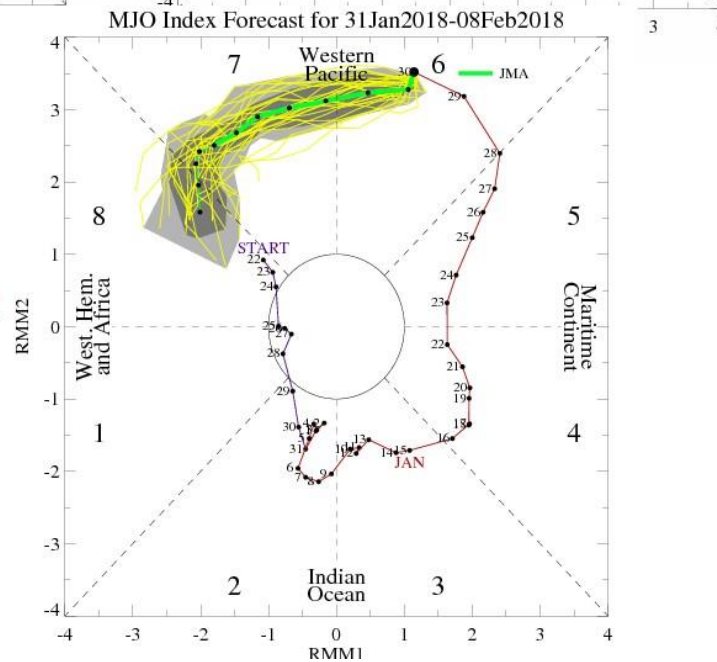
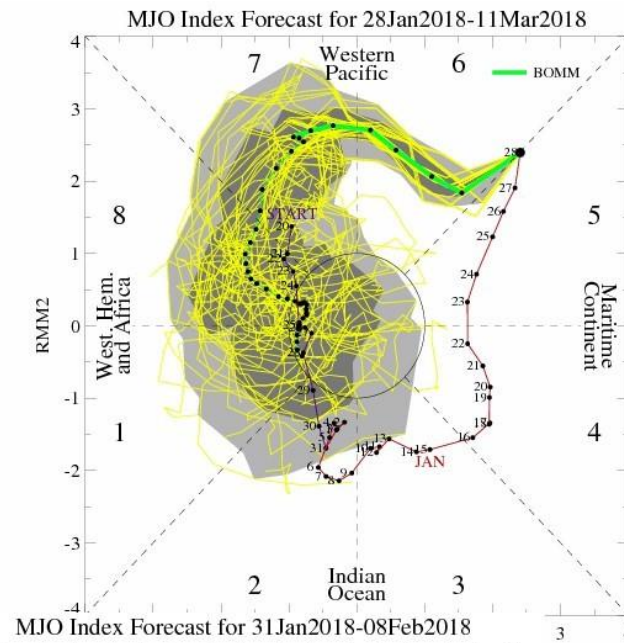
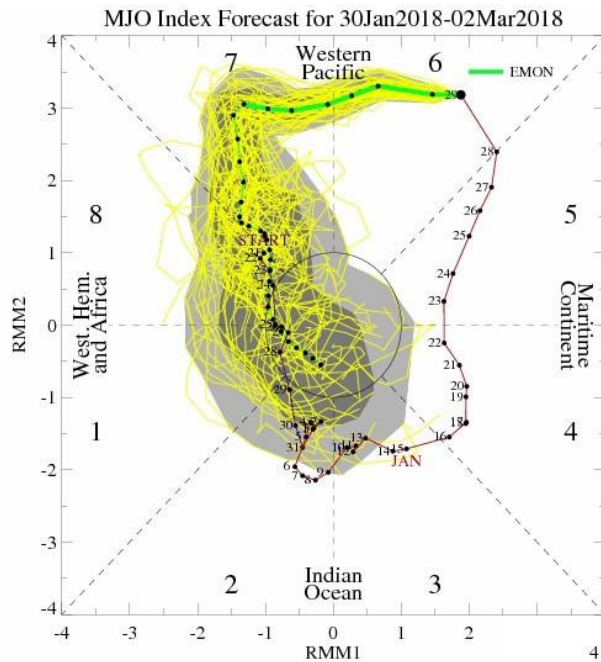


SOUTH AMERICA GRAIN WEATHER

1/31/18 OVERVIEW

SUMMARY

There really is not much to change the forecasts until you get into the 11 to 15 day. The the MHO models yesterday and on Monday began to show a change in that the very strong impulse was going to weaken rapidly once reached phase 8 and turned into or towards the Neutral circle. This is a change because the earlier projections have the impulse staying rather strong in phase 8 and phase 1 into phase 2. As a reminder those Phases keep most of Brazil quite wet and keeps Argentina very dry. Thus this change with current MJO models from yesterday has significant implications for the 11 to 15 day timeframe. For that reason the models are wetter in the 11 to 15 day. It is quite possible that the MJO will not weaken this rapidly and will hold course .. as a strong Phase 1 and phase 2. This obviously would keep the dry pattern over Argentina and the super wet pattern over Brazil. But for now there is risk for some moderate rain showing up in the 11 to 15 day in Central Argentina.

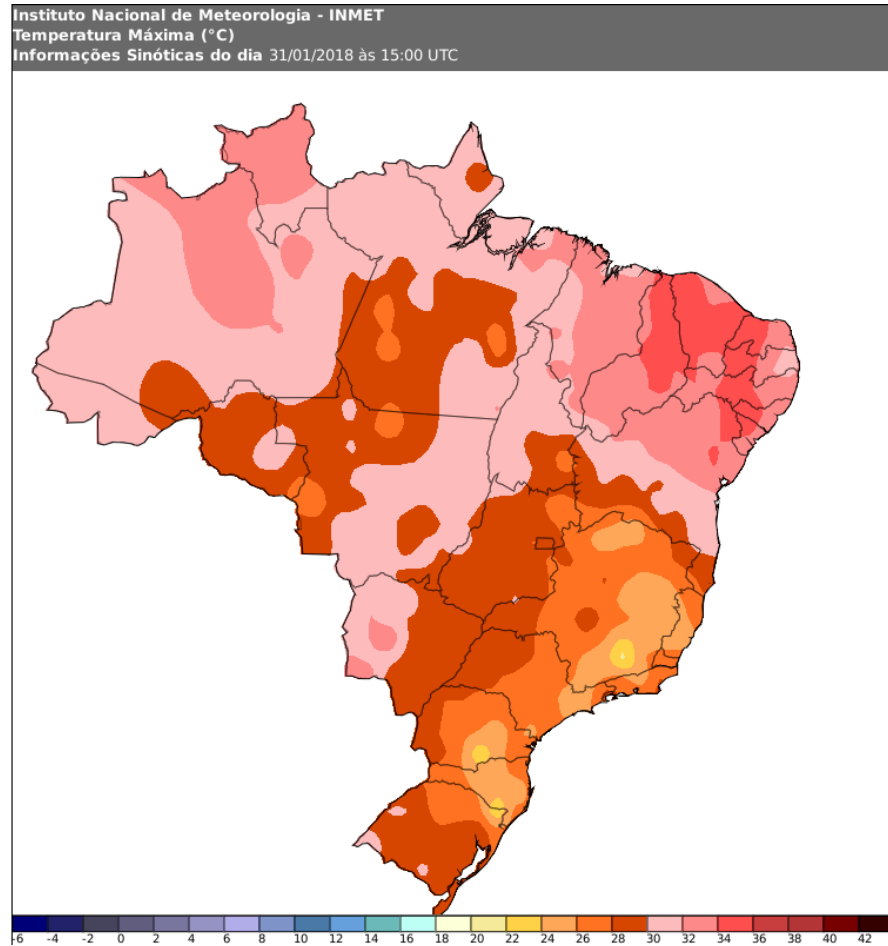
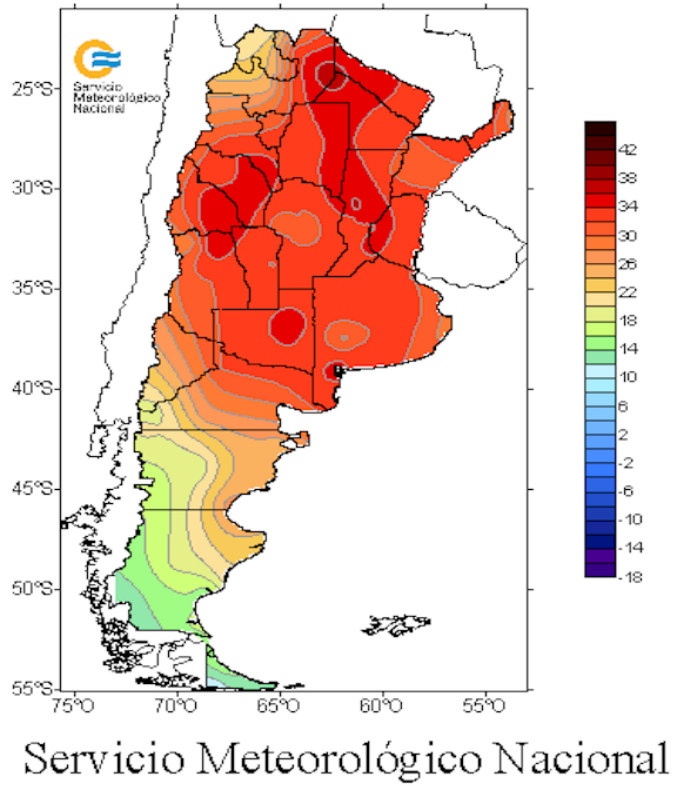


What is "NEW" here is that these MJO forecasts take the very strong MJO then suddenly weaken in it with a massive fall off as it reaches Phase 8... Note how the MJO towards sharply towards Neutral Circle in Mid or late FEB

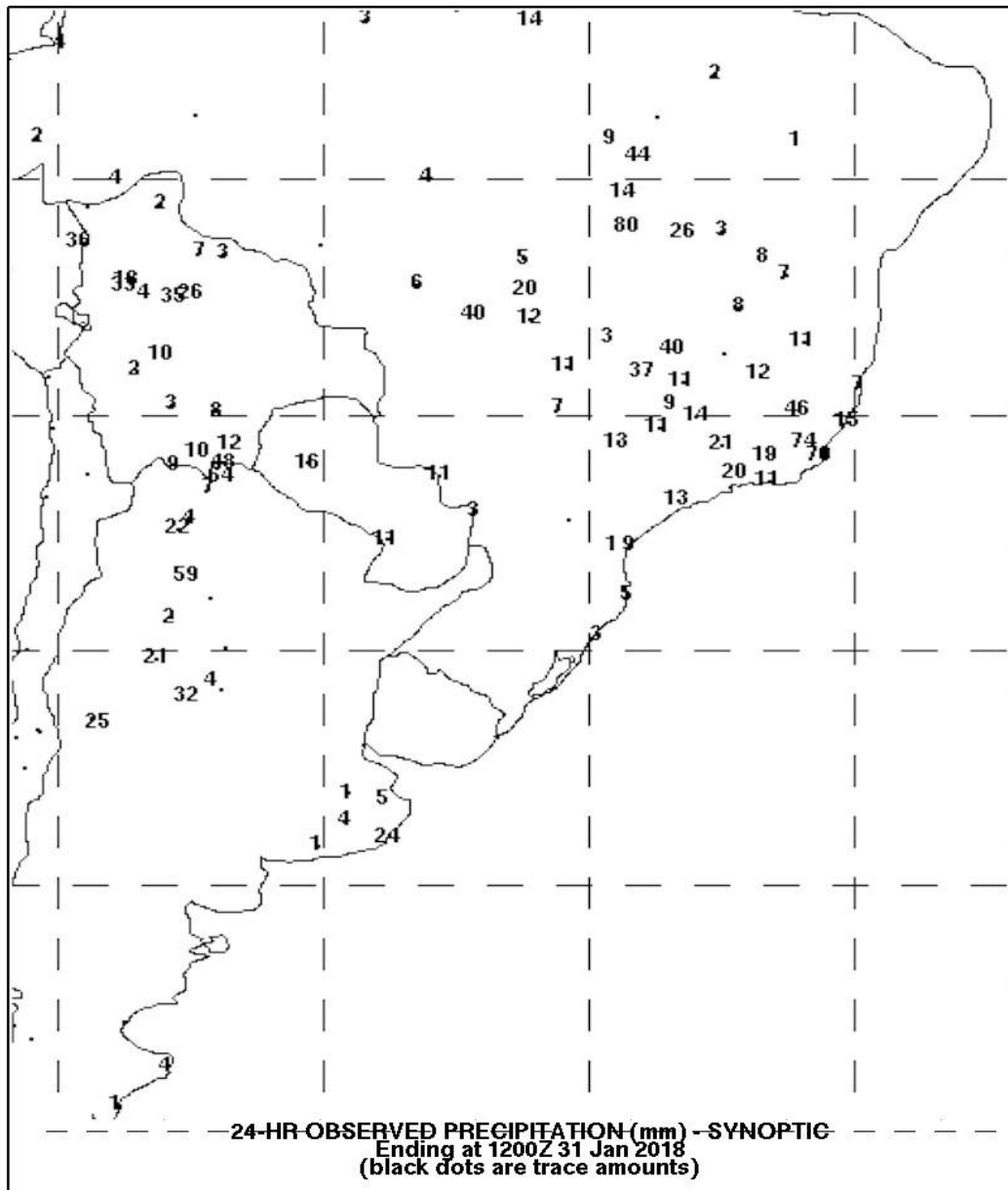
S.AMERICAN MAX TEMPS JAN 30

Max temperatures on the 3th saw some temps 32-34c/ 90-99f and over portions of Bahia in Northeast Brazil.

TEMPERATURAS MAXIMAS 30 de Enero de 2018



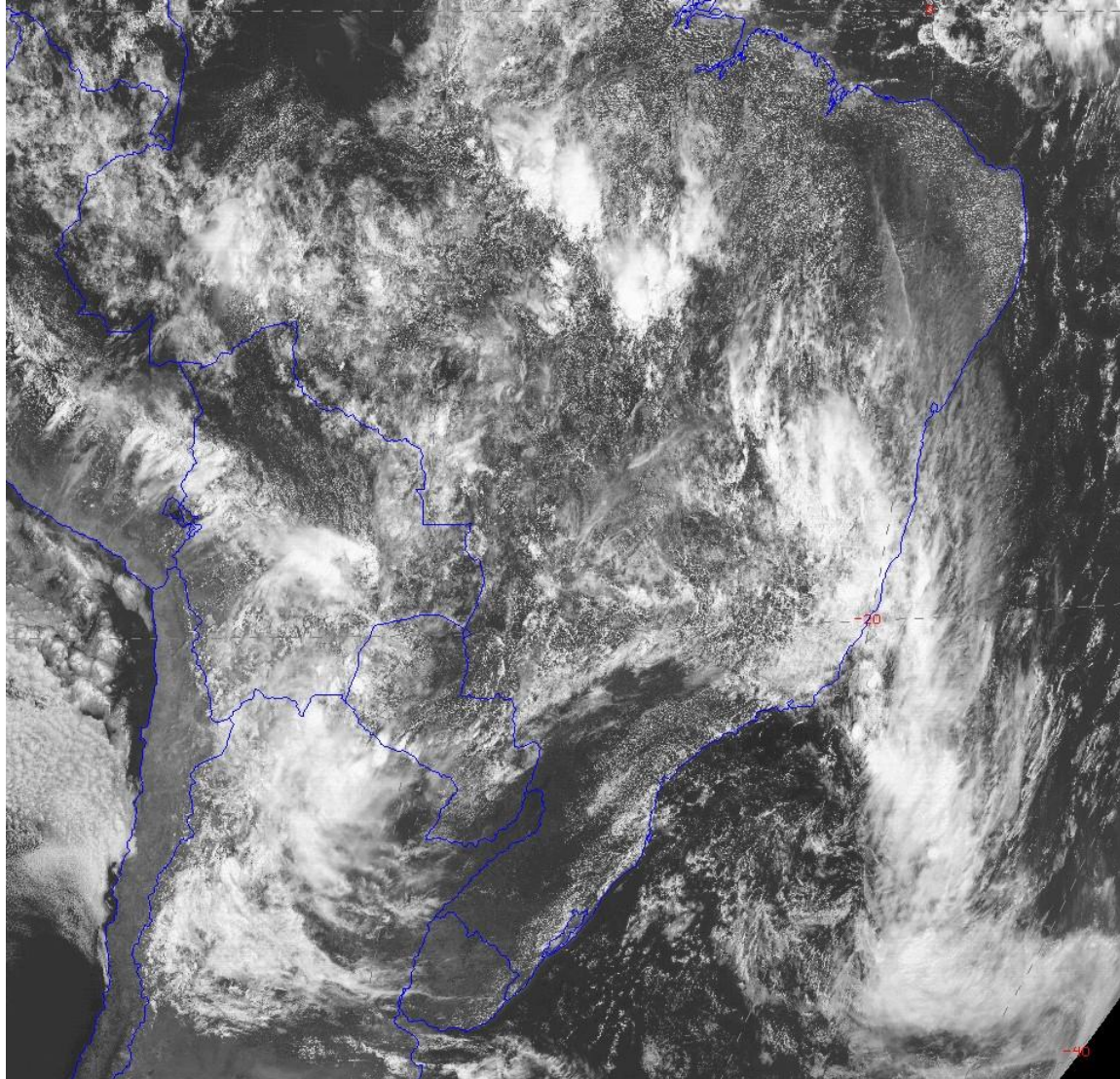
RAINFALL JAN 30-31



ARGENTINA - As you can see most of northern central and south central Argentina was dry. Only some light rains showers fell over eastern Buenos Aires.

BRAZIL -- there was widespread significant to heavy rains over much of central and east central Brazil but all of MGDS and southeast Brazil was dry. Rainfall amounts of 7-80mm/ 0.30-3.25" were common over 60% of Tocantins Goiás southeast Mato Grosso and 70% coverage. with 50% coverage.

The mid Wednesday morning satellite pictures STORMS over far northwest Argentina ... and over central and northern Minas Gerais

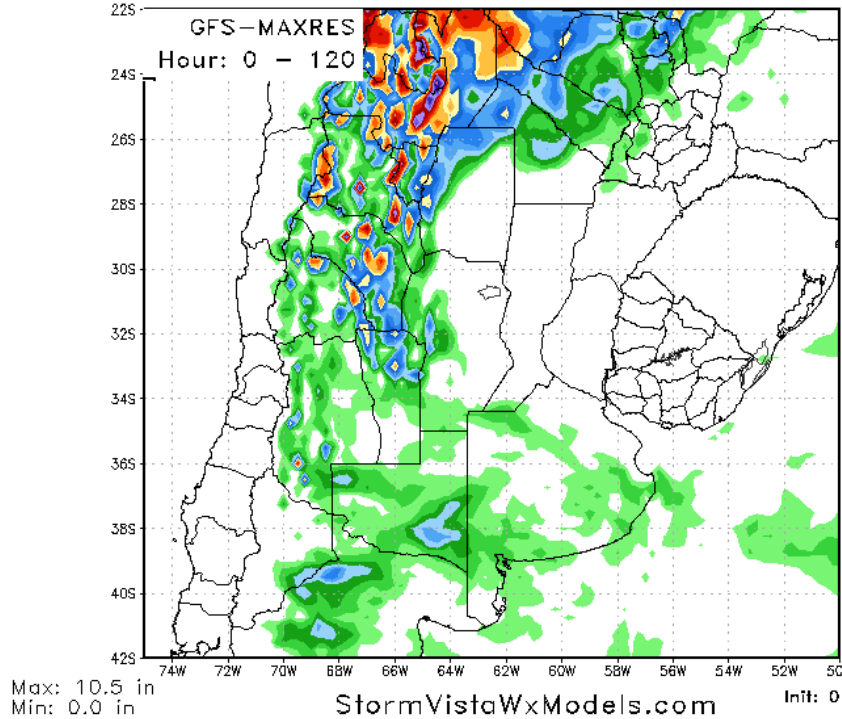


NEXT 5 DAYS ARGENTINA

The forecast models have not change... fAs you can see the entire area some is completely devoid of any sort of rainfall- even minor rainfall. Usually this time of year it is very difficult to see Argentina this completely dry and rain free for a five day interval.

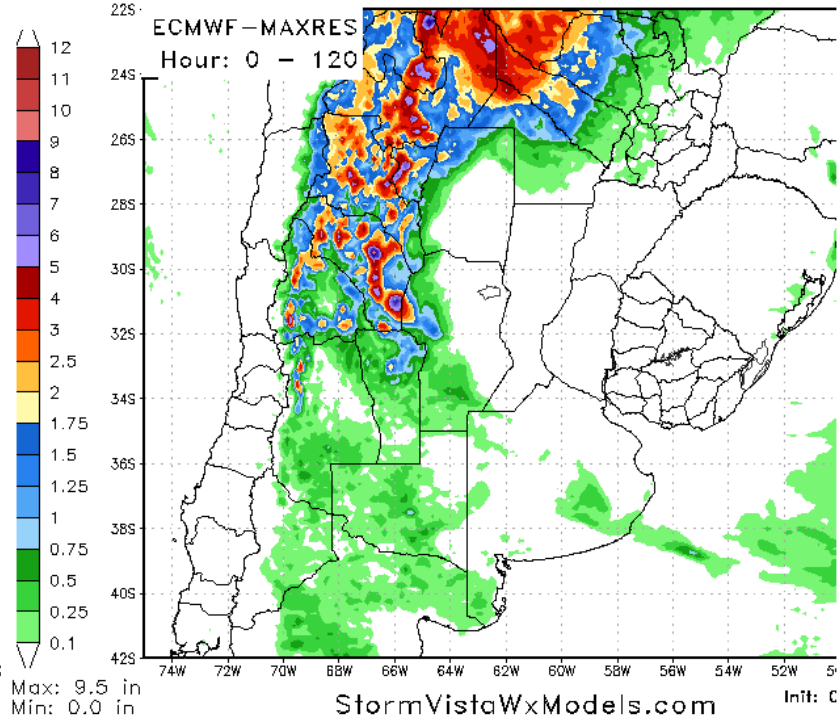
120 Hour Total Precipitation (in)

Valid: 00z Wed 31 Jan 2018 - 00z Mon 05 Feb 2018



120 Hour Total Precipitation (in)

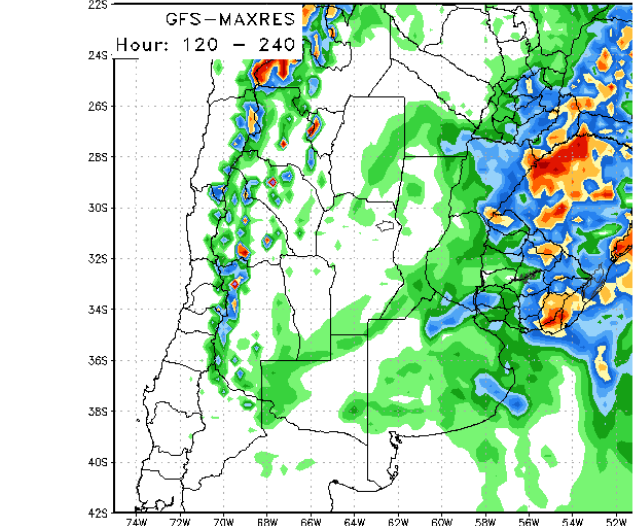
Valid: 00z Wed 31 Jan 2018 - 00z Mon 05 Feb 2018



6-10 DAY ARGENTINA

Again the early Wednesday morning models keep most of Argentina dry. The Euro does have a NARROW stripe of 0.50.20"/12-50mm rains over far western Buenos Aires into far southeast Santa Fe and much of Entre Rios. BUT the EURO ensemble does NOT shows these storms at all so I am skeptical that the Euro is correct about this narrow band of significant rains

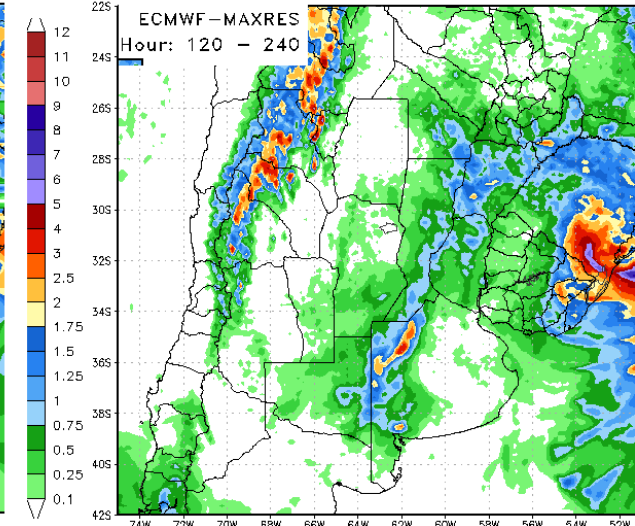
120 Hour Total Precipitation (in)
Valid: 00z Mon 05 Feb 2018 - 00z Sat 10 Feb 2018



Max: 7.0 in
Min: 0.0 in

StormVistaWxModels.com

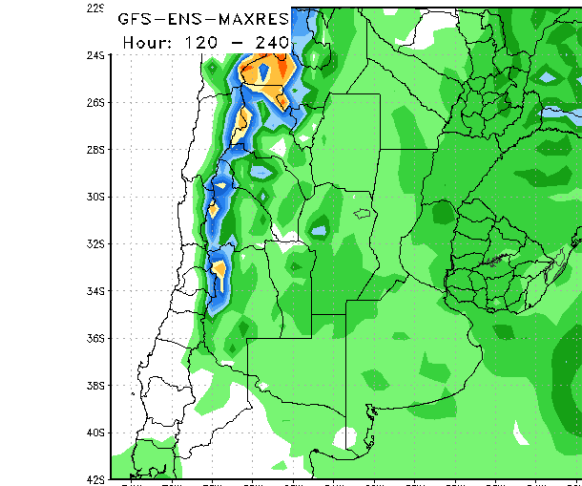
120 Hour Total Precipitation (in)
Valid: 00z Mon 05 Feb 2018 - 00z Sat 10 Feb 2018



Max: 10.7 in
Min: 0.0 in

StormVistaWxModels.com

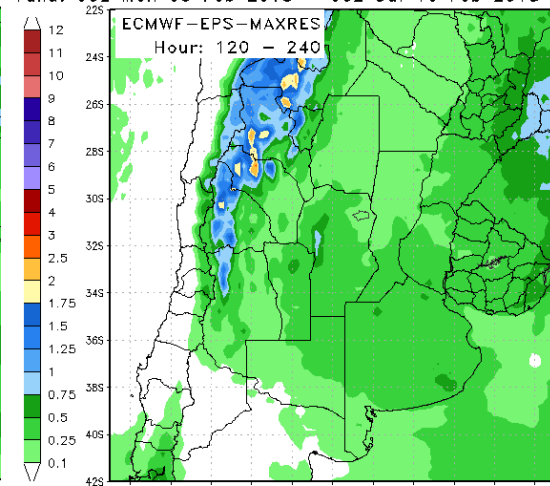
120 Hour Total Precipitation (in)
Valid: 00z Mon 05 Feb 2018 - 00z Sat 10 Feb 2018



Max: 3.7 in
Min: 0.0 in

StormVistaWxModels.com

120 Hour Total Precipitation (in)
Valid: 00z Mon 05 Feb 2018 - 00z Sat 10 Feb 2018



Max: 2.6 in
Min: 0.0 in

StormVistaWxModels.com

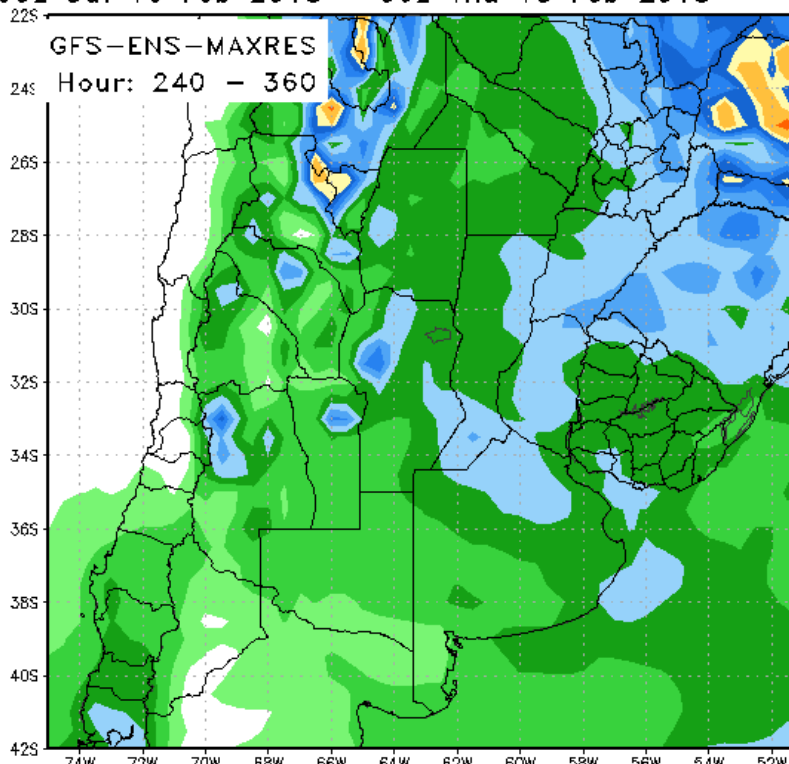
11-15 DAY ARGENTINA

As is typically the case when you get to the operational GFS model in the 11 to 15 day...it usually goes off the rails at some point or another ... whether we are dealing with South America .. US .. Europe .. Russia or China or what have you. In this case we can see the same sort of thing happening. These two images show the operational GFS model. The image on the LEFT refers to the early GFS which came out at 1:00 AM Monday morning and the image on the RIGHT refers to the operational GFS which came out at 6:00 AM on Monday morning. Notice of both models have substantially increased and rainfall coverage over much of Argentina.

However when you compare those 2 images to the GFS ensemble you see that there is no support the the one of these solutions.

The European ensemble does seem to show a little bit of light rain over portions of Cordoba around February 10-11 but that's about it.

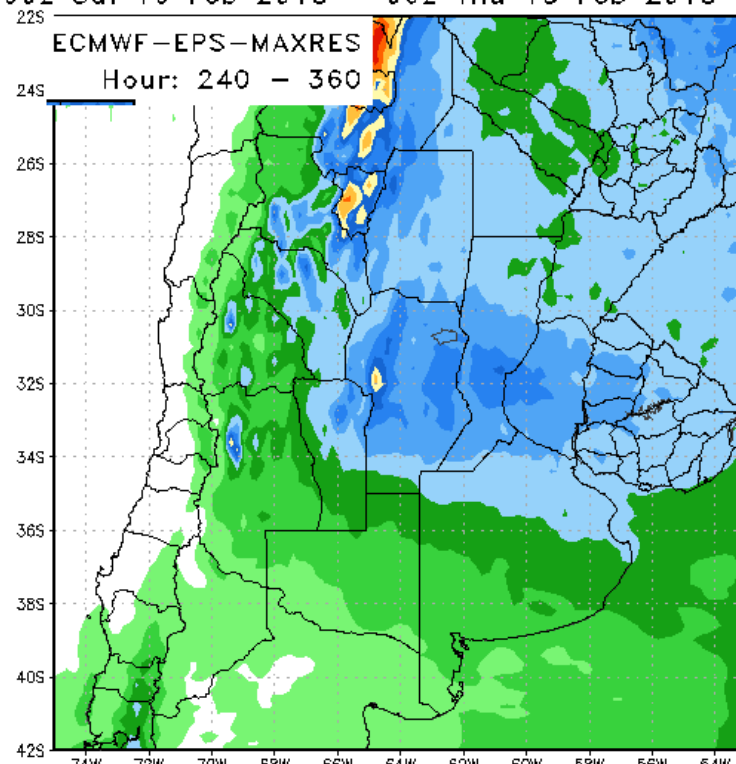
120 Hour Total Precipitation (in)
Valid: 00z Sat 10 Feb 2018 - 00z Thu 15 Feb 2018



Max: 2.8 in
Min: 0.0 in

StormVistaWxModels.com

120 Hour Total Precipitation (in)
Valid: 00z Sat 10 Feb 2018 - 00z Thu 15 Feb 2018



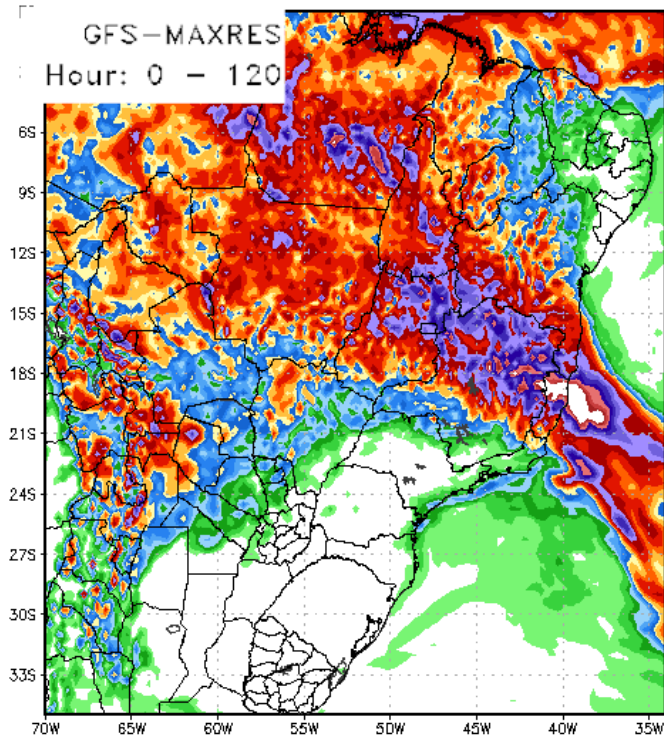
Max: 3.3 in
Min: 0.0 in

StormVistaWxModels.com

1-5 DAY BRAZIL

Again there is little to change from the Sunday afternoon models regarding the rainfall amounts for Brazil over the next 5 days. Both models show a concentration of heavy rains greater than 4 inches over central and northern Minas Gerais and widespread 1-4"/25-100mm over 70% of Mato Grosso Goias... MGDS... and 1-2" with 70% coverage over Tocantins... southwest Bahia ...Sao Paulo ...and Parana..

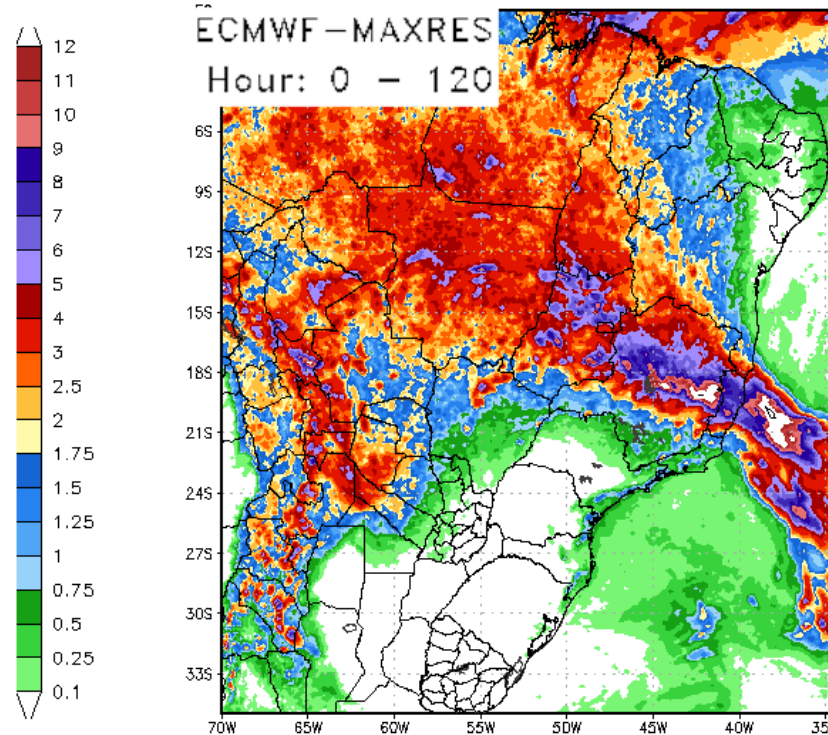
120 Hour Total Precipitation (in)
Valid: 00z Wed 31 Jan 2018 - 00z Mon 05 Feb 2018



Max: 17.0 in
Min: 0.0 in

StormVistaWxModels.com

120 Hour Total Precipitation (in)
Valid: 00z Wed 31 Jan 2018 - 00z Mon 05 Feb 2018



Max: 20.2 in
Min: 0.0 in

StormVistaWxModels.com

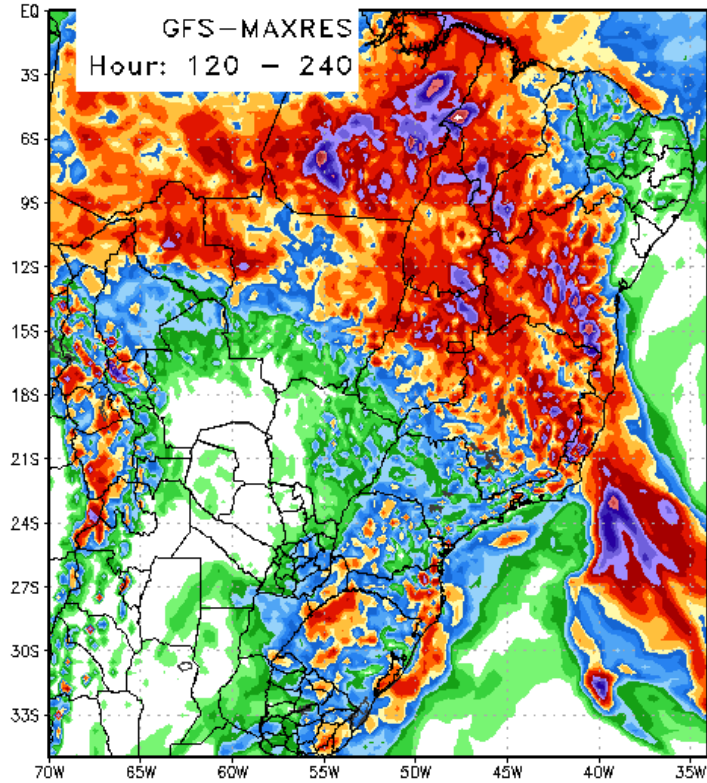
6-10D BRAZIL

However the extreme rains show up on both models in the 6-10 DAY ... during the first week of February. Usually WE do not see the European model this extremely wet --as as the GFS model is. The fact that the European model is showing large areas of greater than 10"/250mm rains over Central Brazil is quite ominous and of major significance. Both models show a concentration of rainfall amounts between 9-12"/225-300mm covering the central and northern portions of Goias and northern Minas Gerais ...and 4-8"/100-200mm over eastern half of Mato Grosso.. southern Goias ...Tocantins ...southern Minas. Notice however that on both of these model images the rainfall

amounts drop off extremely quickly as soon as you move out of the heavy rain band. Most of MGDS.. Sao Paulo ..and all of southeastern Brazil sees very little rain in the 6-10 day.

120 Hour Total Precipitation (in)

Valid: 00z Mon 05 Feb 2018 – 00z Sat 10 Feb 2018

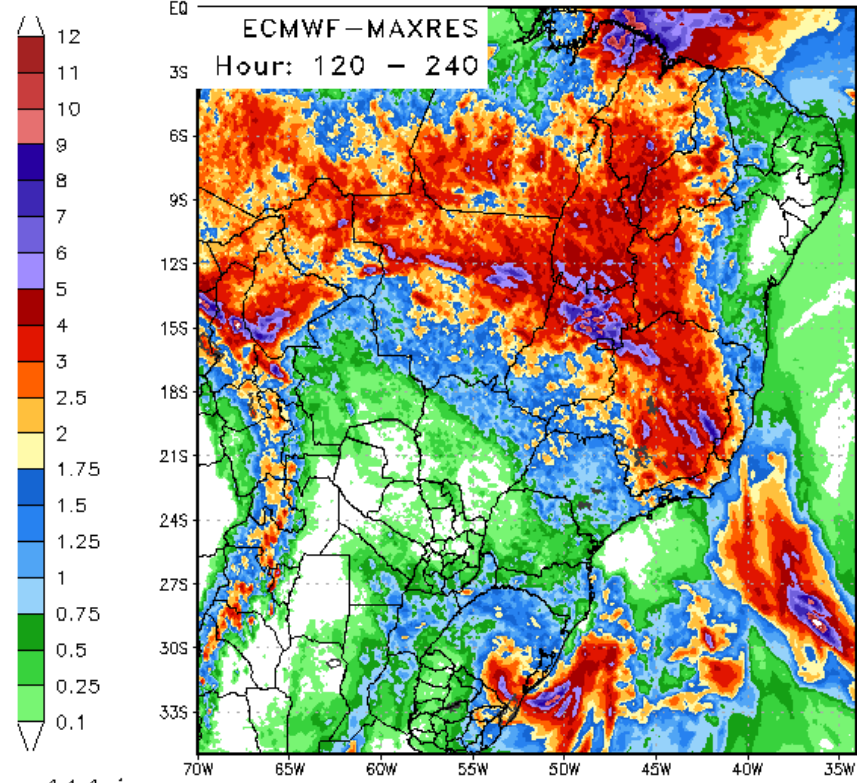


Max: 13.3 in
Min: 0.0 in

StormVistaWxModels.com

120 Hour Total Precipitation (in)

Valid: 00z Mon 05 Feb 2018 – 00z Sat 10 Feb 2018



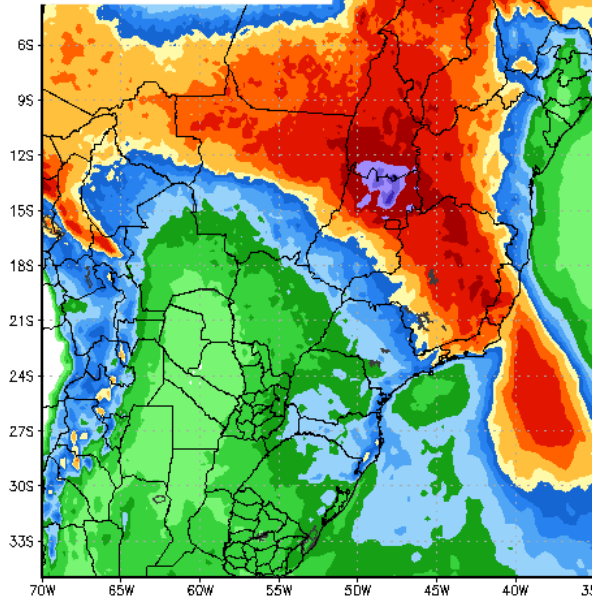
Max: 14.1 in
Min: 0.0 in

StormVistaWxModels.com

This is strongly supported by the GFS and European model ensemble. Notice again that there is very little rain over southwestern and southeastern Brazil and all the rain is concentrated in a northwest to southeast orientation across central and east central Brazil. To see the ensemble mean of 9-10"/ 225-250mm rains on both the European and the GFS ensemble is quite ominous.

120 Hour Total Precipitation (in)
Valid: 00z Mon 05 Feb 2018 - 00z Sat 10 Feb 2018

ECMWF-ENS-MAXRES
Hour: 120 - 240

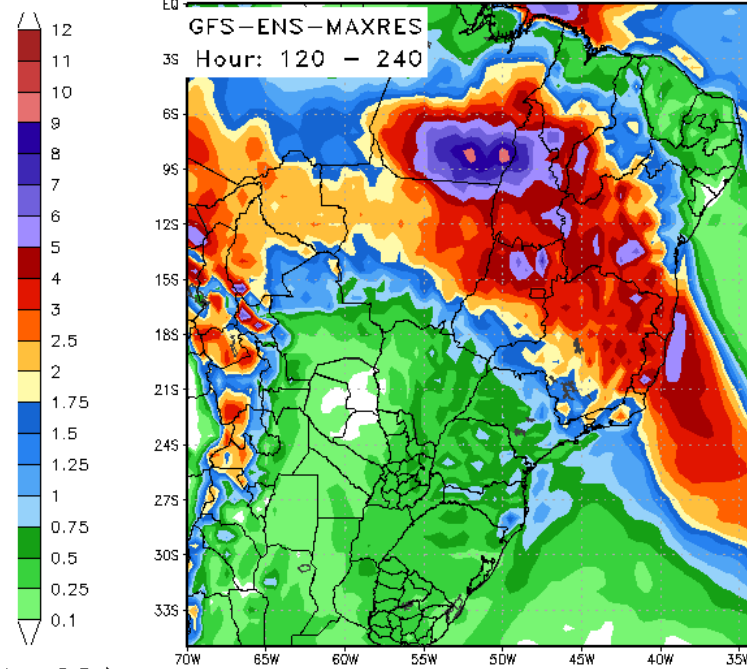


Max: 7.7 in
Min: 0.0 in

StormVistaWxModels.com

120 Hour Total Precipitation (in)
Valid: 00z Mon 05 Feb 2018 - 00z Sat 10 Feb 2018

GFS-ENS-MAXRES
Hour: 120 - 240



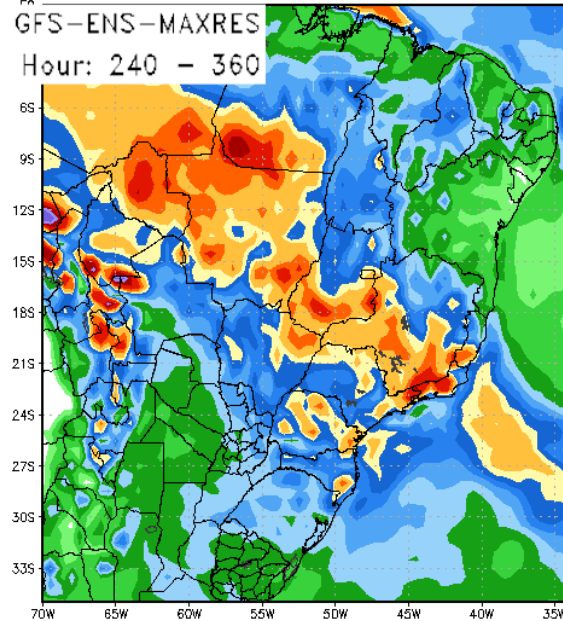
Max: 9.5 in
Min: 0.0 in

StormVistaWxModels.com

11-15 DAY BRAZIL

Finally in the 11 to 15 Day... both models show the extreme rainfall pattern breaking down. The rainfall pattern turns normal over most of western ...central ..and east central Brazil. This still significant rain with many areas of 1-3"/ 25-75mm but it is a significant decrease from what the super heavy rains in the 6-10Day. Notice again however that most of southwestern and southeastern Brazil sees only moderate or light rains.

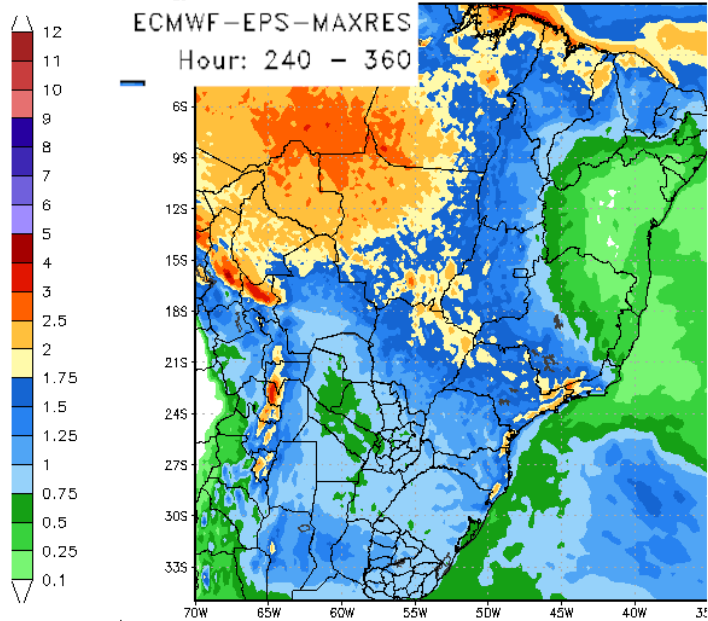
120 Hour Total Precipitation (in)
Valid: 00z Sat 10 Feb 2018 - 00z Thu 15 Feb 2018



Max: 7.1 in
Min: 0.0 in

StormVistaWxModels.com

120 Hour Total Precipitation (in)
Valid: 00z Sat 10 Feb 2018 - 00z Thu 15 Feb 2018



Max: 4.8 in
Min: 0.0 in

StormVistaWxModels.com

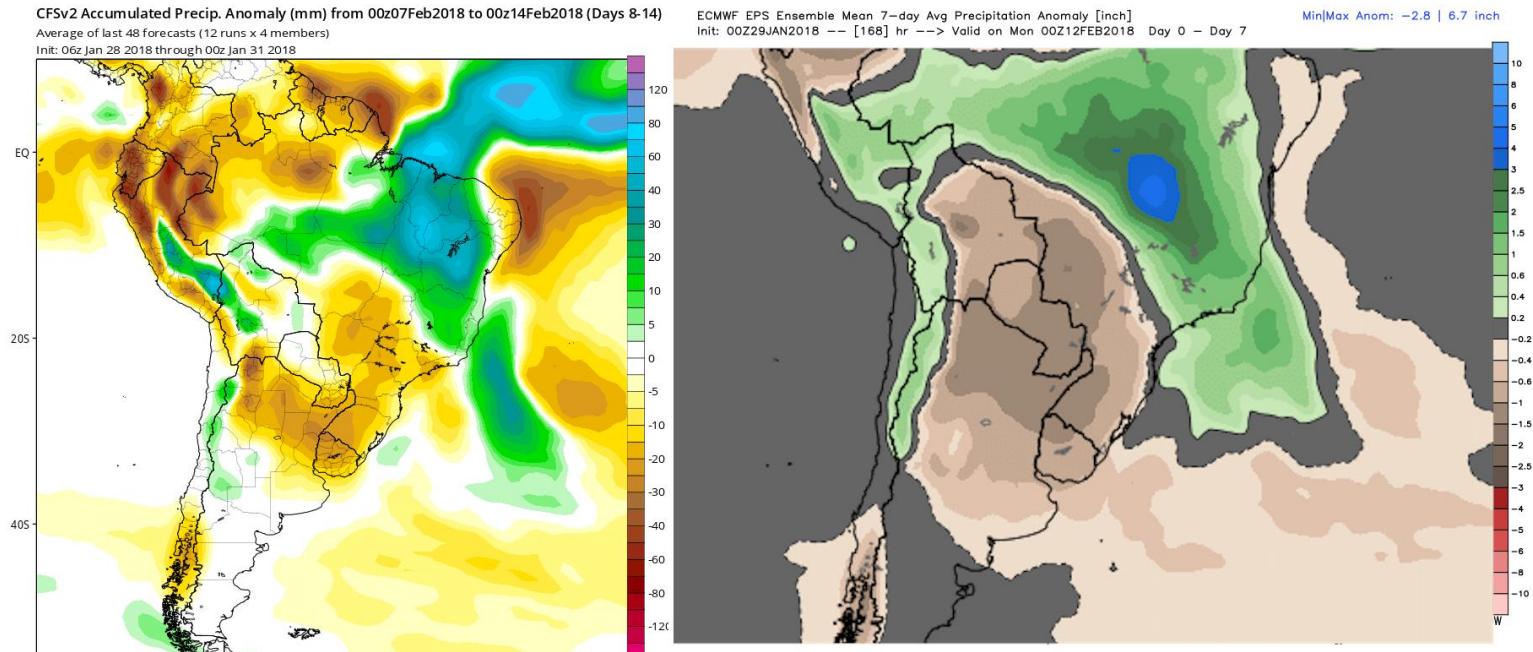
WEEK 3-4-5-6 OUTLOOK RAINFALL ANOMALIES

Here we present the latest CFS weekly rainfall model and the European weekly on Monday night early Tuesday morning for week 2 3 and 4 . Despite the development of rain in the 11 to 15 day over Argentina the long range climate models continue show below and much below normal rainfall for all of Argentina and Southeast Brazil as well as Paraguay in week 2.. week 3 .. and week4.

As I discussed in the summary above the major changes in the track of the forecast for the current MJO impulse has significant implications with regard to what happens in the 11 to 15 day. The trend has been showing up on the European and the GFS ensemble models from yesterday afternoon and the continues here early on Wednesday morning. Obviously this increases the risk of that at least

moderate rain showing up for a decent portion of central / eastern Argentina. The European model is wetter than the GFS model in terms of actual rainfall amounts and actual coverage. I believe that this is because the European ensembles are forecasting the MJO to collapse which would allow for a wetter pattern to develop in the 11 to 15 day.

That being said I am skeptical that the MJO is going to break down that fast and moved rapidly into the Neutral circle. By moving into the neutral circle of course it removes the pattern which favors a heavy rains staying in Brazil and the dry conditions staying Argentina. Over the next couple of days I will be focusing heavily on the MJO forecast models ... The updated forecast tracks may not show such a rapid breakdown of the MJO



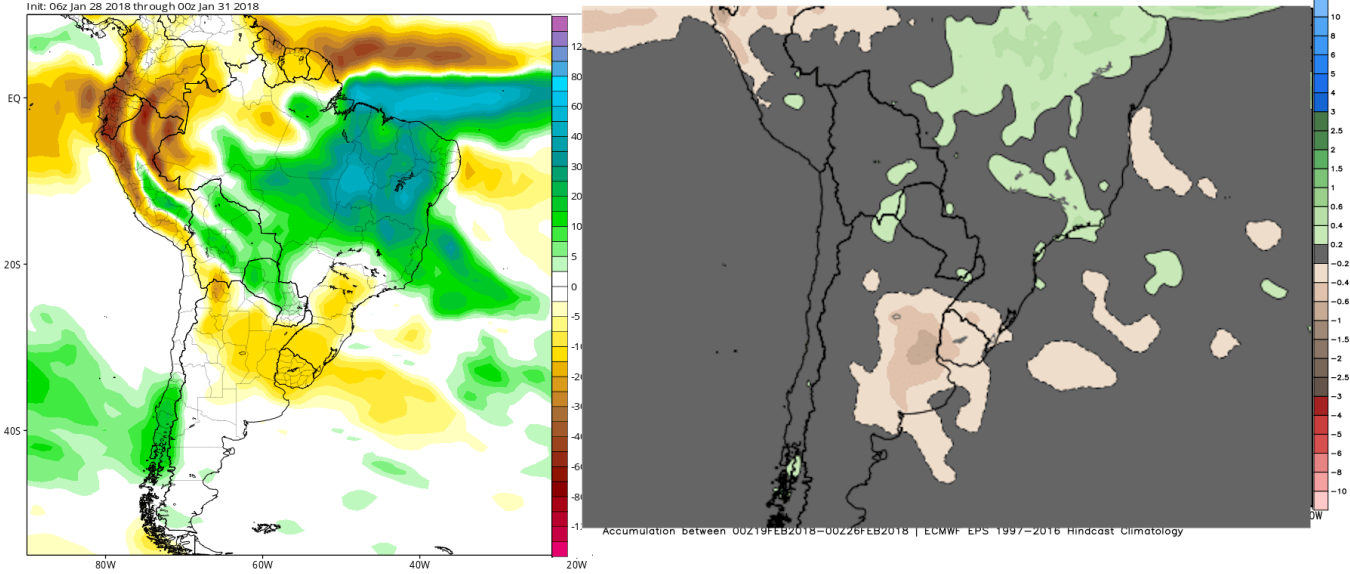
CFSv2 Accumulated Precip. Anomaly (mm) from 00z21Feb2018 to 00z28Feb2018 (Days 22-2)

Average of last 48 forecasts (12 runs x 4 members)
Init: 06z Jan 28 2018 through 00z Jan 31 2018

ECMWF EPS Ensemble Mean 7-day Avg Precipitation Anomaly [inch]

Init: 00Z29JAN2018 -- [336] hr --> Valid on Mon 00Z26FEB2018 Day 7 - Day 14

Min|Max Anom: -3.1 | 1.5 inch



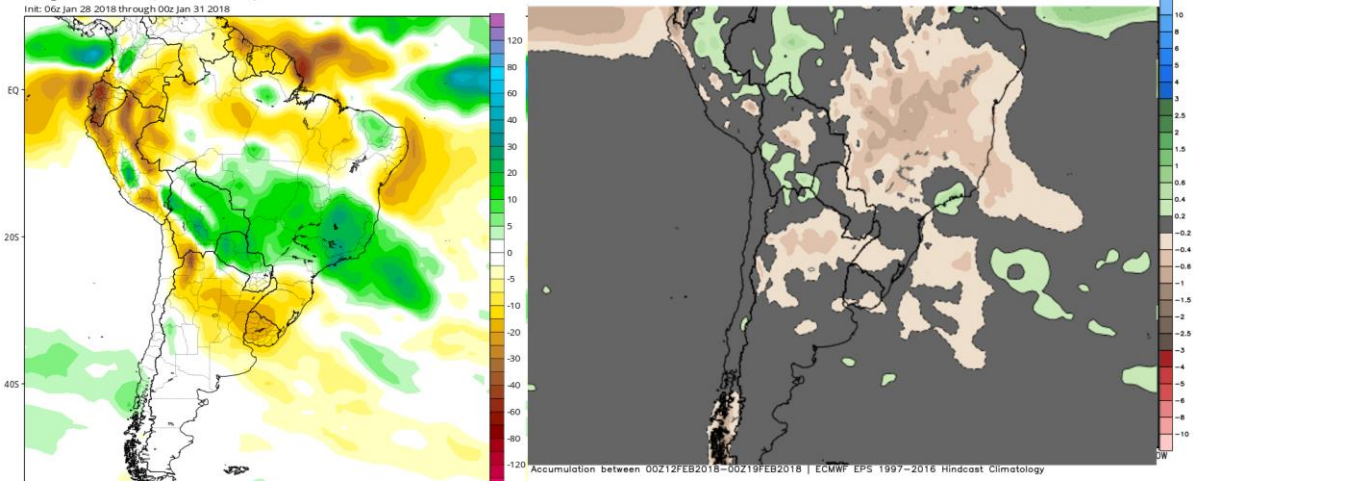
CFSv2 Accumulated Precip. Anomaly (mm) from 00z14Feb2018 to 00z21Feb2018 (Days 15-21)

Average of last 48 forecasts (12 runs x 4 members)
Init: 06z Jan 28 2018 through 00z Jan 31 2018

ECMWF EPS Ensemble Mean 7-day Avg Precipitation Anomaly [inch]

Init: 00Z29JAN2018 -- [252] hr --> Valid on Mon 00Z19FEB2018 Day 3.5 - Day 10.5

Min|Max Anom: -6.1 | 2.7 inch



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