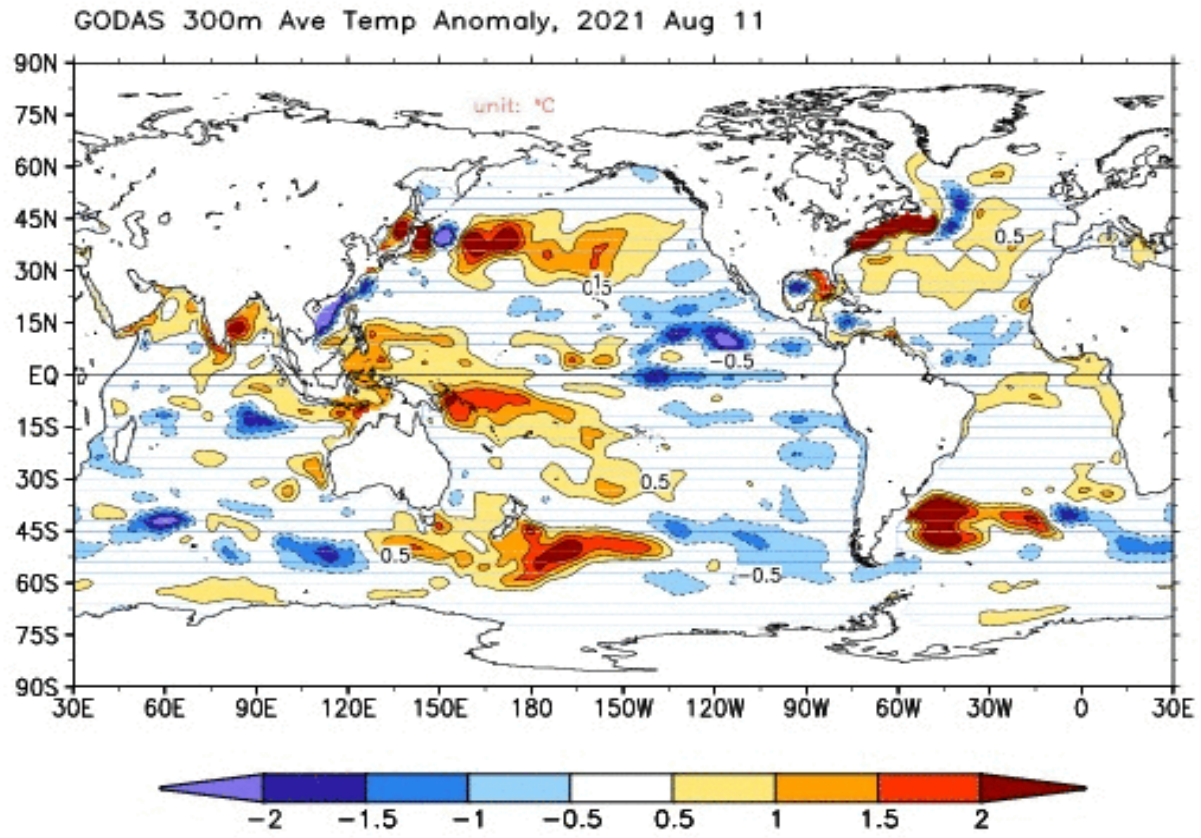
Are the anomalies deep?

Deep anomalies tend to last longer, becoming useful for subseasonal forecasting.



Source: https://psl.noaa.gov/map/clim/sst.shtml

Top 300m Layer Anomaly



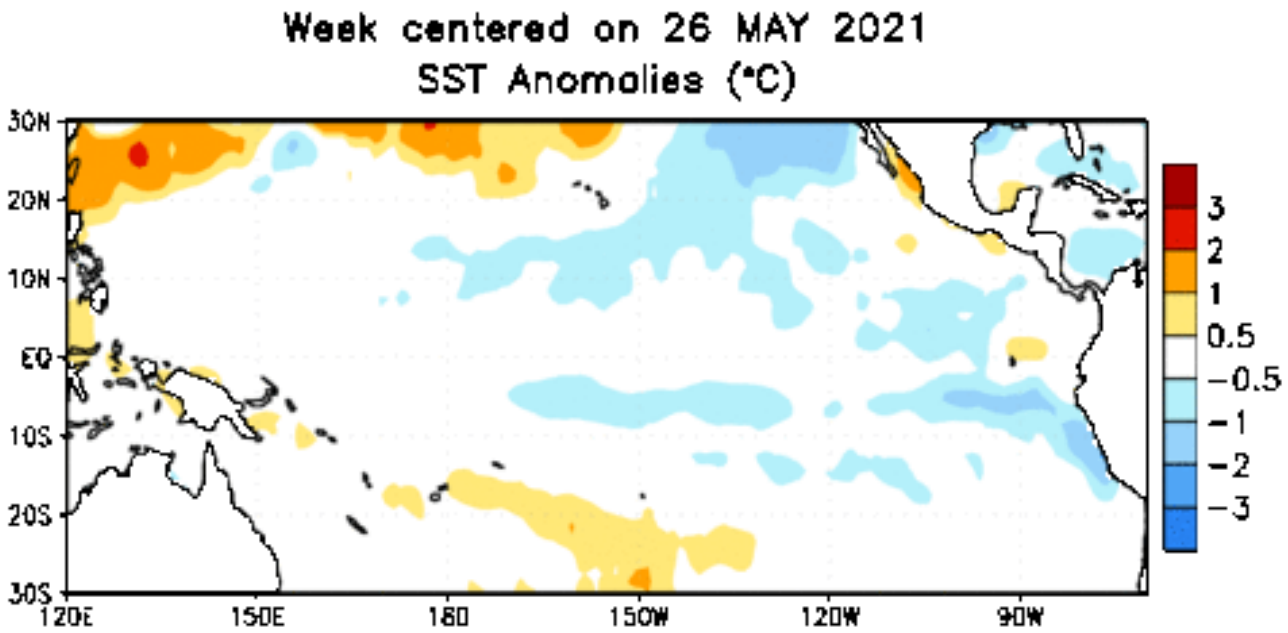
Source: CPC GODAS, https://www.cpc.ncep.noaa.gov/products/GODAS/

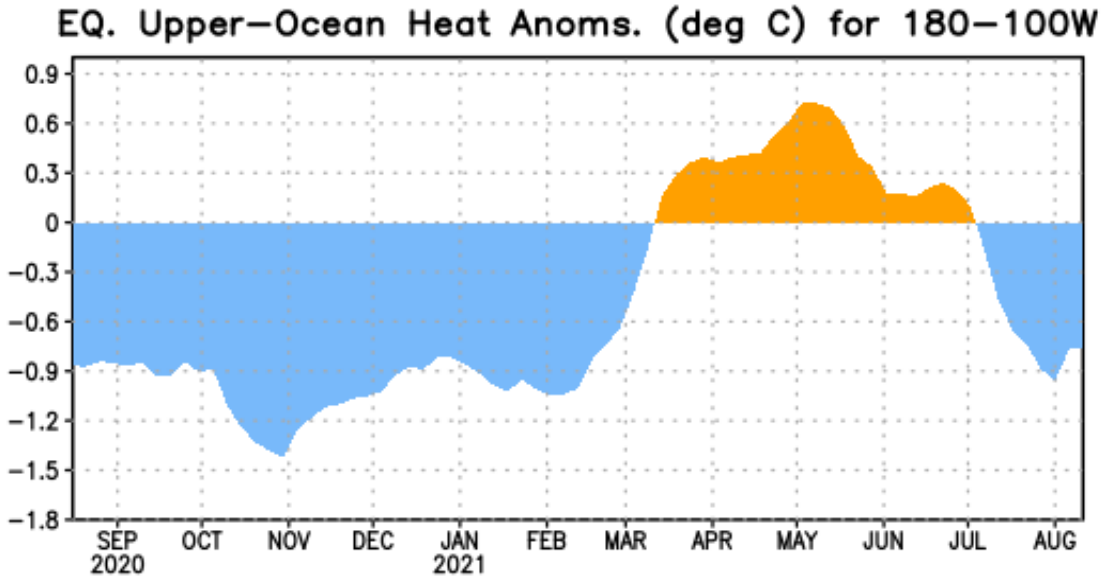
ENSO: Neutral

ENSO Alert System Status: La Niña Watch

ENSO-neutral conditions are present.*

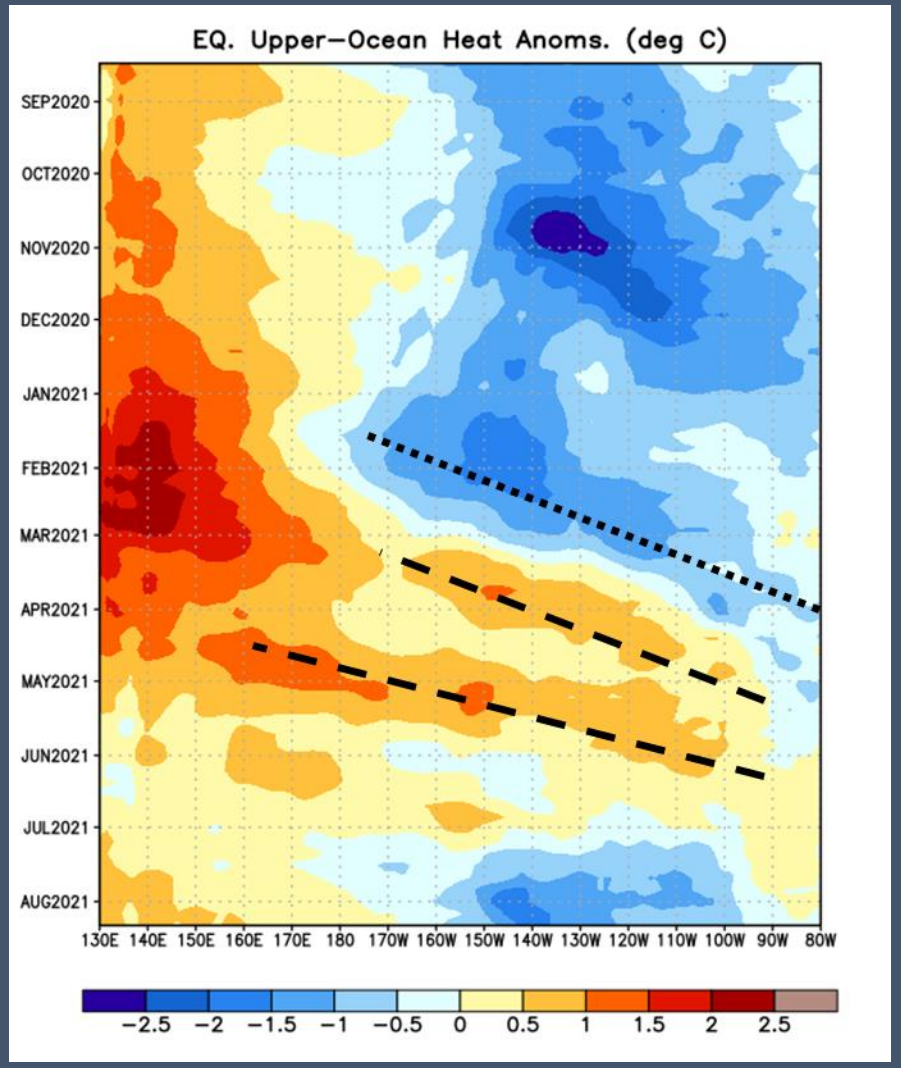
Equatorial sea surface temperatures (SSTs) are near-to-below average across most of the Pacific Ocean.





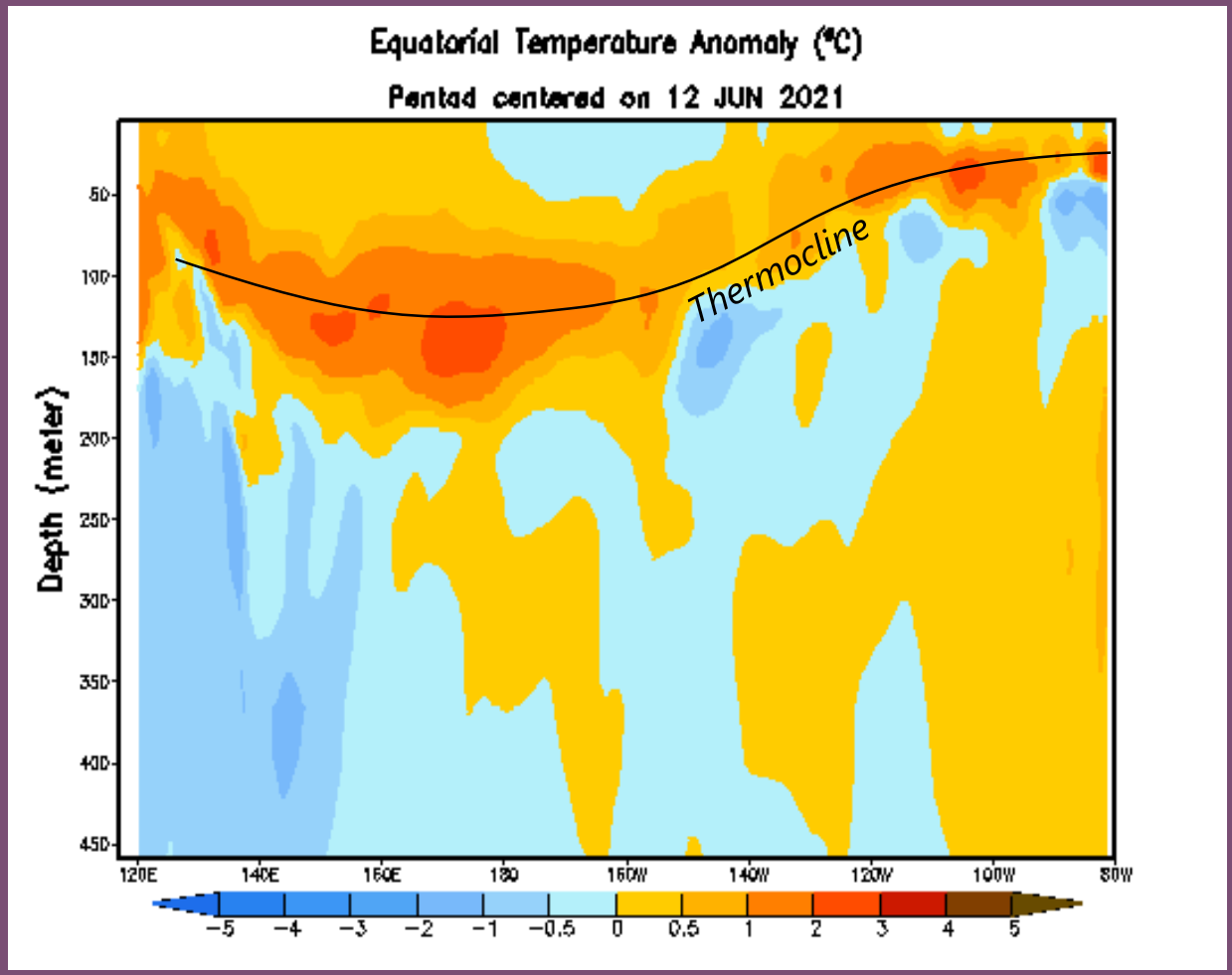
ENSO: Oceanic Kelvin Waves

Hovmöller: Heat Content



Source: CPC

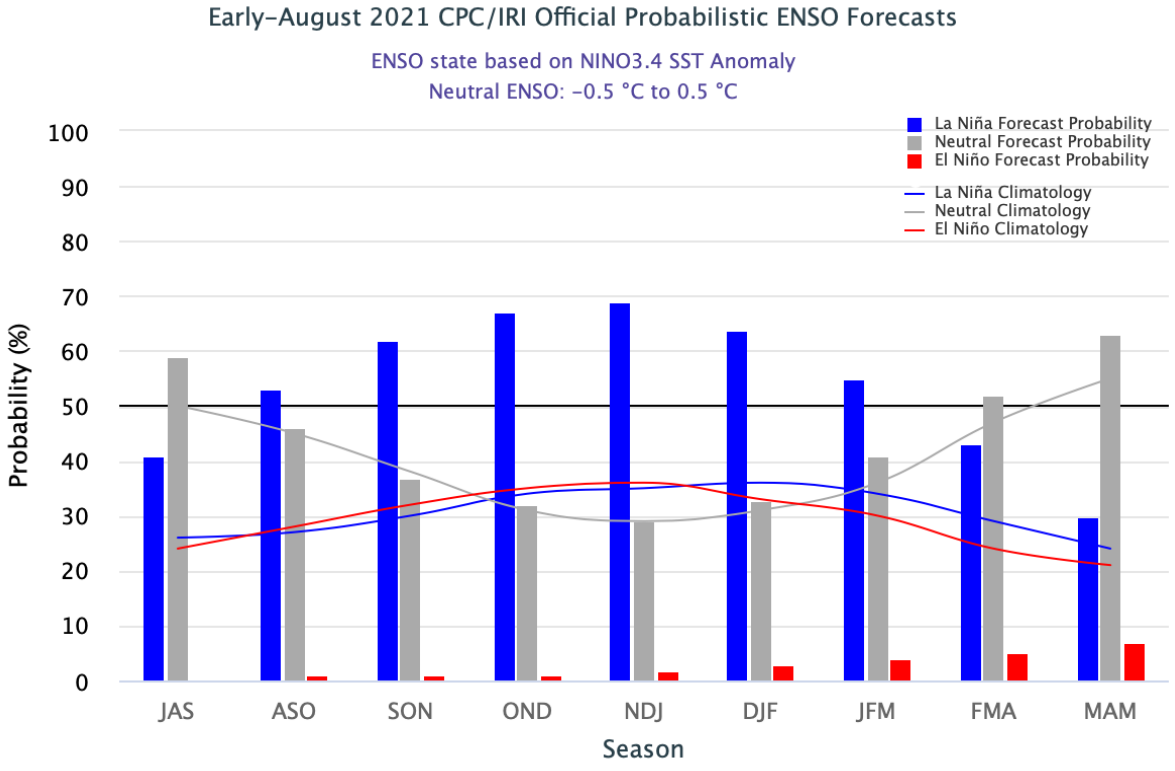
Equatorial Pacific Temp. Anomaly



ENSO Outlook

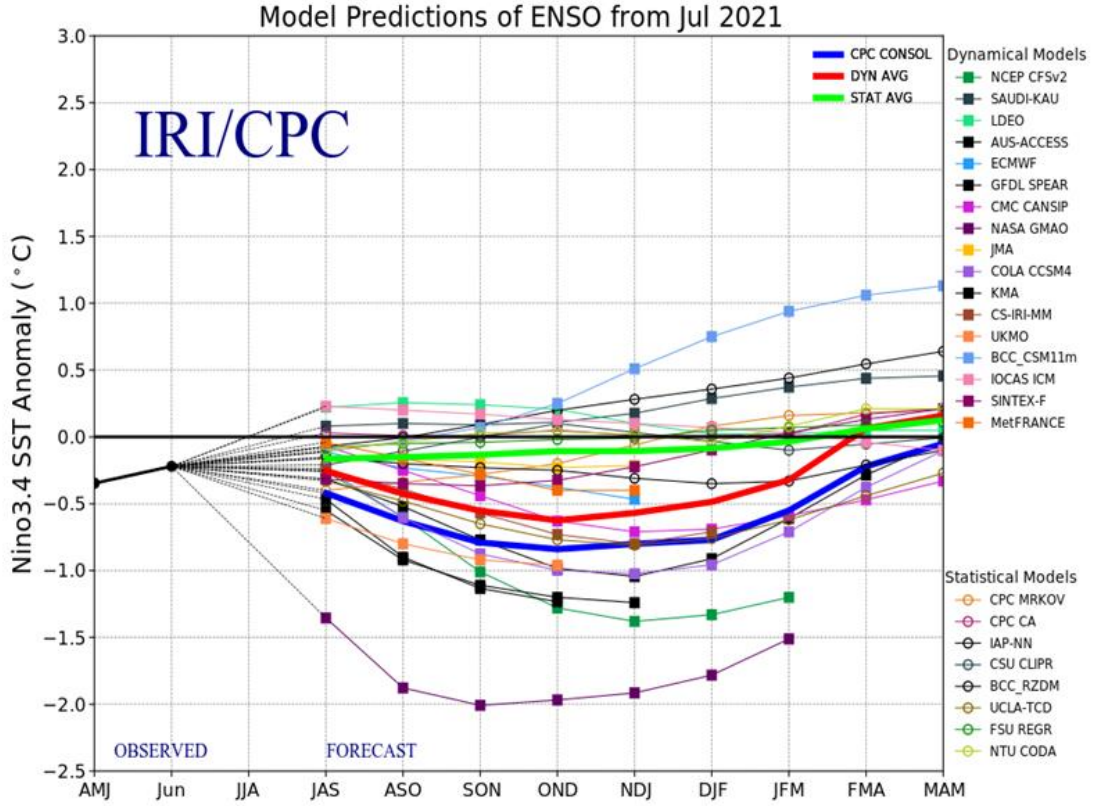
ENSO-neutral is favored for the remainder of summer (~60% chance in the July-September season), with La Niña possibly emerging during the August-October season and lasting through the 2021-22 winter (~70% chance during November-January).*

CPC/IRI Probabilistic Forecast



Source: CPC

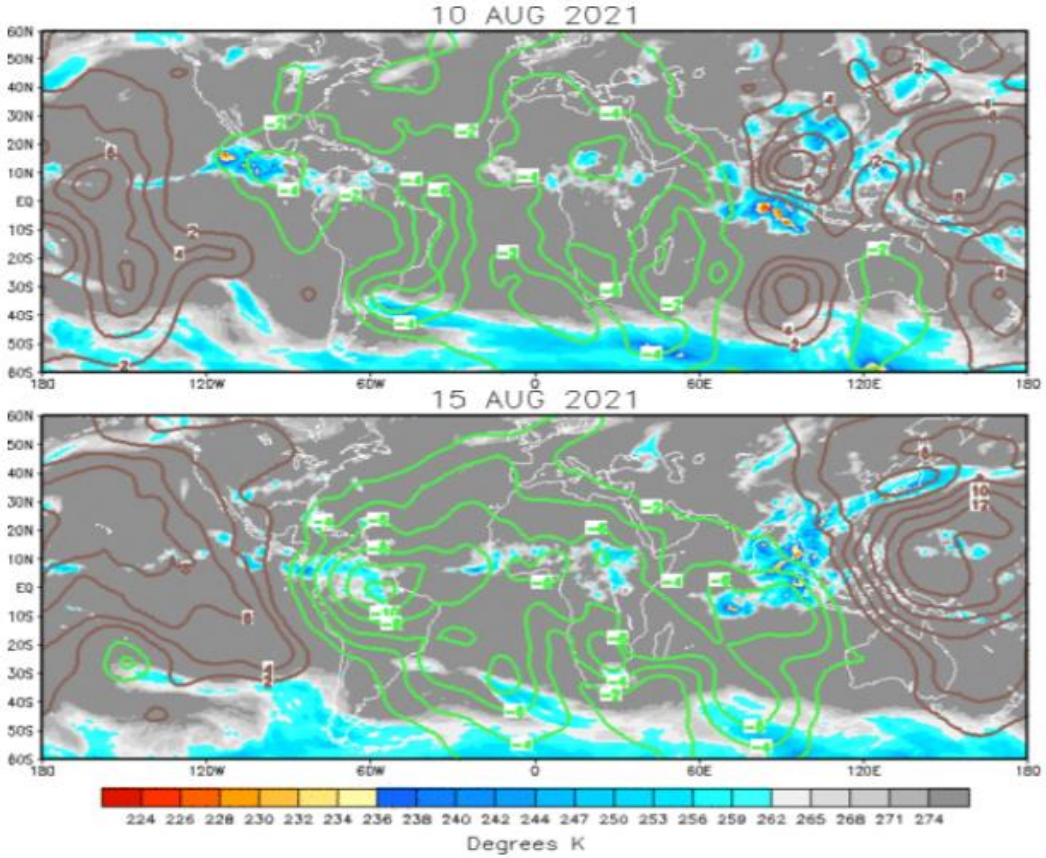
IRI/CPC Dynamic Models



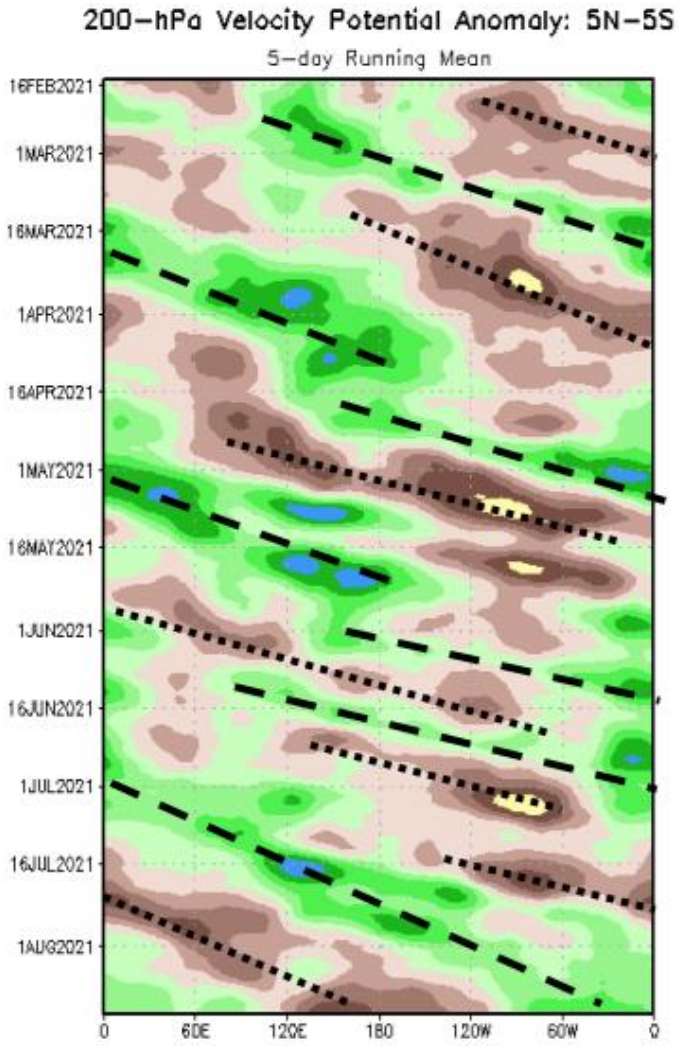
Madden-Julian Oscillation (MJO)

Now: Wave-1 of the MJO is organizing:

- Upper divergent (wet) over Africa
- Upper convergent (dry) over the Pacific



Source: CPC

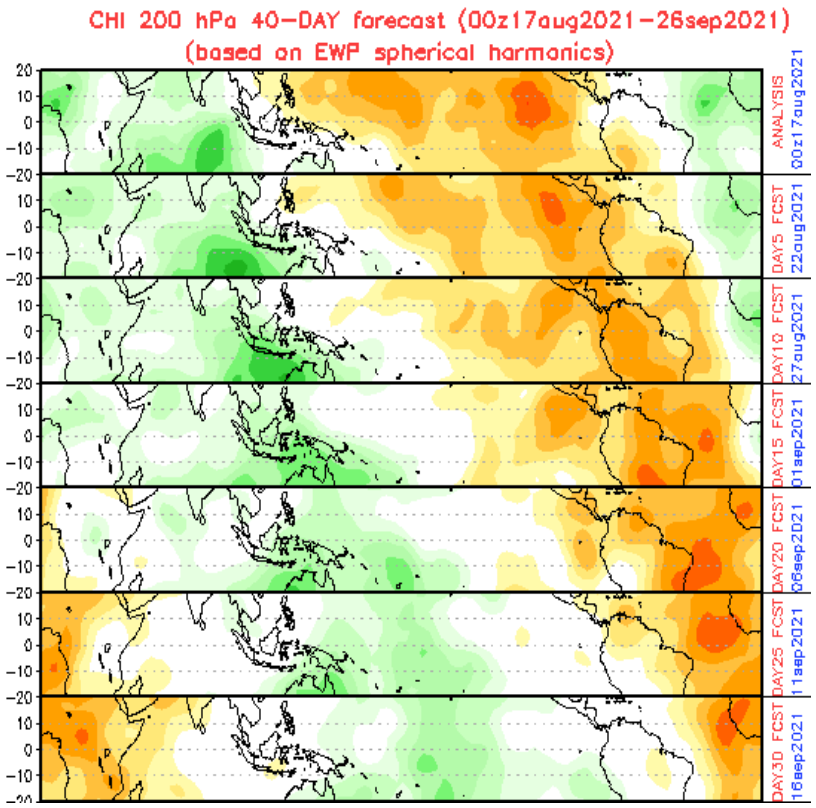


Favors rain storms

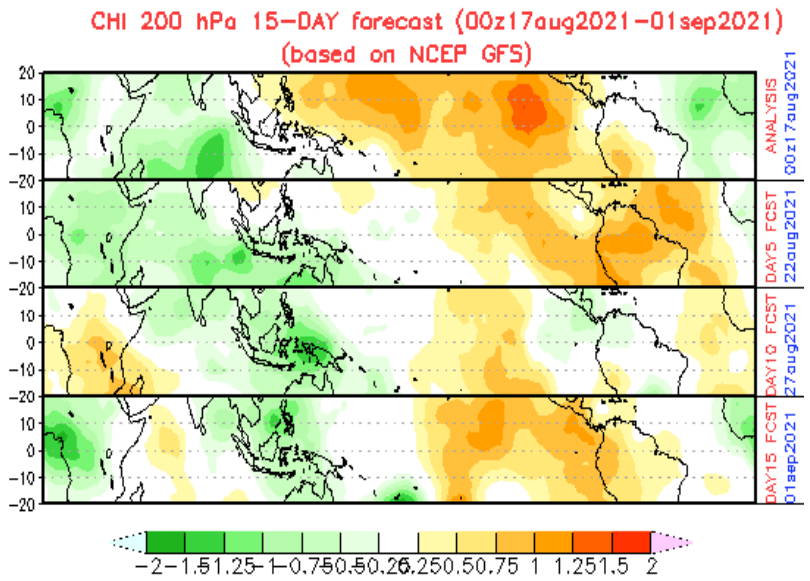
Favors limited rainfall

MJO Forecasts

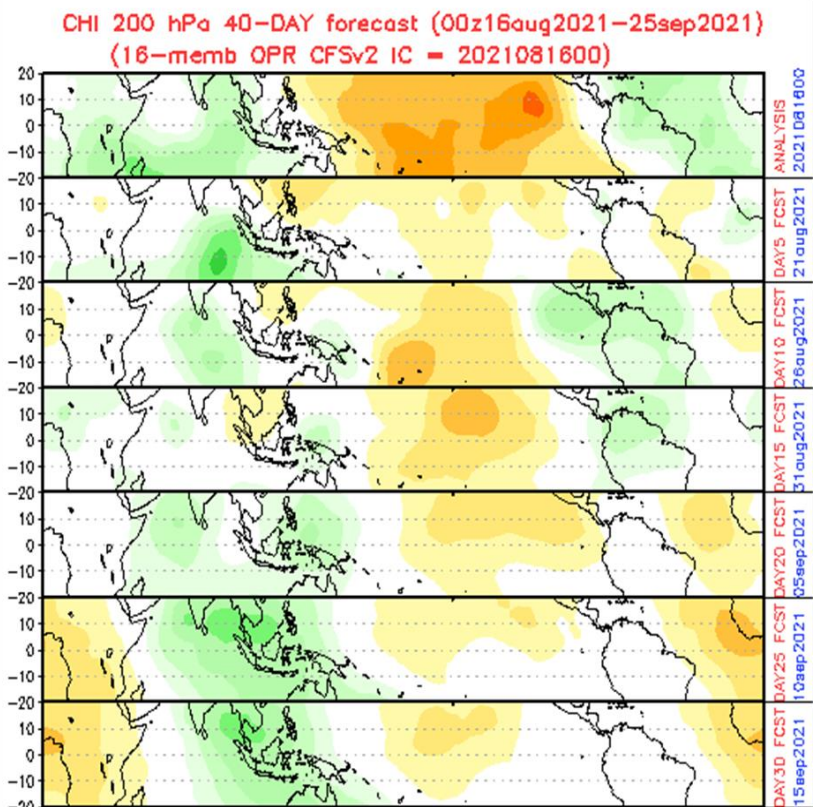
EWP



GFS



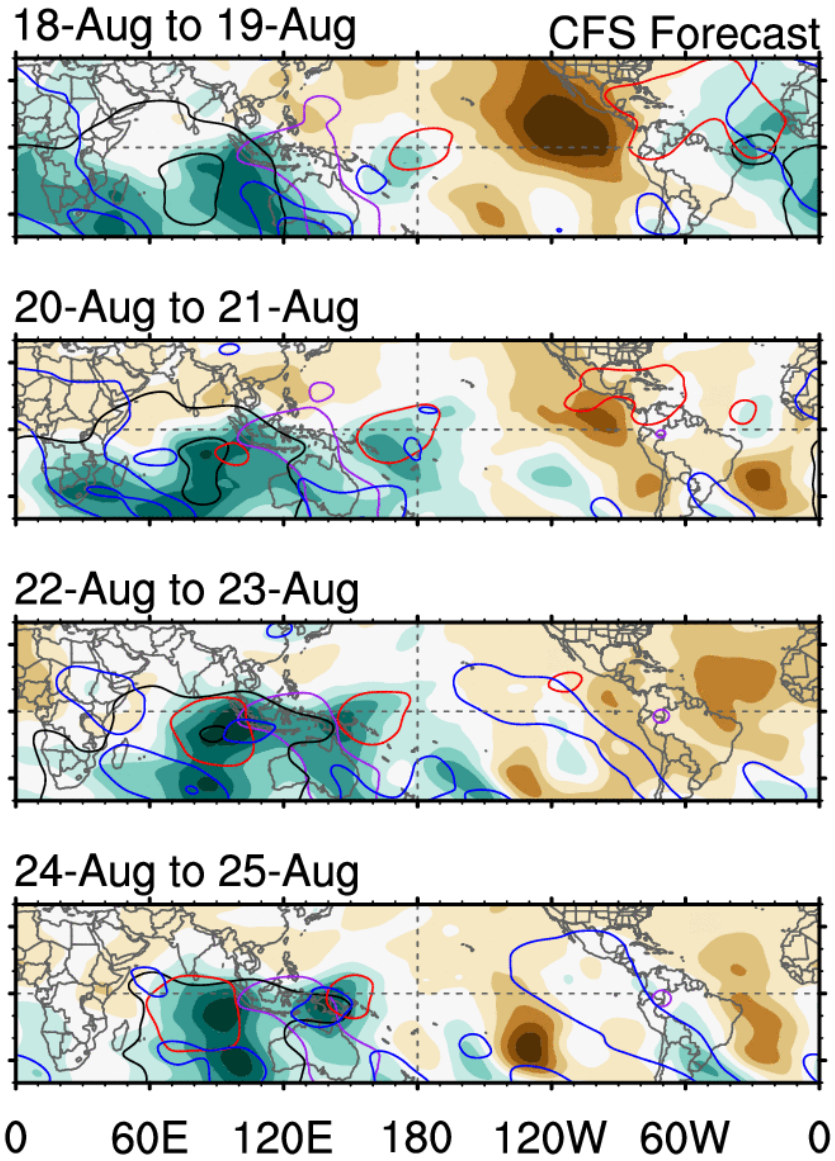
CFS



Upper convergent (dry): Arriving next week through early September

Upper divergent (wet): ~ Mid September

Tropospheric Equatorial Waves



- Upper convergent (drier) pattern dominant
- A Rossby wave to provide local enhancement through the 21st.
- Next Kelvin on 24-25 Aug, aiding with Central South America.

NCICS
ncics.org/mjo

-9 -7 -5 -3 -1 1 3 5 7 9 x10^6 m2 s-1

7-day CHI200 with CFS forecasts

Wed 2020-09-16 1018 UTC

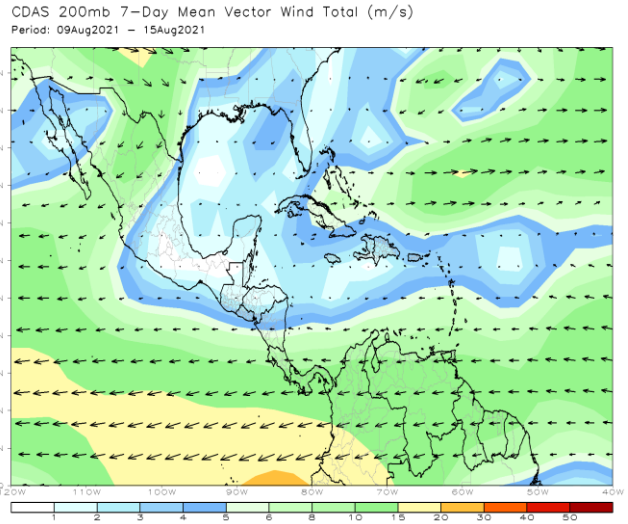
MJO
Low
Kelvin x2
ER

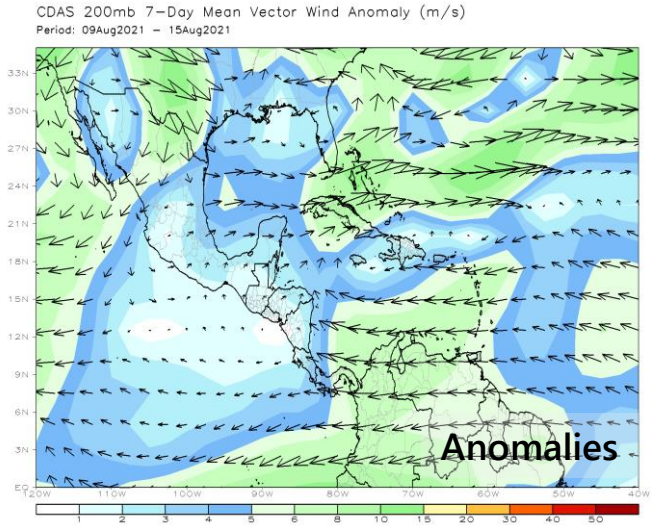
Contours at -2, -6 x10^6 m2 s-1

Carl Schreck
carl_schreck@ncsu.edu

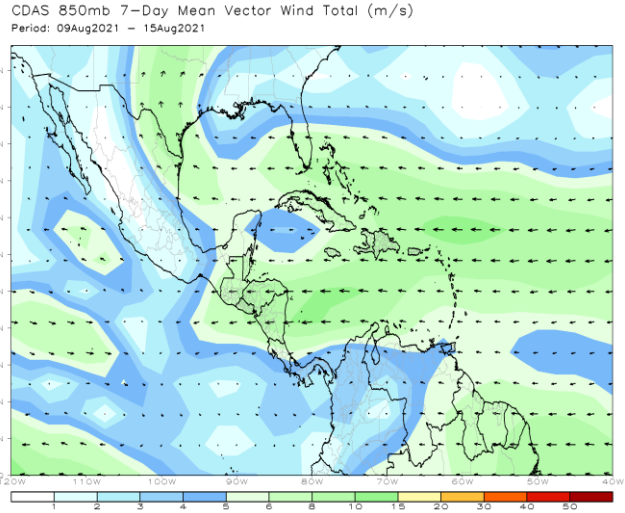
Last Week's Circulation and Rainfall – Tropical Americas

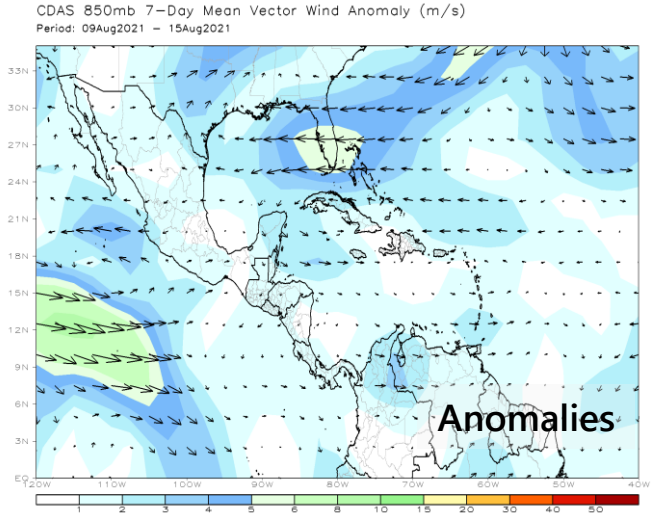
200 hPa



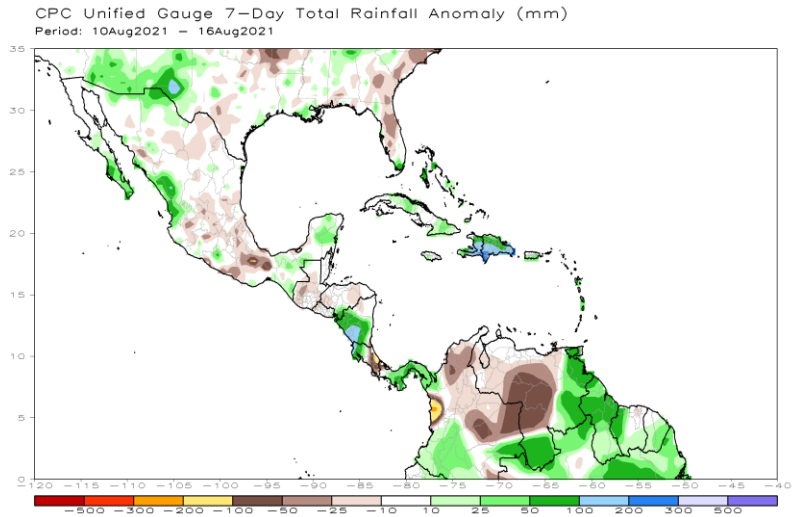


850 hPa

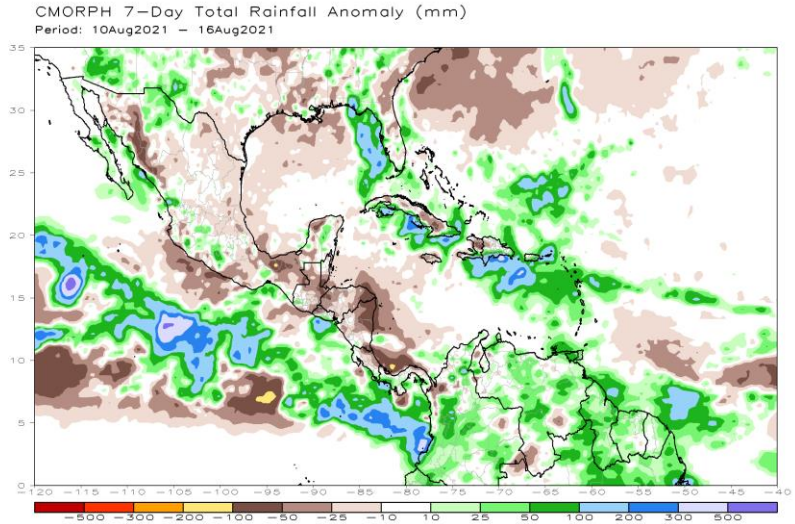




Rainfall

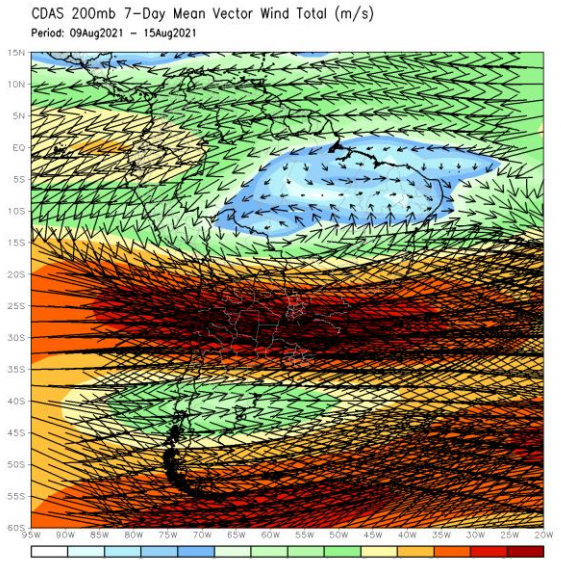


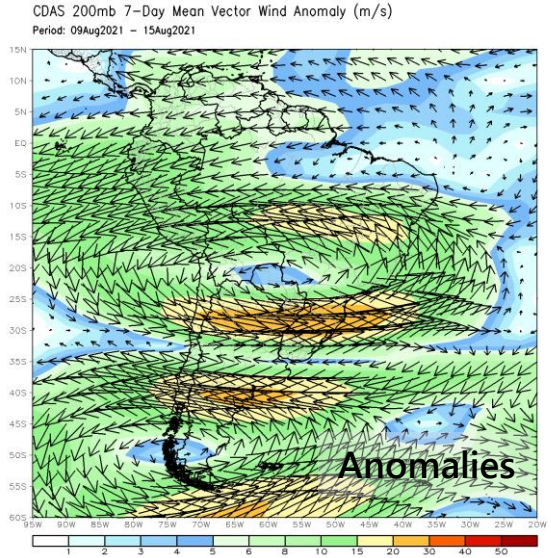
CMORPH: CPC Morphing Technique https://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html



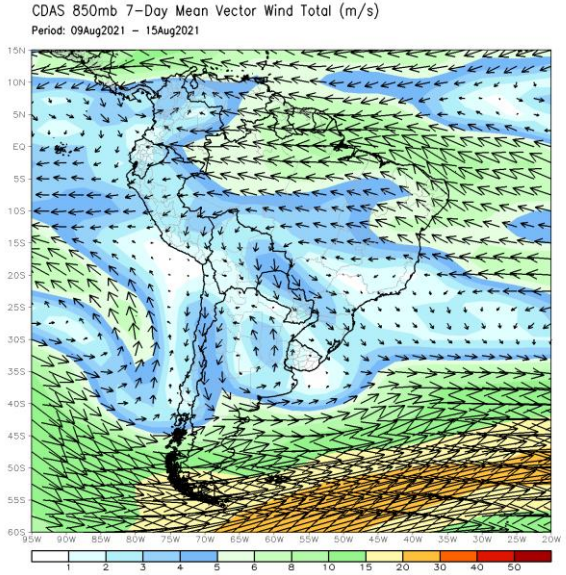
Last Week's Circulation and Rainfall – South America

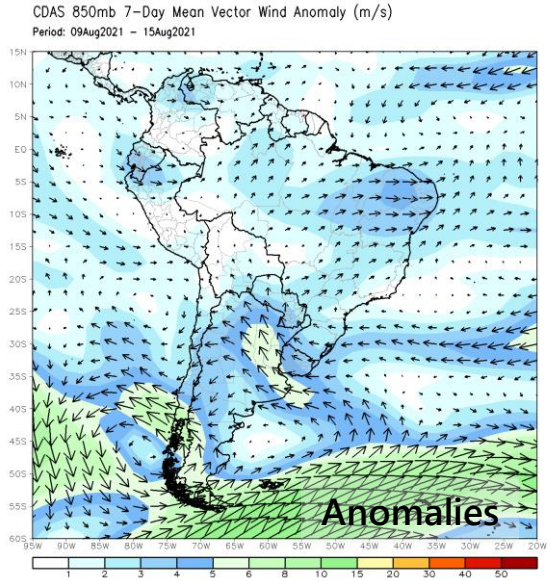
200 hPa



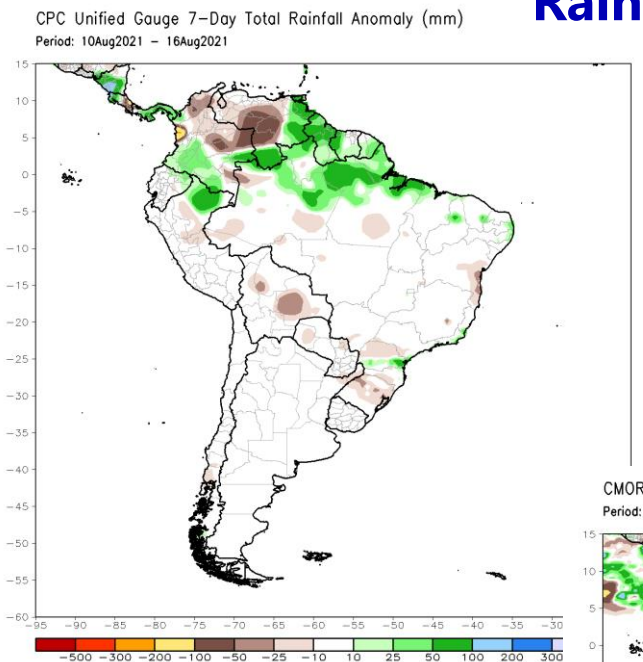


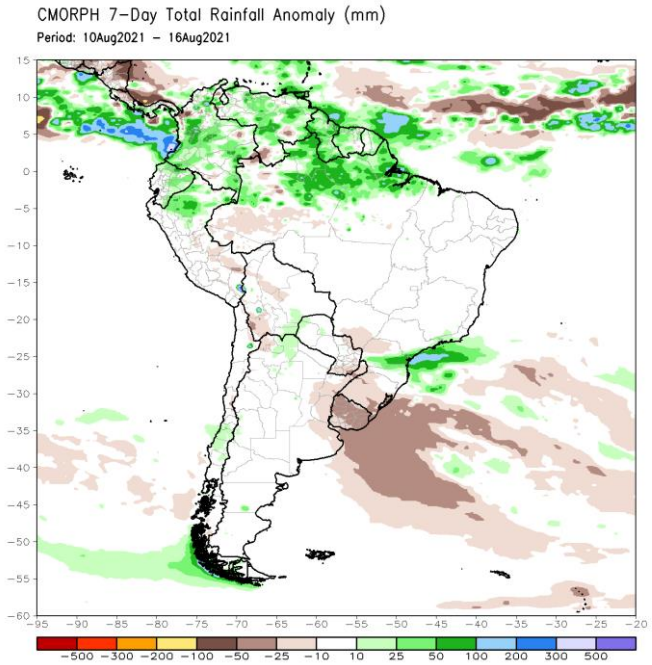
850 hPa





Rainfall





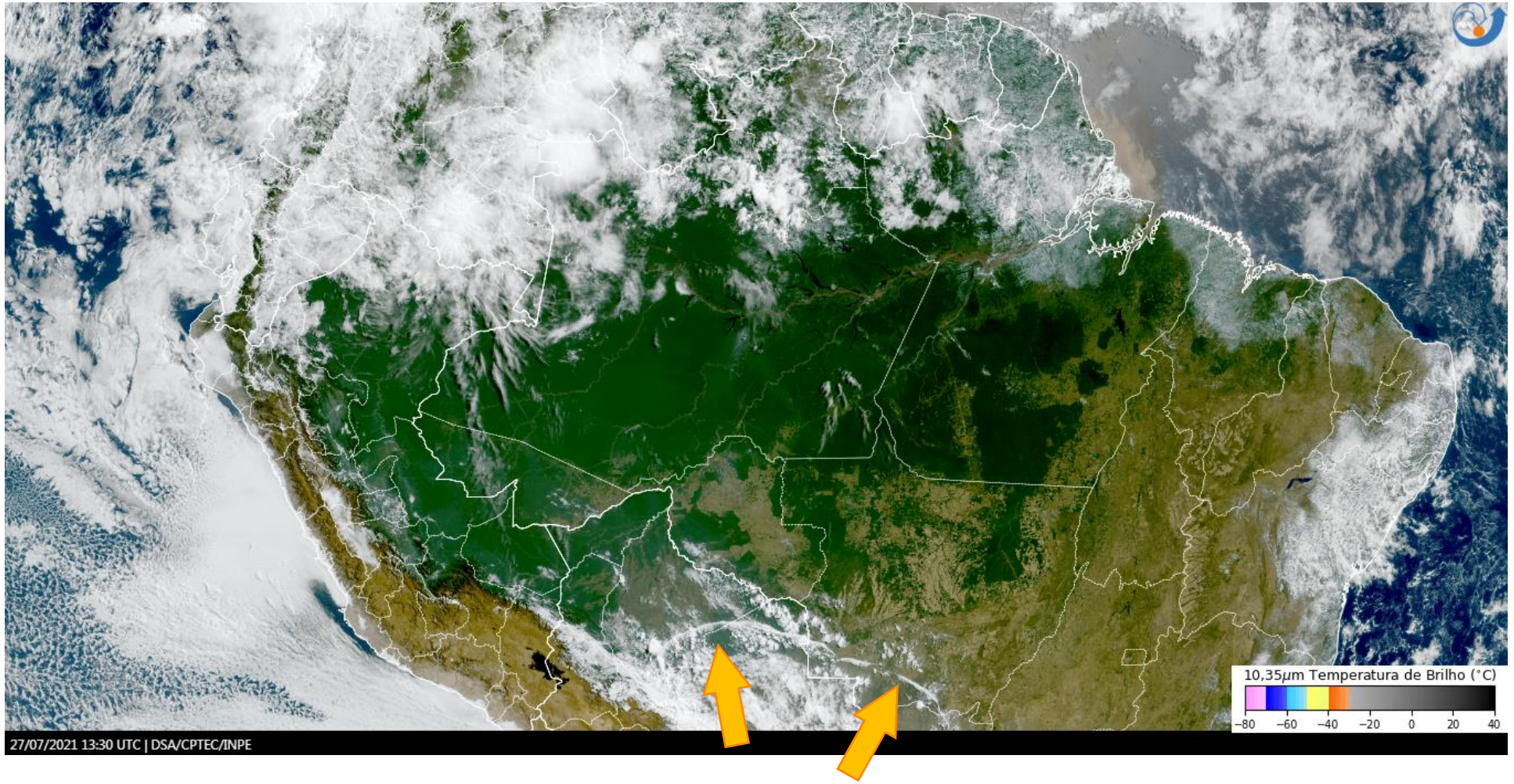
CMORPH: CPC Morphing Technique
https://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html

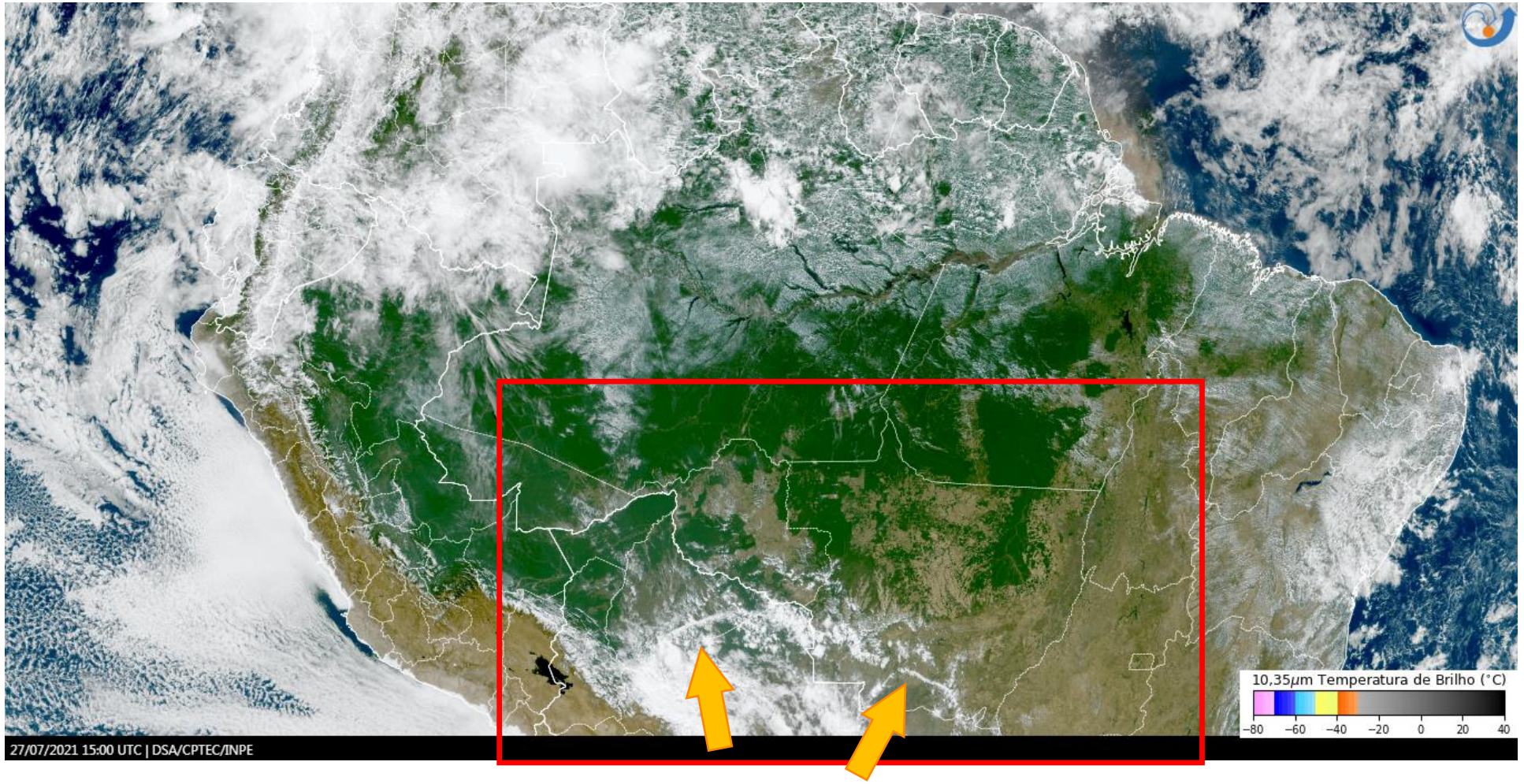
¡Gracias!

Thank you!

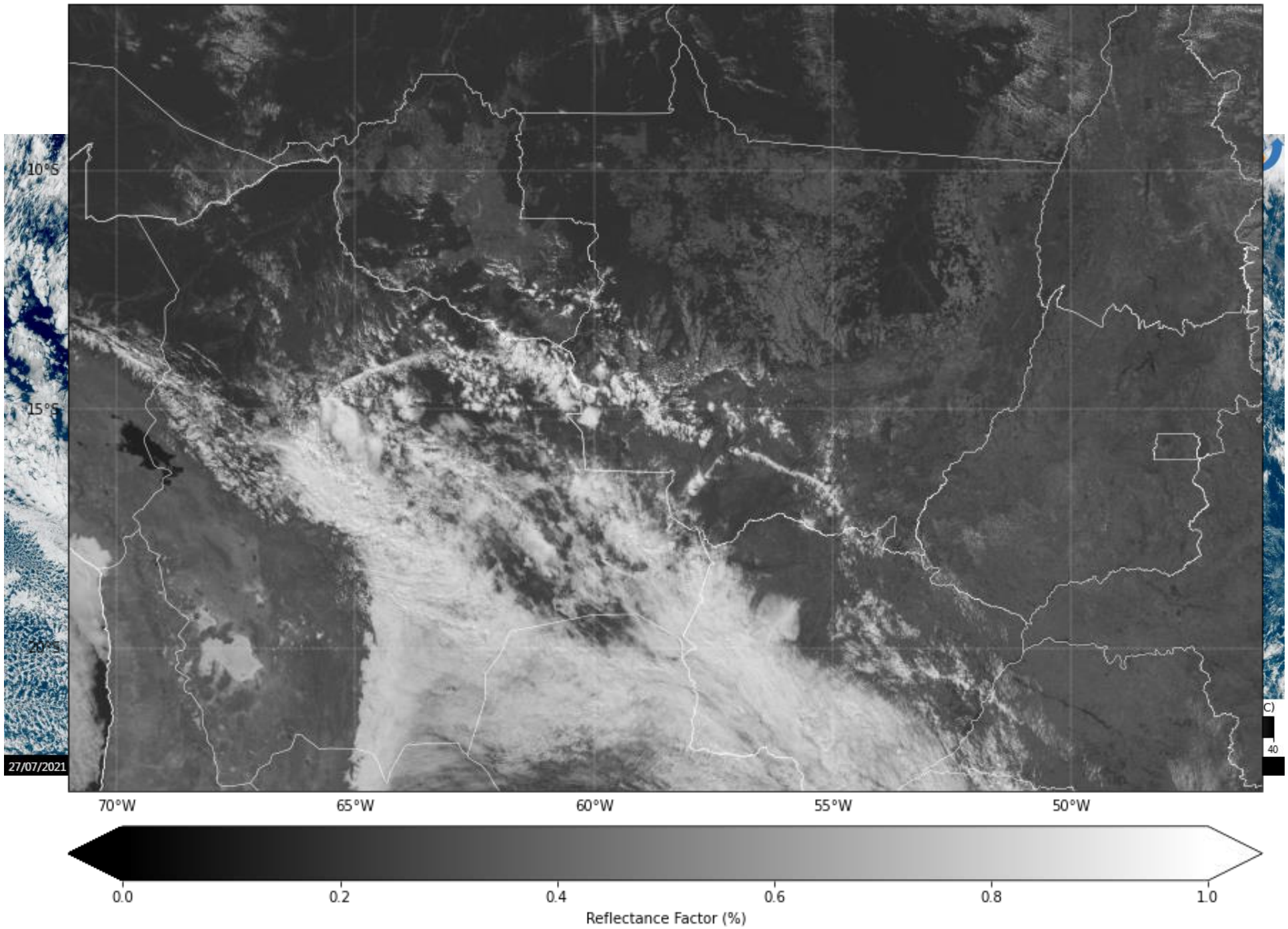
Regina Ito Slides – Brazil Cold Snap

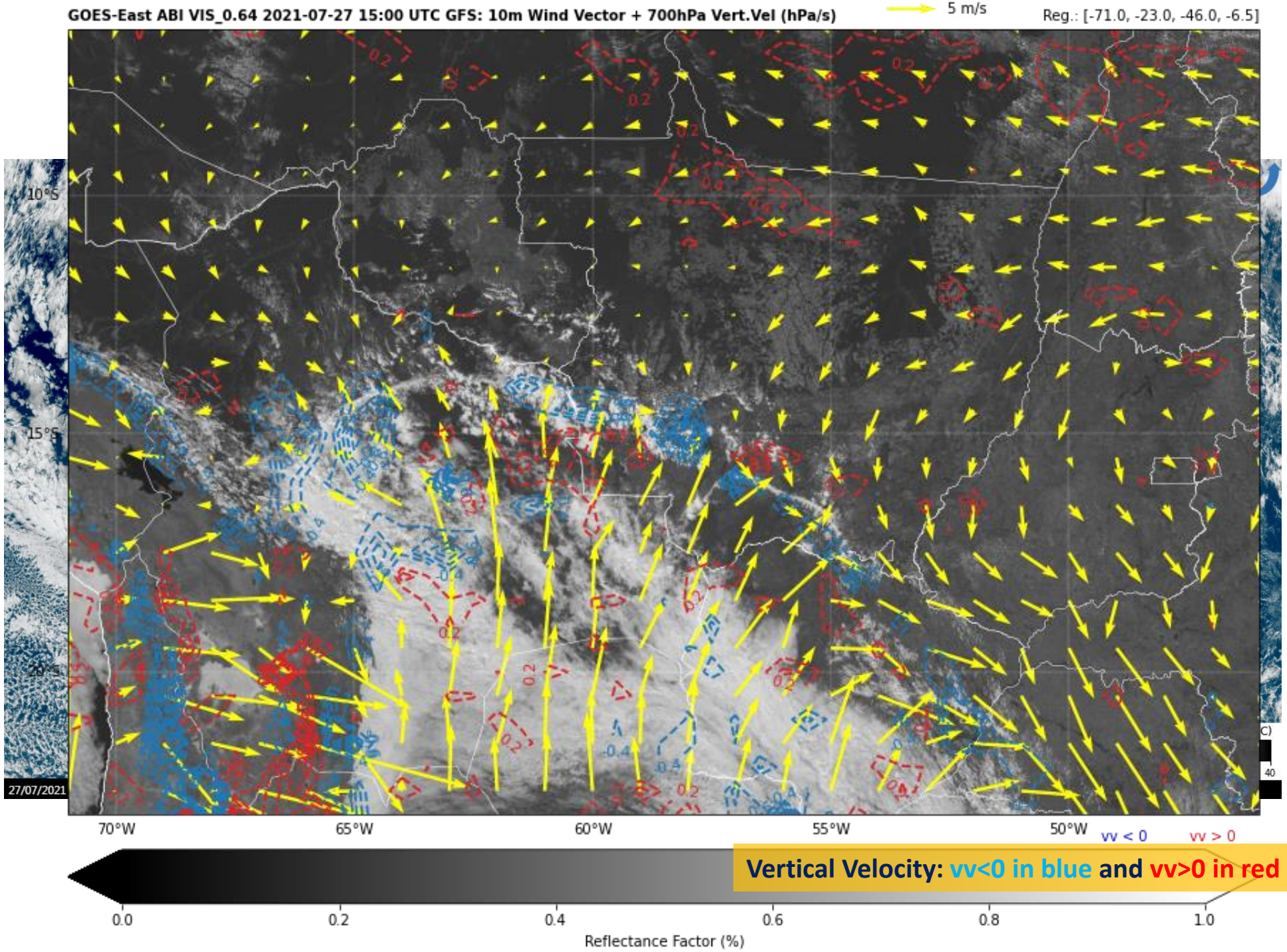
Period
July 27th to 30th

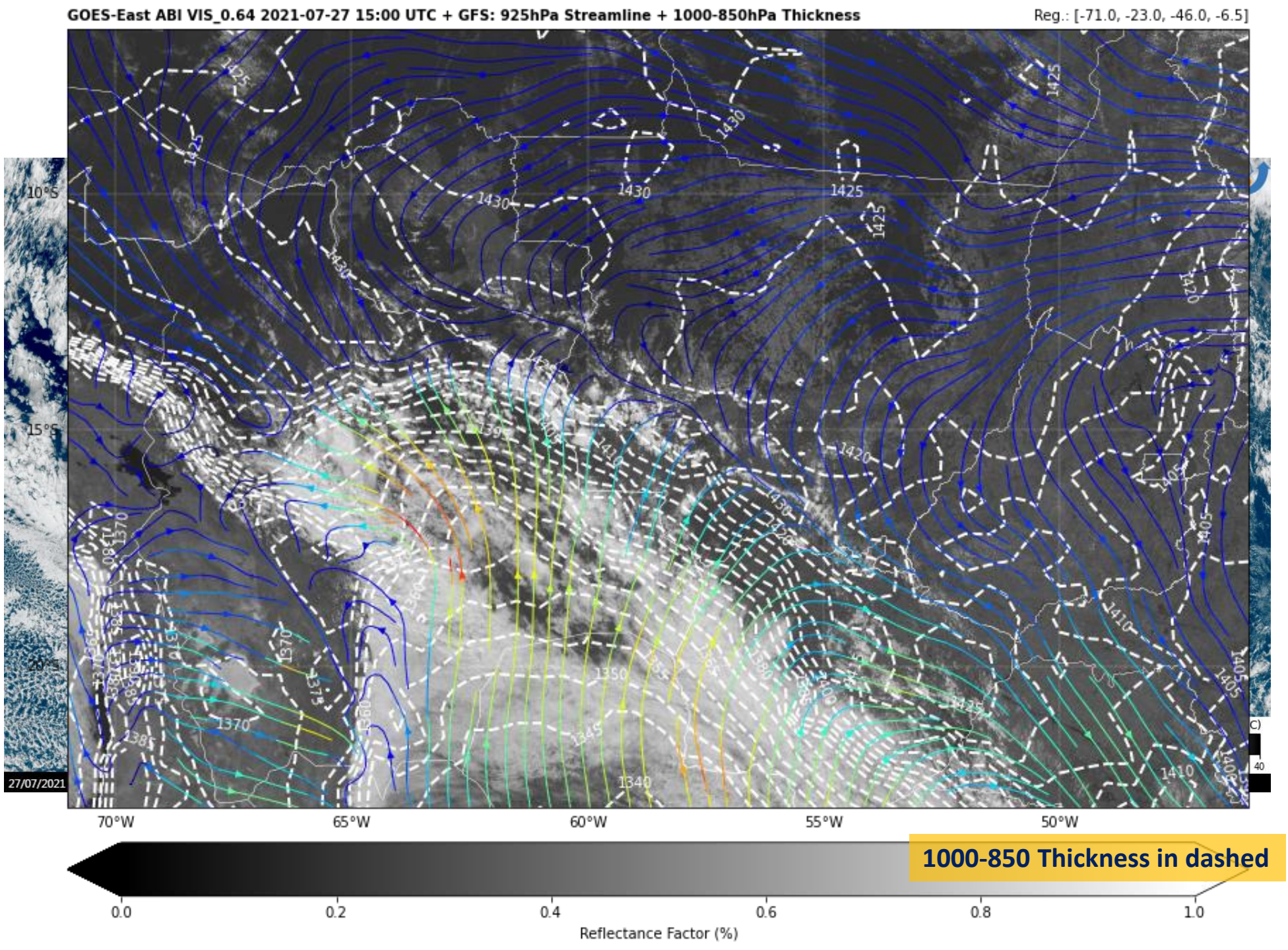

10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
27/07/2021 13:30 UTC | DSA/CPTEC/INPE

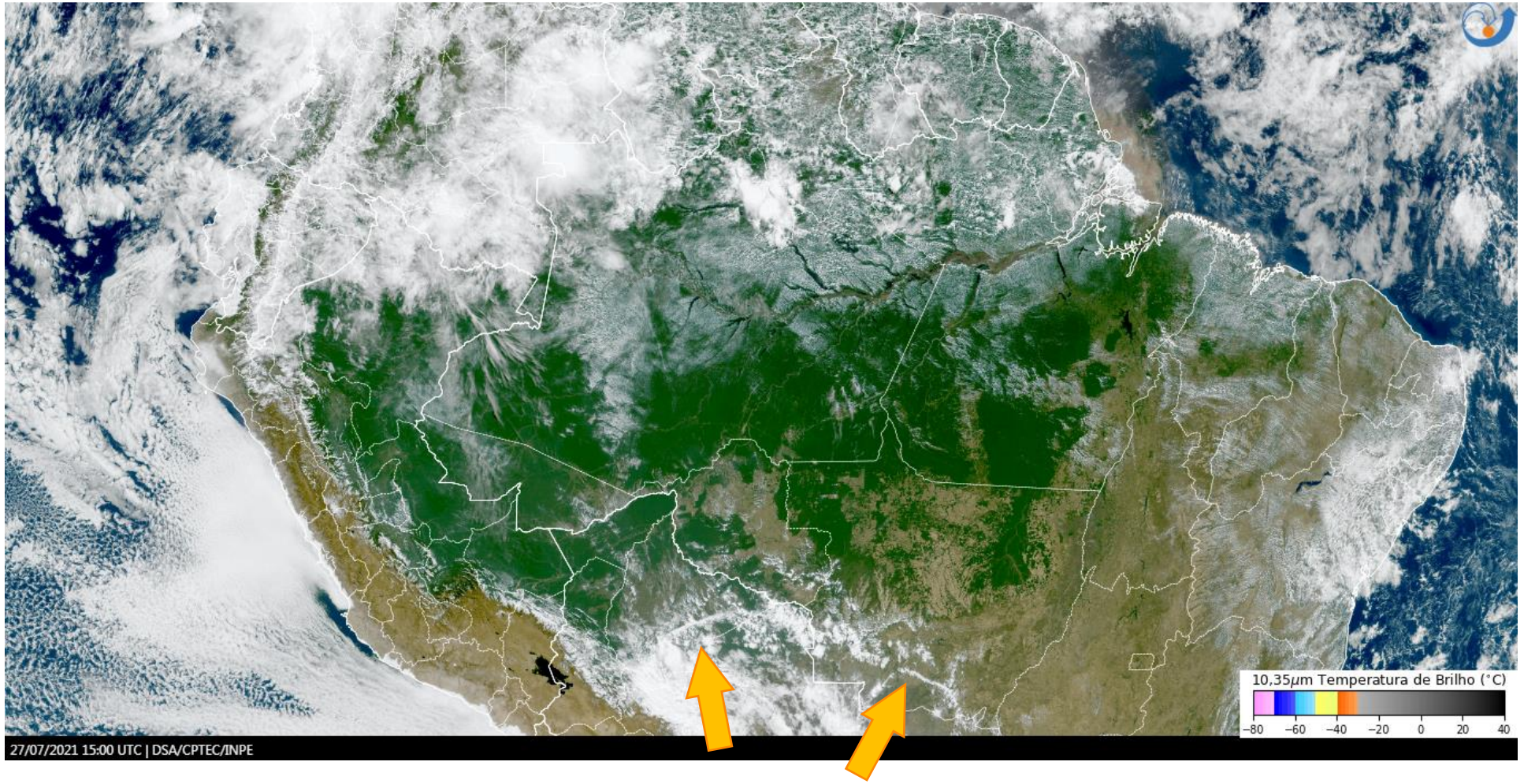


Let´s look at this area and analyze compositons with GFS
at 15UTC July 27th 2021

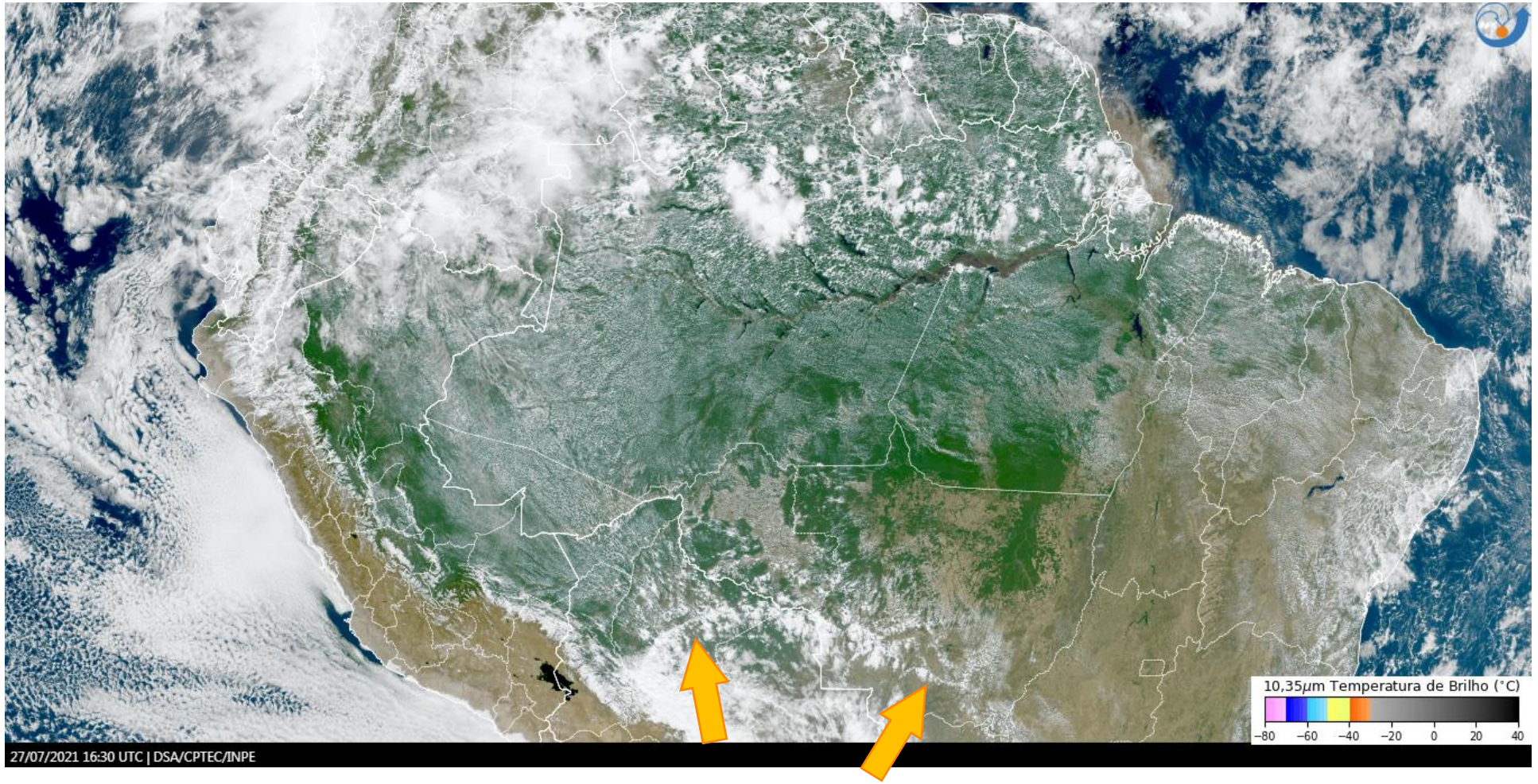

GOES-East ABI VIS_0.64 2021-07-27 15:00 UTC
Reg.: [-71.0, -23.0, -46.0, -6.5]
10°S
15°S
20°S
27/07/2021
70°W
65°W
60°W
55°W
50°W
0.0
0.2
0.4
0.6
0.8
1.0
Reflectance Factor (%)
C)
40

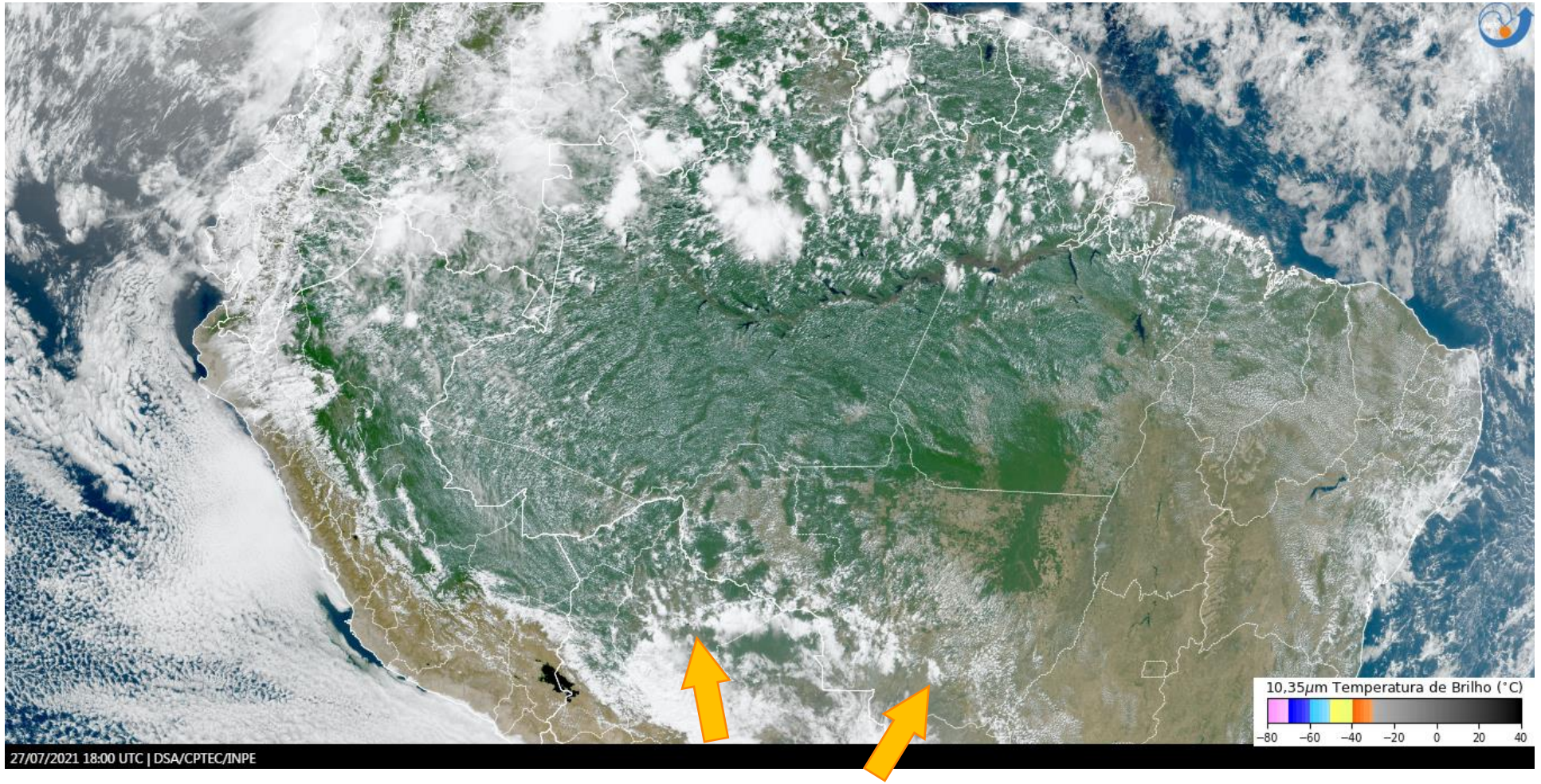

GOES-East ABI VIS_0.64 2021-07-27 15:00 UTC GFS: 10m Wind Vector + 700hPa Vert.Vel (hPa/s)
5 m/s
Reg.: [-71.0, -23.0, -46.0, -6.5]
10°S
15°S
20°S
27/07/2021
70°W
65°W
60°W
55°W
50°W
vv < 0
vv > 0
Vertical Velocity: vv<0 in blue and vv>0 in red
0.0
0.2
0.4
0.6
0.8
1.0
Reflectance Factor (%)


GOES-East ABI VIS_0.64 2021-07-27 15:00 UTC + GFS: 925hPa Streamline + 1000-850hPa Thickness
Reg.: [-71.0, -23.0, -46.0, -6.5]
10°S
15°S
20°S
27/07/2021
70°W
65°W
60°W
55°W
50°W
1000-850 Thickness in dashed
0.0
0.2
0.4
0.6
0.8
1.0
Reflectance Factor (%)



Continuing the animation.....


10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
27/07/2021 16:30 UTC | DSA/CPTEC/INPE


10,35μm Temperatura de Brilho (°C)
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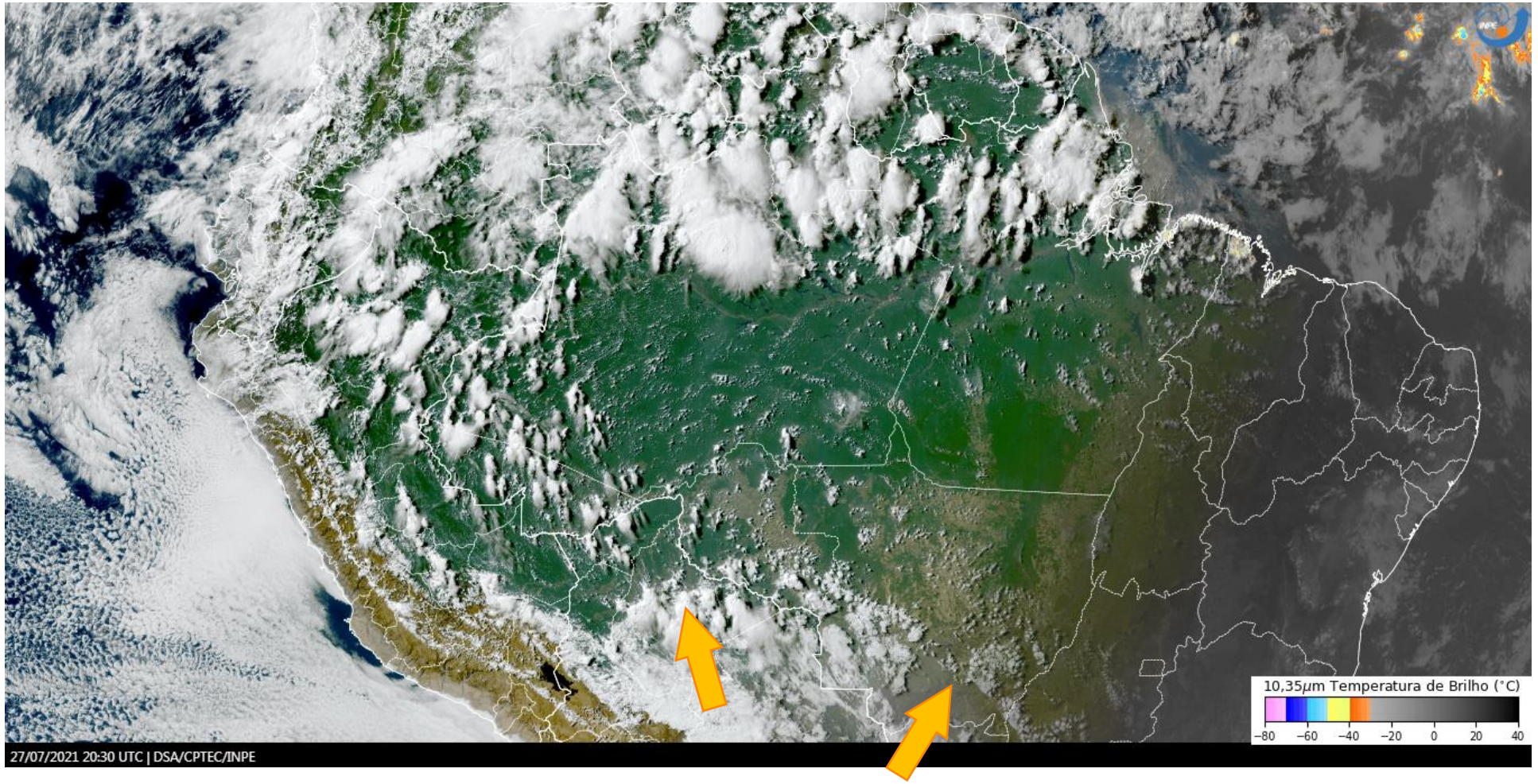
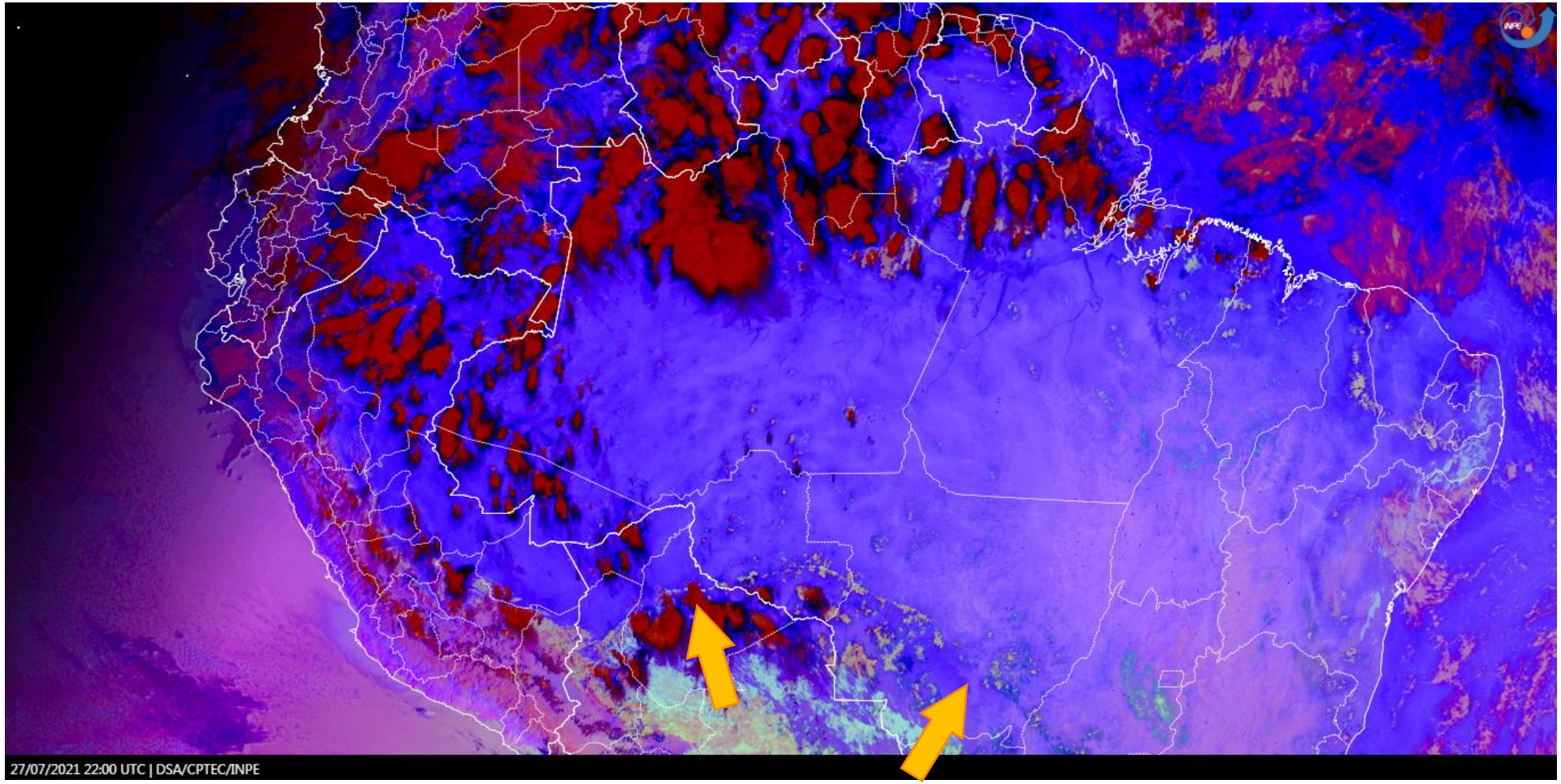
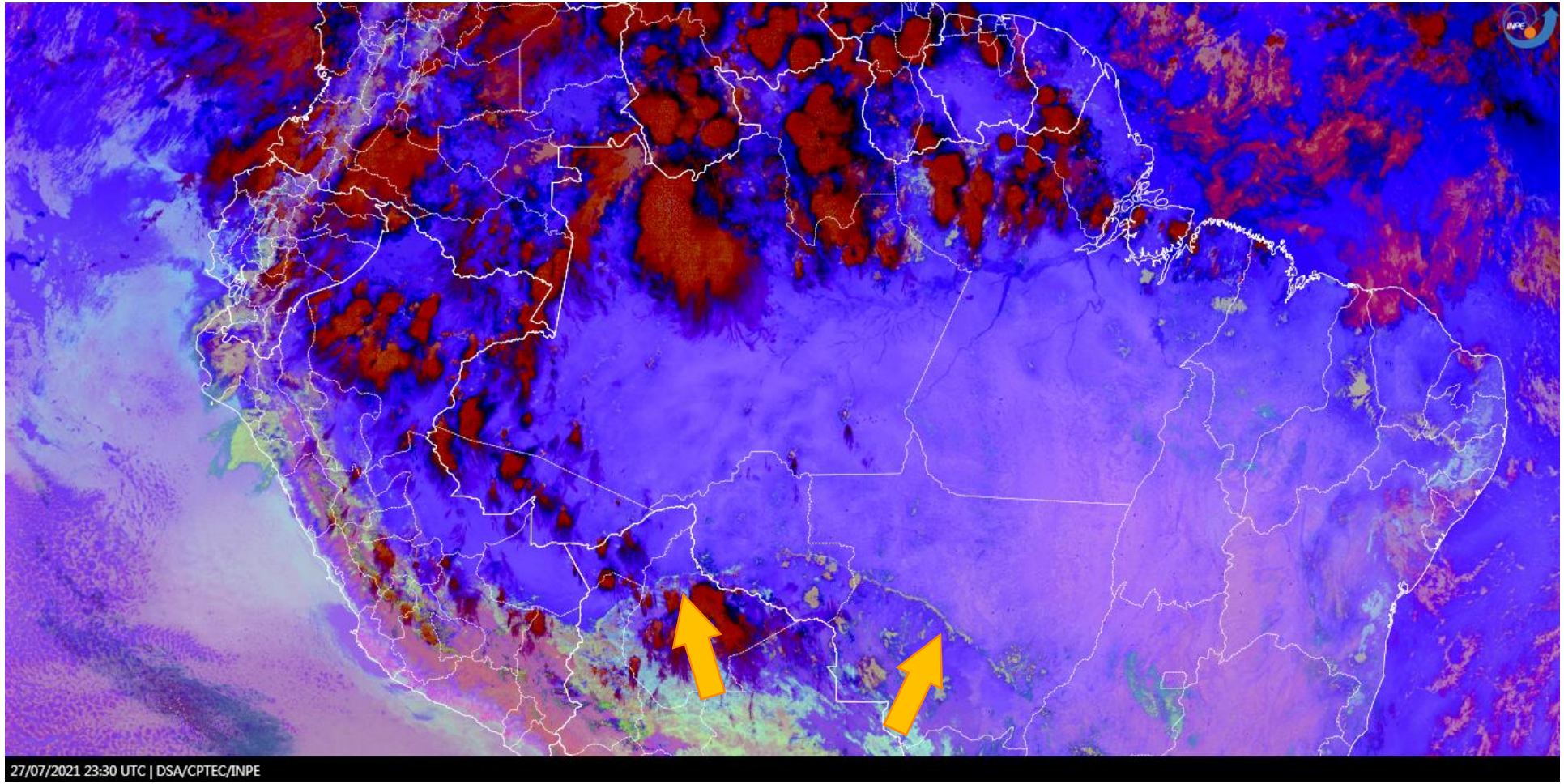
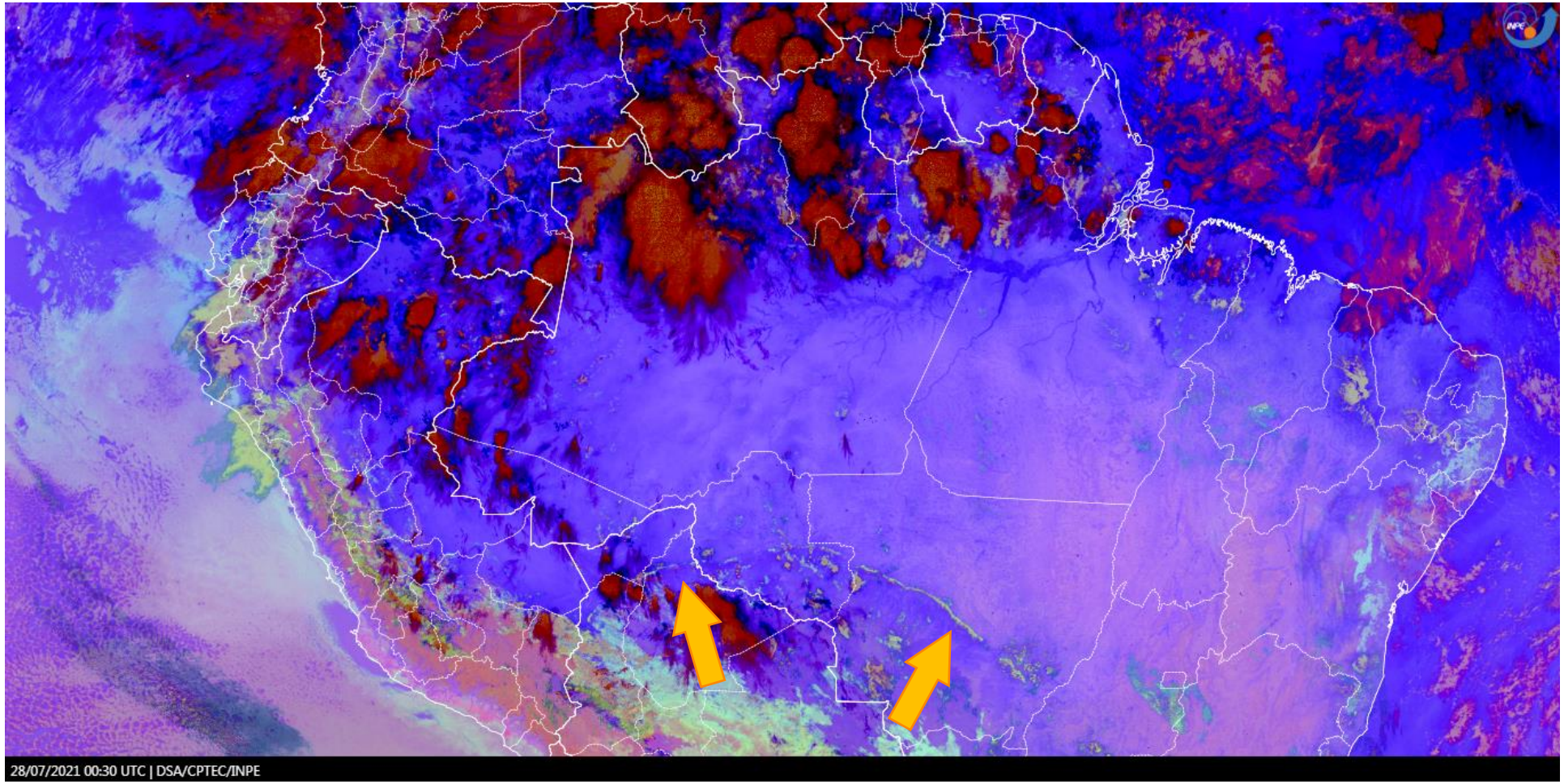
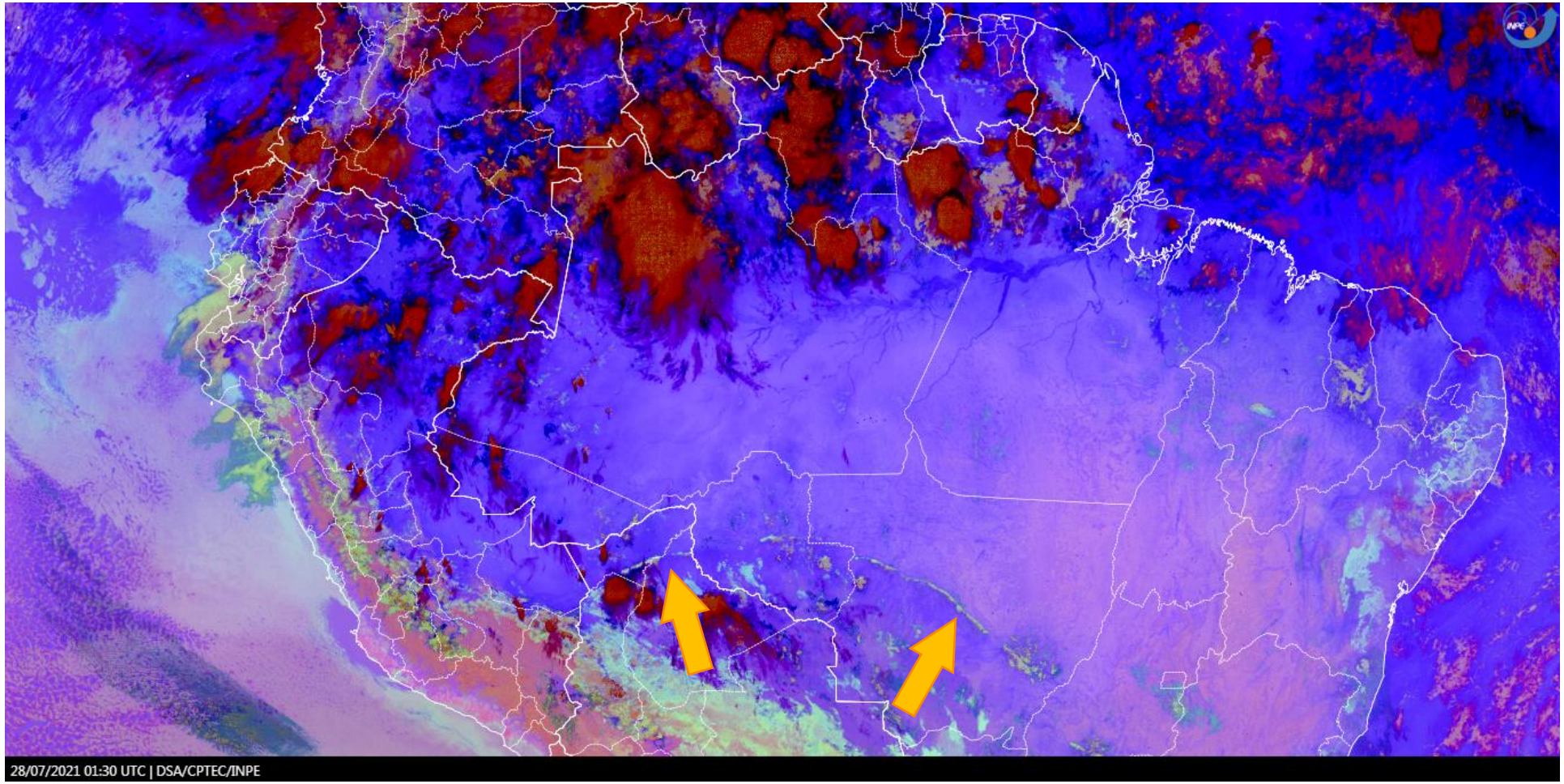
27/07/2021 18:00 UTC | DSA/CPTEC/INPE

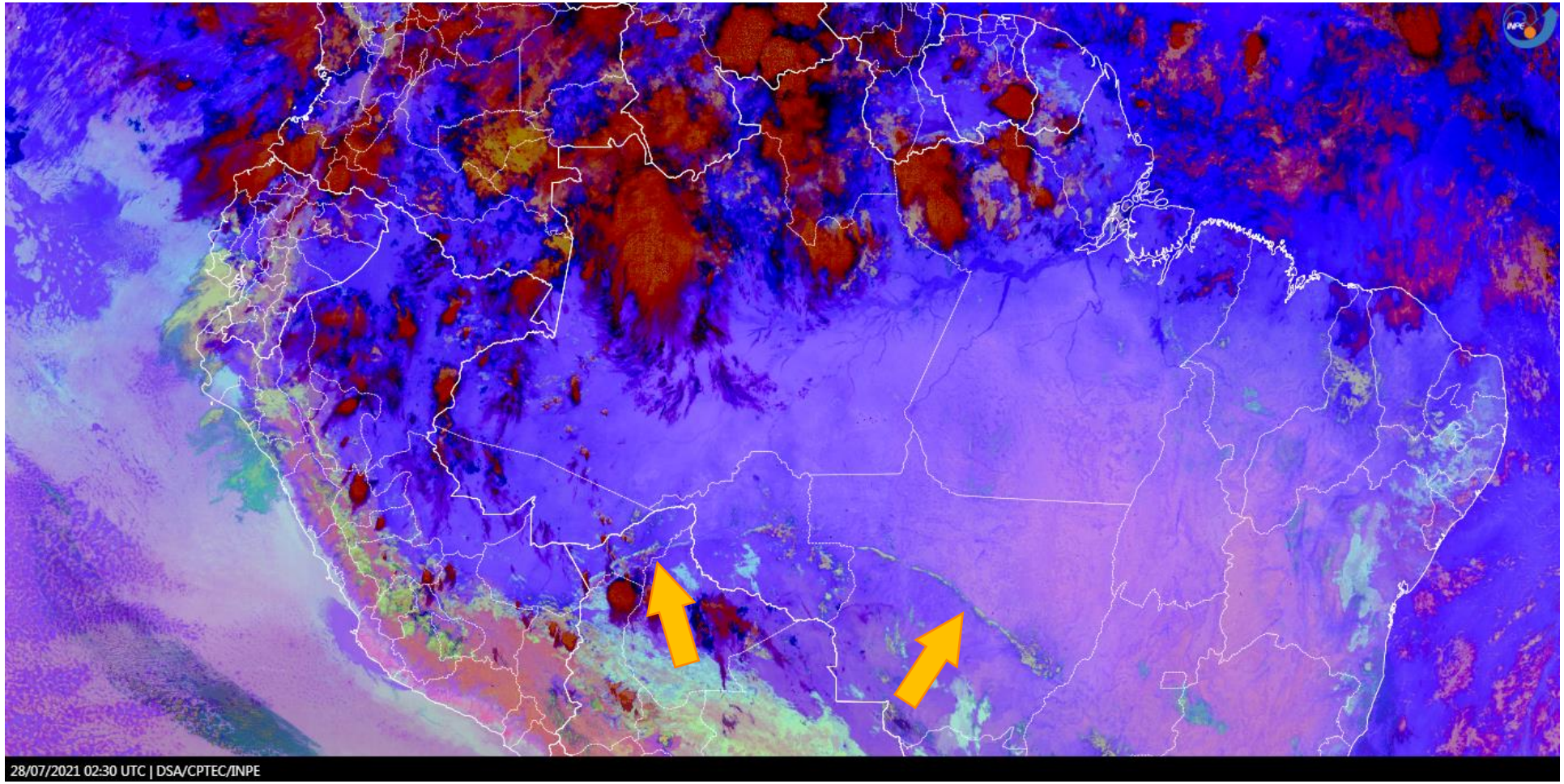

10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
27/07/2021 20:30 UTC | DSA/CPTEC/INPE

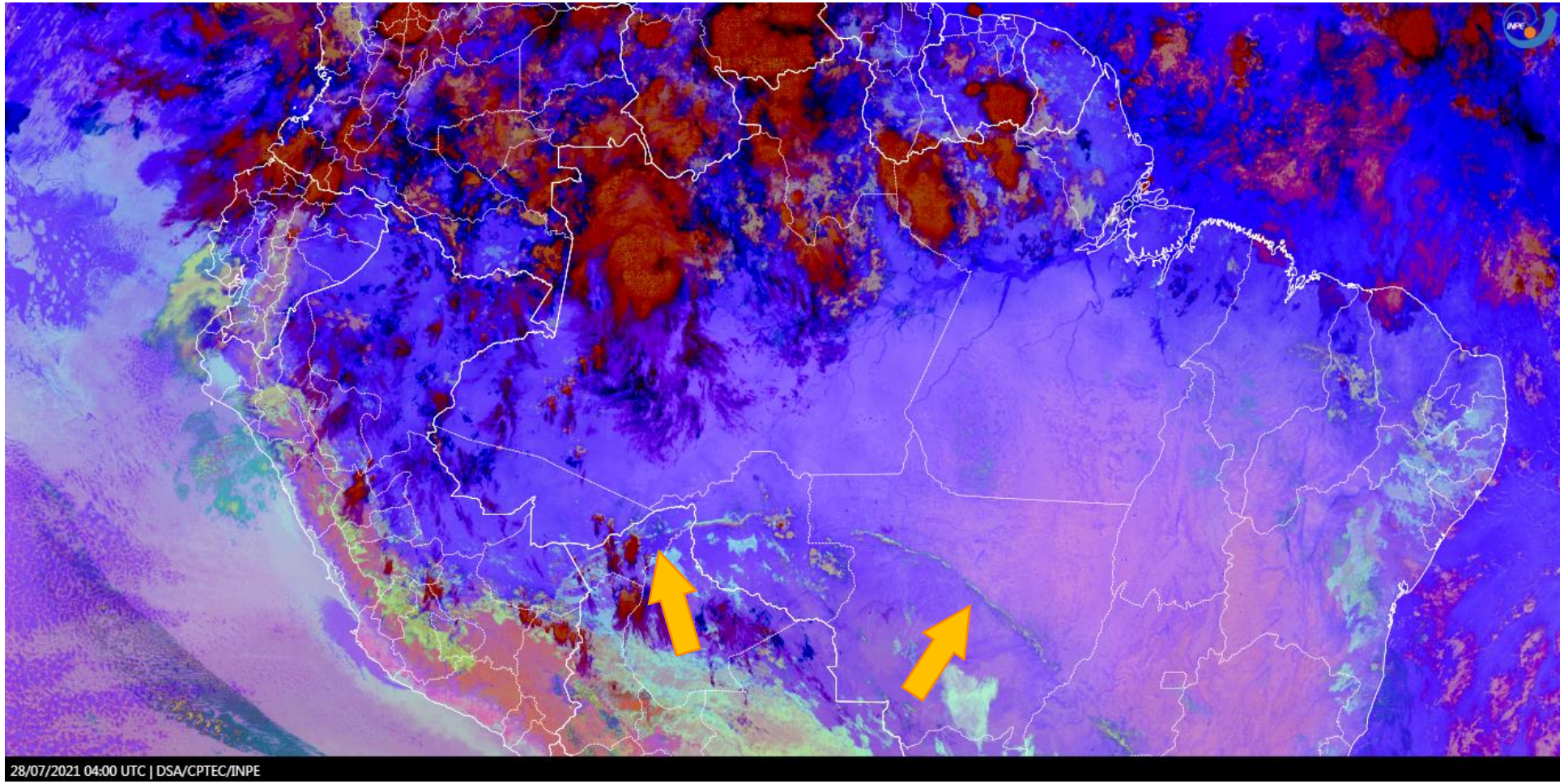

27/07/2021 22:00 UTC | DSA/CPTEC/INPE

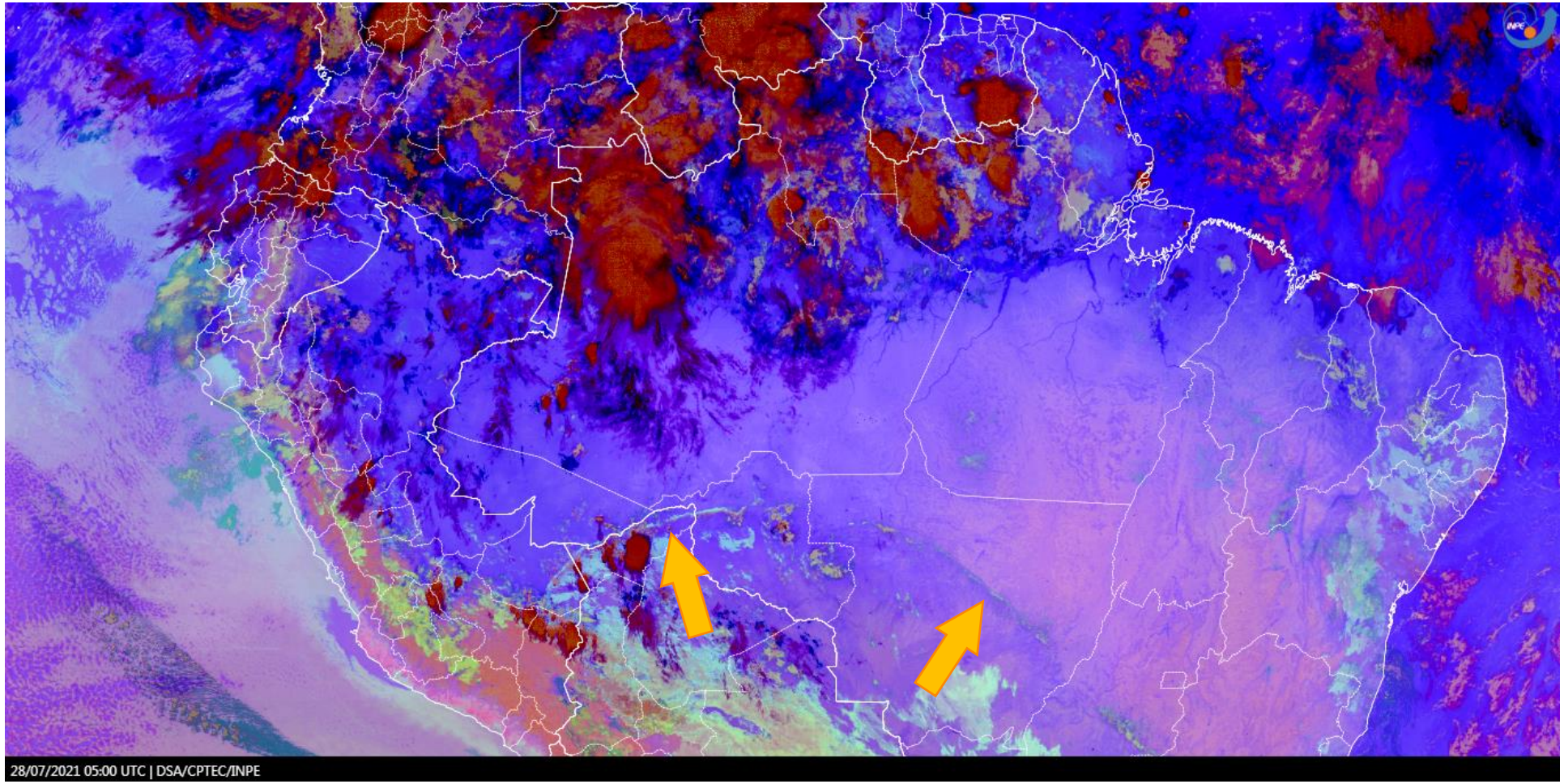

27/07/2021 23:30 UTC | DSA/CPTEC/INPE

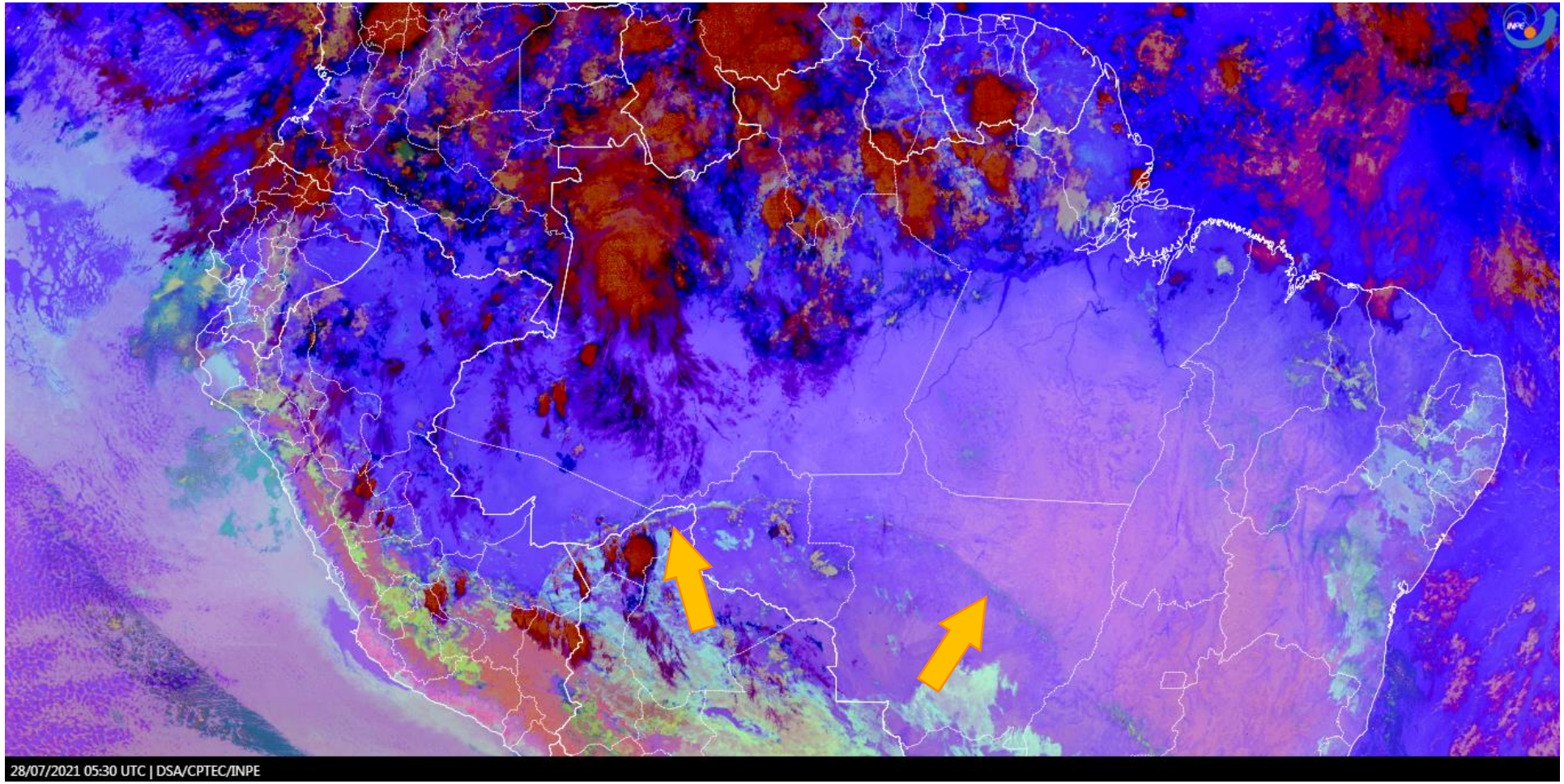

28/07/2021 00:30 UTC | DSA/CPTEC/INPE

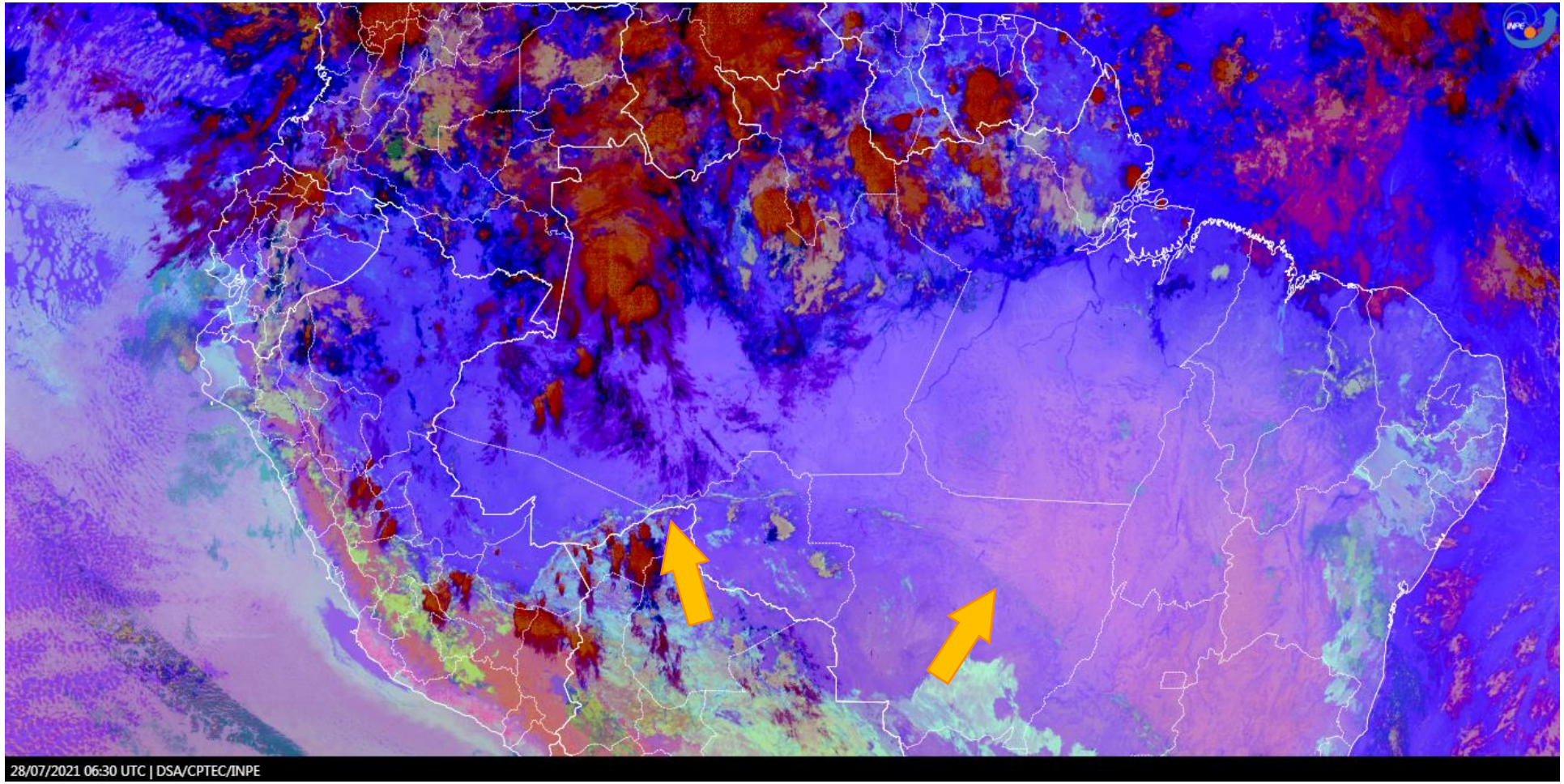

28/07/2021 01:30 UTC | DSA/CPTEC/INPE

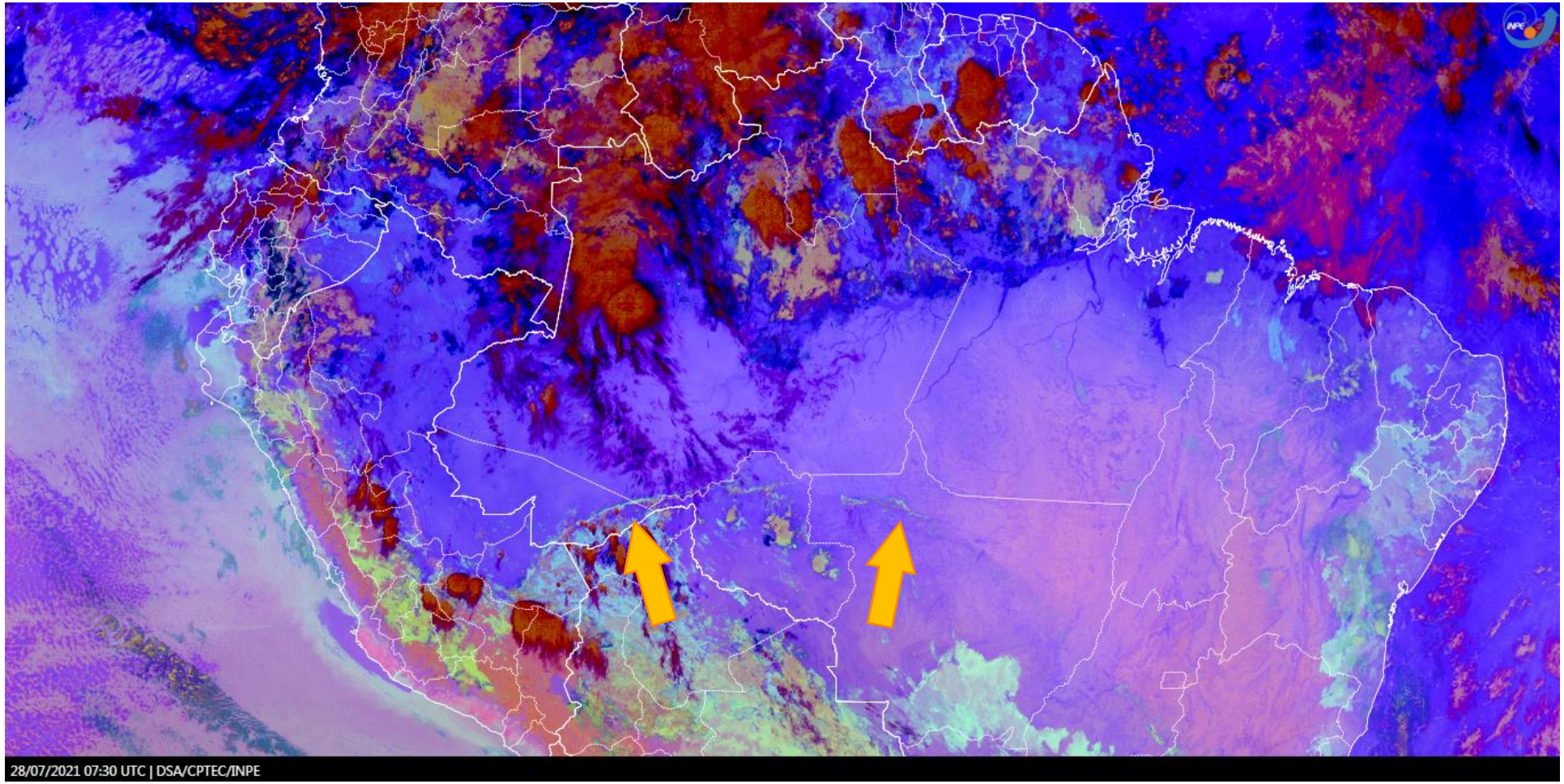

28/07/2021 02:30 UTC | DSA/CPTEC/INPE

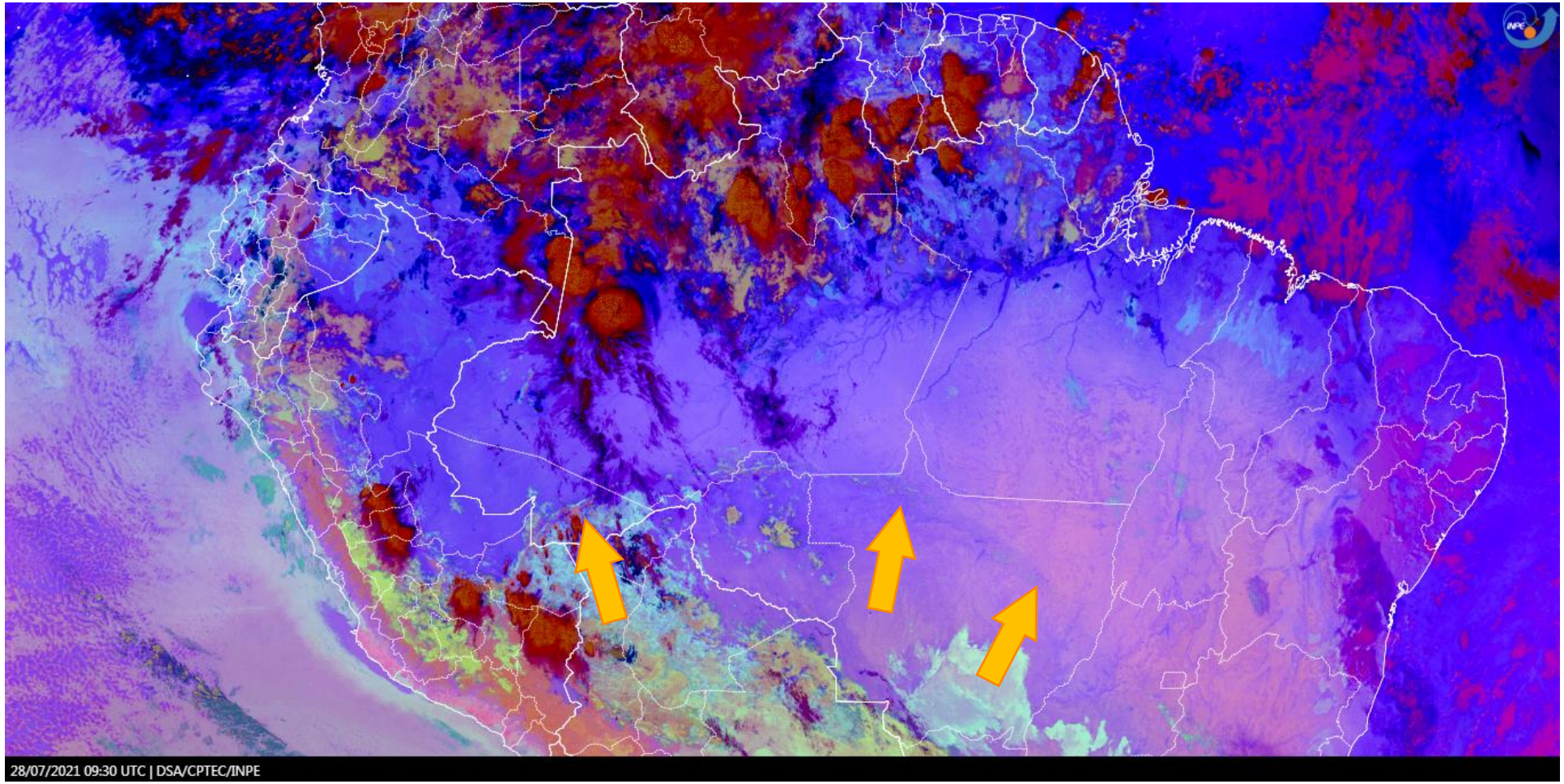

28/07/2021 04:00 UTC | DSA/CPTEC/INPE

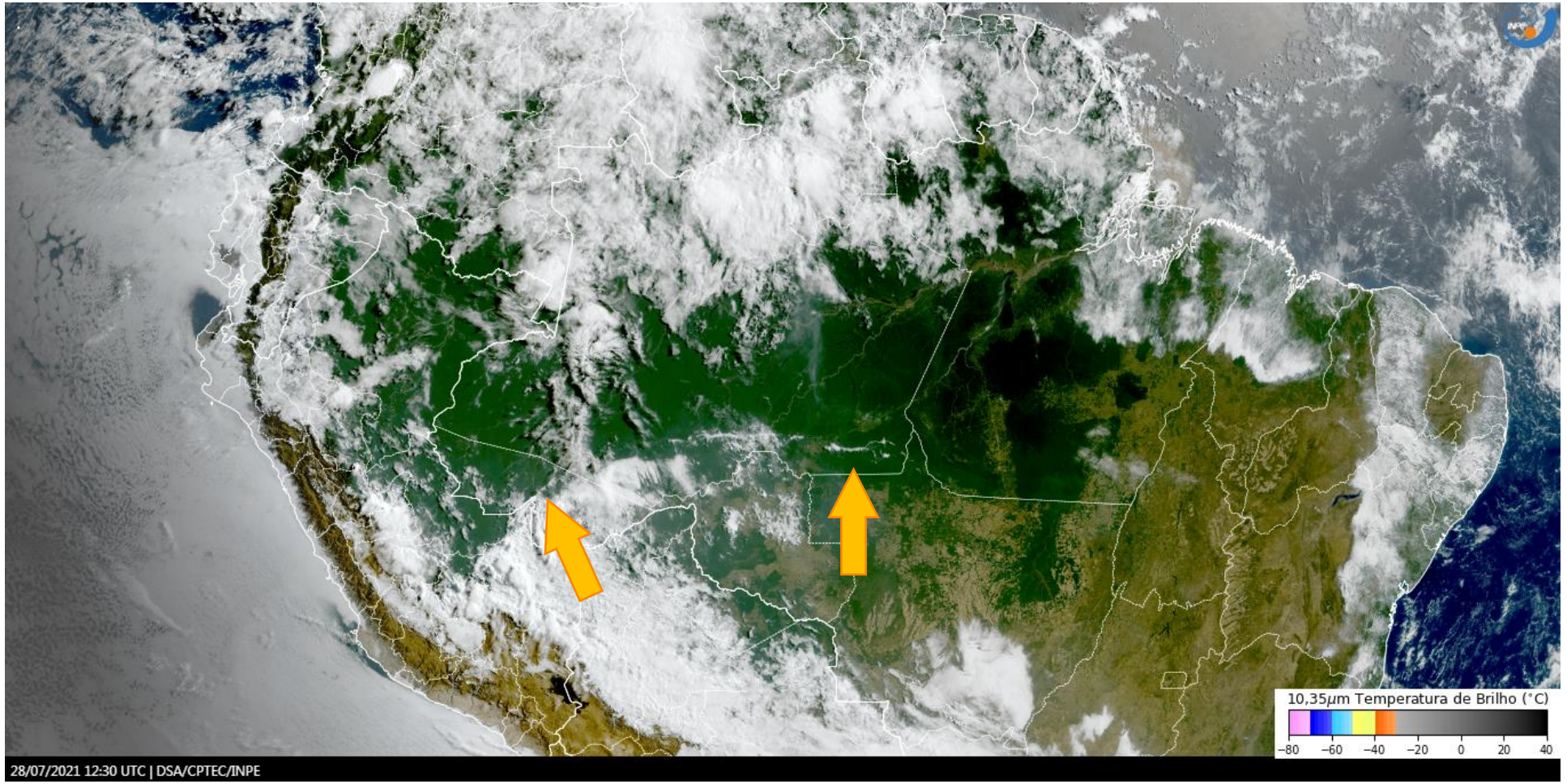

28/07/2021 05:00 UTC | DSA/CPTEC/INPE

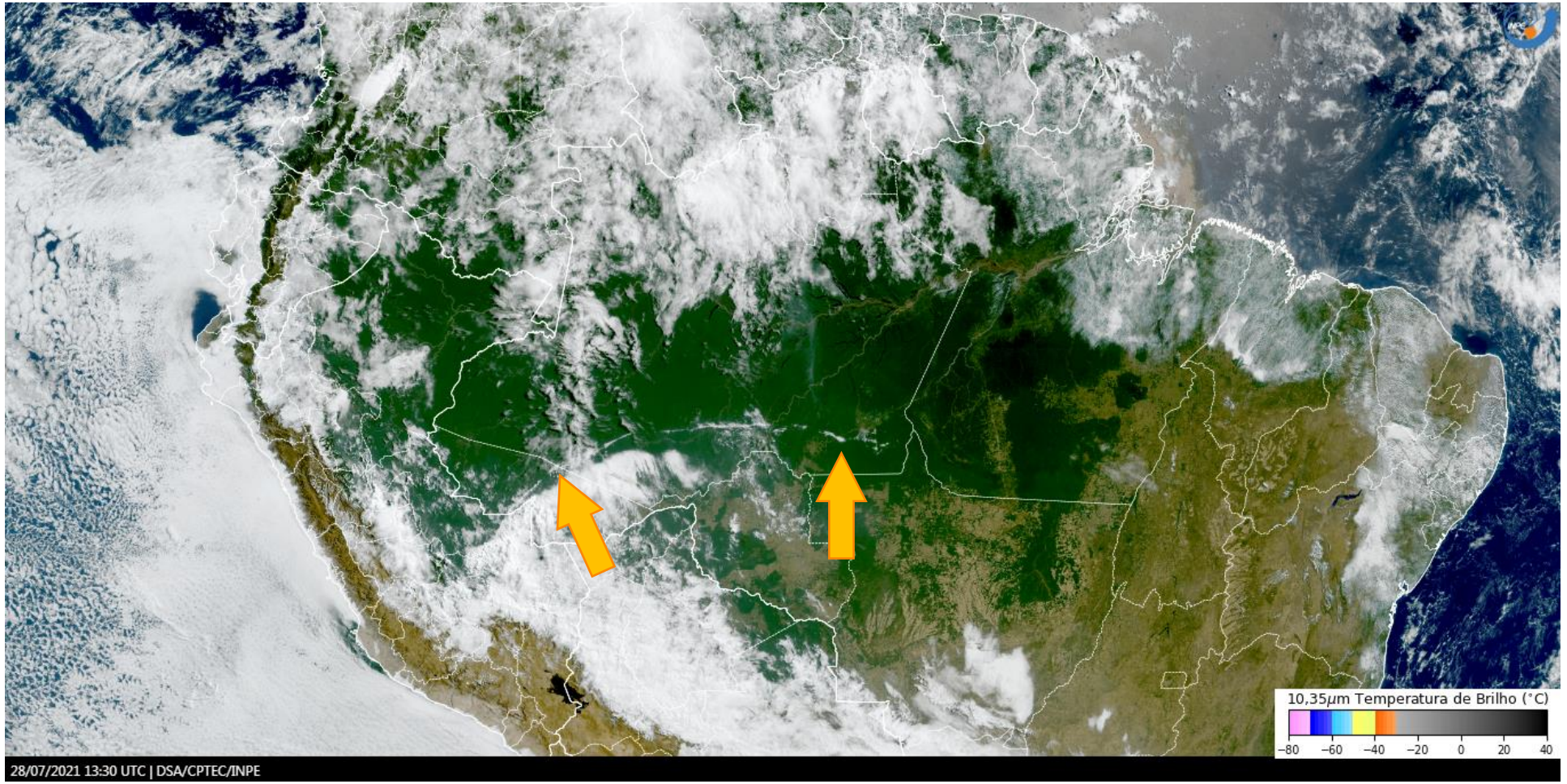

28/07/2021 05:30 UTC | DSA/CPTEC/INPE

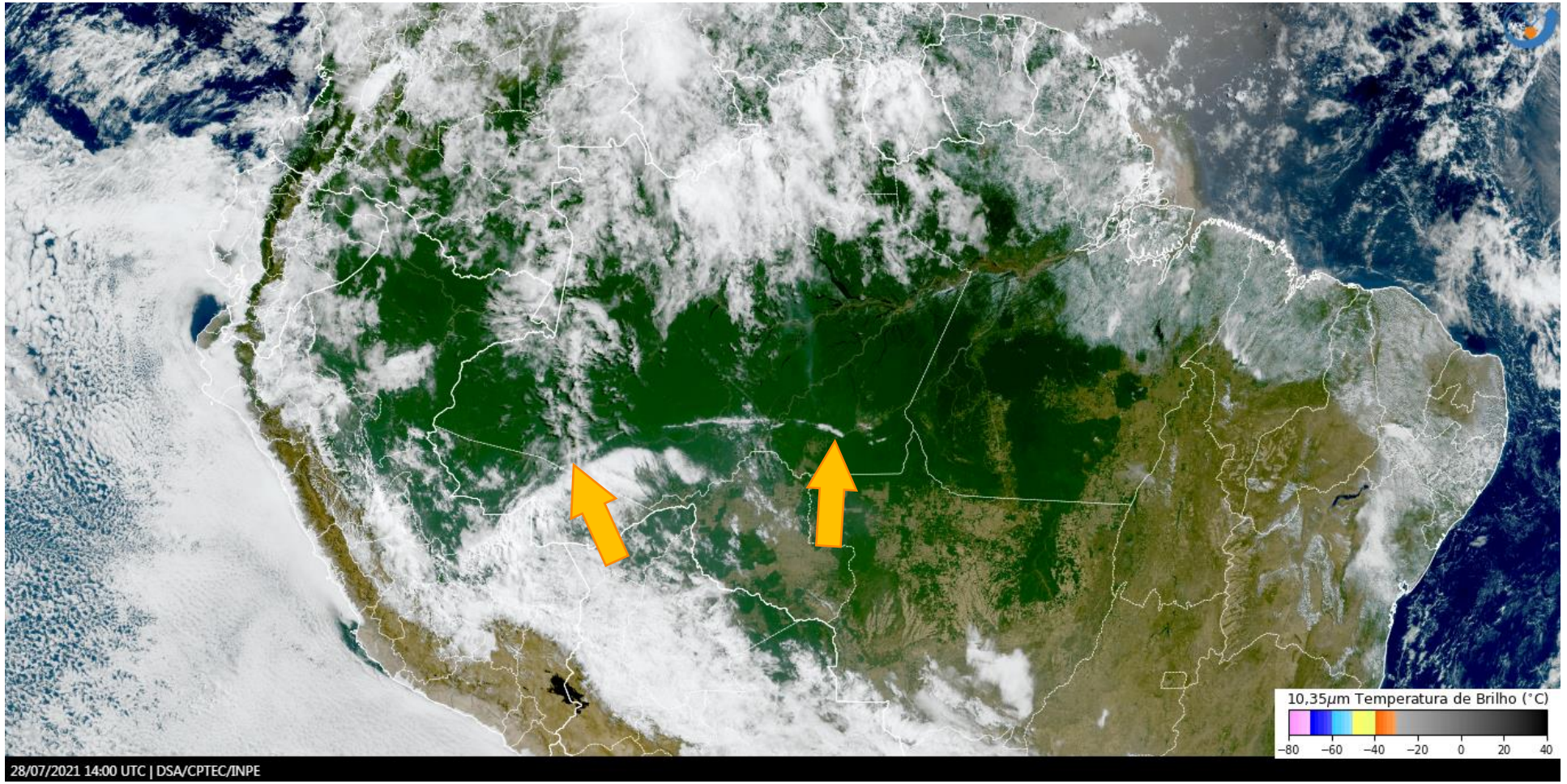

28/07/2021 06:30 UTC | DSA/CPTEC/INPE

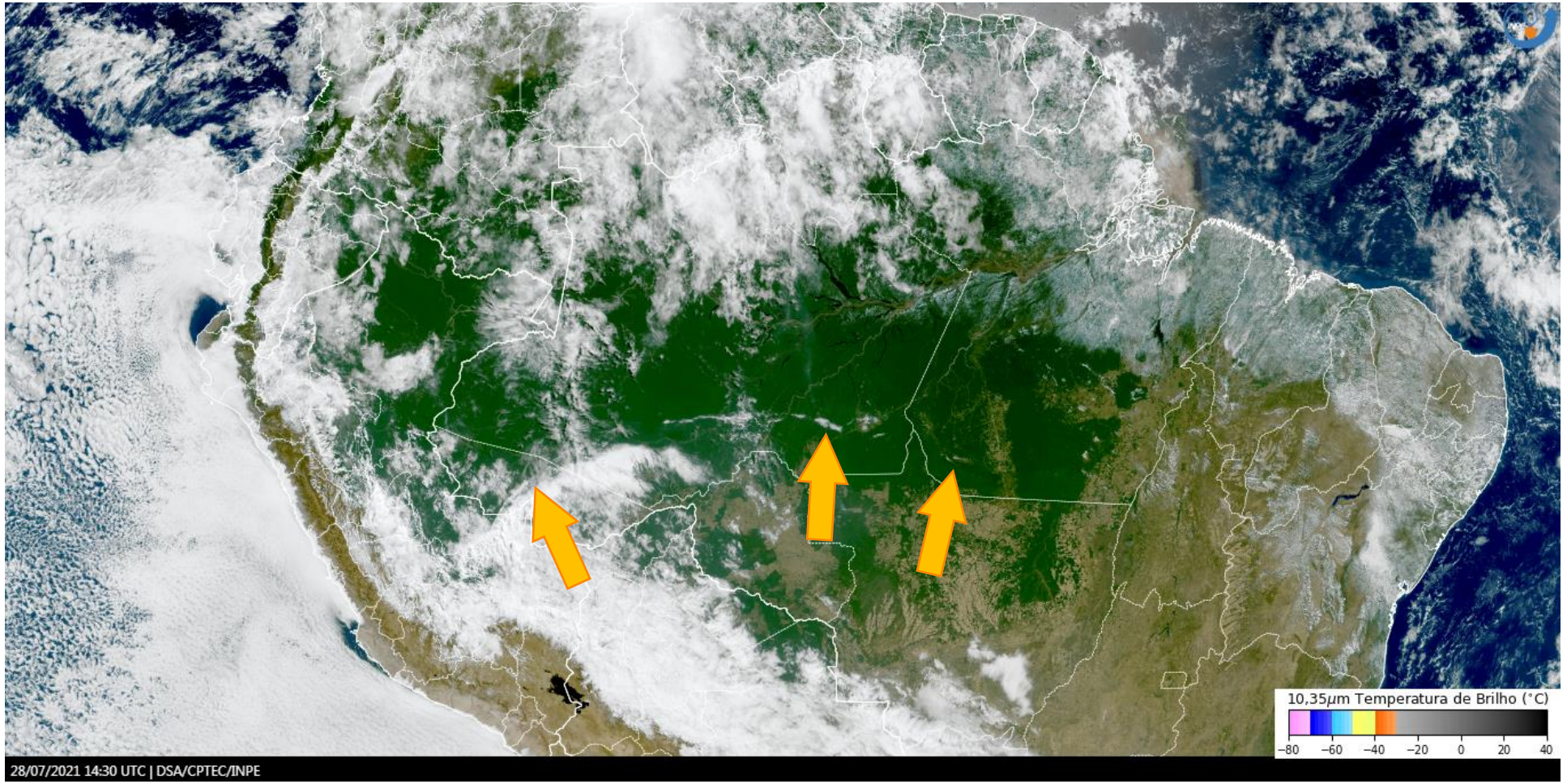

28/07/2021 07:30 UTC | DSA/CPTEC/INPE

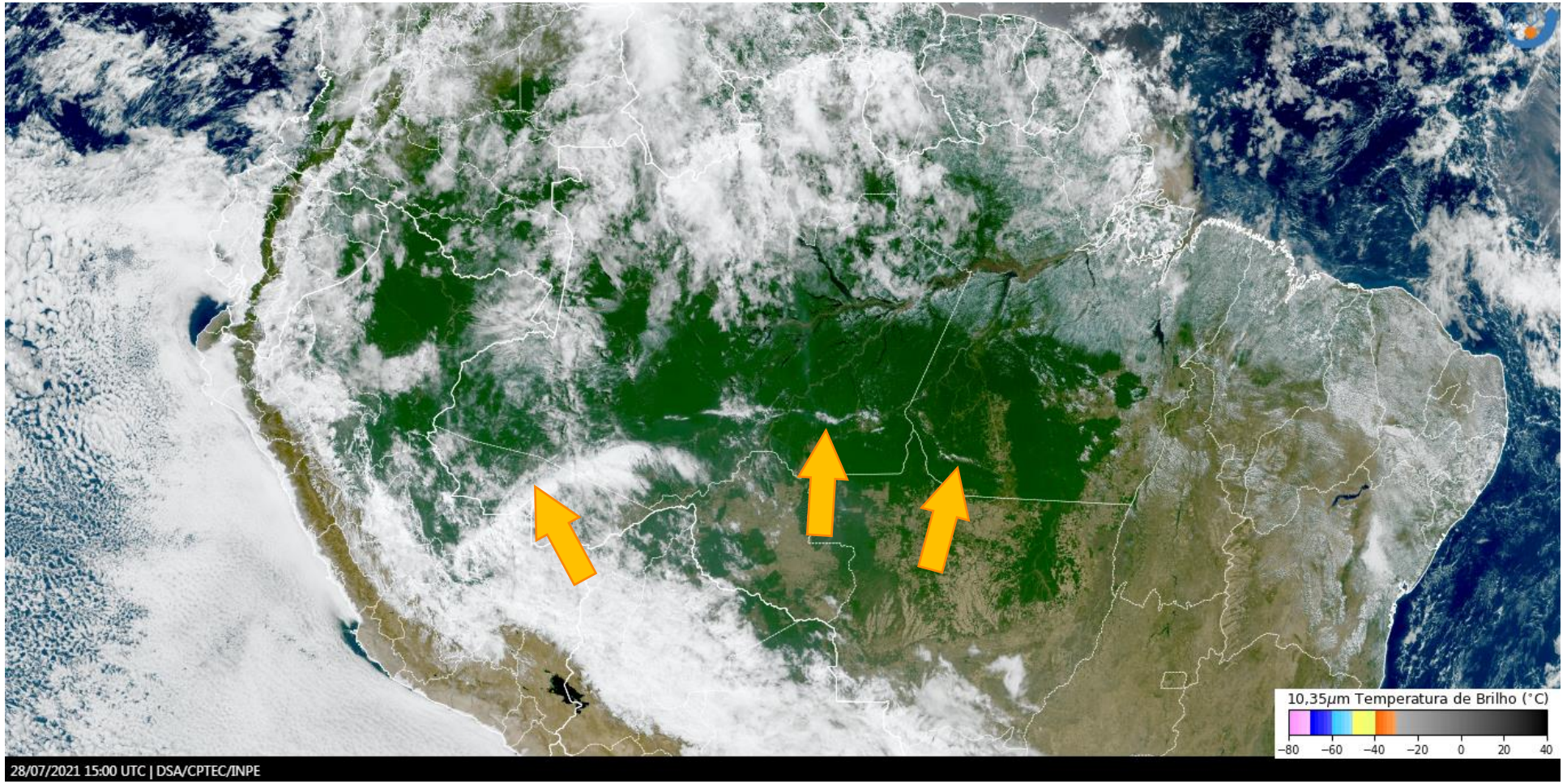

28/07/2021 09:30 UTC | DSA/CPTEC/INPE

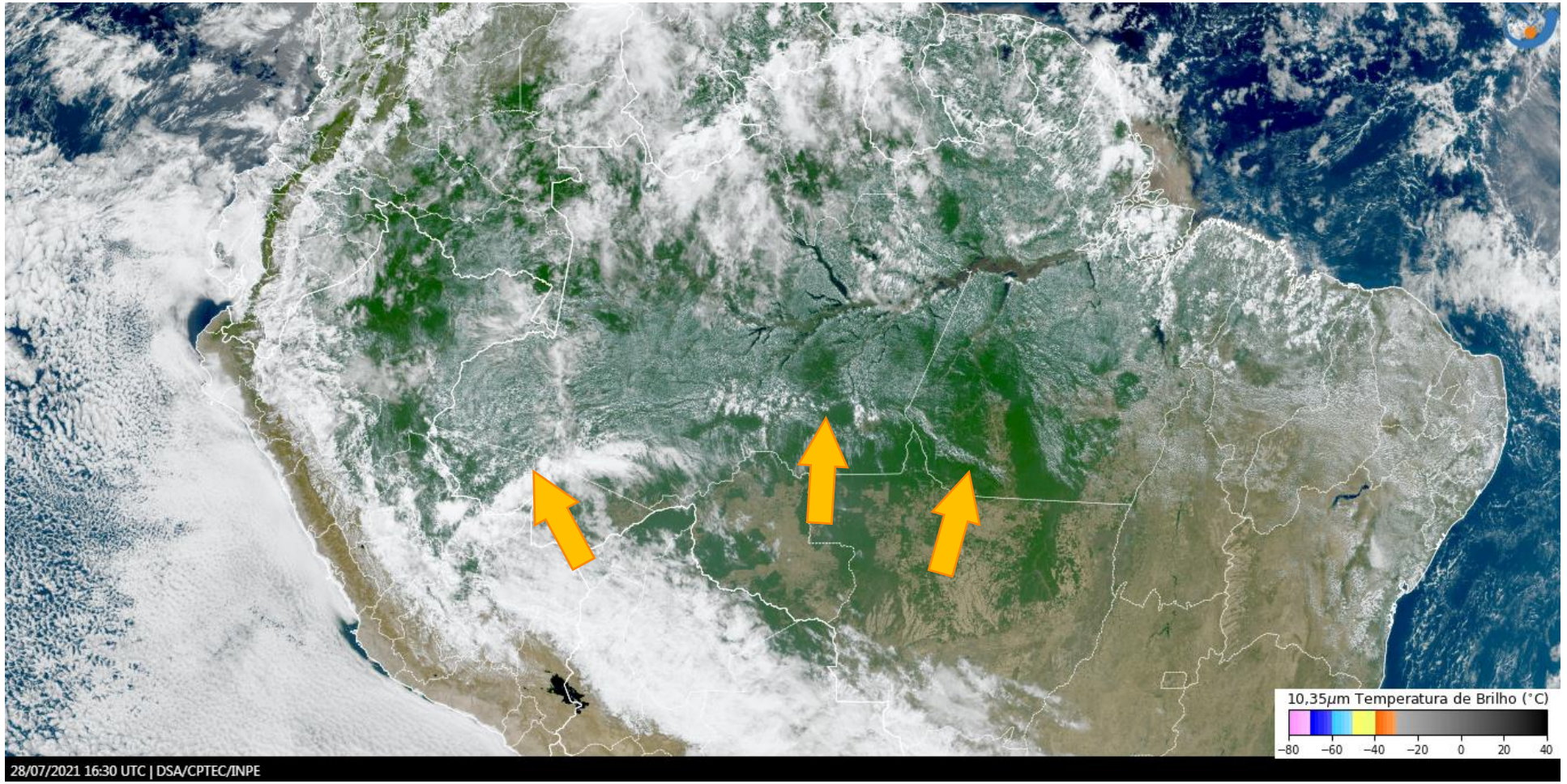

10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
28/07/2021 12:30 UTC | DSA/CPTEC/INPE


10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
28/07/2021 13:30 UTC | DSA/CPTEC/INPE


10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
28/07/2021 14:00 UTC | DSA/CPTEC/INPE


10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
28/07/2021 14:30 UTC | DSA/CPTEC/INPE


10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
28/07/2021 15:00 UTC | DSA/CPTEC/INPE


10,35μm Temperatura de Brilho (°C)
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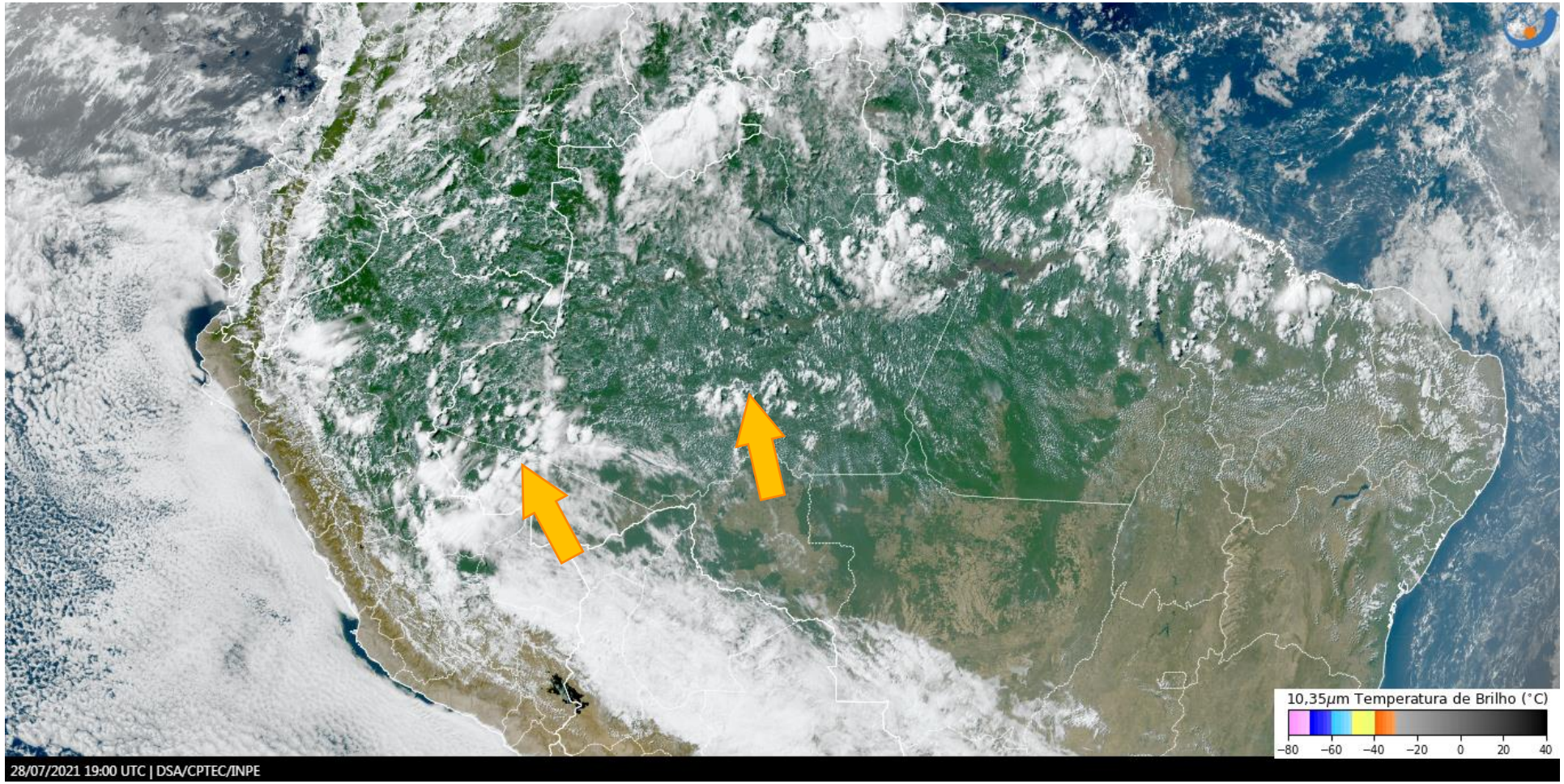
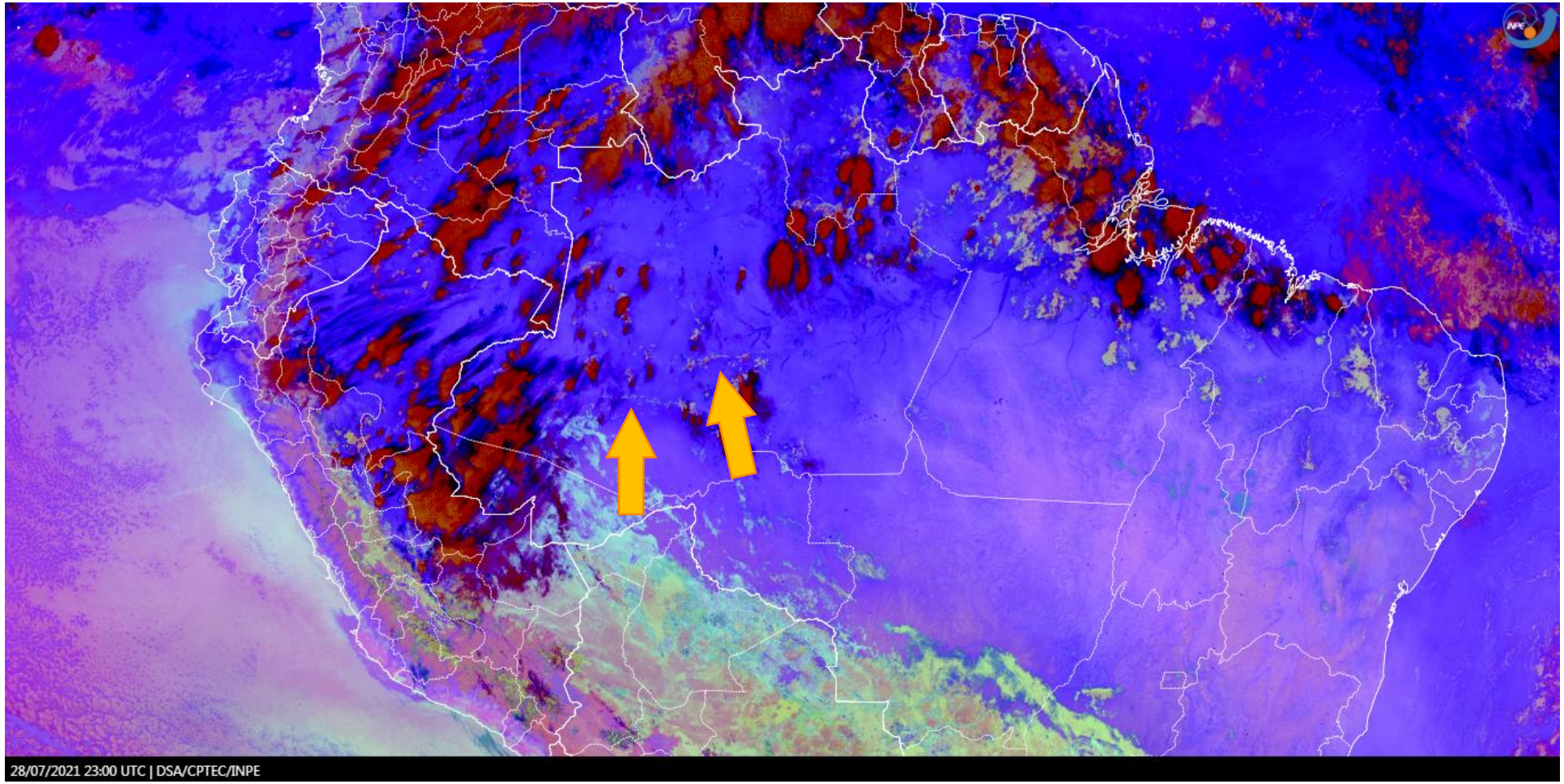
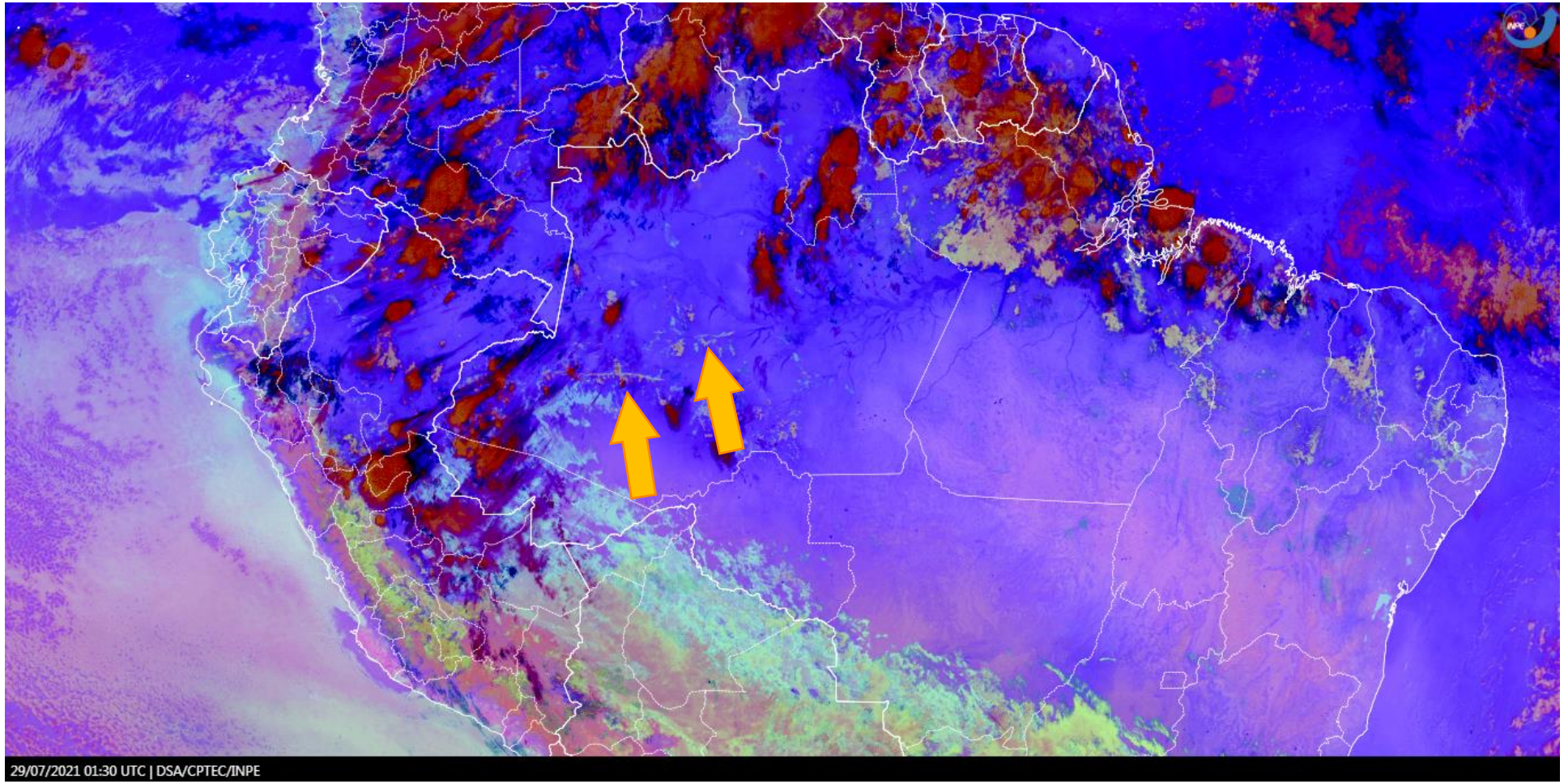
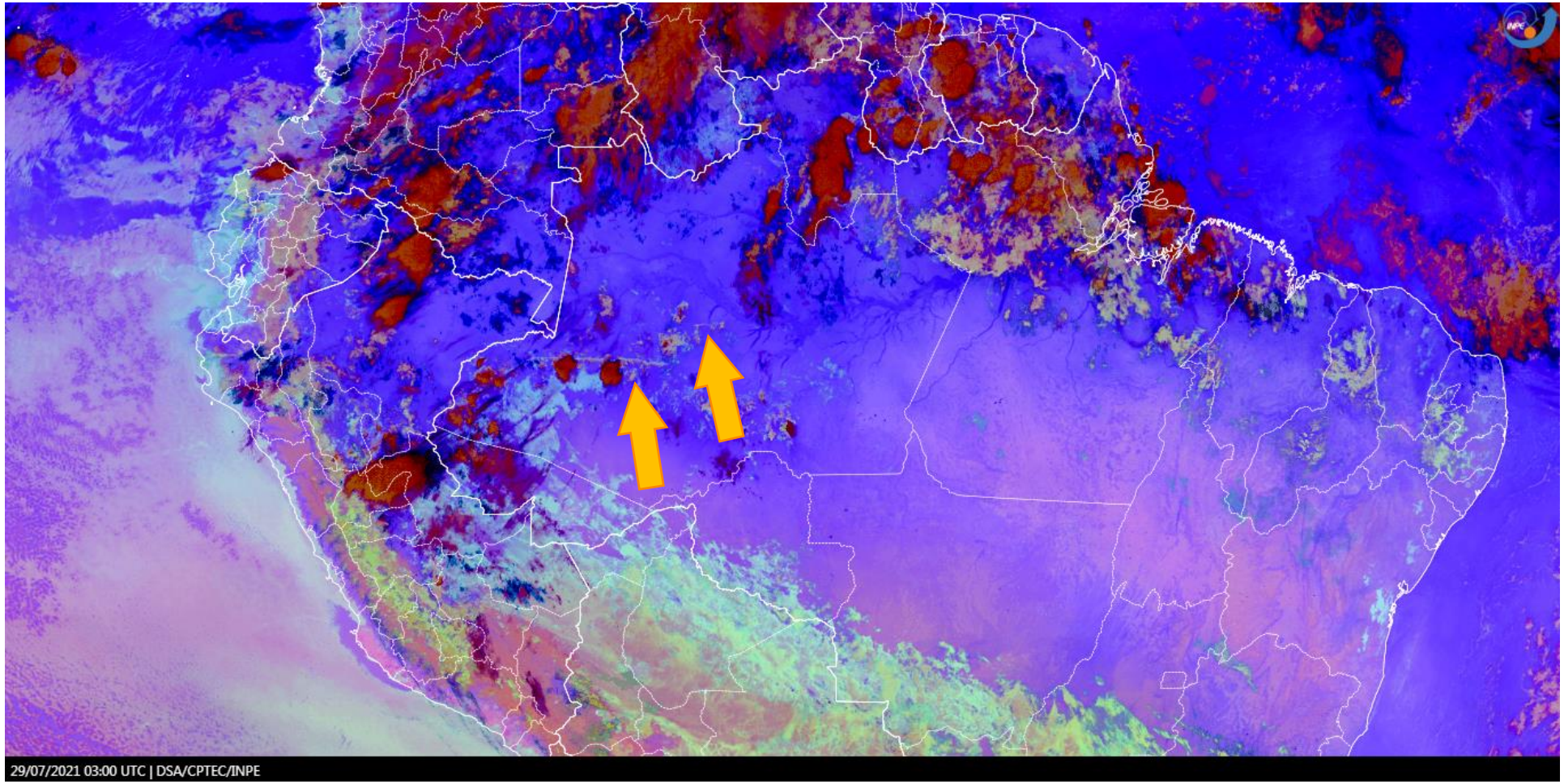
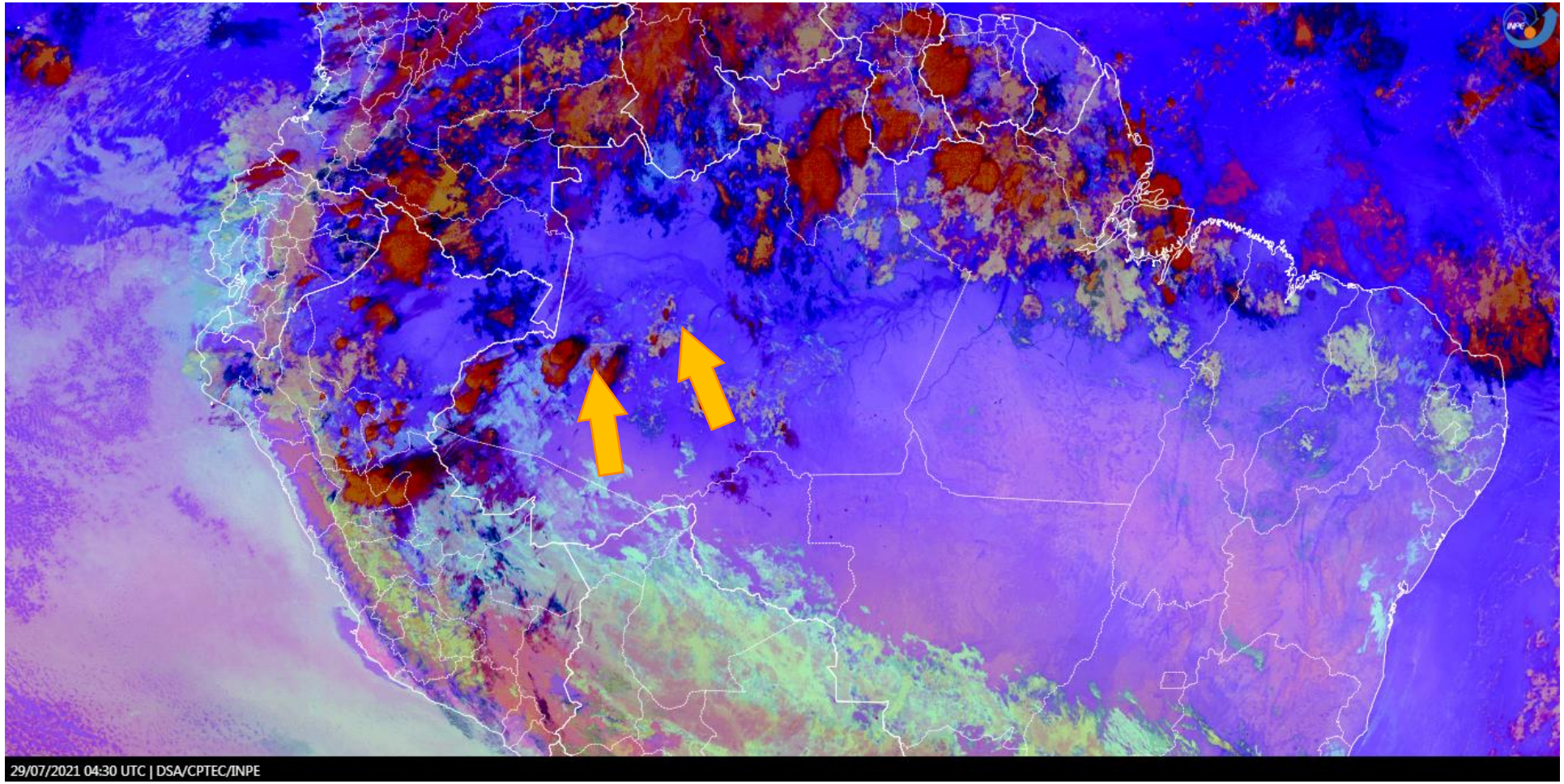
28/07/2021 16:30 UTC | DSA/CPTEC/INPE

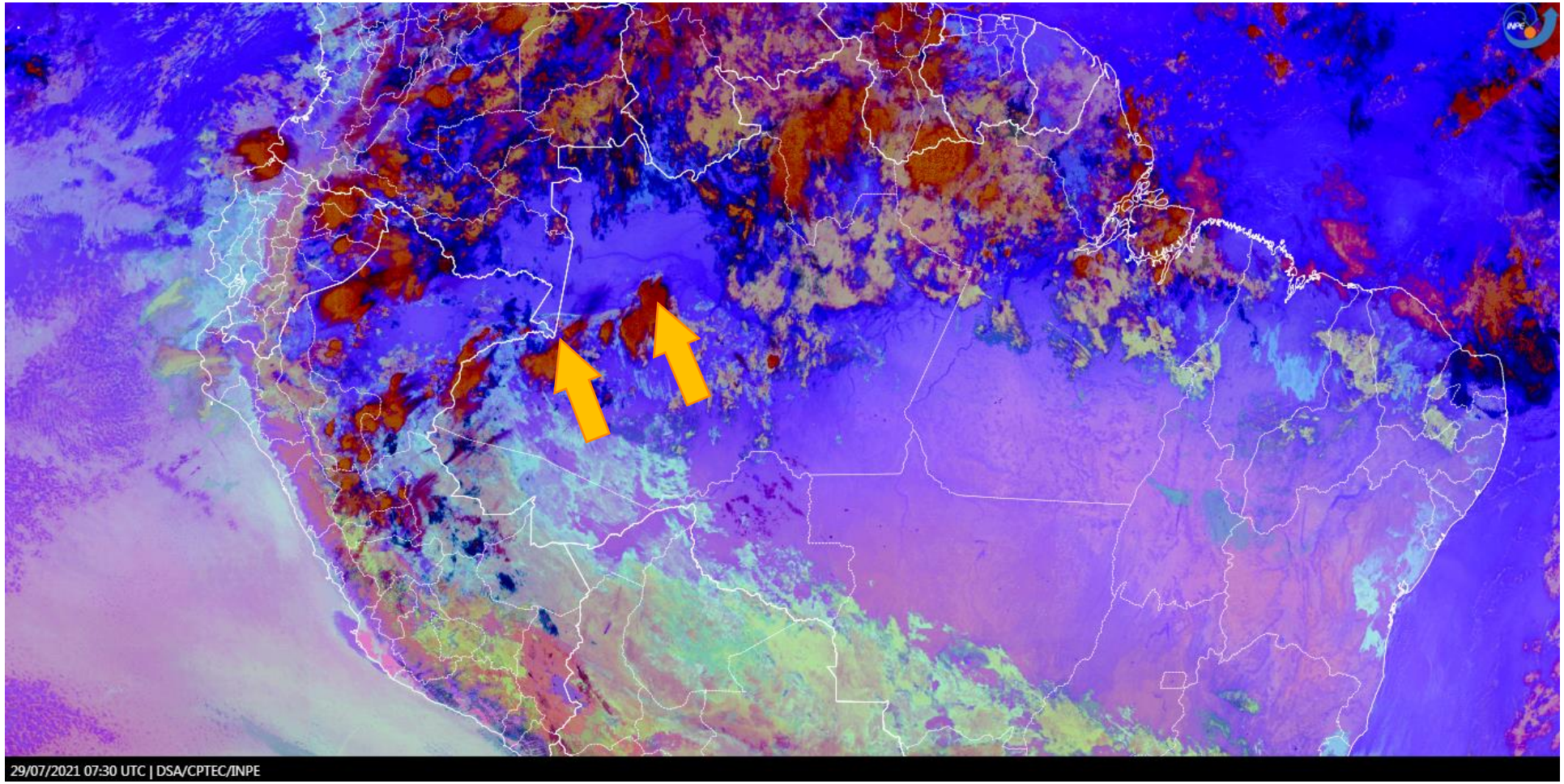

10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
28/07/2021 19:00 UTC | DSA/CPTEC/INPE

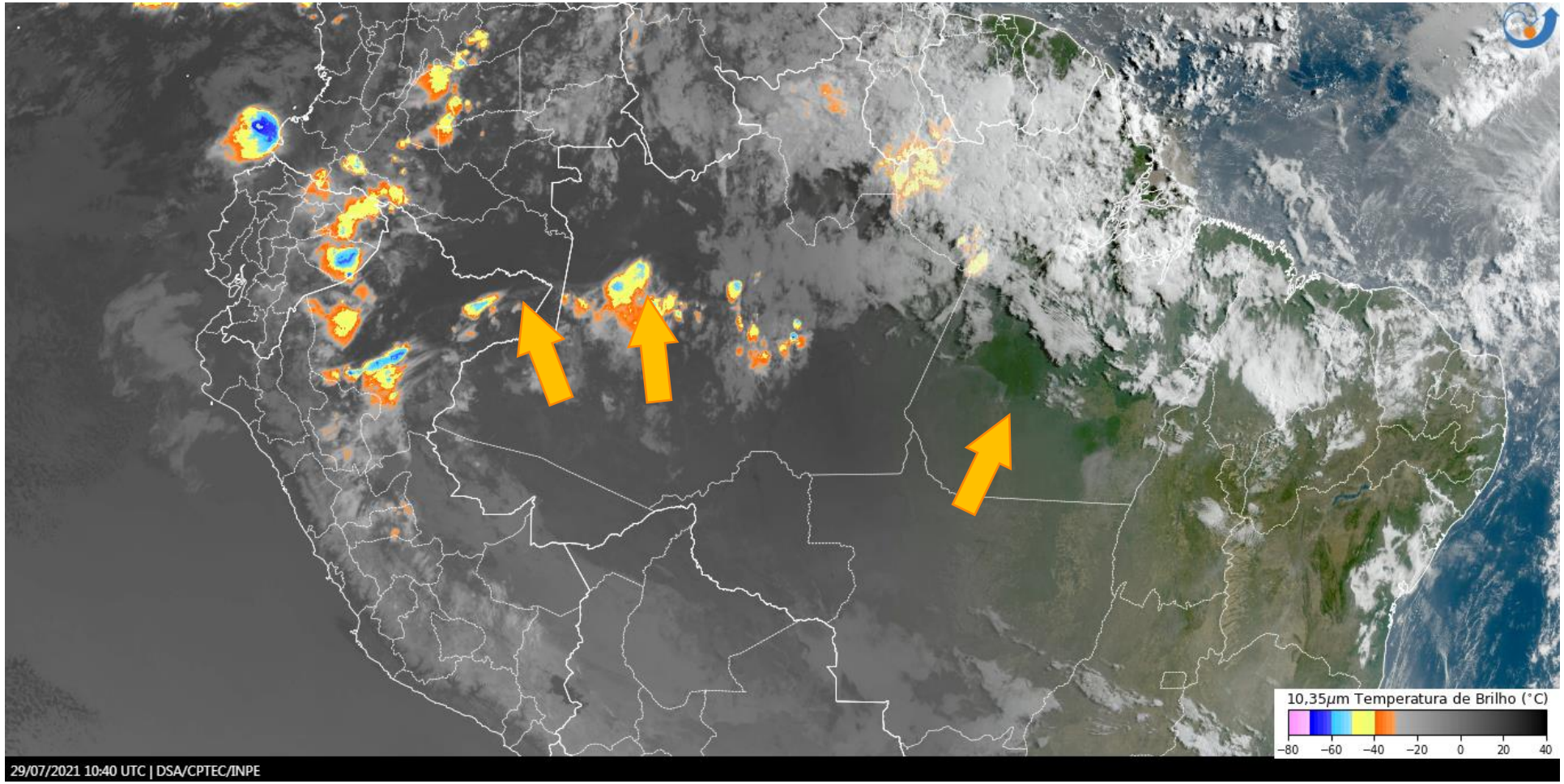

28/07/2021 23:00 UTC | DSA/CPTEC/INPE

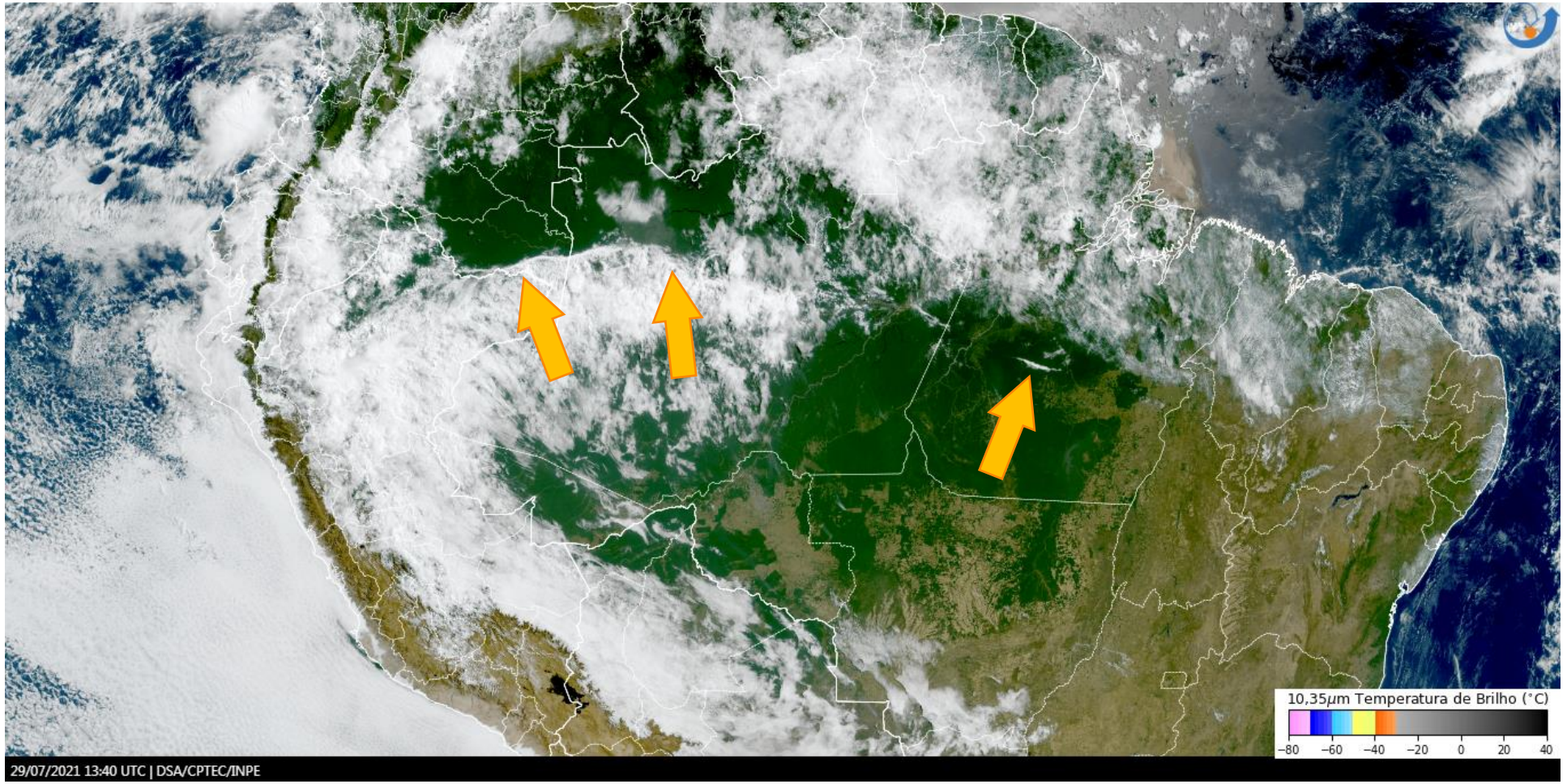

29/07/2021 01:30 UTC | DSA/CPTEC/INPE

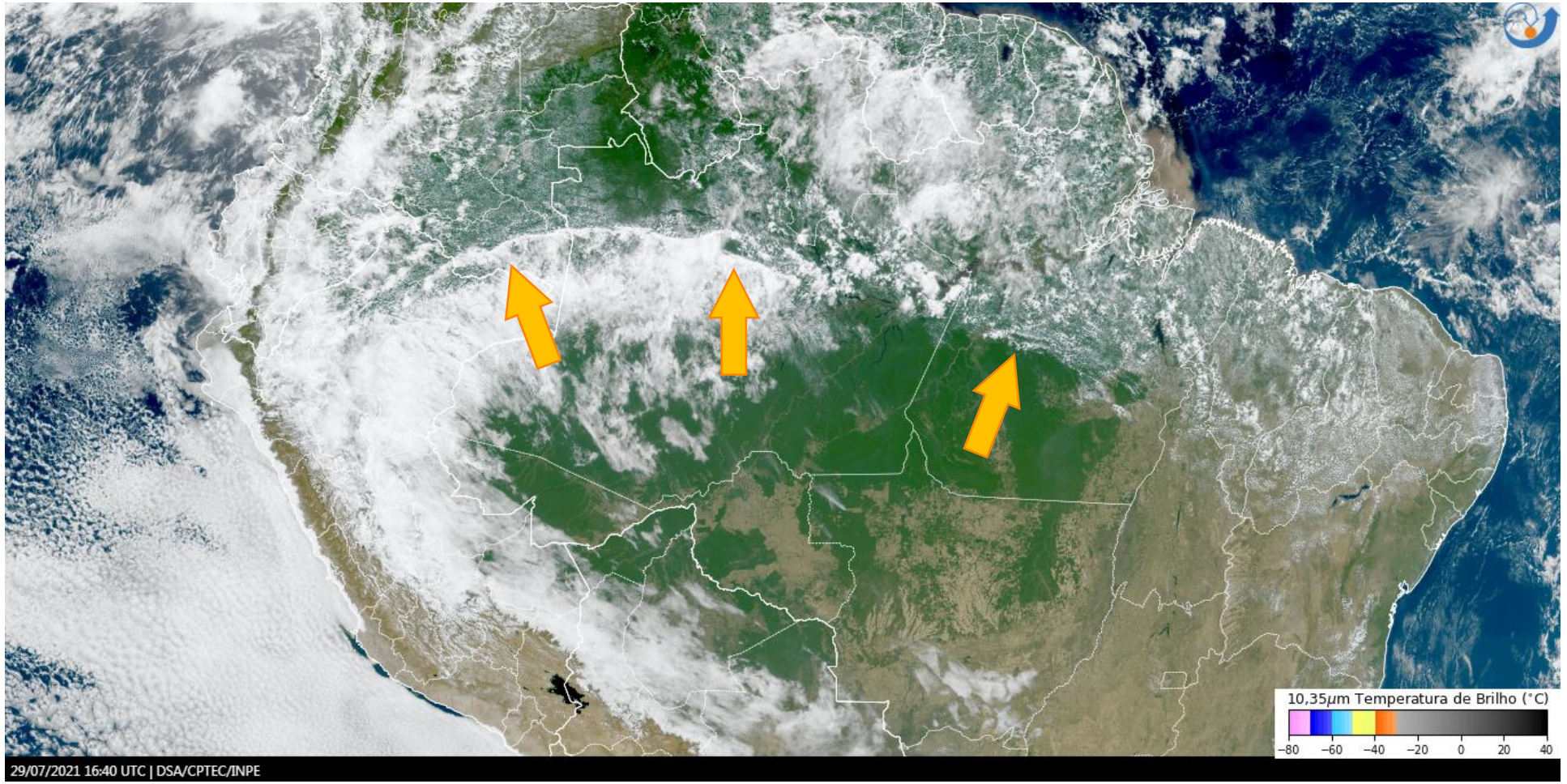

29/07/2021 03:00 UTC | DSA/CPTEC/INPE

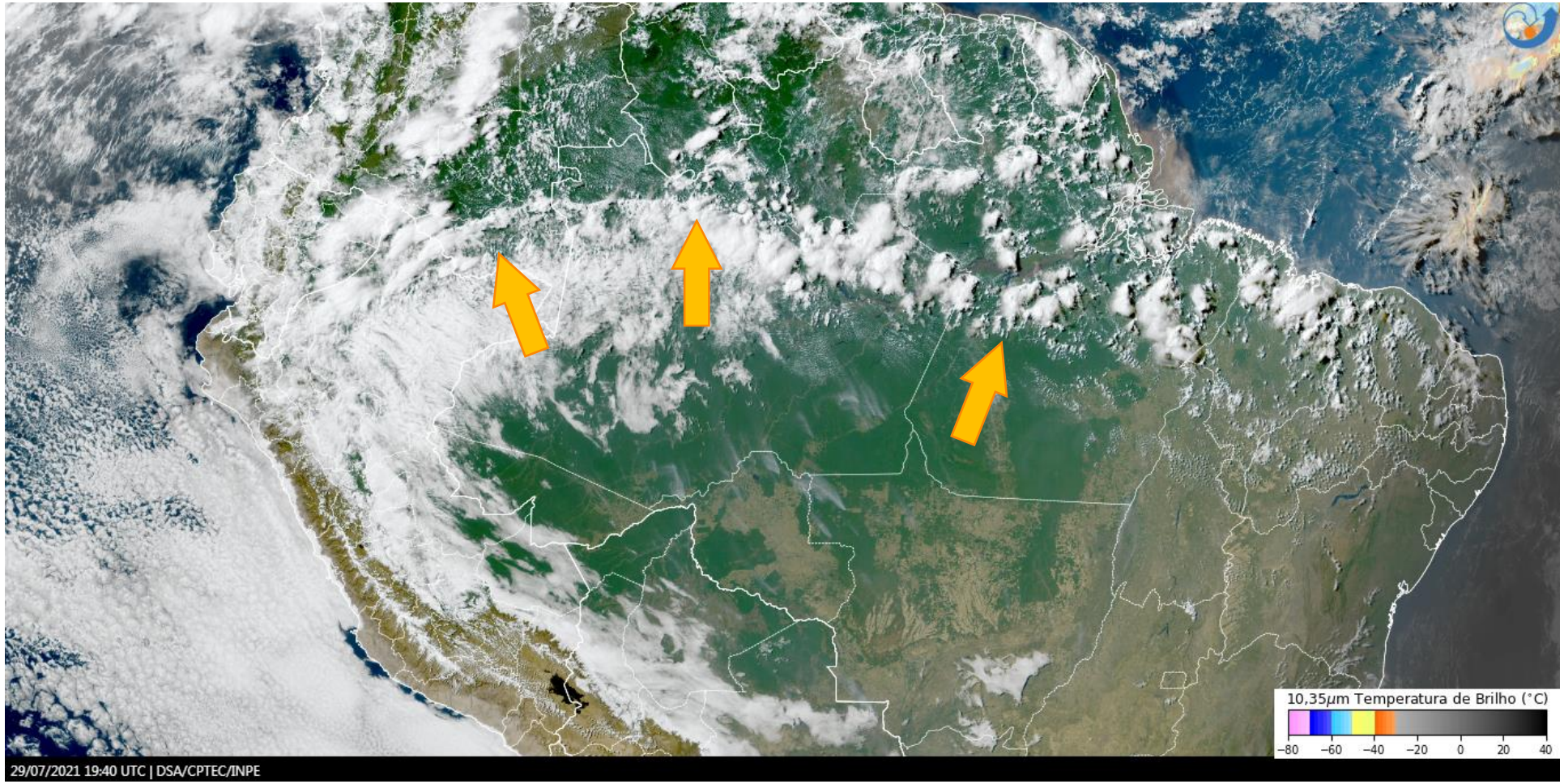

29/07/2021 04:30 UTC | DSA/CPTEC/INPE


29/07/2021 07:30 UTC | DSA/CPTEC/INPE


10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
29/07/2021 10:40 UTC | DSA/CPTEC/INPE


10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
29/07/2021 13:40 UTC | DSA/CPTEC/INPE


10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
29/07/2021 16:40 UTC | DSA/CPTEC/INPE


10,35μm Temperatura de Brilho (°C)
−80 −60 −40 −20 0 20 40
29/07/2021 19:40 UTC | DSA/CPTEC/INPE

The feature crossed the Amazon region over the July 27th to 30th