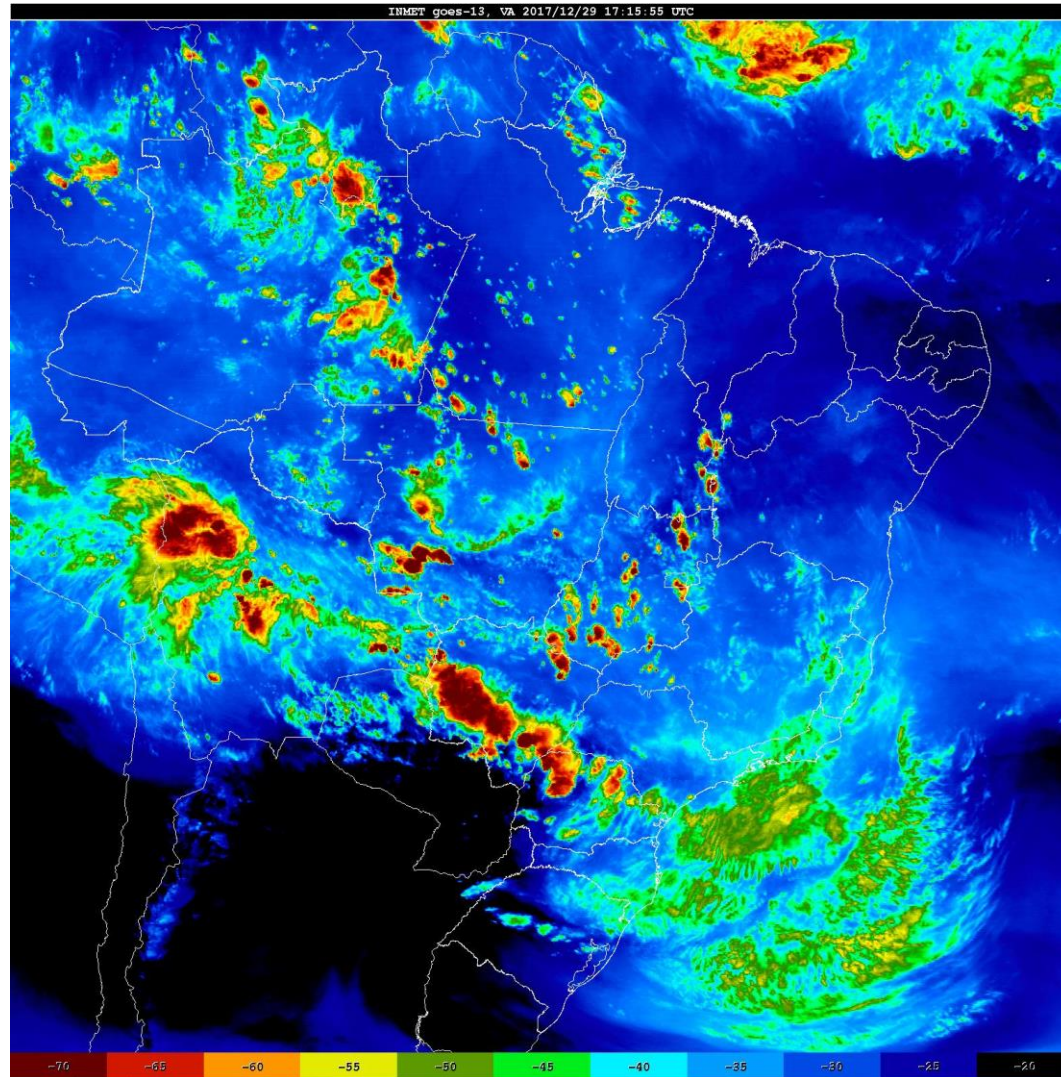


**S.AMERICA  
GRAIN WEATHER  
ISSUES**

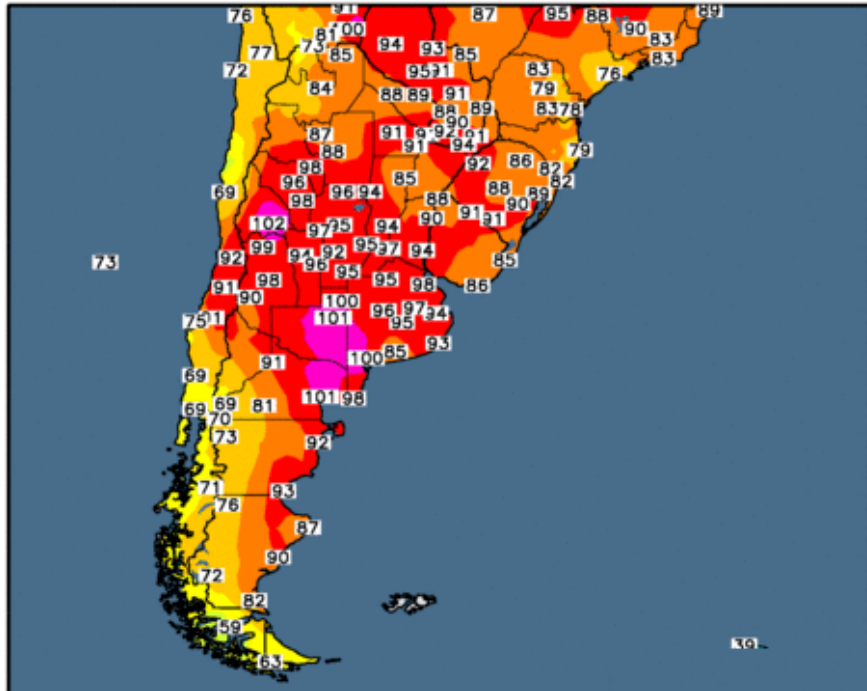
**as of FRIDAY  
28 DECEMBER 2017**

**BIG storms over MGDS scattered over  
Parana small storms over Goias  
western Mato Grosso CLEAR over ARG**

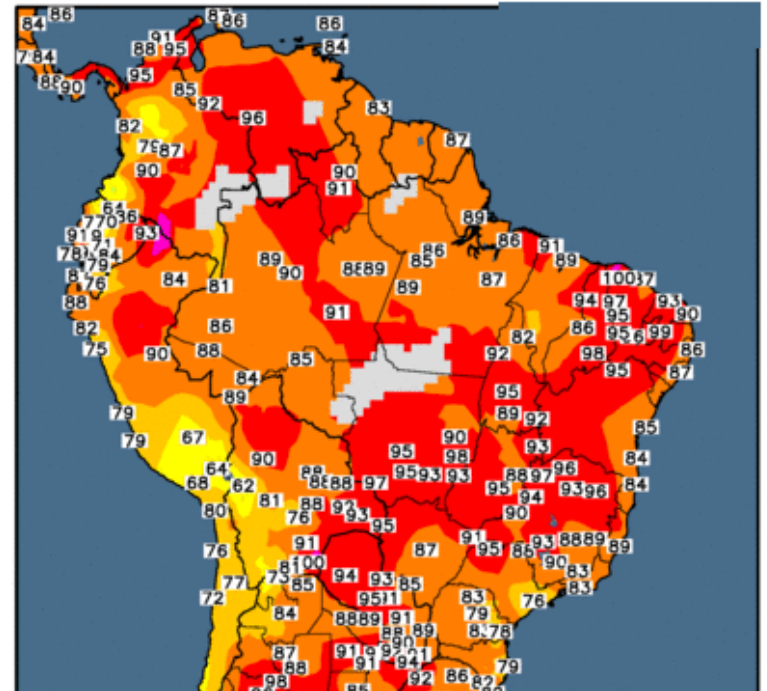


# MAX TEMPS DEC 28

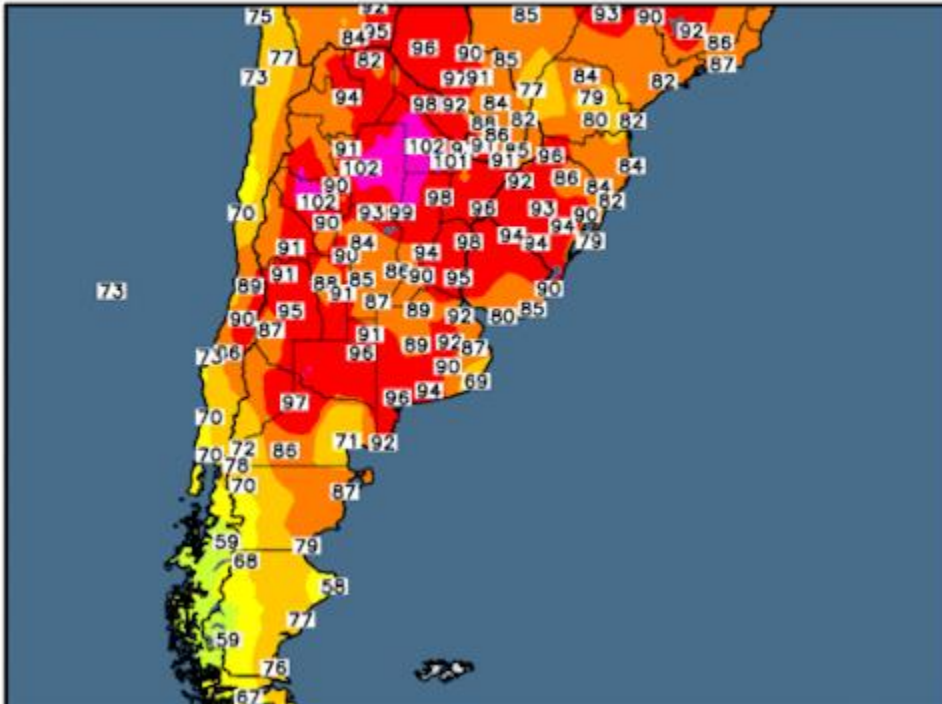
Observed Maximum Temperature (°F)  
28 Dec 2017



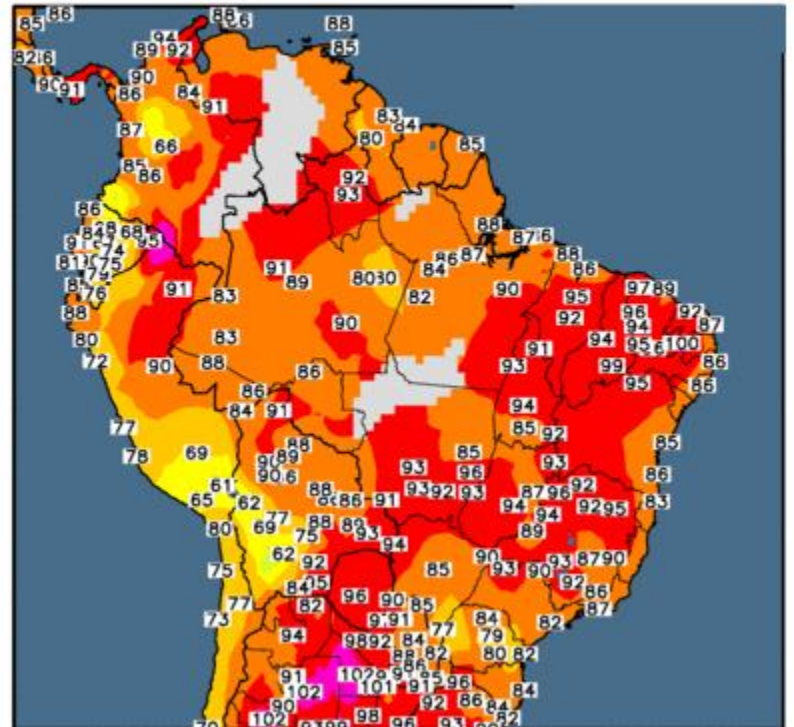
Observed Maximum Temperature (°F)  
28 Dec 2017



Observed Maximum Temperature (°F)  
27 Dec 2017



Observed Maximum Temperature (°F)  
27 Dec 2017

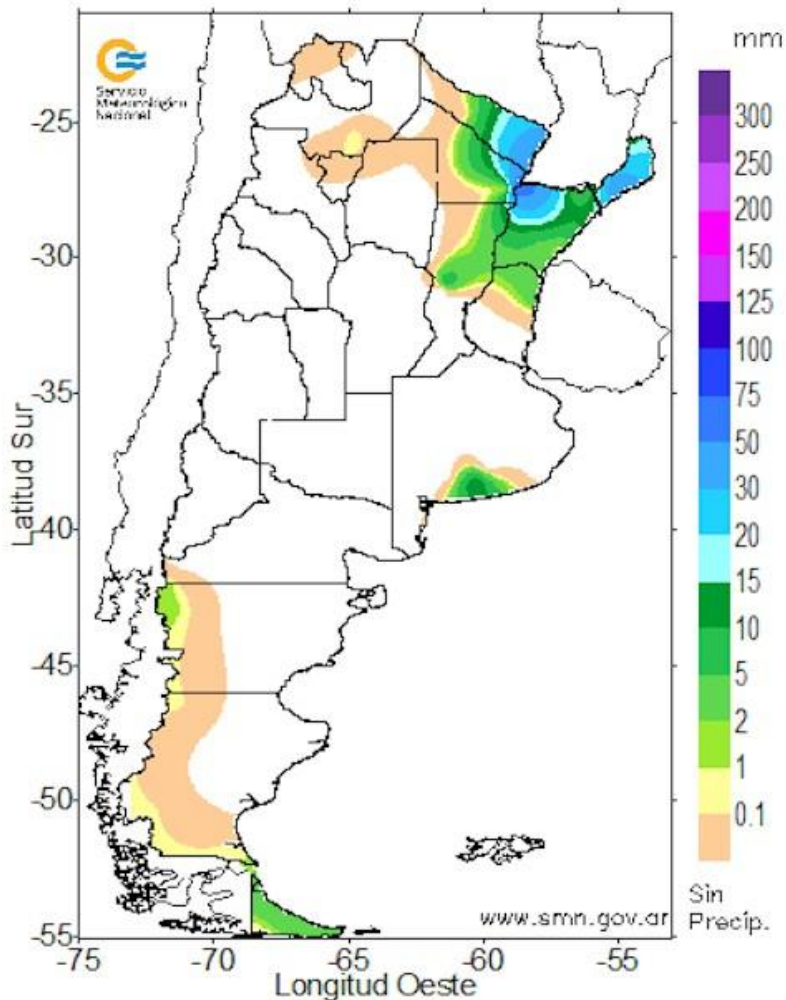


# RAINFALL DEC 28

## Servicio Meteorológico Nacional

PRECIPITACION (EN MILIMETROS) ACUMULADA EN 24 HORAS

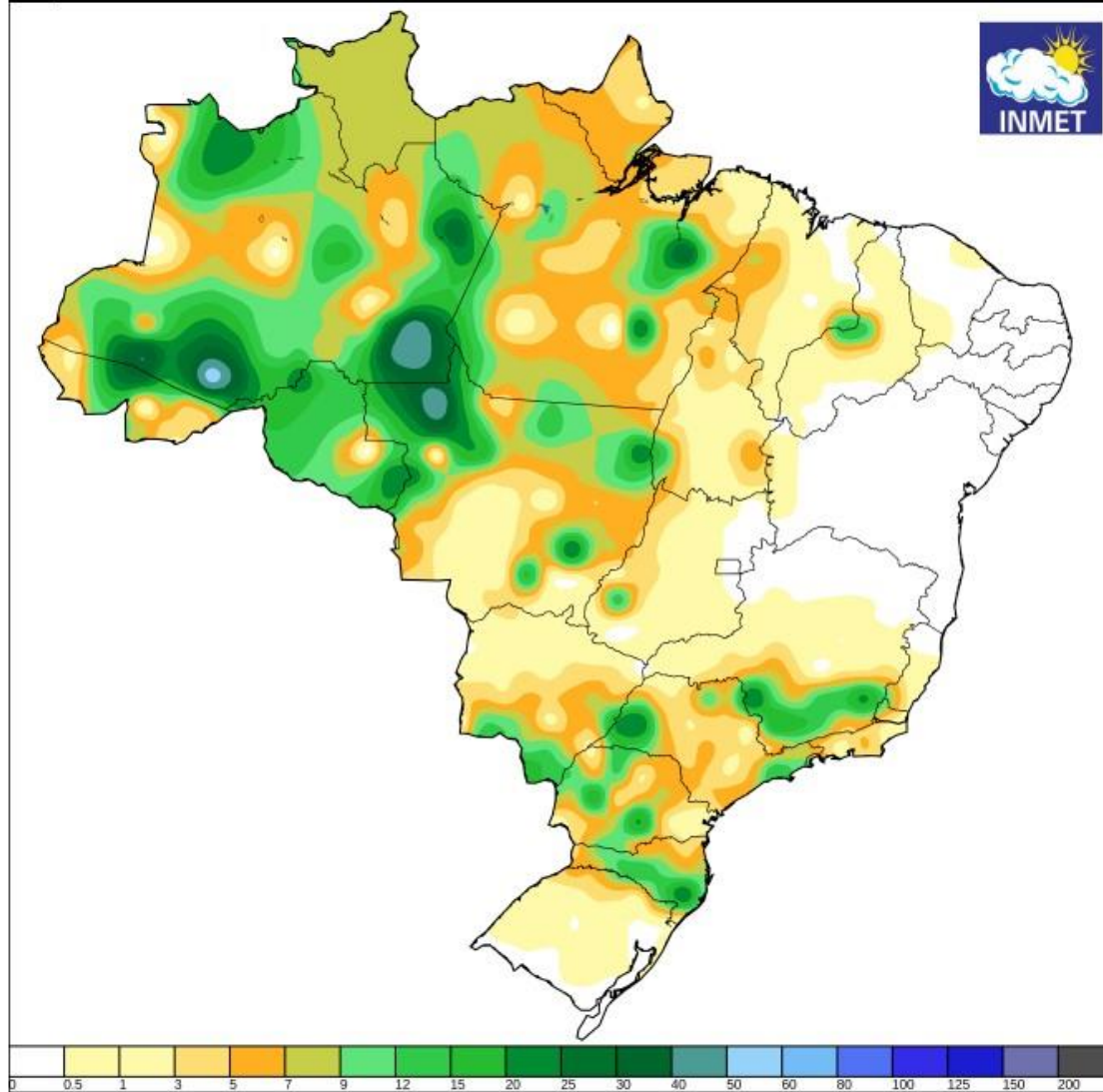
Los valores corresponden al periodo comprendido entre las 9 hs. del 28/12/2017 y las 9 hs. del 29/12/2017



Instituto Nacional de Meteorologia - INMET

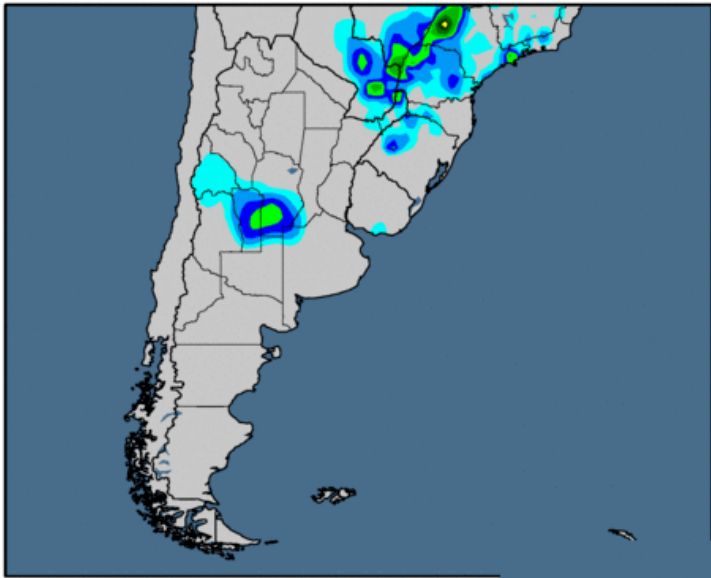
Precipitação Acumulada em 24 horas

Mapa do dia 28/12/2017



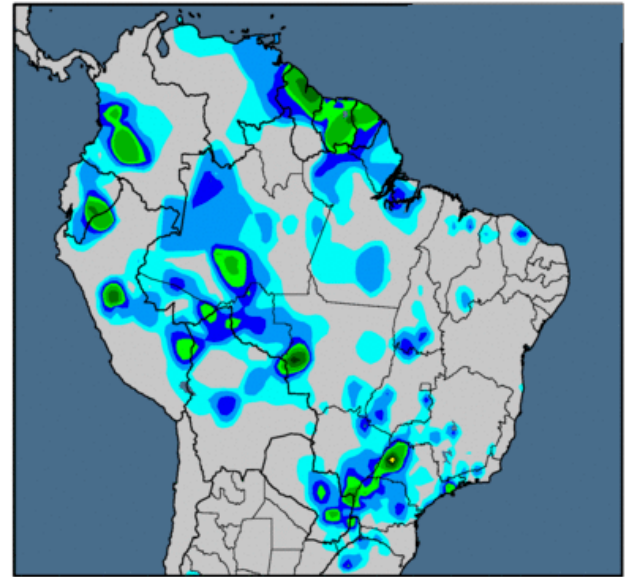
### 24-hour Precipitation Analysis

Observed precipitation (inches) through 12 UTC 27 Dec 2017



### 24-hour Precipitation Analysis

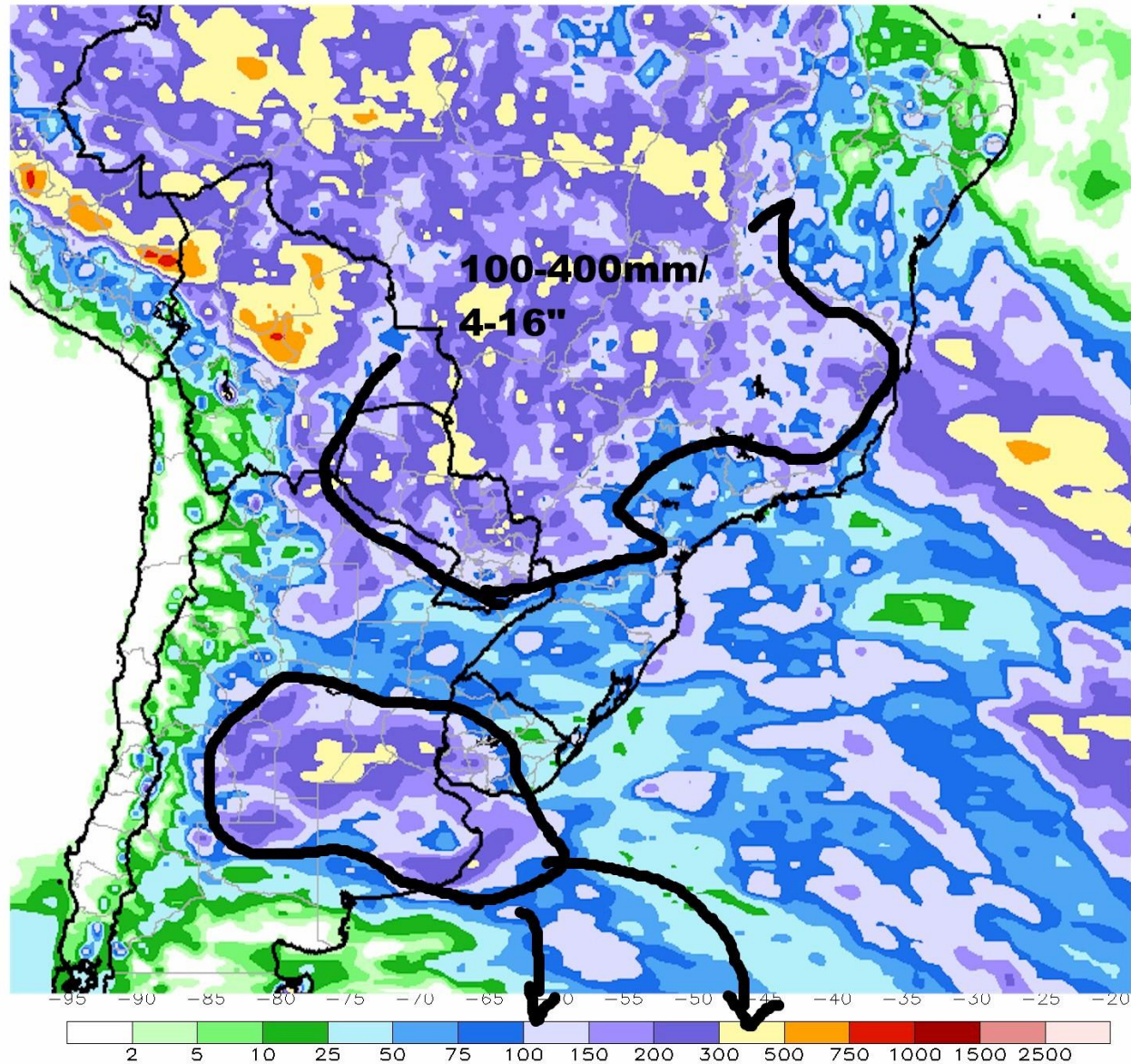
Observed precipitation (inches) through 12 UTC 27 Dec 2017



# TOTAL RAINFALL SINCE DEC 1 DECAYS

CMORPH 1-Month Total Rainfall (mm)

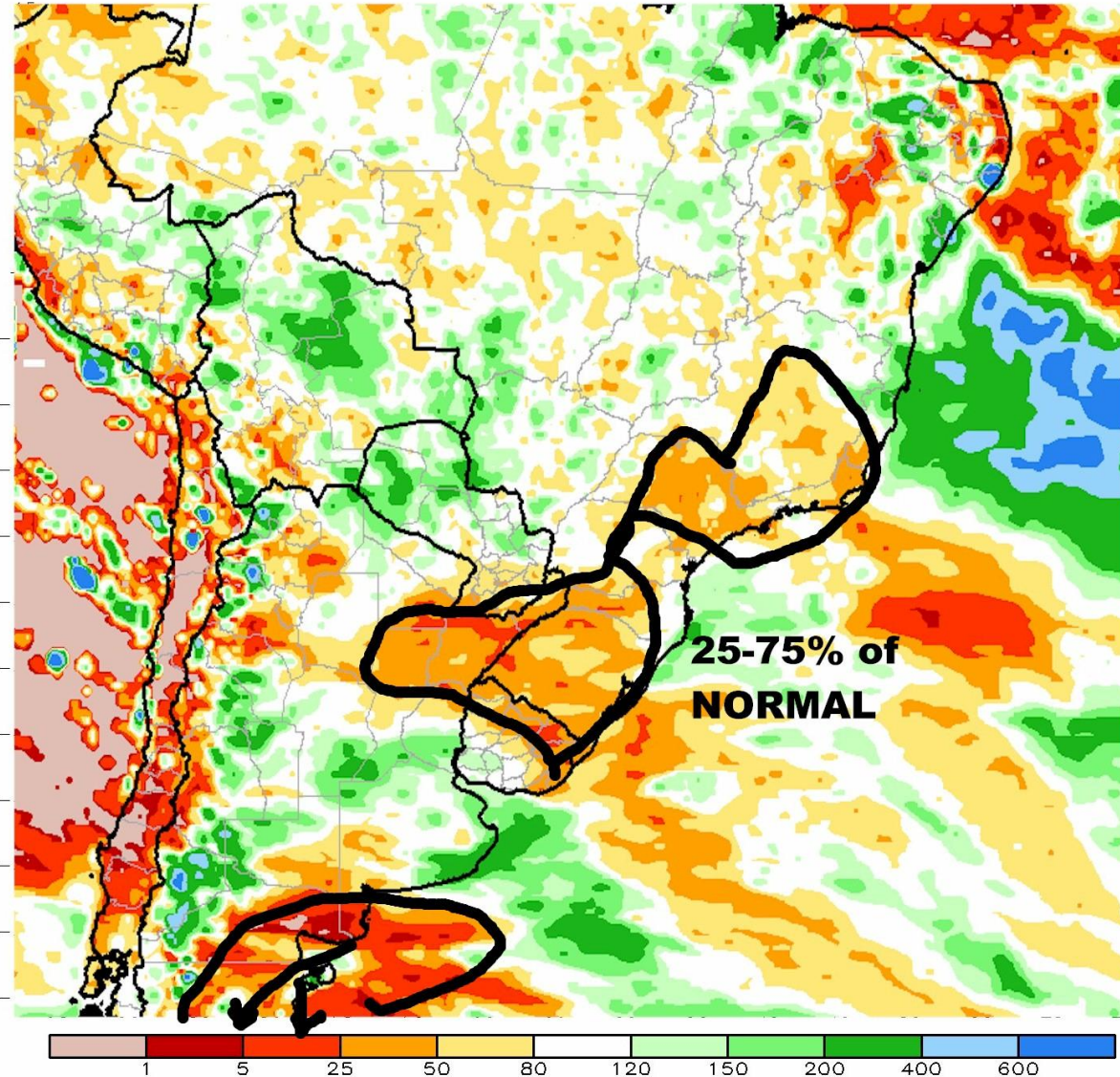
Period: 01Dec2017 - 27Dec2017



# RAINFALL DEPARTURE FROM NORMAL SINCE DEC 1

CMORPH 1-Month Percent of Normal Rainfall (%)

Period: 01Dec2017 - 27Dec2017

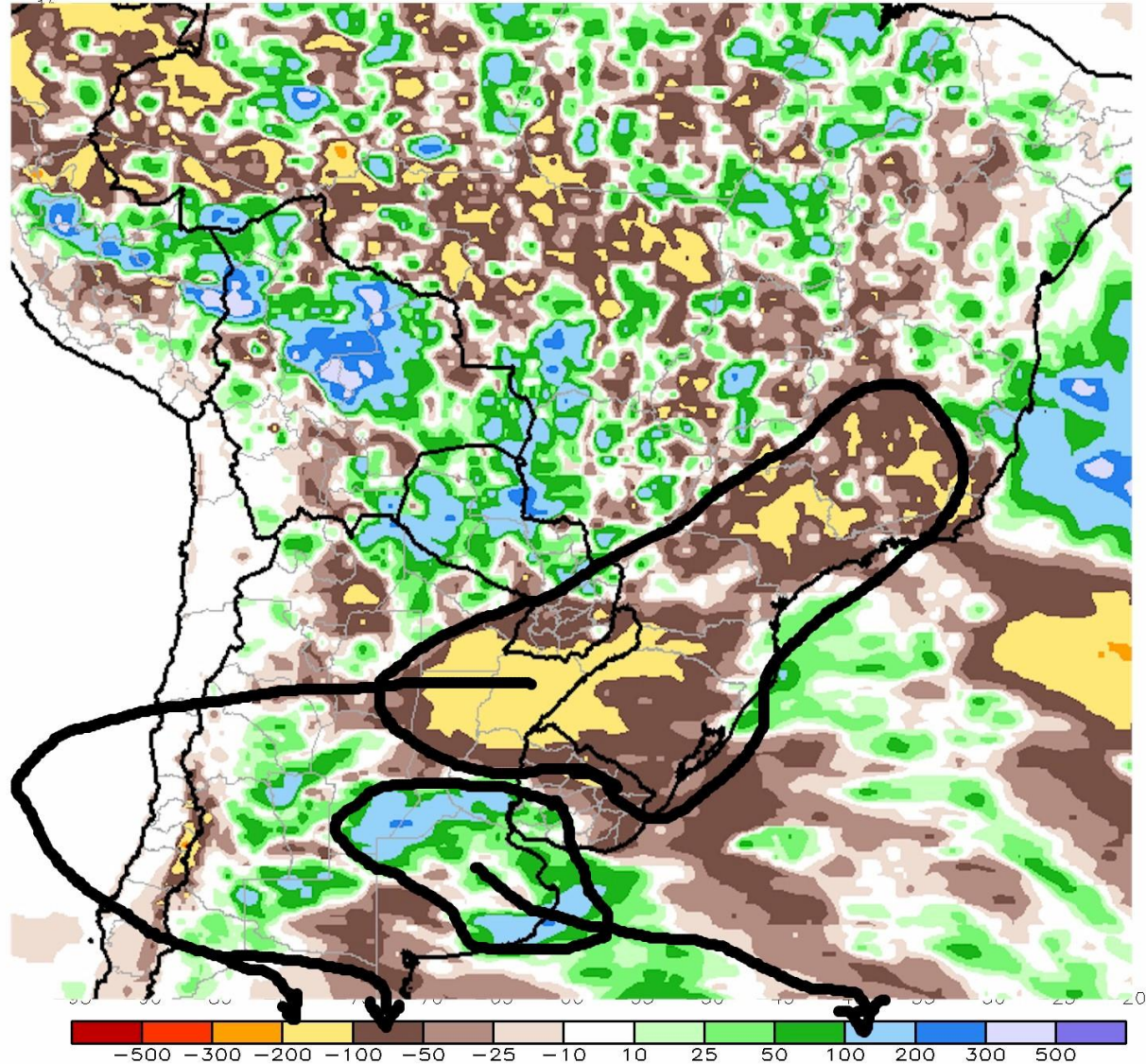




# RAINFALL DEPARTURE FROM NORMAL ACTUAL AMOUNTS SINCE DEC 1

CMORPH 1-Month Total Rainfall Anomaly (mm)

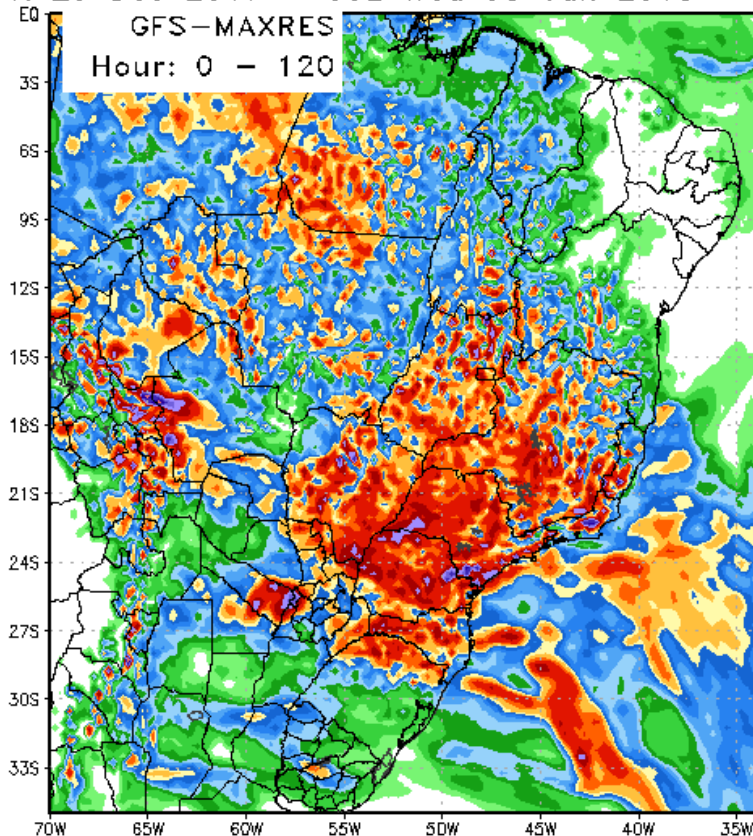
Period: 01Dec2017 - 27Dec2017



# GFS / EURO MODELS NEXT 5 DAYS

**Good Model agreement but GFS heavier rains better coverage over MGDS Goais southern Tocantins & Mato Grosso**

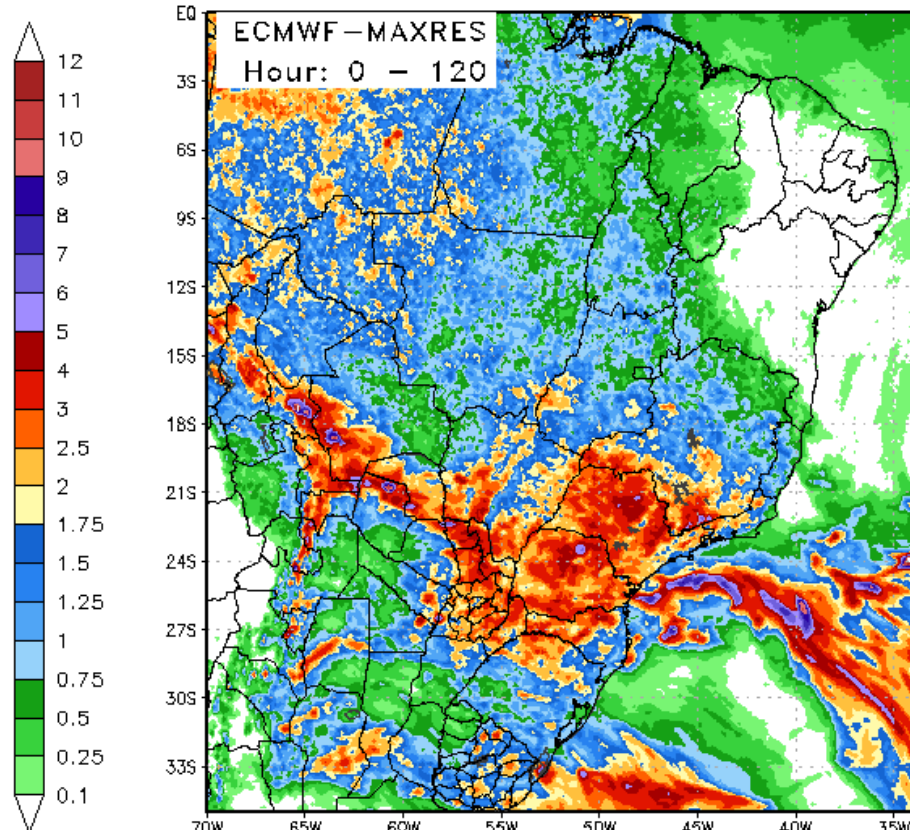
120 Hour Total Precipitation (in)  
Valid: 00z Fri 29 Dec 2017 - 00z Wed 03 Jan 2018



Max: 10.3 in  
Min: 0.0 in

StormVistaWxModels.com

120 Hour Total Precipitation (in)  
Valid: 00z Fri 29 Dec 2017 - 00z Wed 03 Jan 2018



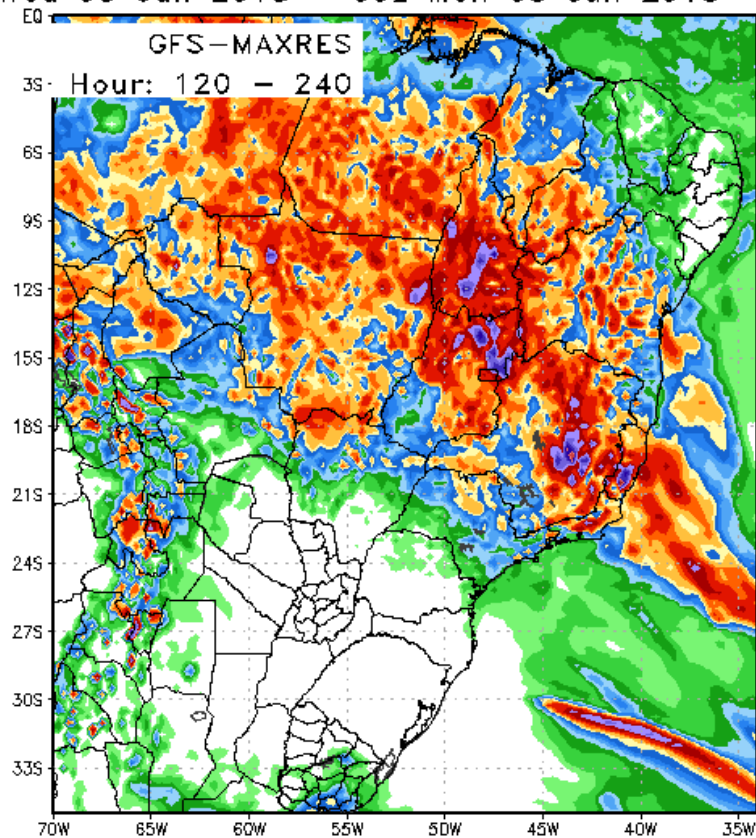
Max: 17.5 in  
Min: 0.0 in

StormVistaWxModels.com

# GFS / EUROPEAN MODELS 6-10 DAY

**ARG /most of SE BRAZIL 100% DRY Rains shift NORTH EURO mostly 1-3"/ 25-75mm but 4-8"/ 100-200mm over portions of Minas...GFS much heavier rains into North Goias/ Tocantins**

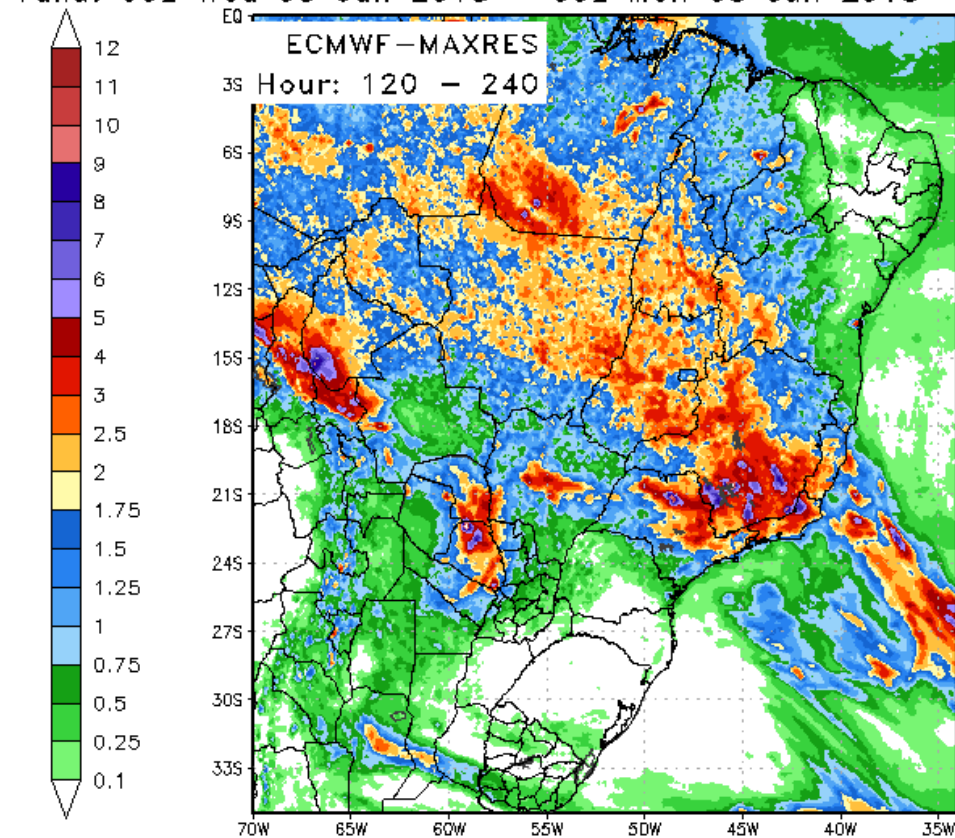
120 Hour Total Precipitation (in)  
Valid: 00z Wed 03 Jan 2018 - 00z Mon 08 Jan 2018



Max: 11.4 in  
Min: 0.0 in

StormVistaWxModels.com

120 Hour Total Precipitation (in)  
Valid: 00z Wed 03 Jan 2018 - 00z Mon 08 Jan 2018



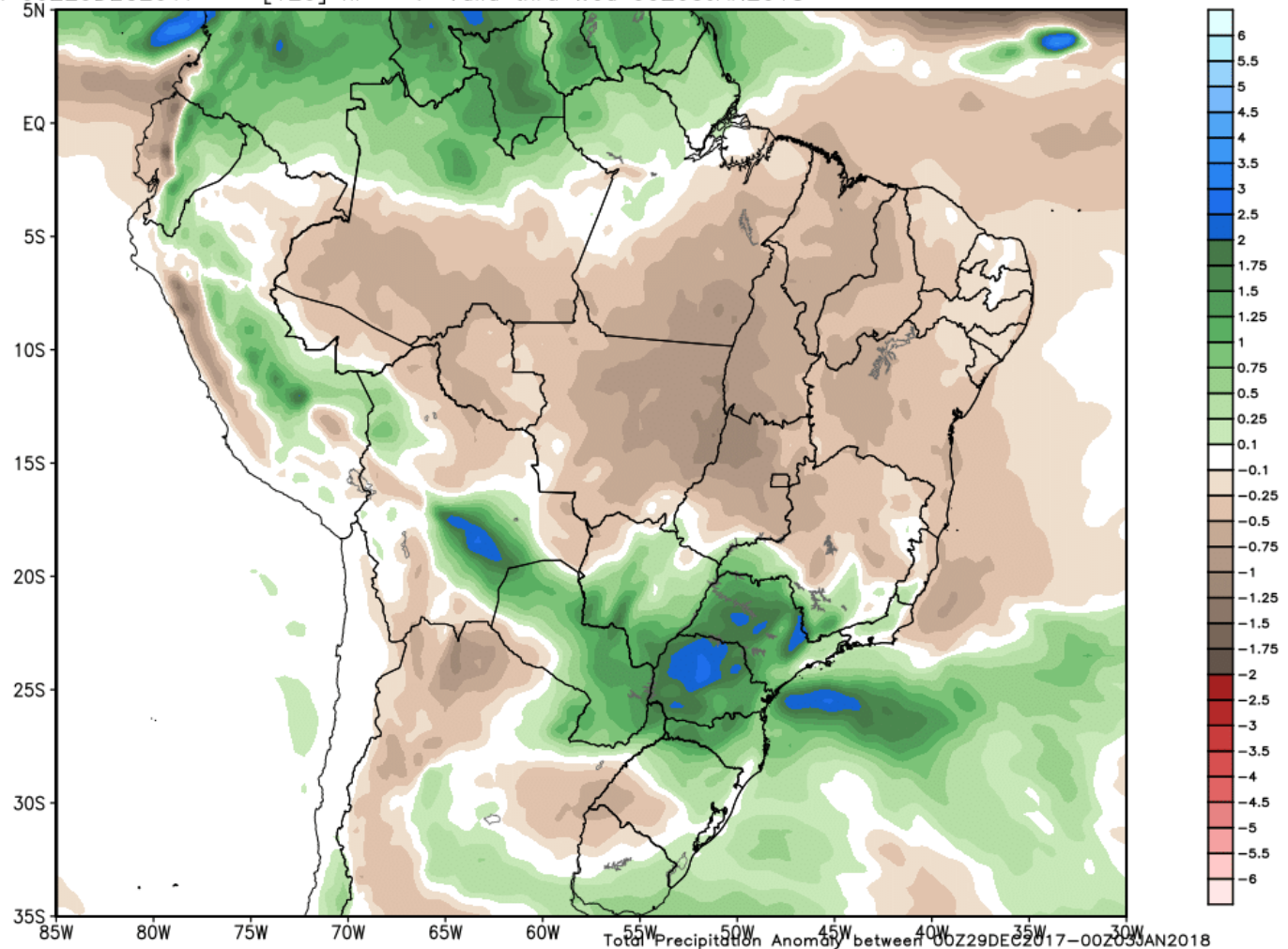
Max: 14.2 in  
Min: -0.0 in

StormVistaWxModels.com

# EUROPEAN MODEL RAINFALL ANOMALIES 1-5 DAY

ECMWF EPS Ensemble Mean Total Precipitation Anomaly [inches]  
Init: 00Z29DEC2017 -- [120] hr --> Valid thru Wed 00Z03JAN2018

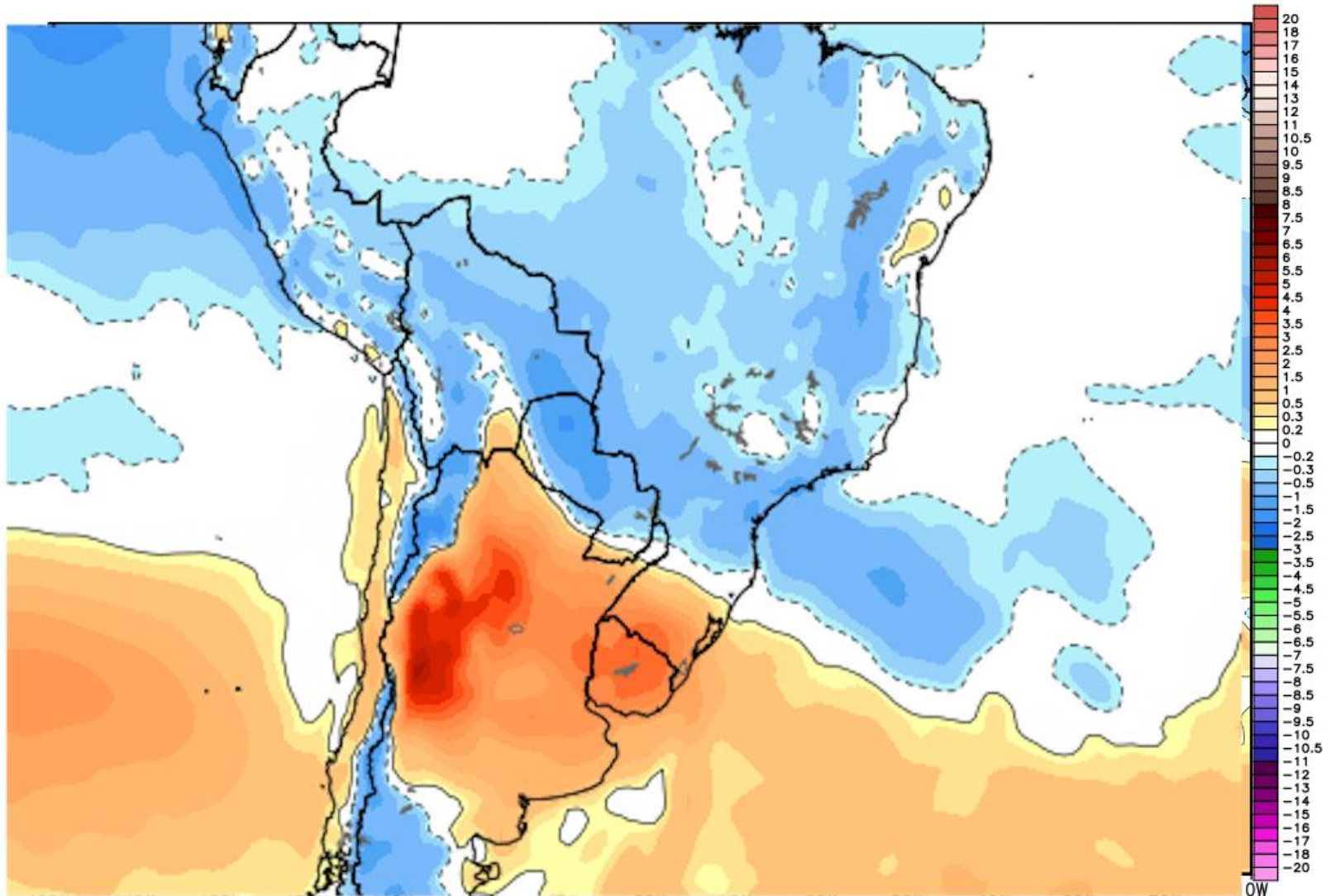
Min|Max: -5.3 | 4.9 inch



# EUROPEAN TEMP ANOMALIES N NEXT 7 DAYS

ECMWF EPS Ensemble Mean 7-day Avg 2m Temperature Anomaly [°C]  
Init: 00Z28DEC2017 -- [336] hr --> Valid on Thu 00Z11JAN2018

Min|Max: -5.7° | 8.4°C

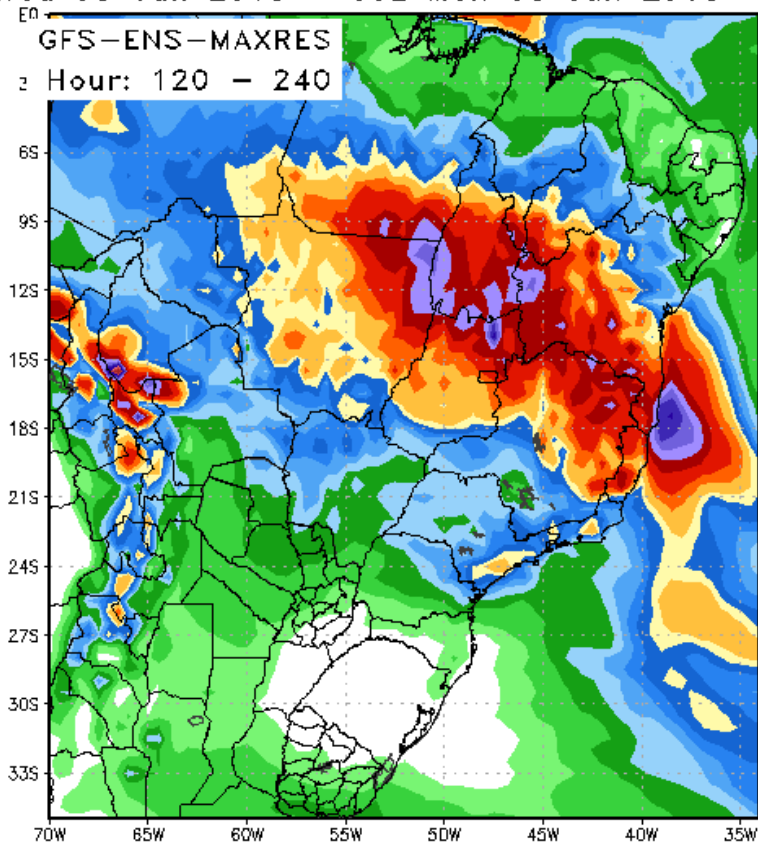


Average between 00Z04JAN2018-00Z11JAN2018 | ECMWF EPS 1997-2016 Hindcast Climatology

# GFS / EUROPEAN MODELS 6-10 ENSEMBLES

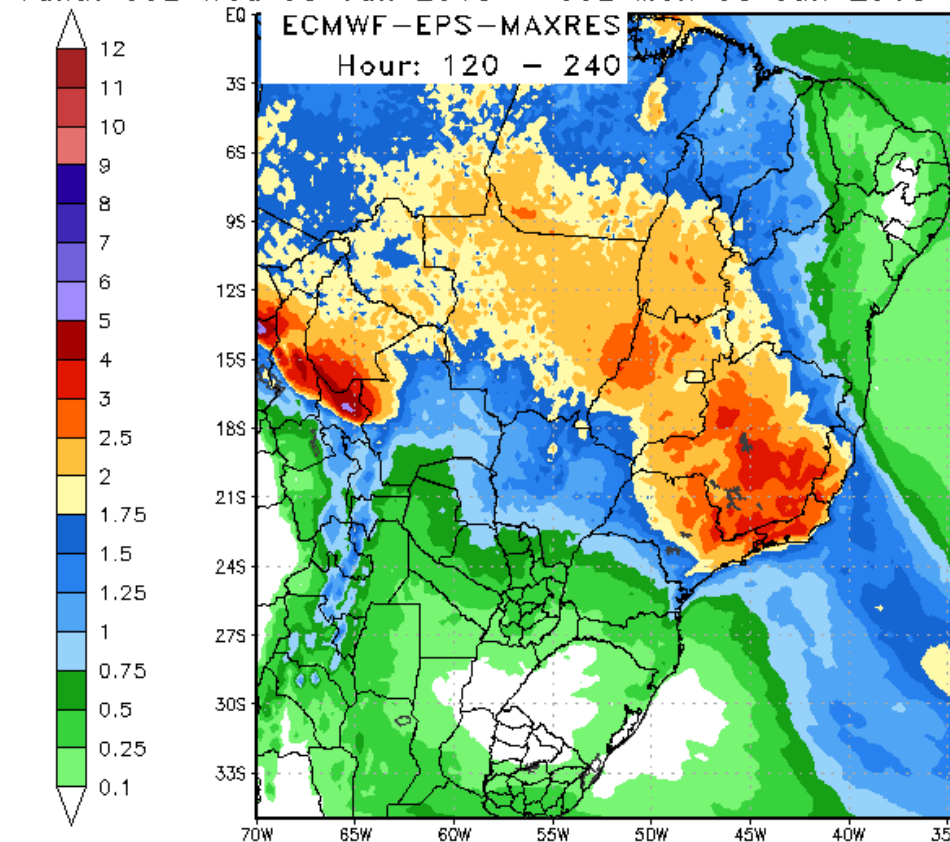
**ARG /most of SE BRAZIL 100% DRY Rains shift NORTH Mato Grosso Tocantins Goias southern Bahia most of Minas Gerais 2-4"/ 50-100mm.. GFS 5-6"/ 125-150mm small areas**

120 Hour Total Precipitation (in)  
Valid: 00z Wed 03 Jan 2018 - 00z Mon 08 Jan 2018



StormVistaWxModels.com

120 Hour Total Precipitation (in)  
Valid: 00z Wed 03 Jan 2018 - 00z Mon 08 Jan 2018



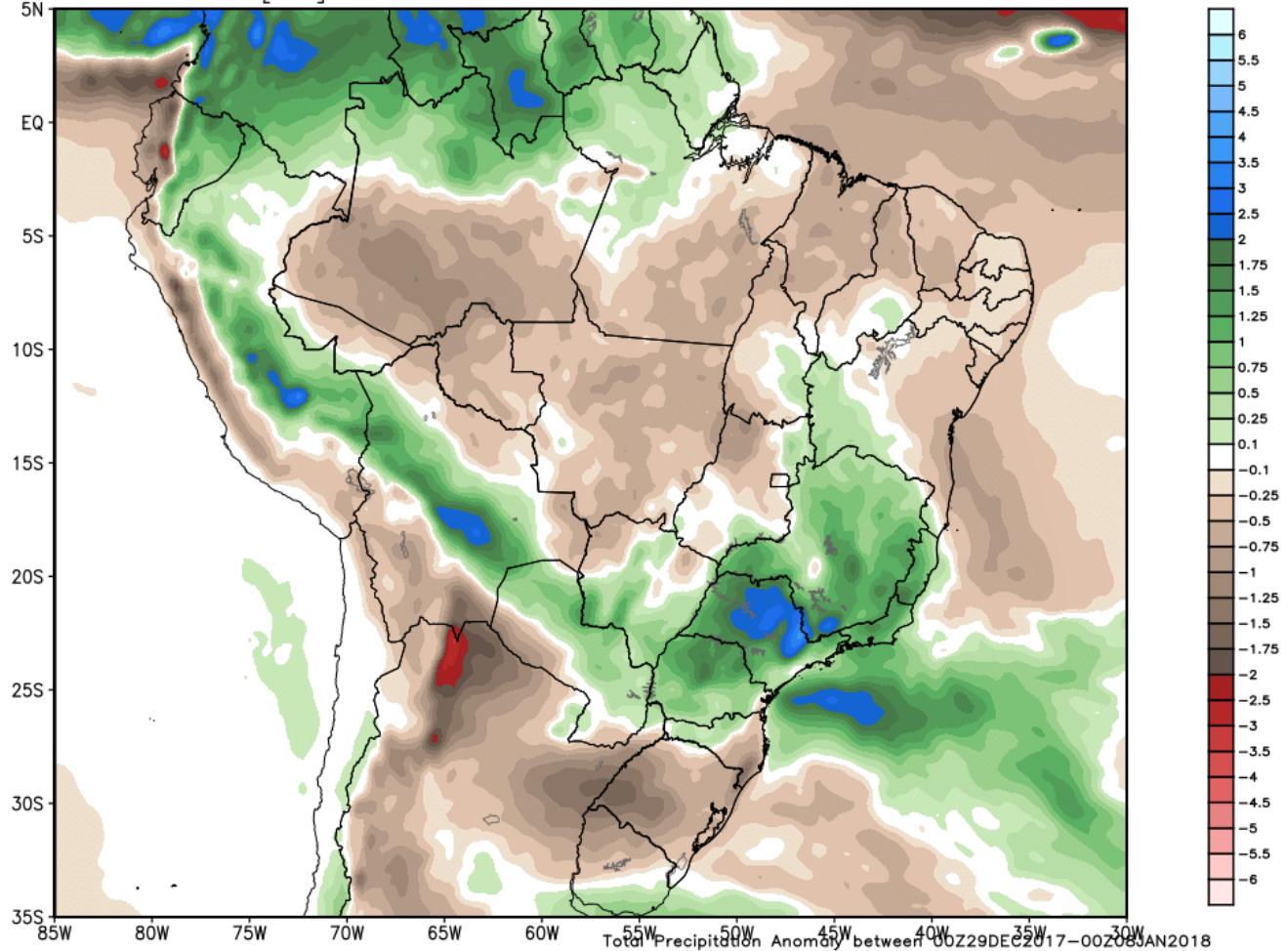
StormVistaWxModels.com

# EUROPEAN MODEL RAINFALL ANOMALIES

## 6-10 DAY

ECMWF EPS Ensemble Mean Total Precipitation Anomaly [inches]  
Init: 00Z29DEC2017 -- [240] hr --> Valid thru Mon 00Z08JAN2018

Min|Max: -8.0 | 4.8 inch

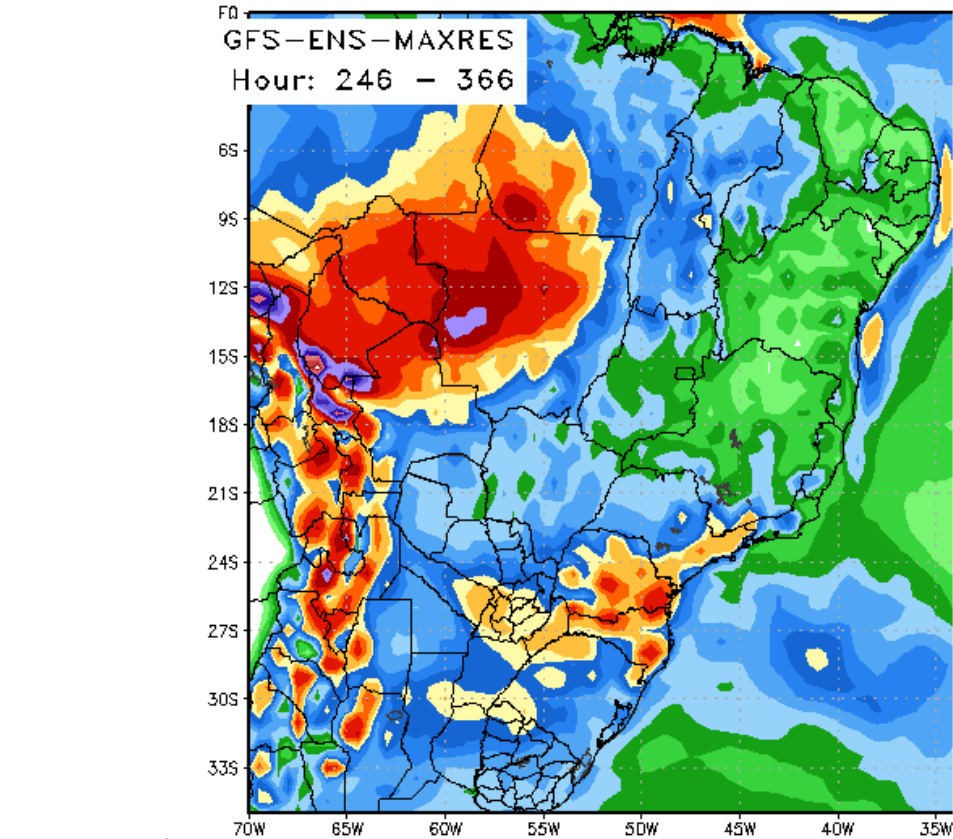


# GFS / EUROPEAN MODELS 11-15 ENSEMBLES

**RAINS SHIFT INTO WESTERN BRAZIL ... 1.0-2.5"/ 25-60MM 70% COVERAGE .. RAINS INCREASE OVER ALL OF ARG 1-2"/ 25-50MM 75% COVERAGE**

120 Hour Total Precipitation (in)

Valid: 06z Mon 08 Jan 2018 - 06z Sat 13 Jan 2018

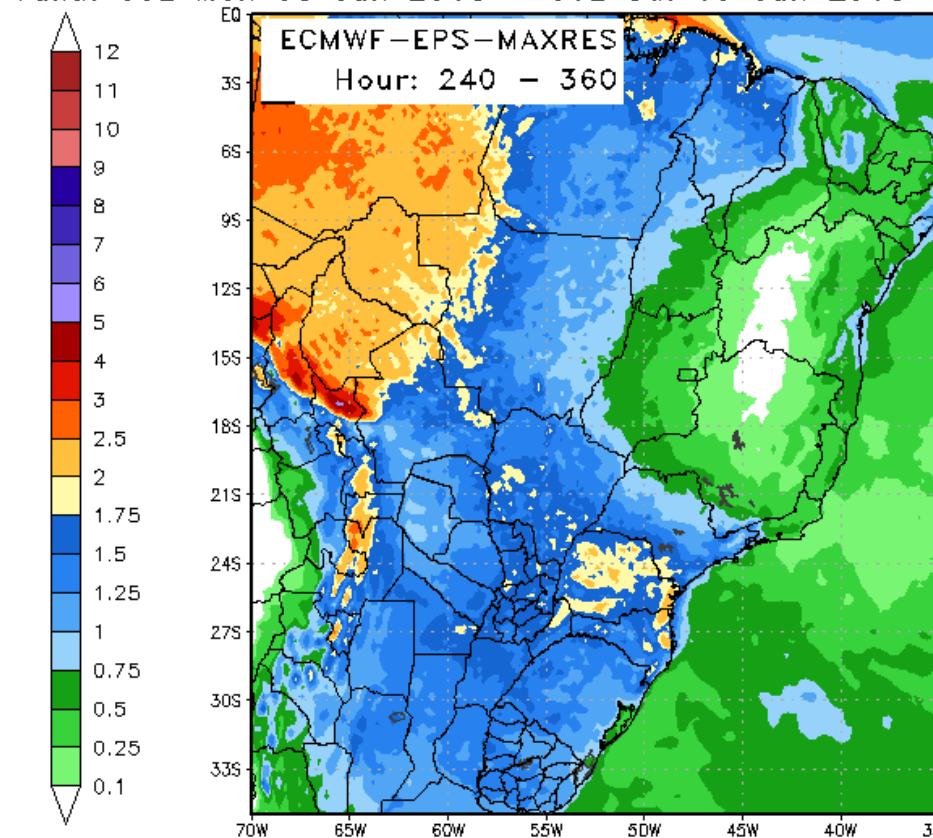


Max: 12.3 in  
Min: 0.0 in

StormVistaWxModels.com

120 Hour Total Precipitation (in)

Valid: 00z Mon 08 Jan 2018 - 00z Sat 13 Jan 2018



Max: 5.3 in  
Min: 0.0 in

StormVistaWxModels.com

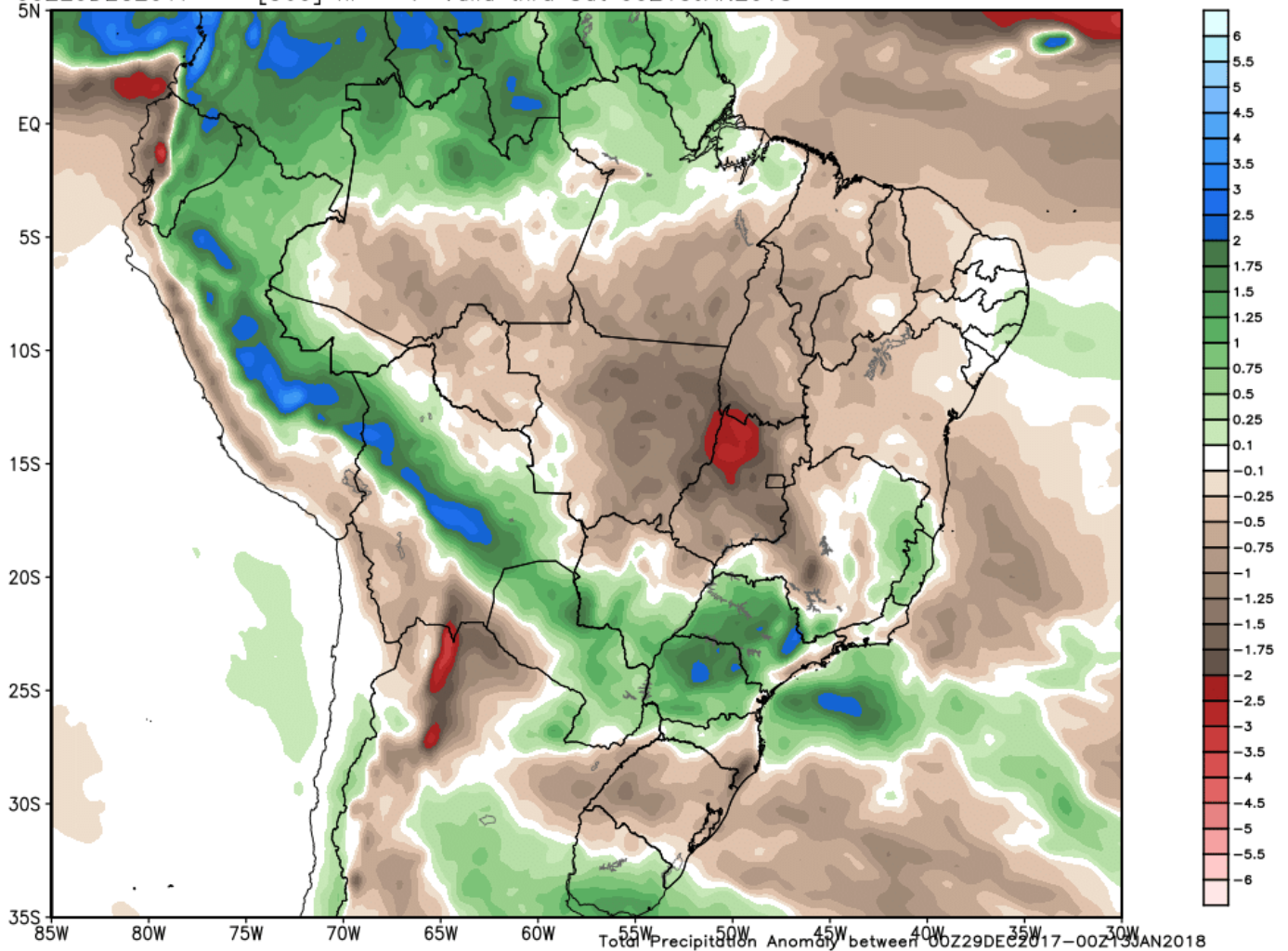


# EUROPEAN MODEL RAINFALL ANOMALIES

## 11-15

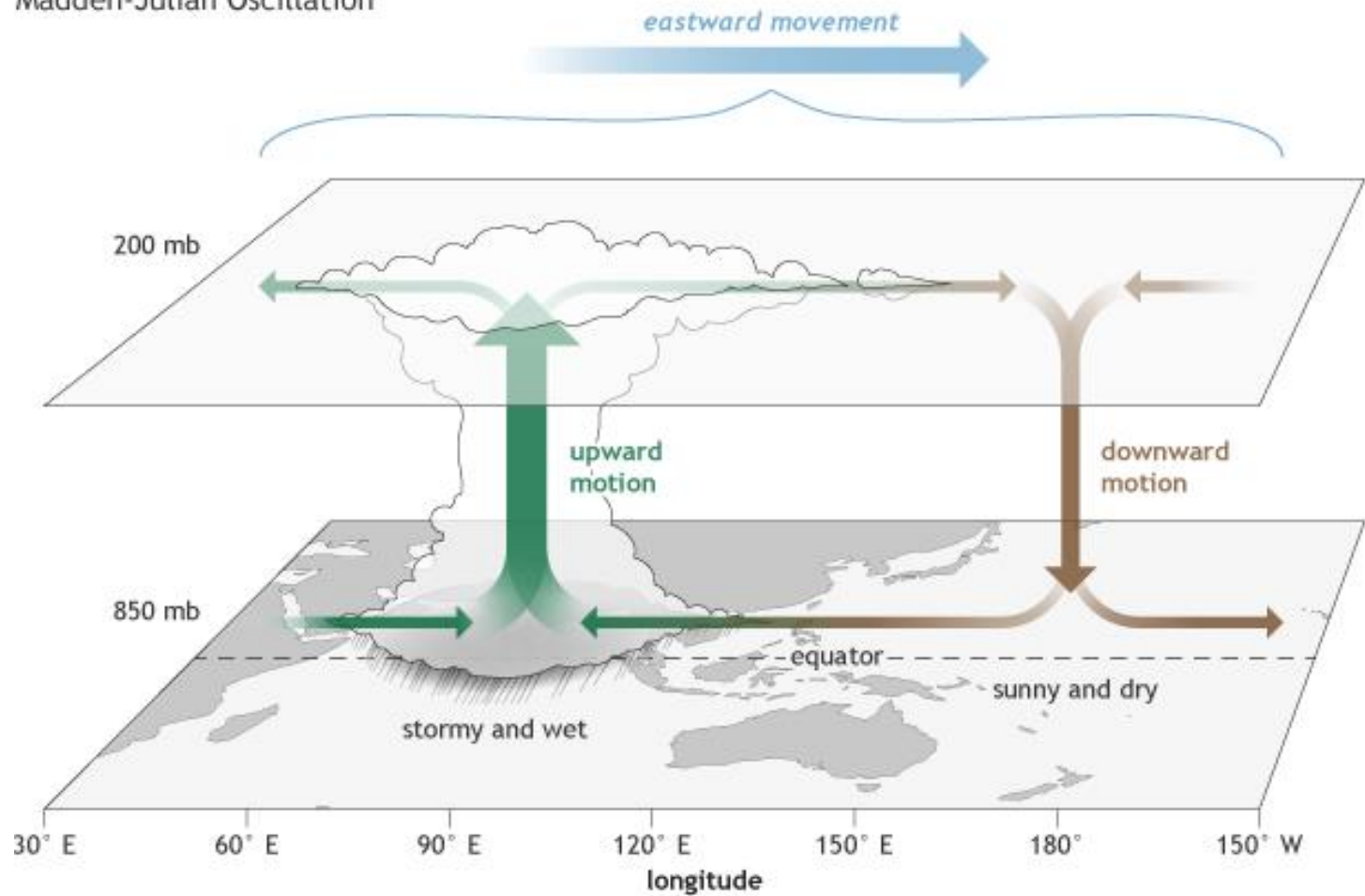
ECMWF EPS Ensemble Mean Total Precipitation Anomaly [inches]  
Init: 00Z29DEC2017 -- [360] hr --> Valid thru Sat 00Z13JAN2018

Min|Max: -9.5 | 5.6 inch

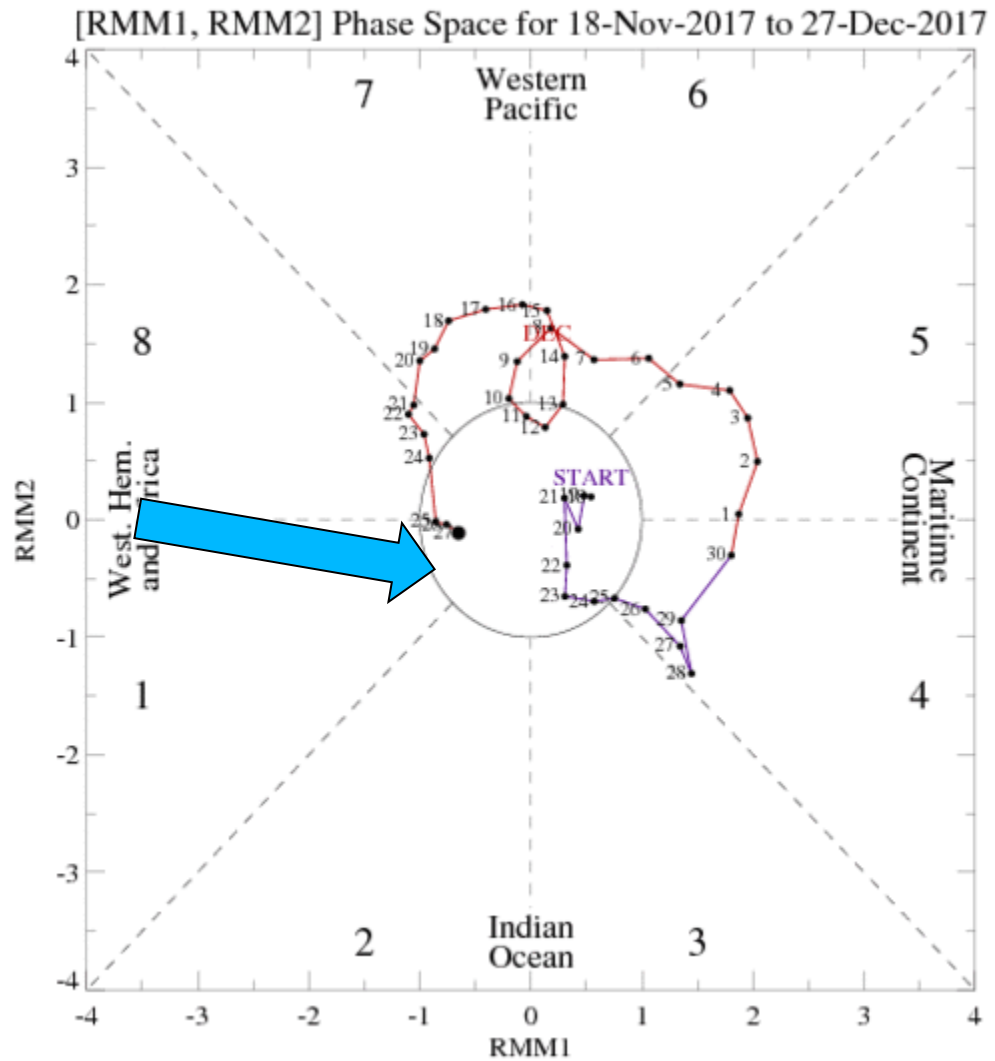


# LETS TALK MJO/ENSO

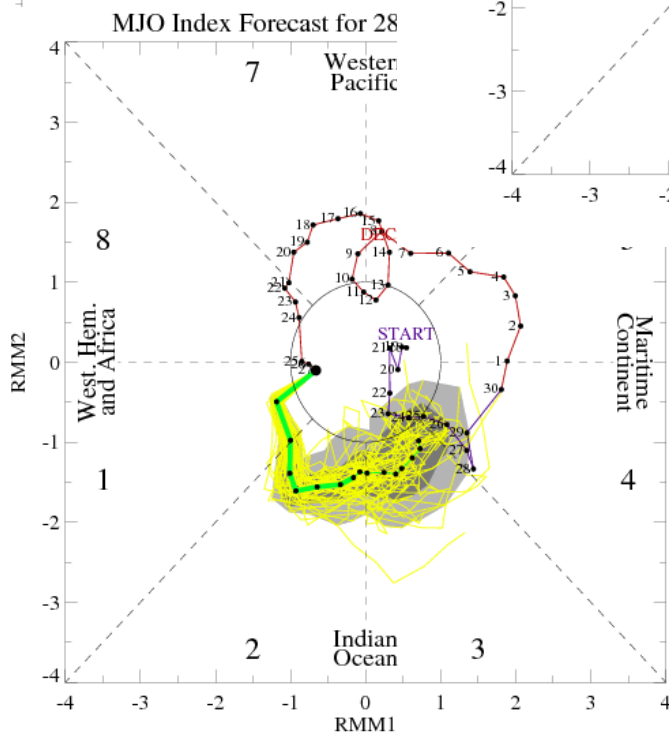
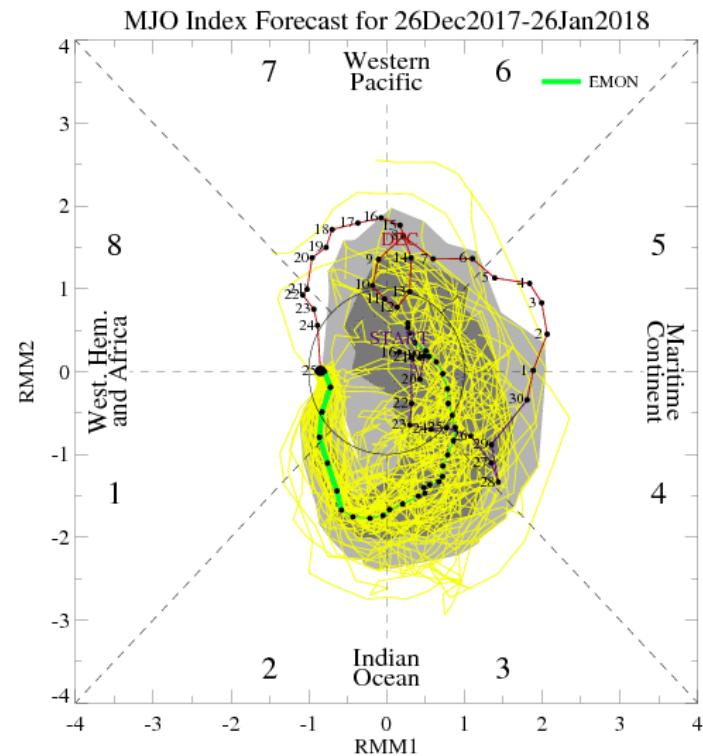
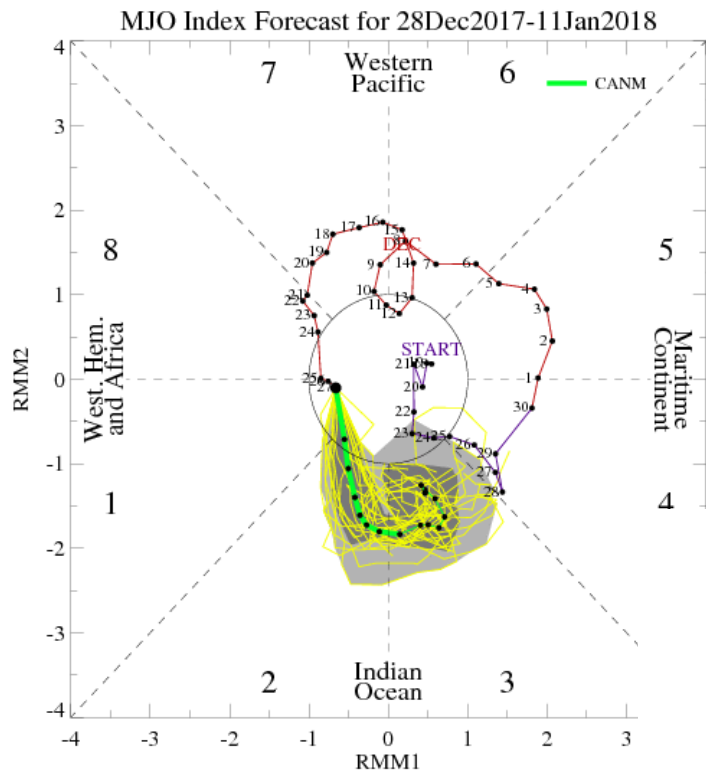
Madden-Julian Oscillation



# MJO IS IN NEUTRAL

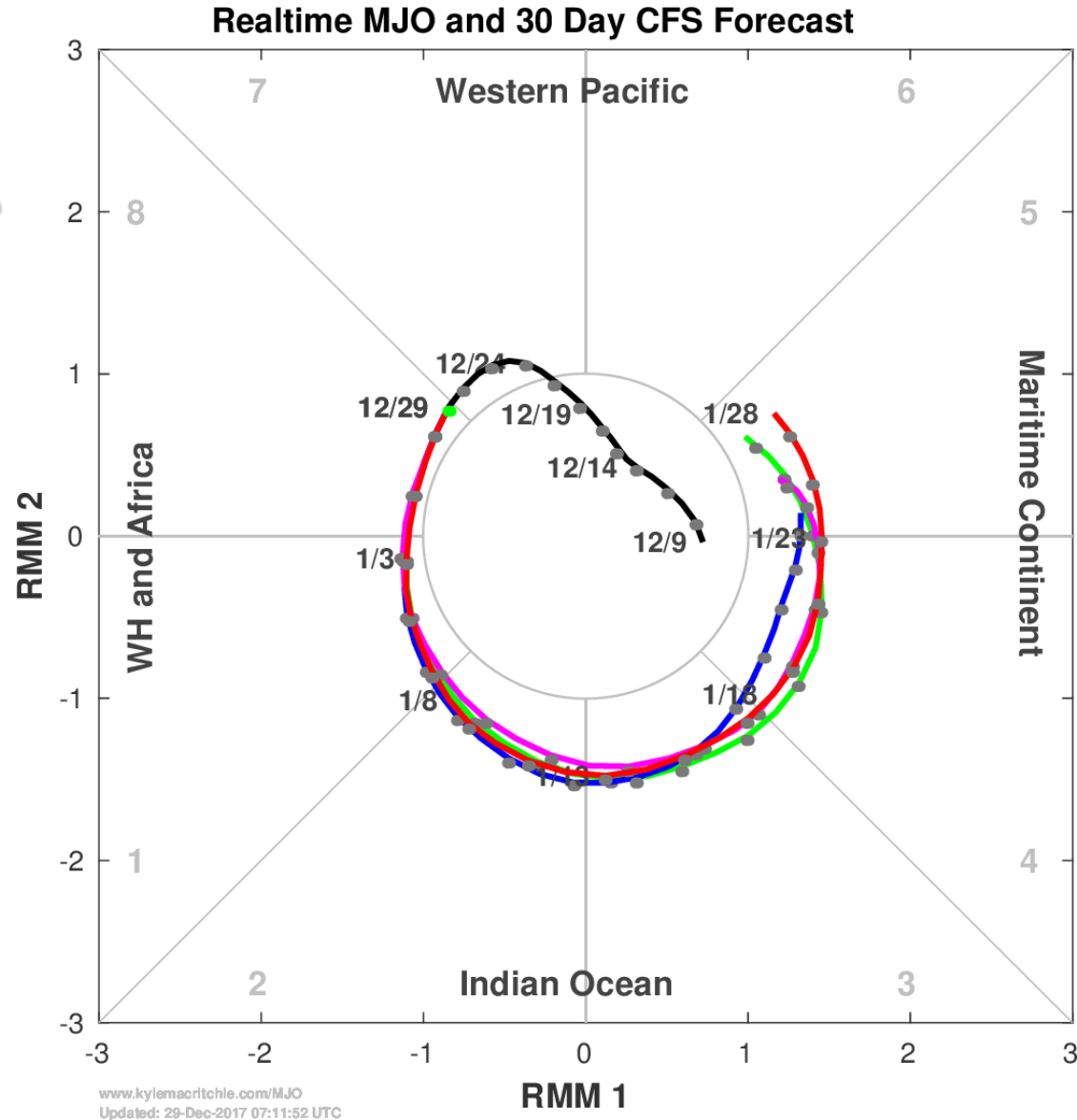


# MJO PHASE MOVES BACK OUT ..INTO PHASE 2 AND 3 BY MID / LATE JAN



# EXPERIMENTAL MJO CONTINUES INTO PHASE 4 5 BY END OF JAN

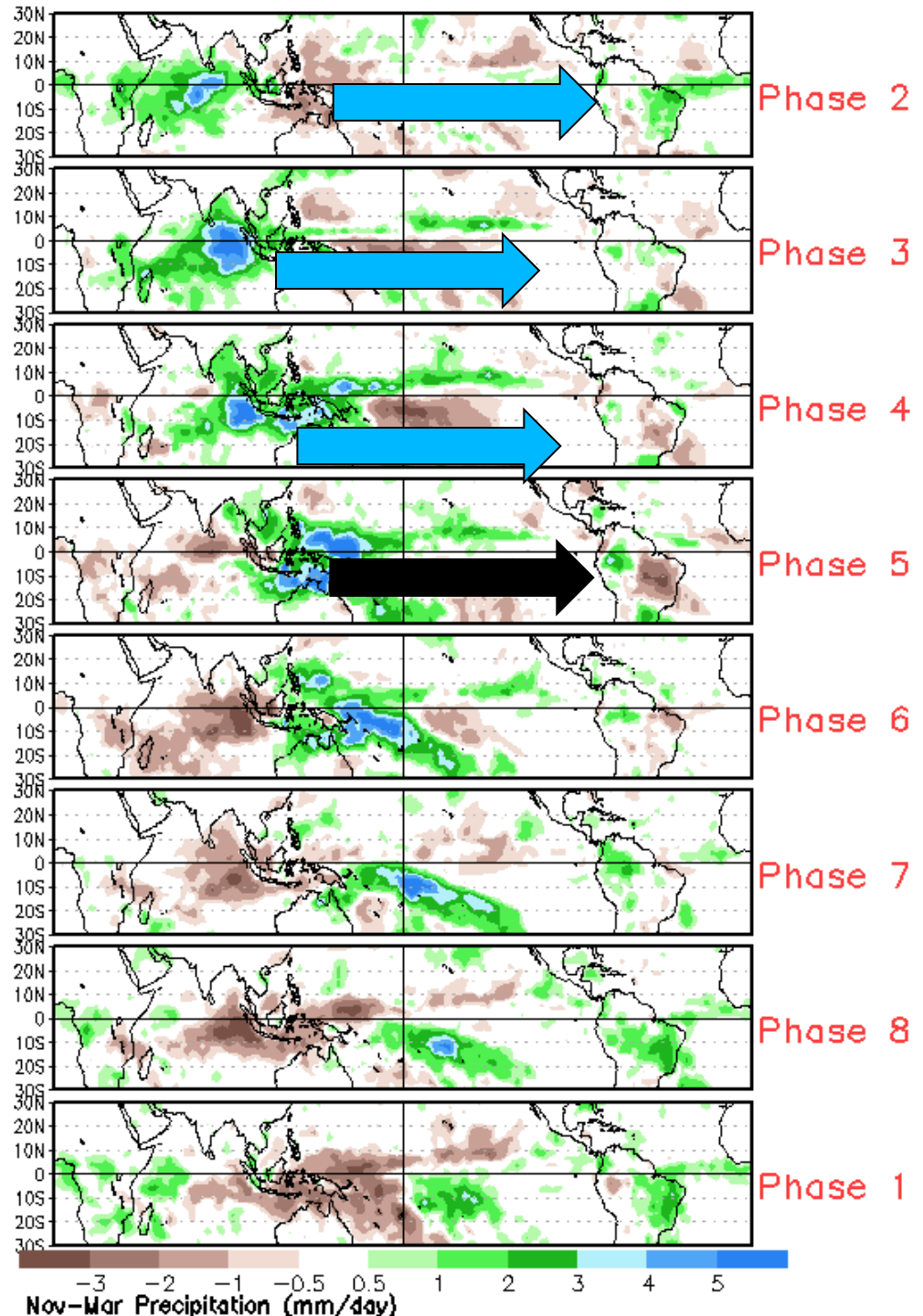
WHICH MEANS WHAT?



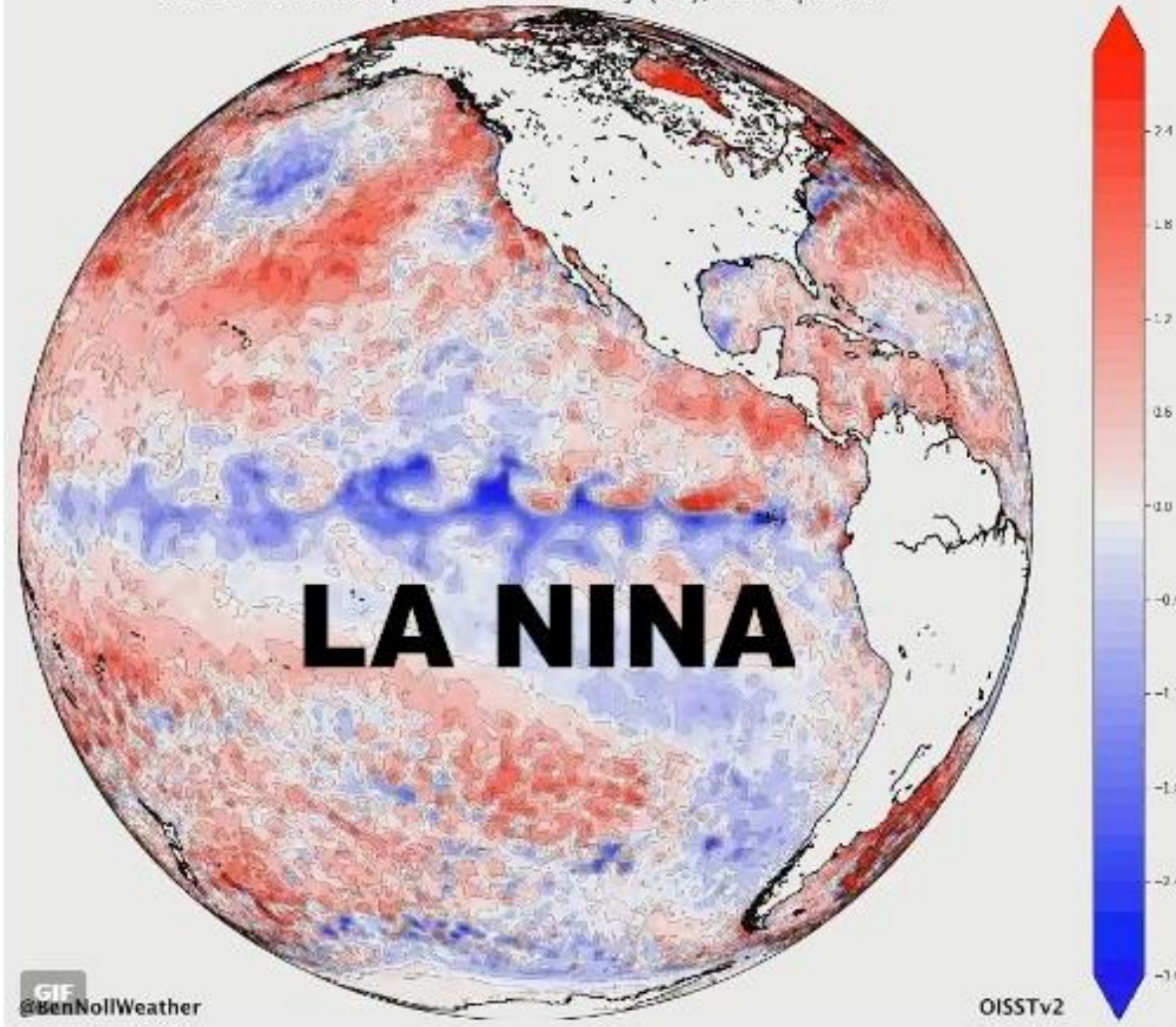
**MJO MOVES  
 INTO PHASE 2  
 SHORTLY THEN  
 PHASE 3**

**PHASE 4 and  
 maybe PHASE 5**

**2= WET for eastern  
 Brazil / DRY in ARG**  
**3 = turns Drier in Brazil  
 wetter over ARG**  
**4= Wet over ARG dry  
 over central/ eastern  
 Brazil**



Sea Surface Temperature Anomaly (°C), 10 Sep 2017



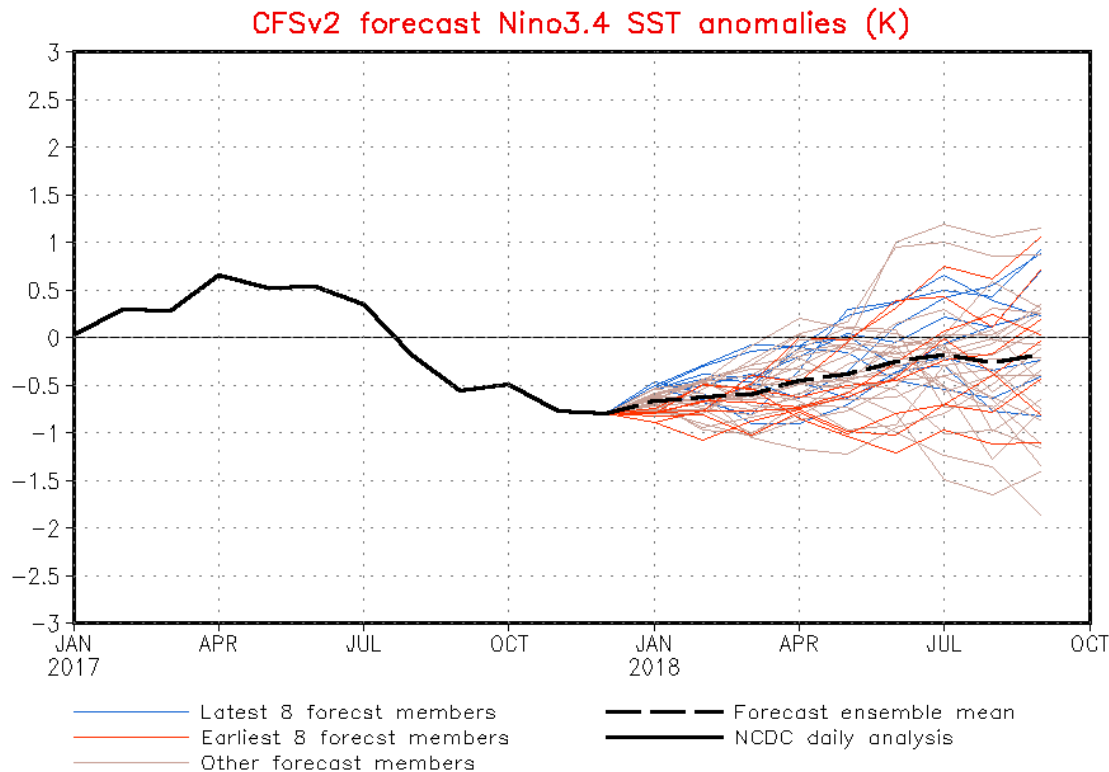
6:29 AM - 13 Sep 2017

# LATEST CFS MODEL PROJECTION = \*\* La Nina NEVER reaches threshold for MODERATE but stays weak into APRIL... Prolonging dry pattern into at least part of SPRING 2018



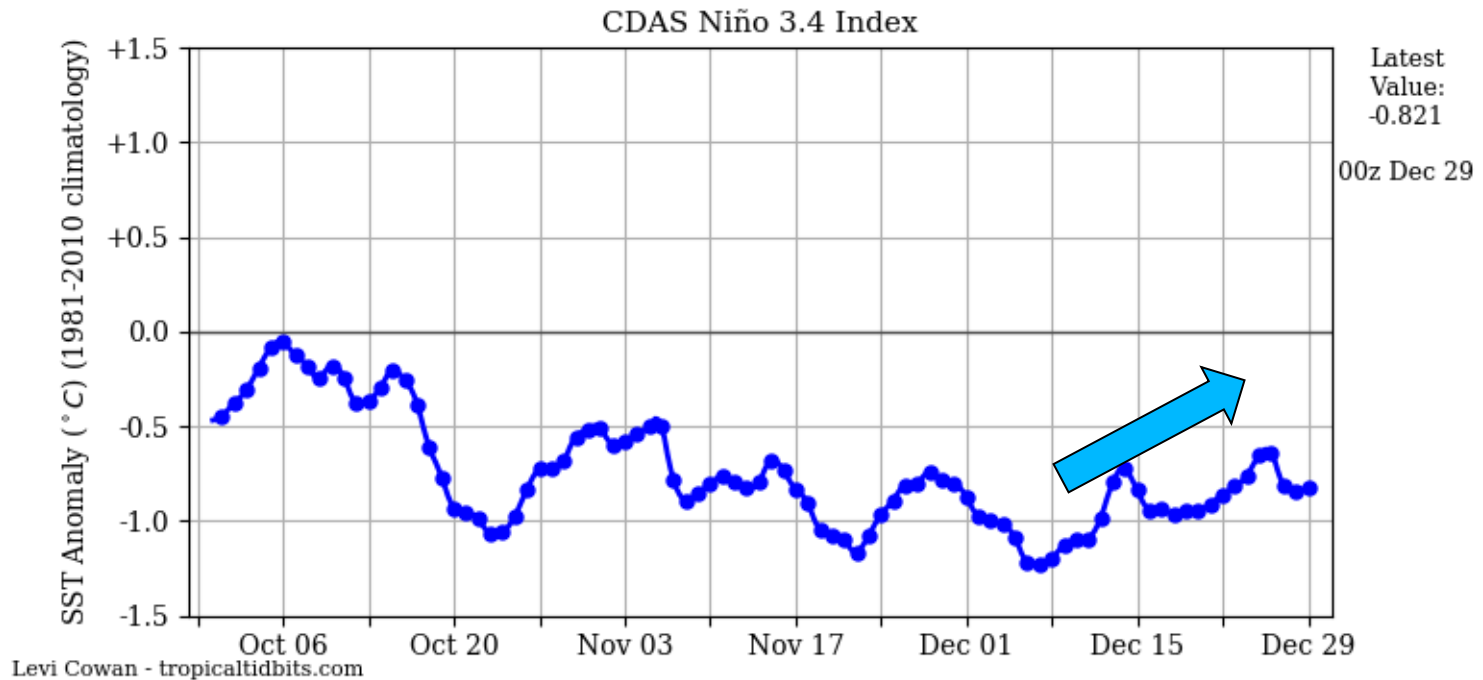
NWS/NCEP/CPC

Last update: Thu Dec 28 2017  
Initial conditions: 18Dec2017-27Dec2017



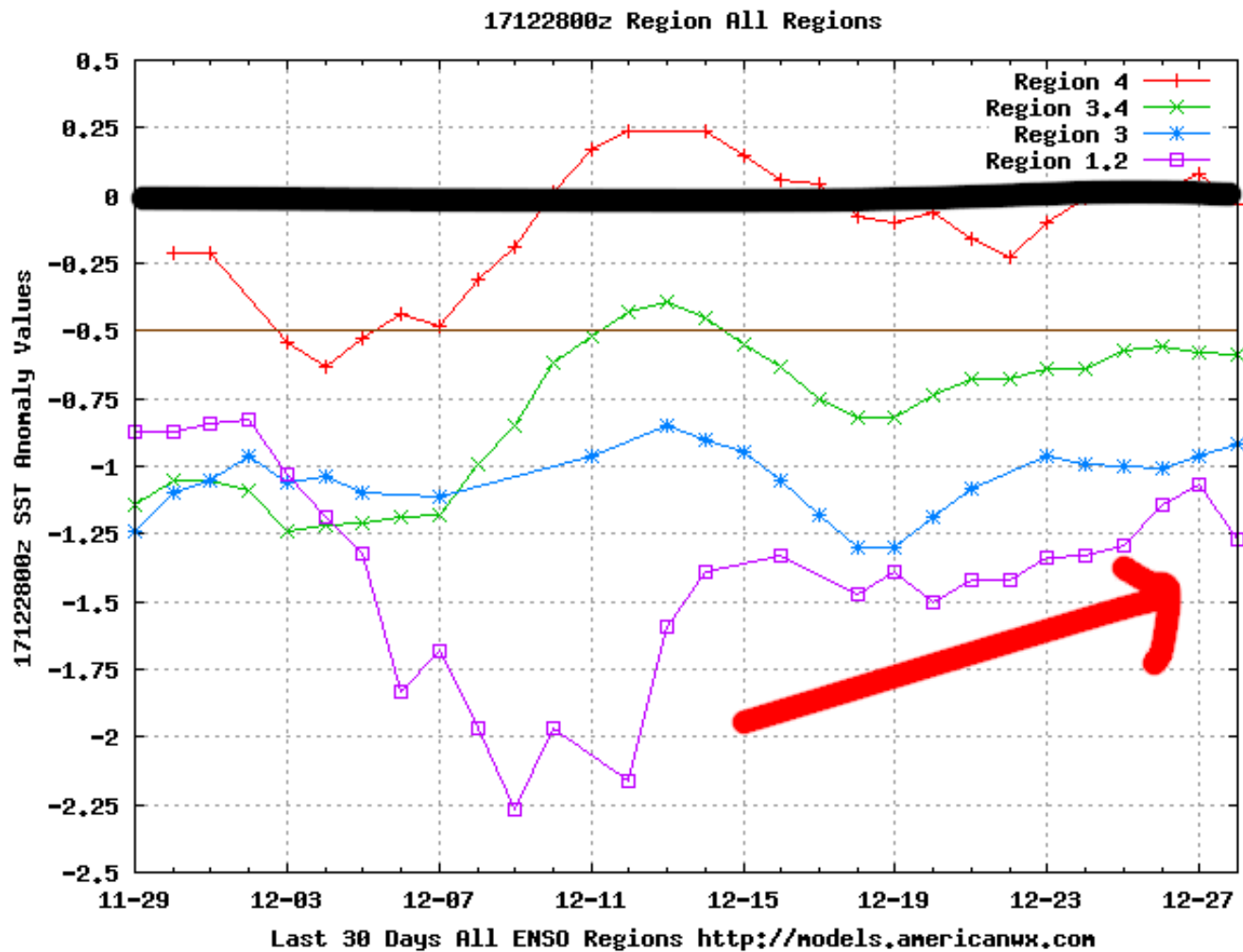


# ACTUAL ENSO REGION 3.4 .... LA NINA clearly weakening since DEC 7-10



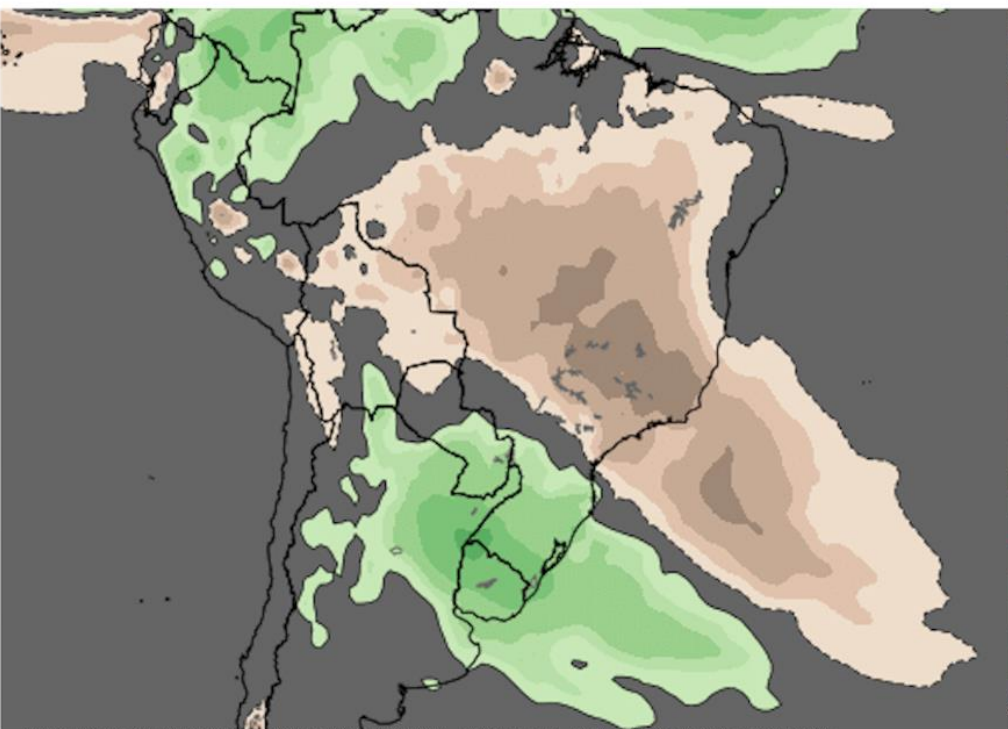
# ACTUAL SEA SURFACE TEMP ANOMALIES – of all 4 regions.. This is NOT a Model “projection”

Moderately cold SSTA ... Also shows weakening of the cold SSTA/ LA Nina



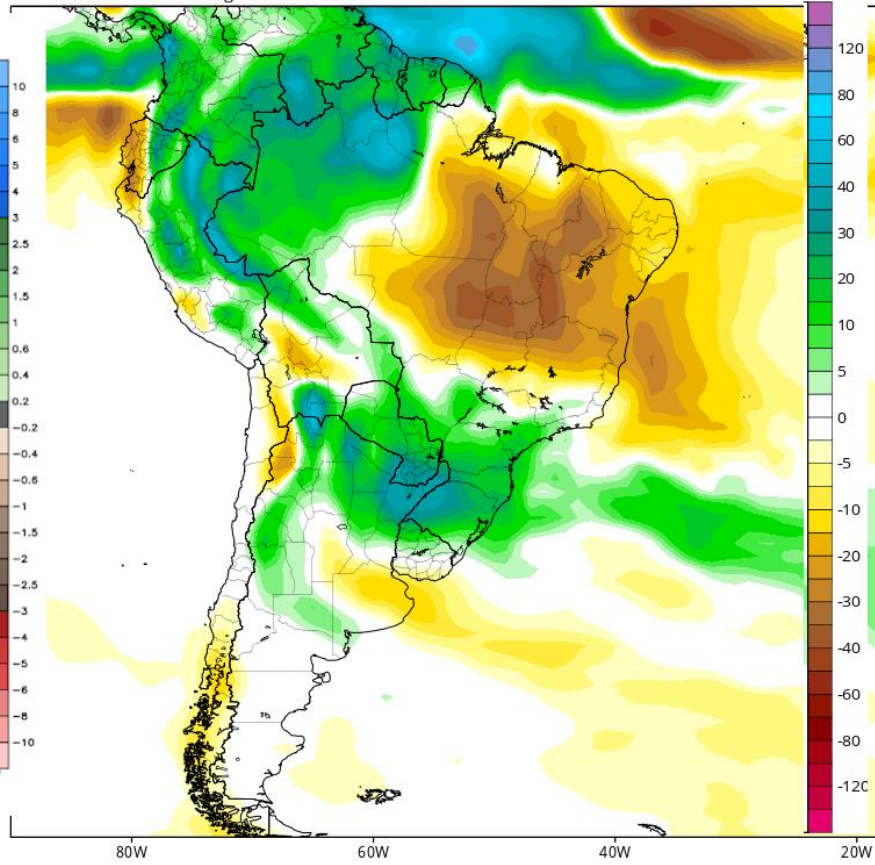
**WEEK 3... JAN 12-18 EURO LEFT CFS/ RIGHT EURO**  
**has central eastern Northern ARG WET into se Brazil**  
**while all of western/ central/ east central Brazil turns as**  
**DRY --- CFS very similar**

ECMWF EPS Ensemble Mean 7-day Avg Precipitation Anomaly [inch]  
 Init: 00Z28DEC2017 -- [252] hr --> Valid on Thu 00Z18JAN2018 Day 3.5 - Day 10.5  
 Min|Max Anom: -6.6 | 3.0 inch



Accumulation Between 00Z17JAN2018-00Z18JAN2018 | ECMWF EPS 1997-2016 Hindcast Climatology

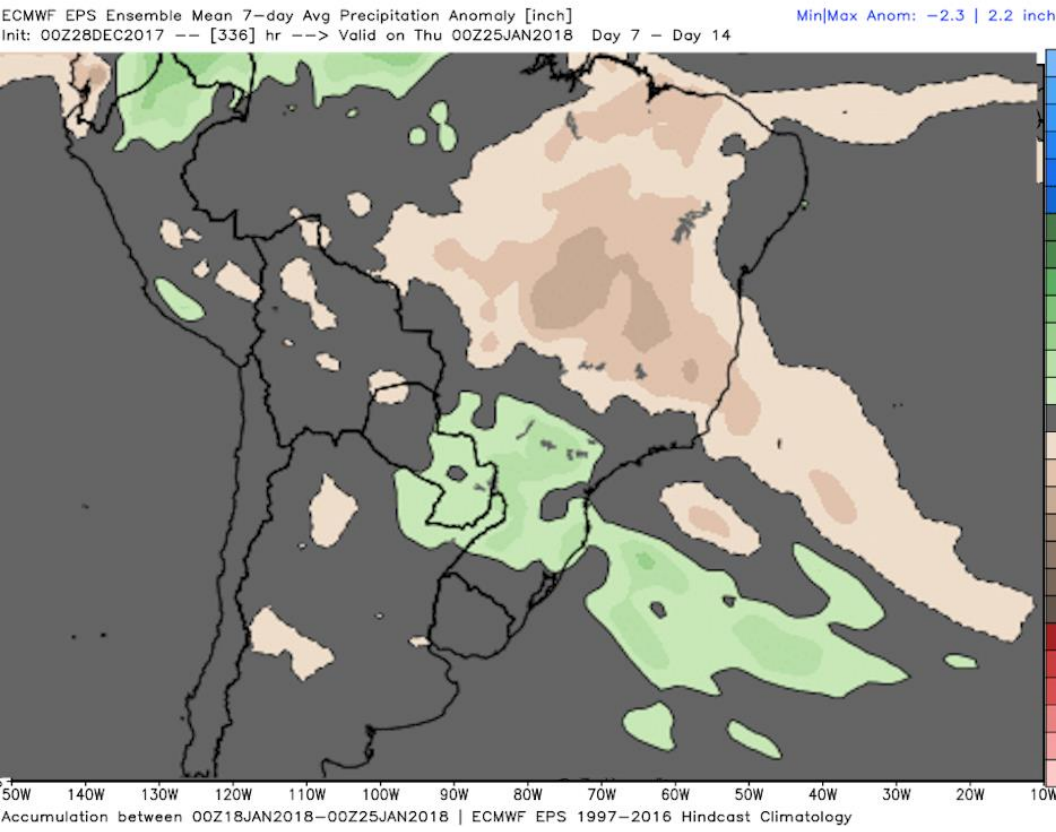
CFSv2 Accumulated Precip. Anomaly (mm) from 00z12Jan2018 to 00z19Jan2018 (Days 15-21)  
 Average of last 48 forecasts (12 runs x 4 members)  
 Init: 06z Dec 26 2017 through 00z Dec 29 2017



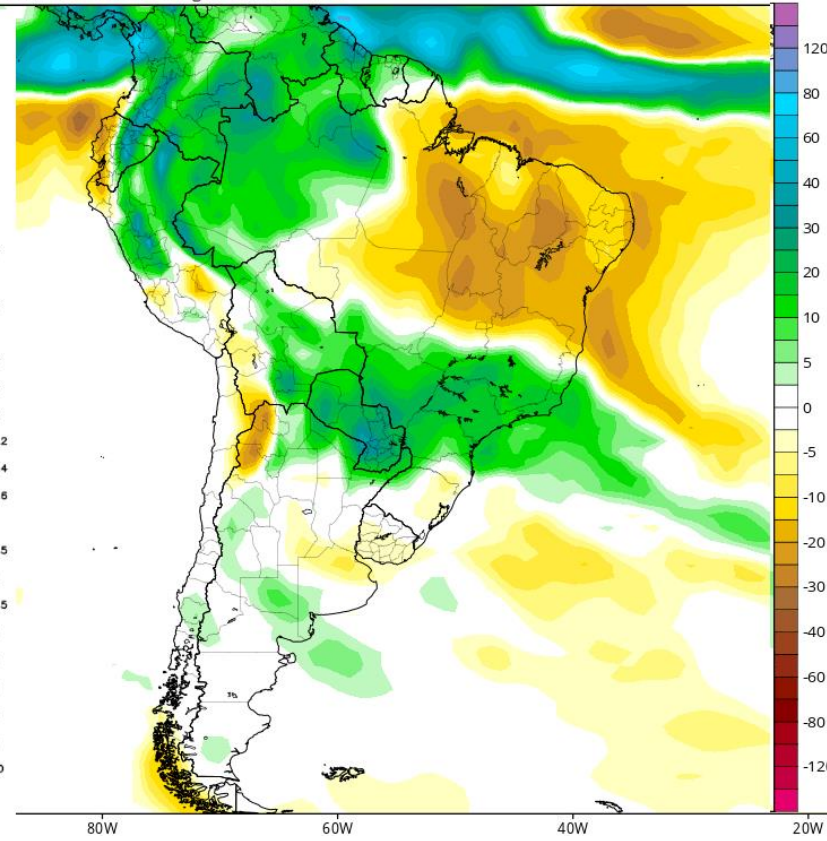
80W 60W 40W 20W

# WEEK 4 ... JAN 19-25 EURO LEFT CFS/ RIGHT

**EURO** still has ARG near Normal **WET** over se Brazil..  
**DRY** over western Central east central Brazil **CFS** very similar



CFSv2 Accumulated Precip. Anomaly (mm) from 00z19Jan2018 to 00z26Jan2018 (Days 22-28)  
Average of last 48 forecasts (12 runs x 4 members)  
Init: 06z Dec 26 2017 through 00z Dec 29 2017

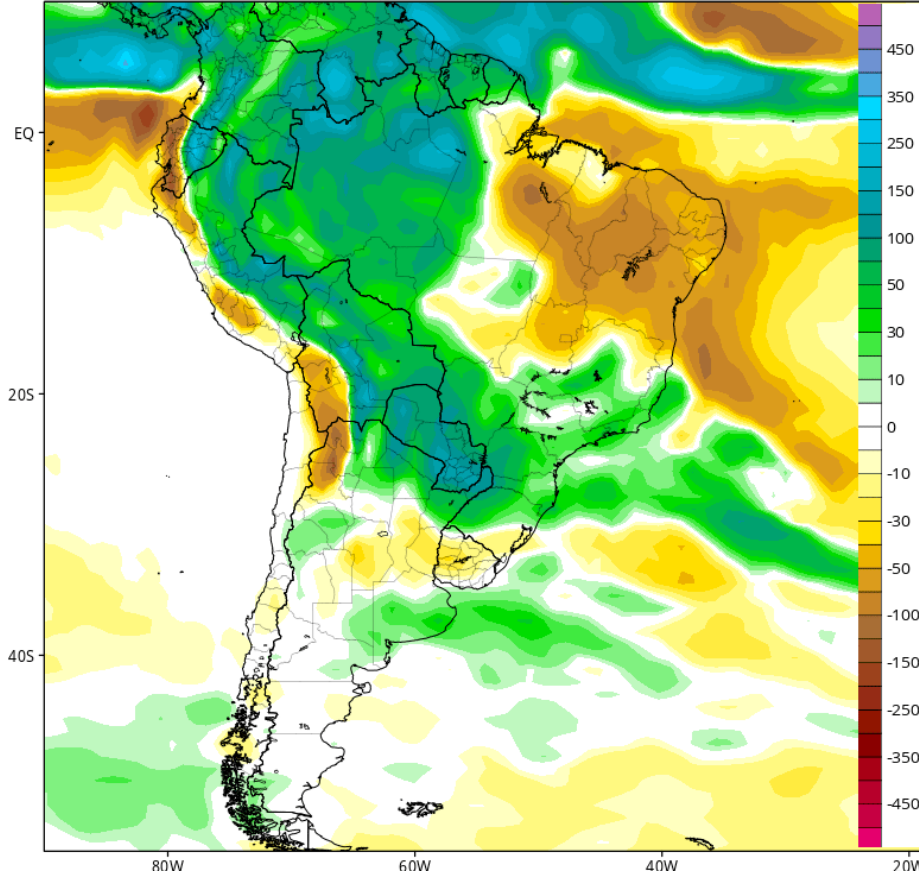


# CFS FOR JAN/FEB 2018 ARG turning drier

## CFSv2 Total Accumulated Precipitation Anomaly (mm)

Average of last 12 forecasts (12 runs x 1 members)

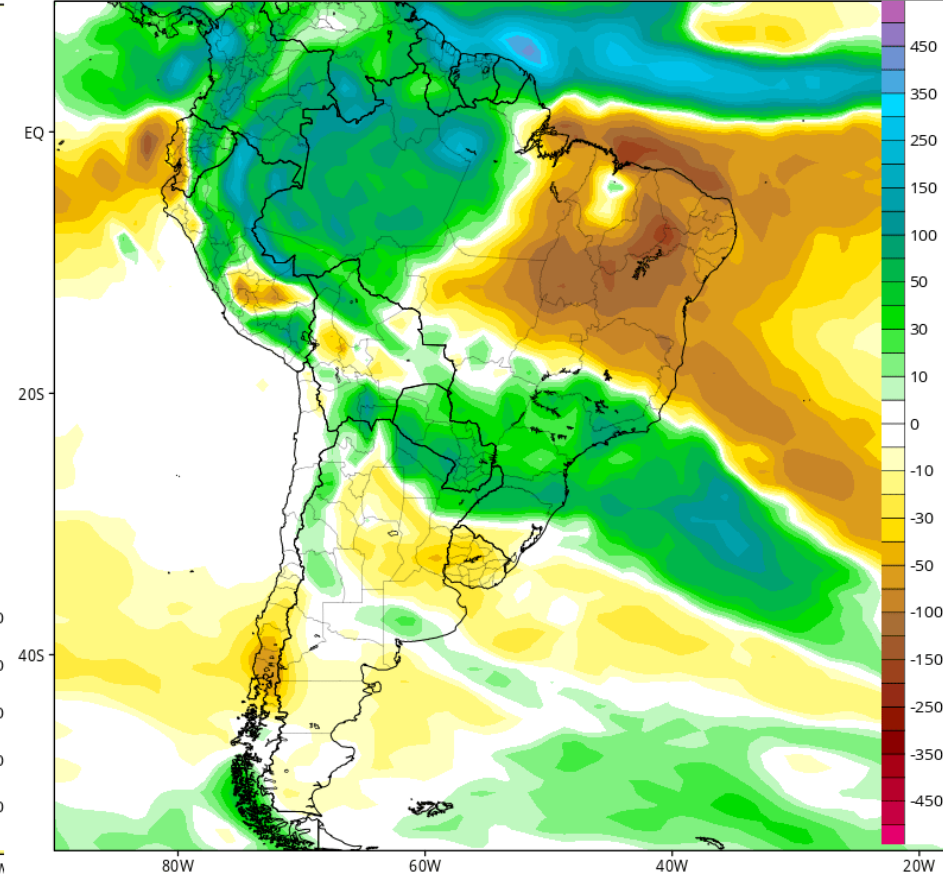
Init: 00z Dec 26 2017 through 18z Dec 28 2017 Valid for: Jan 2018



## CFSv2 Total Accumulated Precipitation Anomaly (mm)

Average of last 12 forecasts (12 runs x 1 members)

Init: 00z Dec 26 2017 through 18z Dec 28 2017 Valid for: Feb 2018



# SUMMARY US / HRWW

1. ARGENTINA stays HOT ...94-100F/ 34=38c or hotter for at least another 7 days
2. Areas in central ARG has not been that dry during DEC.
3. ARG DRY for next 10 days .. Some scattered stuff day 1-5 very dry 6-10D... Significant rains possible in 11-15 day
4. wetter pattern for mid / late JAN 2018 supported by MJO trends
5. CFS Monthly for JAN FEB and MAR still dry for ARG which makes sense IF weak La Nina holds on until M March or April
6. New EURO & UKMET climate Models come out next week for Jan FEB MAR APRIL

**Sometimes I wonder whether the world is being run by smart people who are putting us on, or by imbeciles who really mean it.**

**MARK TWAIN**

