Sao Vicente to Carlisle Bay– Weather and Routing Brief

1. The Route and Journey

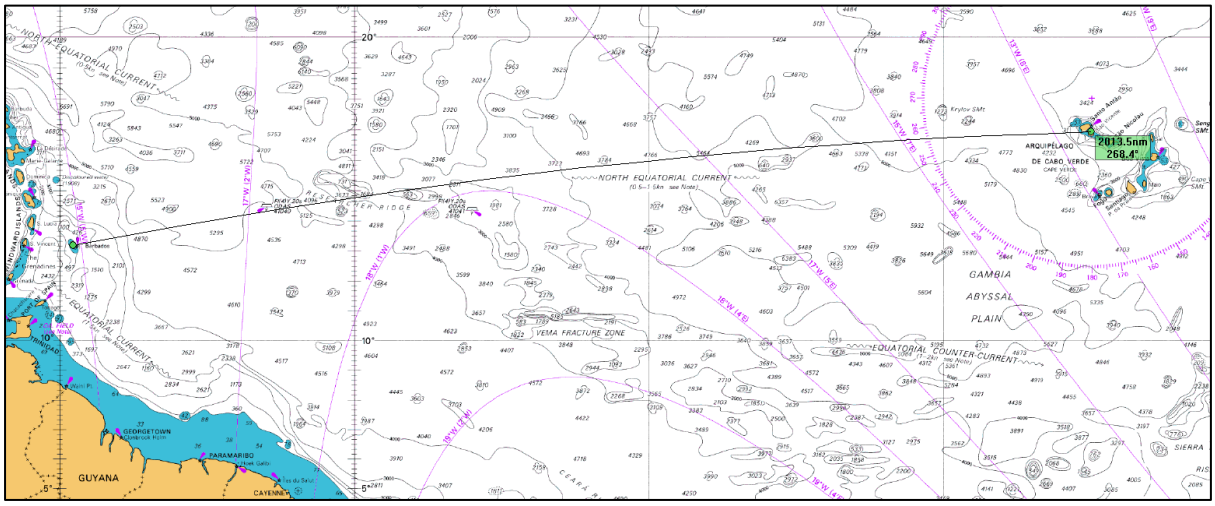


Fig 1.1: the overall route from Sao Vicente to Barbados (1)

The route from Sao Vicente to Barbados is a classic Great Circle route, with no natural navigational hazards away from land. Leaving the Cape Verdes there are no charted hazards outside the 50m contours, with any potential problems coming from local traffic or wind funnelling between the islands down the Canal de Sao Vicente. There are several ODAS data buoys moored in mid-Atlantic, not all of which are charted. The current list (2) shows the following:

1. Station 13008**:** Prediction and Research Moored Array in the Atlantic
   Location: **14.97N 38.02W**
2. Station 41041**:** National Data Buoy Center (NDBC)
   Location: **14.175N 45.998W**
3. Station 41NT0**:** Woods Hole Oceanographic Institution
   Location: **14.750N 50.95W**
4. Station 41040**:** NDBC
   Location: **14.477N 53.008W**
5. Station 41101**:** Meteo France
   Location: **14.600N 56.201W**

These range in size from 12m to 3m (*Figure 1.2)* and will make rather nasty dents in the hull – so do keep a good lookout! Even though the company colours include yellow I can't see Sarah being too pleased with a large extra stripe down the topsides. They do give real time data, which does help a lot to calibrate the forecasts.

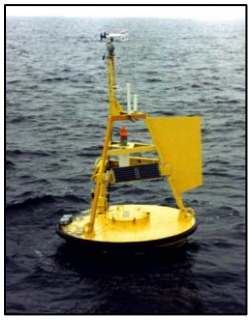



Fig 1.2: 12m Discus buoy (left – note men on it) and a 3m Discus buoy (right – note sharp edges) (2)

Approaching Barbados you will probably be rounding the south side of the island, and close in there are no dangers outside the 100m contour. There are two outlying areas of note – The Shallows around $12^{O}58$'N $059^{O}29$'W, 5 miles on a bearing of 150^{O}T from South Point lighthouse, and Trader Bank around $13^{O}03$'N 059^{O} 39'W. There is plenty of water over these (60m and 49m respectively), but if there is a strong easterly blowing there may be choppier seas.

The overall journey is just over 2000 miles long, and should take between 11 and 14 days.

2. Overall Weather for the Period

The North Atlantic Trades are generated by the pressure difference between the North Atlantic High (NAH) and the ITCZ. The first couple of days of the trip will see a fairly slack NAH, which should give you moderate NE (15 to 20 knots) winds to start. As you get further east the winds will veer to ENE, and there will be a slight drop in wind until Friday or Saturday when it will pick up again back to 15 to 20 knots, possibly even 25. I would recommend sticking to the Great Circle route to start, and if you need to come up a little to increase the apparent then coming a little north of that would probably be quite good, as the stronger winds by the end of the week will come in from the north east. So far it looks pretty good for a reasonably fast crossing.

There are no tropical depressions forecast at the moment, but you will see tropical waves and squall activity, so keep a good visual and radar watch out for those.

3. Detailed 5 day Forecast

The table shows the conditions for the various geographic areas for 12 hour periods, and all times are UTC. I've assumed about 3^{O} of longitude a day, so about 180 mile days on the great circle course which is perhaps a little conservative, but don't take that as a challenge. The timings of the various shifts will vary as time goes on, but the overall weather patterns should change as detailed. Pressure and surface wind streamline charts are shown after the table. I have made regional streamline charts from the US National Centre for Environmental prediction (NCEP) Global Forecast System (GFS) model data. When you're looking at this, the colours refer to the wind speed in knots (scale to the left of each plot), the streamlines show direction and where they converge you'll usually get an increase in wind speed (and possibly more convection and squalls), where they diverge you get a decrease. I've arbitrarily used 2 knot wind speed bands; these can be changed as you wish for future forecasts. Where there is a discrepancy between the table wind strengths and the charted that's because I've looked at a couple of different models and put in the text what I think will happen. These discrepancies will increase after a forecast time of about 3 days though. The surface pressure charts show pressure as normal and precipitation over the previous 6 hours, rather than fronts, which also shows the ITCZ very well. They are obtained from the US Navy's Fleet Numerical Meteorology and Oceanography Center (3). All wind speeds are in knots. If you use any weather forecasts that give you ms^{-1}, just double it for knots.

v:	veering	**inc:**	increasing
b:	backing	**dec:**	decreasing
brackets:	occasional, e.g. (gusts 20) means occasional 20 kt gusts	**NbyW (for example):**	North by West, i.e. 1 point or 11.25^{O} West of North
l&v:	light & variable		
RL:	rhumb line		

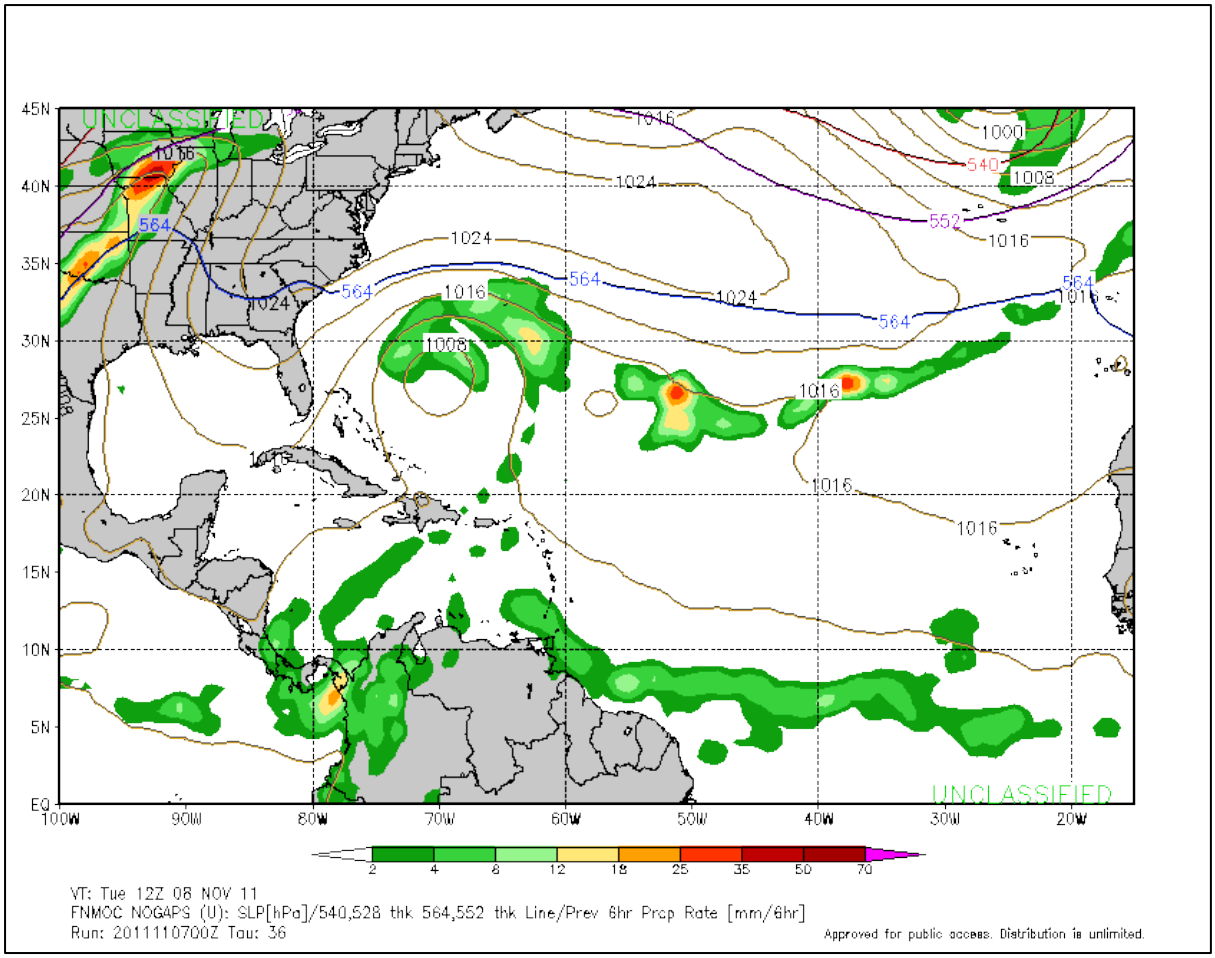
References:

1. **UK Hydrographic Office.** Chart 4012: North Atlantic Ocean Southern Part. [Chart]. Taunton, Somerset, UK : UK Hydrographic Office, January 2003.

2. **National Data Buoy Center.** National Data Buoy Center. *National Ocean and Atmospheric Administration.* [Online] National Ocean and Atmospheric Administration, November 2011. http://www.ndbc.noaa.gov/obs.shtml.

3. **FNMOC.** Fleet Numerical Meteorological and Oceanography Center. *Fleet Numerical Meteorological and Oceanography Center.* [Online] February 2011. https://www.fnmoc.navy.mil/public/.

November 2011	25° to 28°W	28° to 31°W	31° to 34°W	34° to 37°W	37° to 41°W
Tuesday 8th 0000 to 1200	ENE 15 v EbyN 10-15	ENE 15-18 v EbyN 10-15			
Tuesday 8th 1200 to 2400	EbyN 10-15 b NE 15	EbyN 10-15 v NEbyE 15-18			
Wednesday 9th 0000 to 1200	NE 15 v NEbyE 10-15	NEbyE 15-18 v ENE 15			
Wednesday 9th 1200 to 2400	NEbyE 10-15 inc NEbyE 15-20	ENE 15 b & inc NEbyE 15-20	ENE 15-18 inc ENE 15-20		
Thursday 10th 0000 to 1200	NEbyE 15-20 dec NEbyE 13-17	NEbyE 15-20 dec NEbyE 13-17	ENE 15-20		
Thursday 10th 1200 to 2400		NEbyE 13-17 b NE 13-17	ENE 15-20 b NEbyE 13-17	ENE 13-17	
Friday 11th 0000 to 1200		NE 13-17 v NEbyE 13-17	NEbyE 13-17	ENE 13-17 inc ENE 15-20	
Friday 11th 1200 to 2400			NEbyE 13-17	ENE 15-20	ENE 15-20 dec ENE 13-17
Saturday 12th 0000 to 1200			NEbyE 13-17	ENE 13-17 inc ENE 15-20	ENE 15-20 dec ENE 13-17
Saturday 12th 1200 to 2400			NEbyE 13-17	ENE 15-20	ENE 13-17 inc ENE 15-20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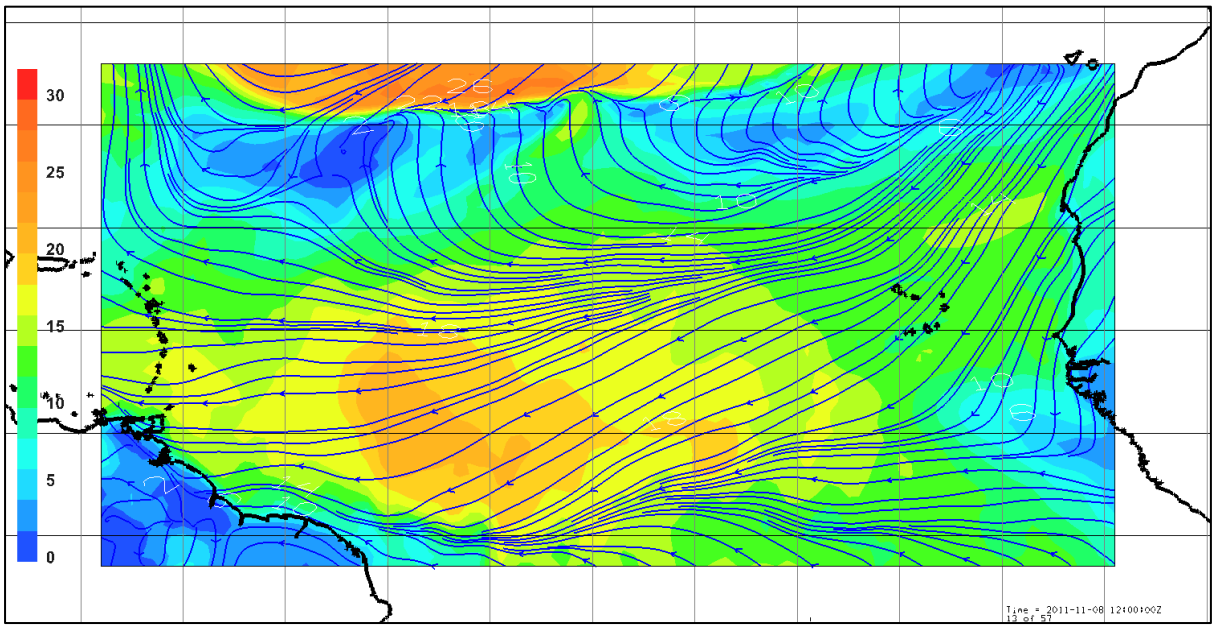
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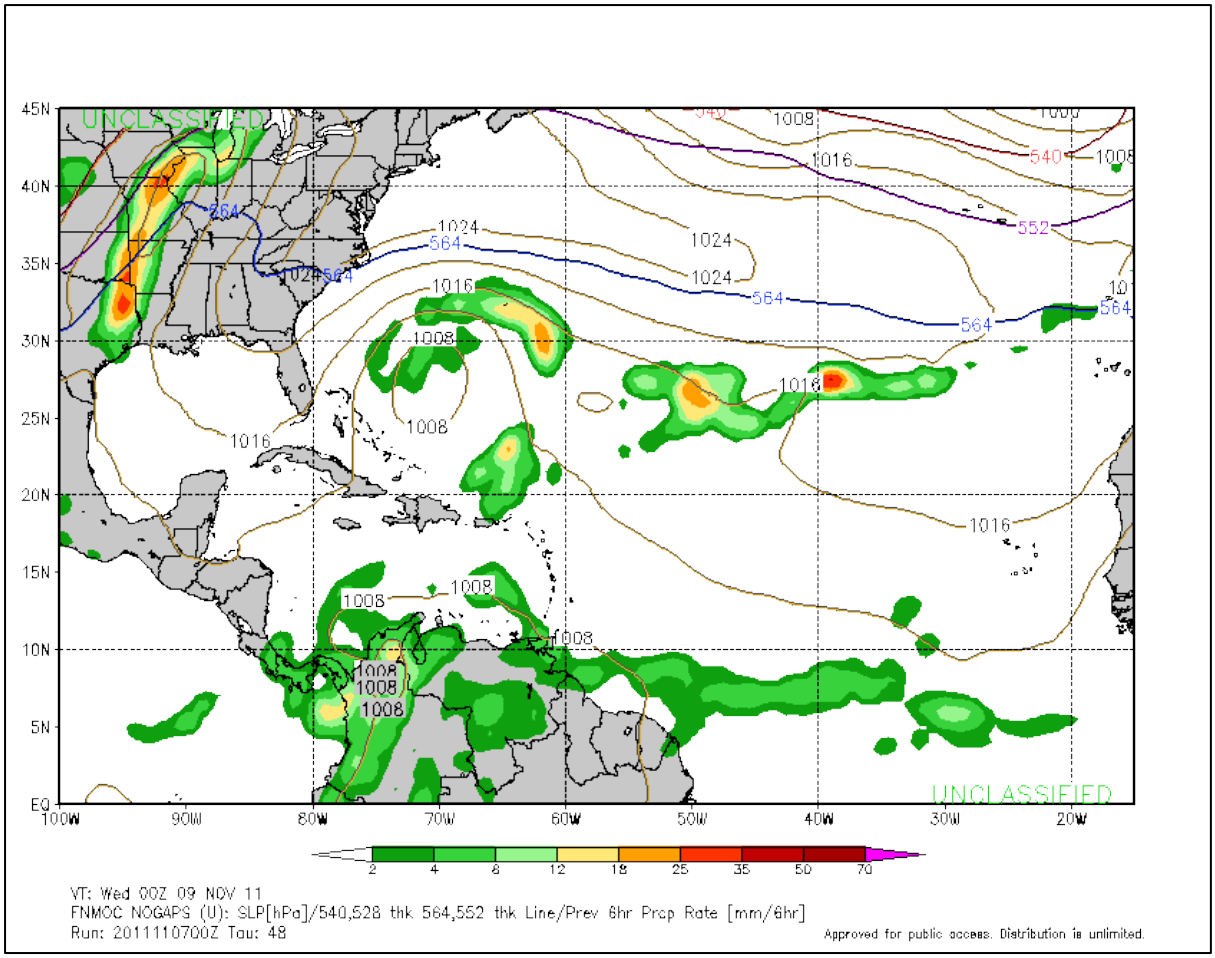
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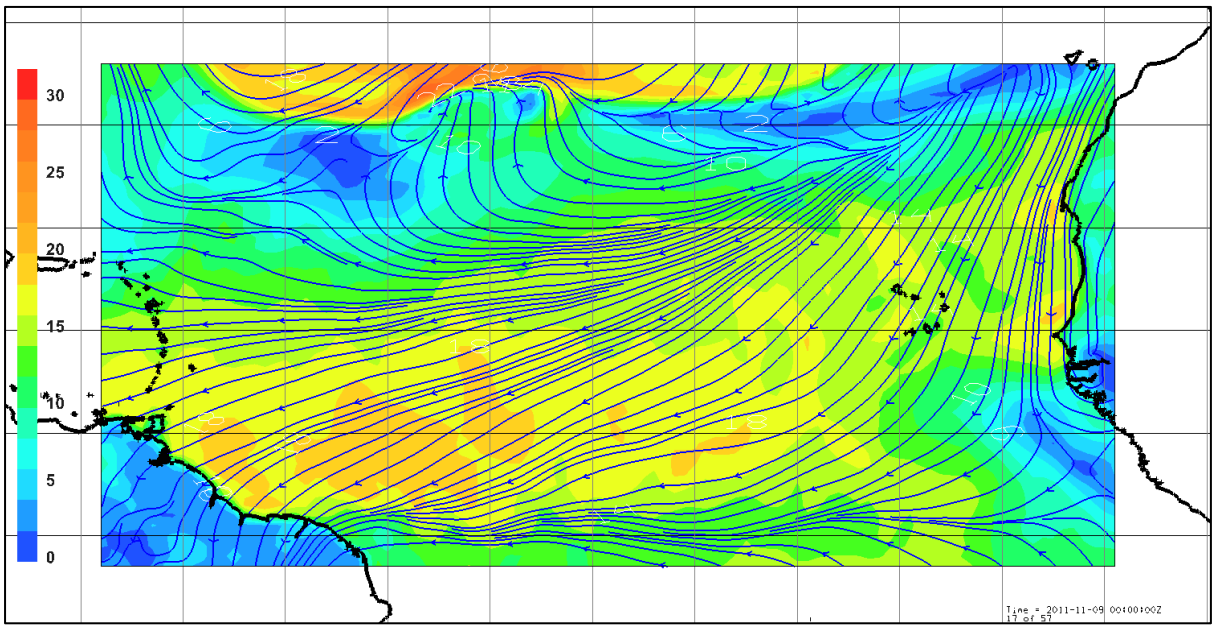
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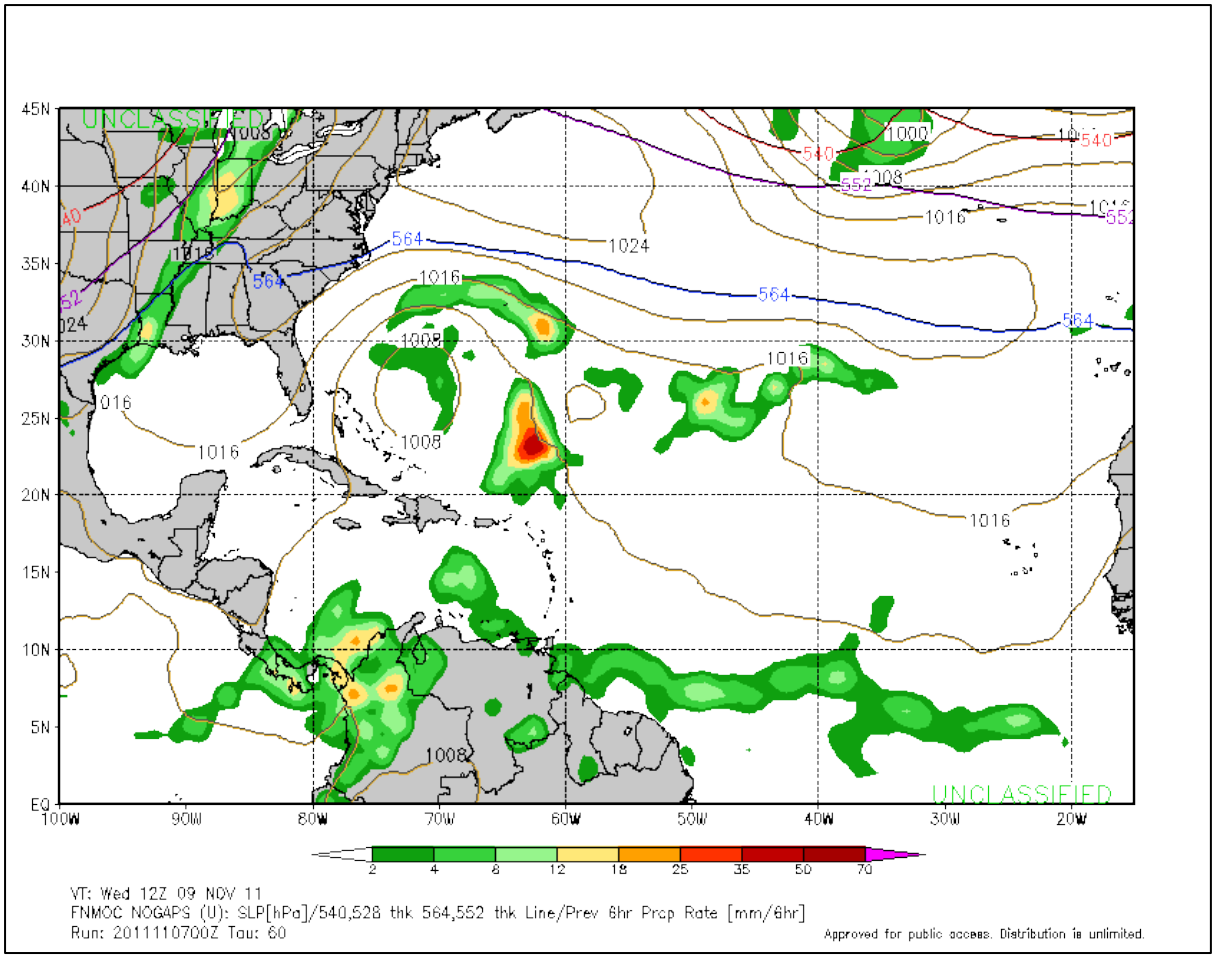
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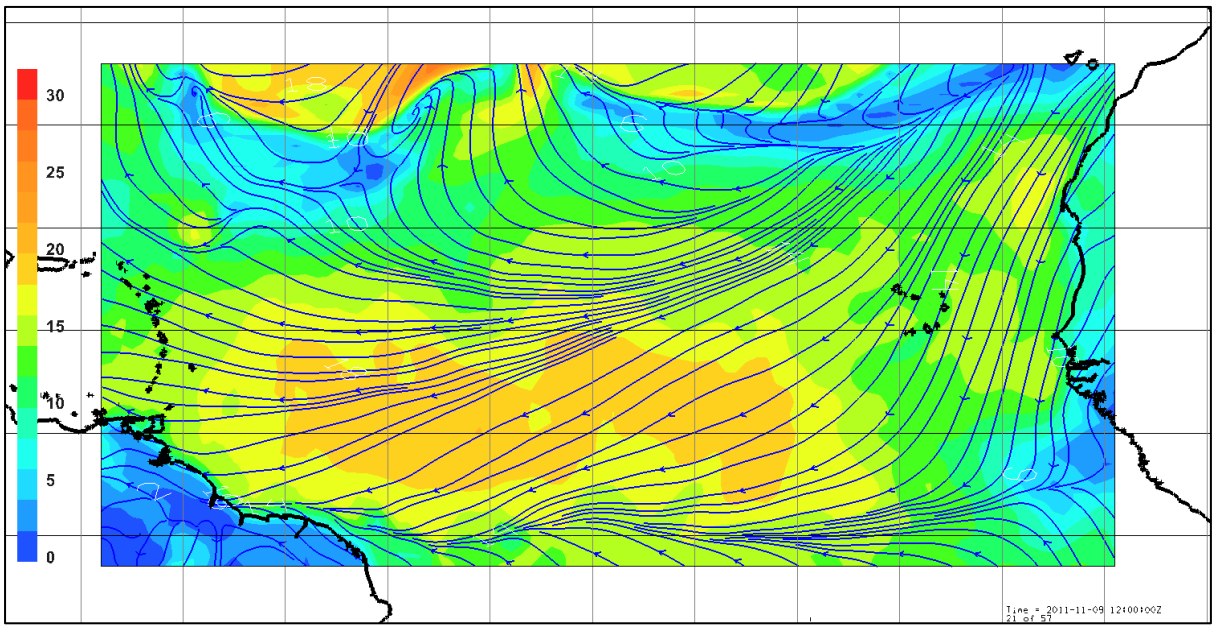
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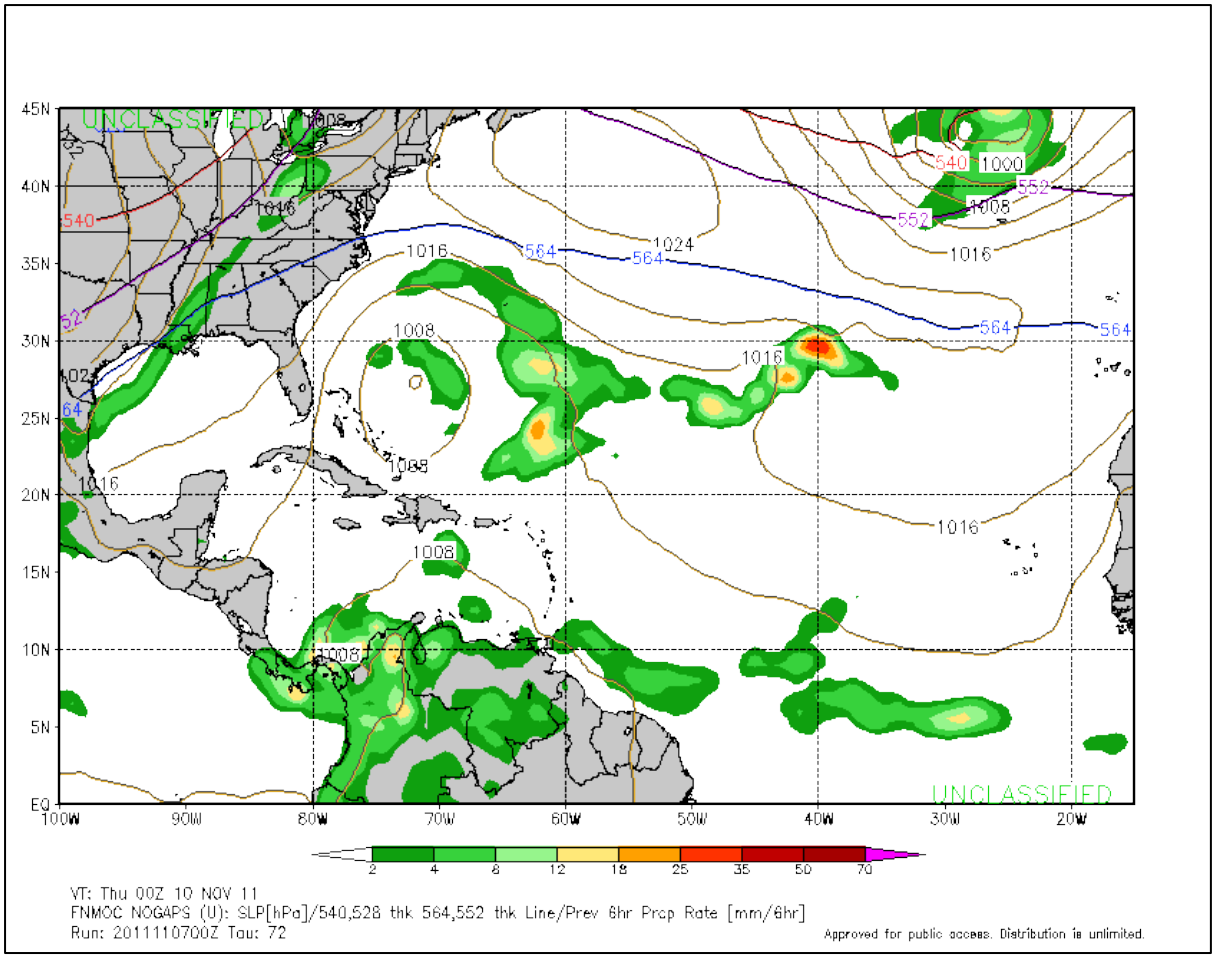
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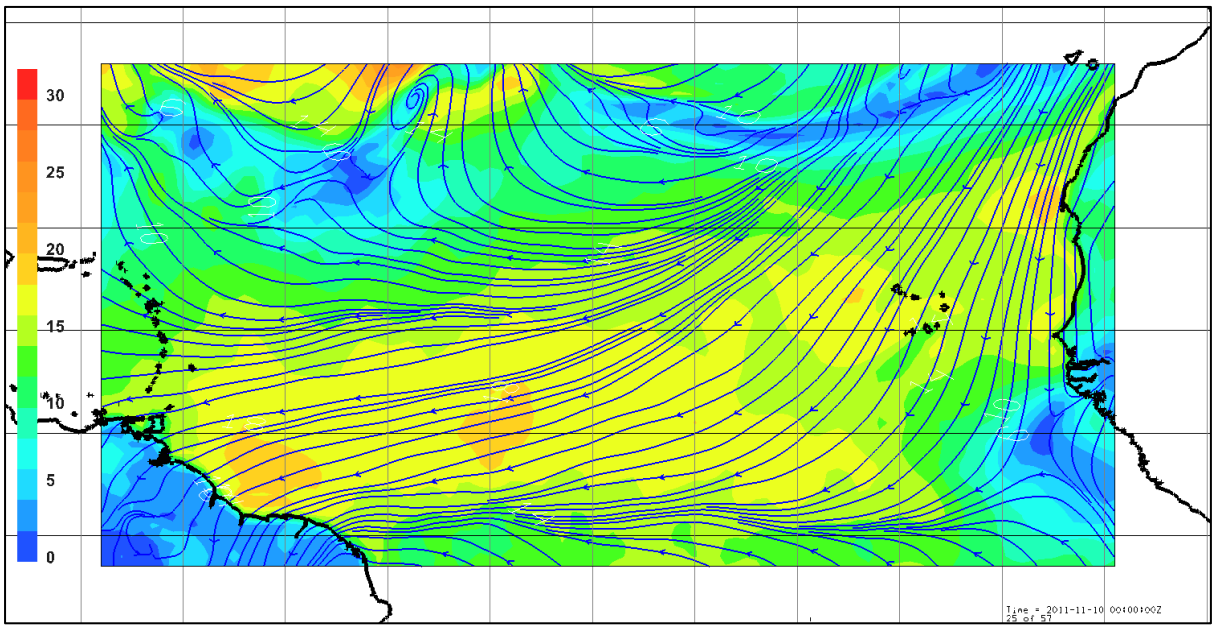
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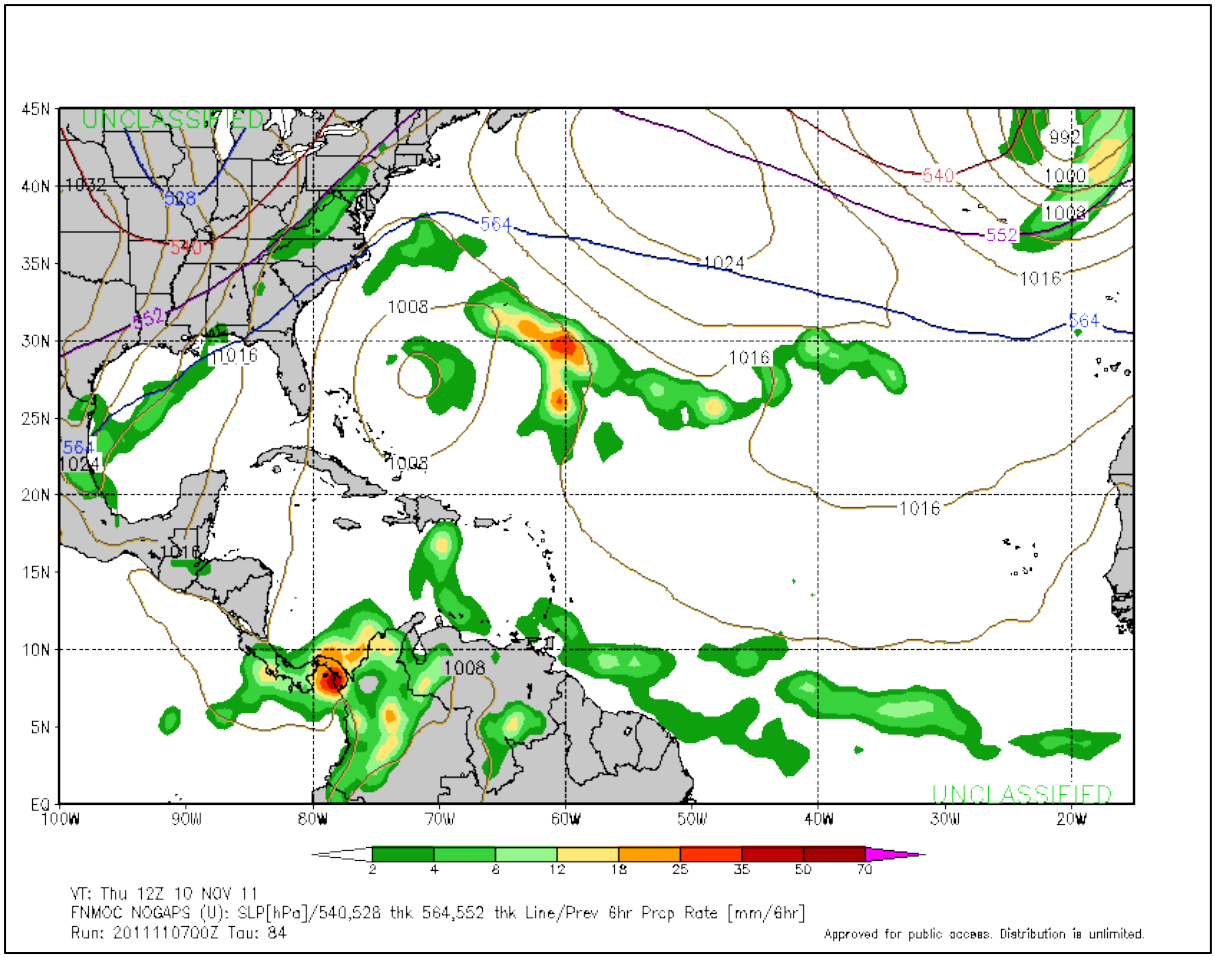
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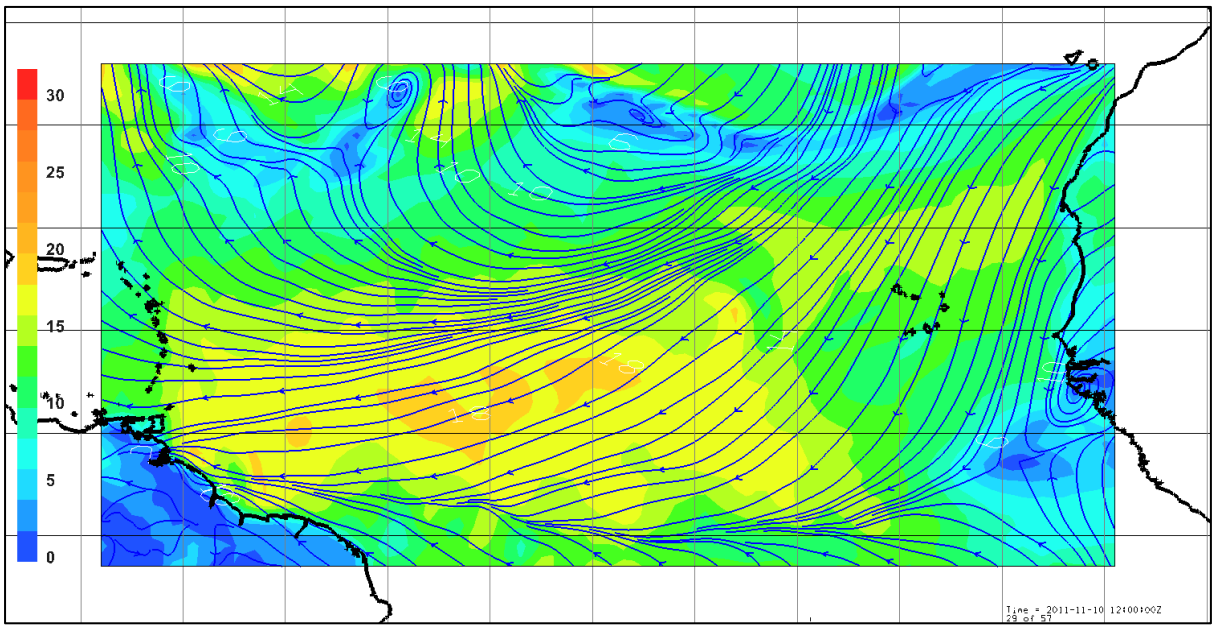
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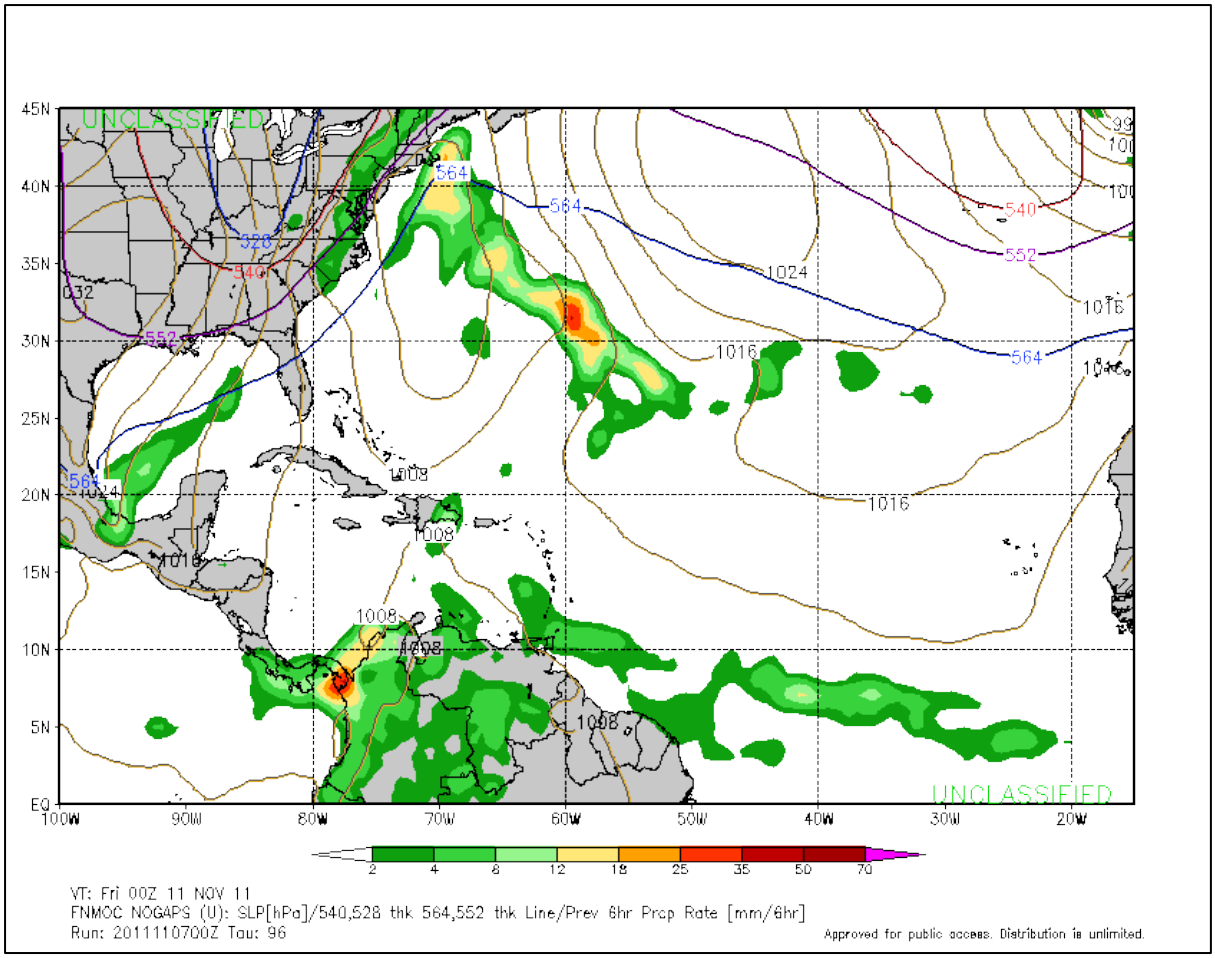
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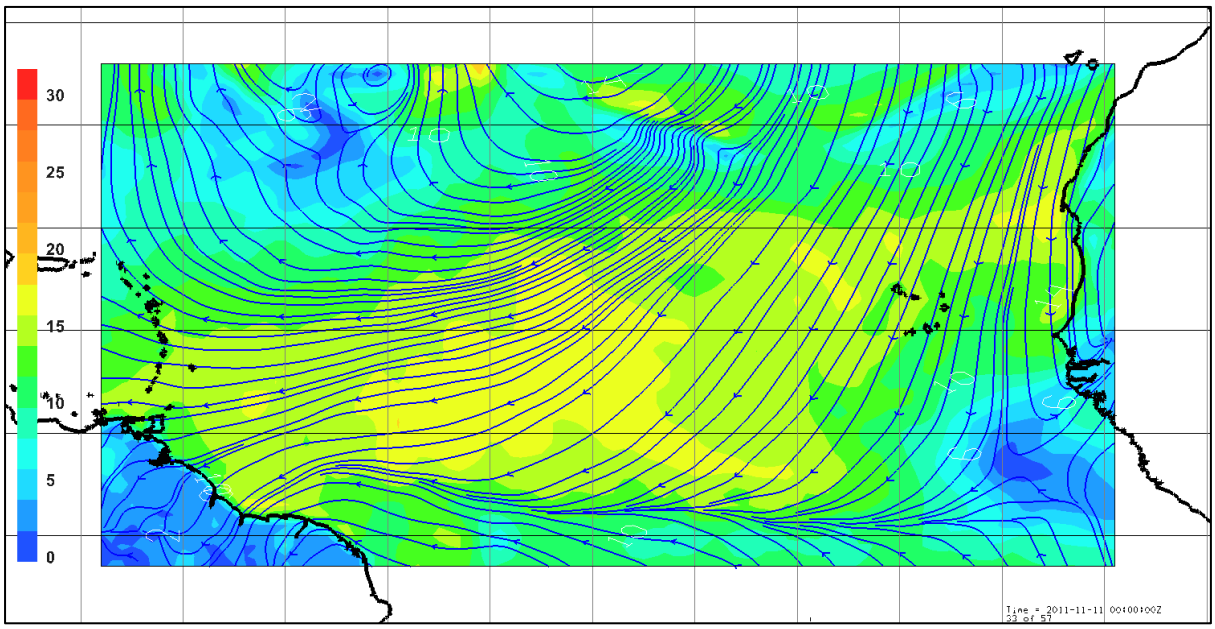
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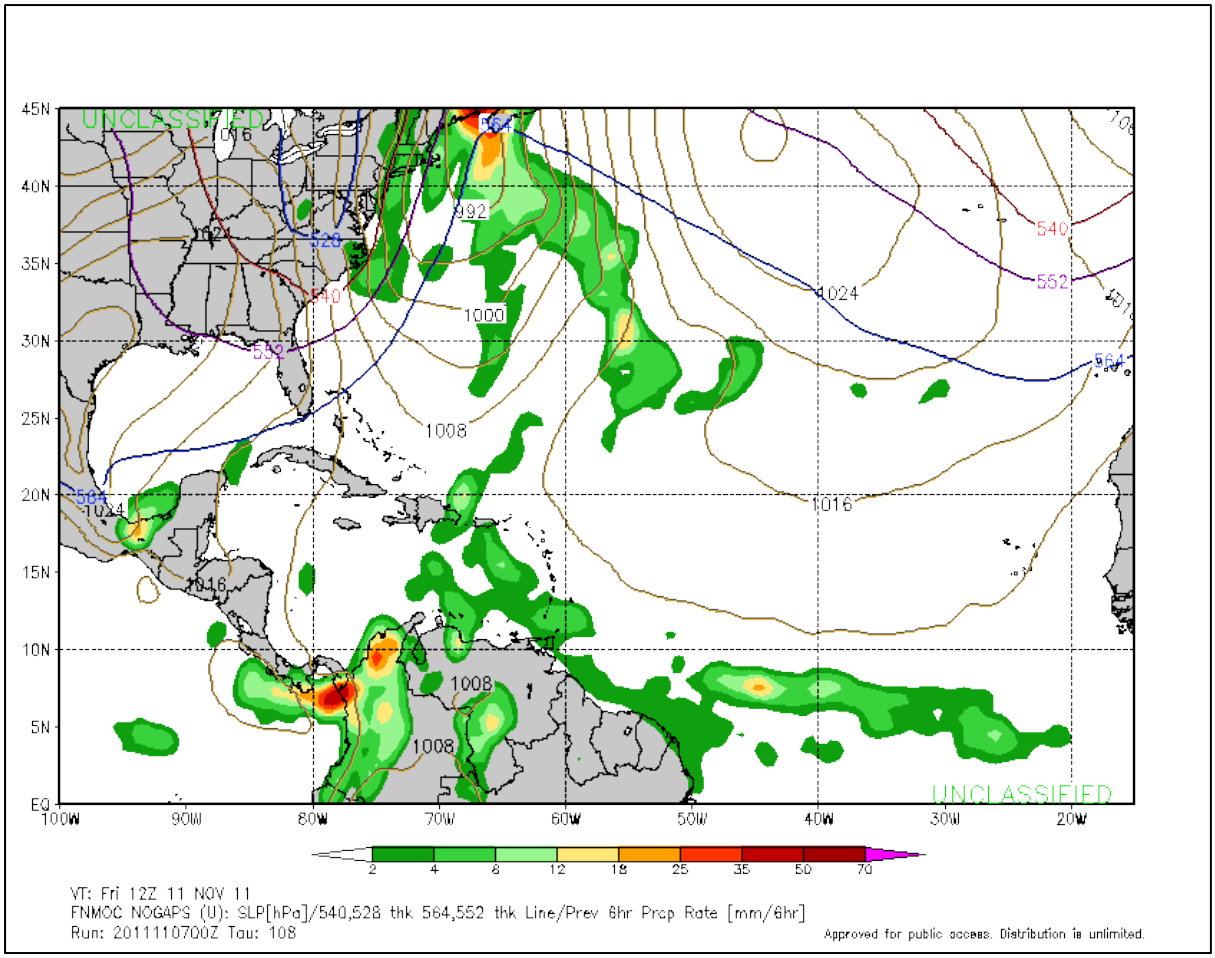
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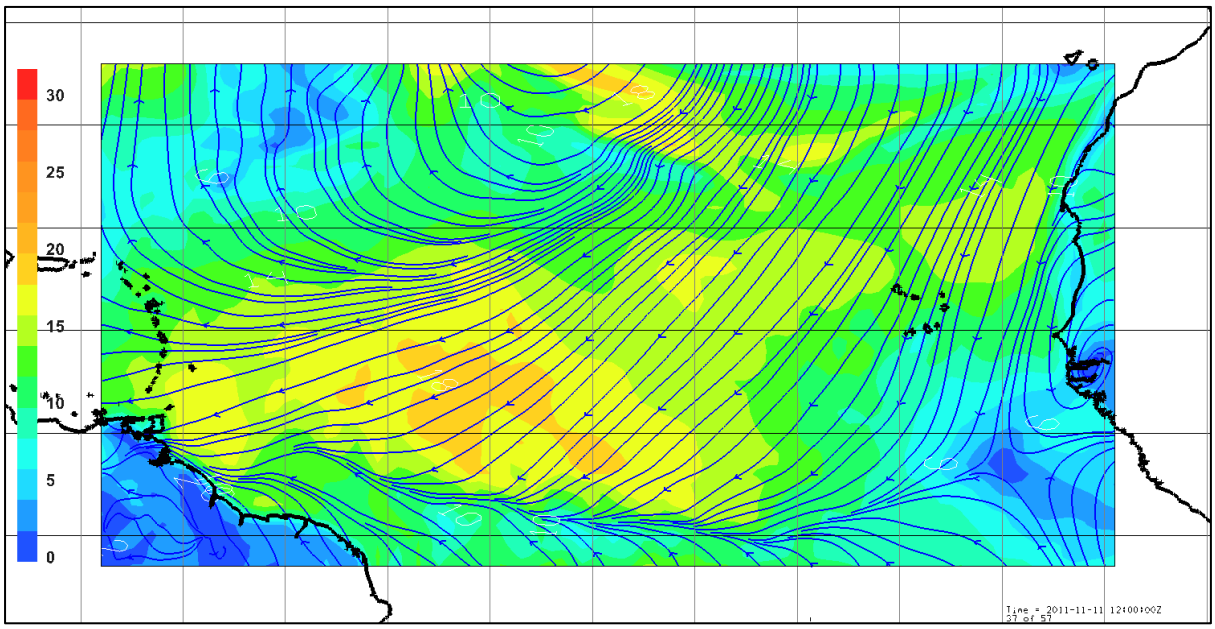
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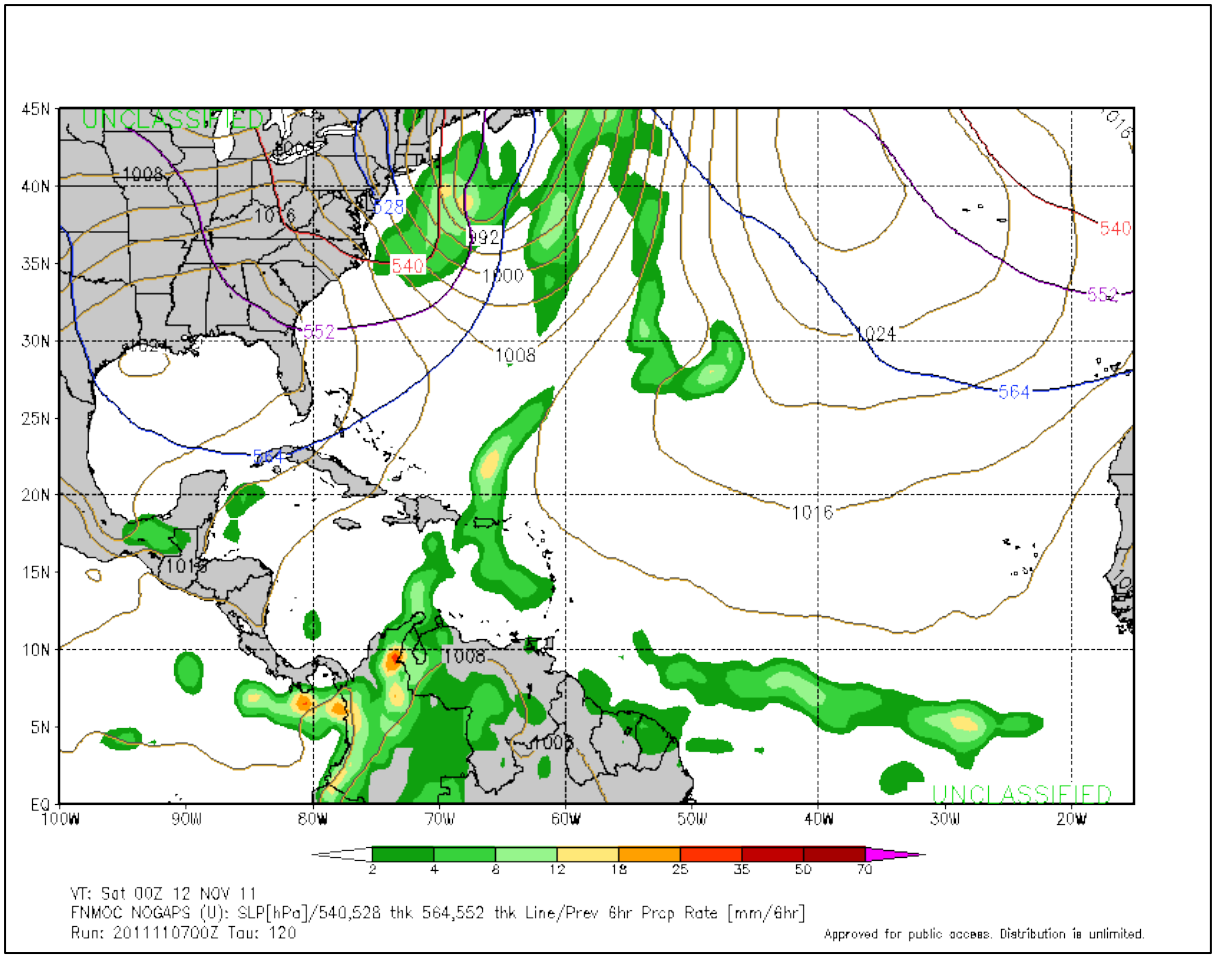
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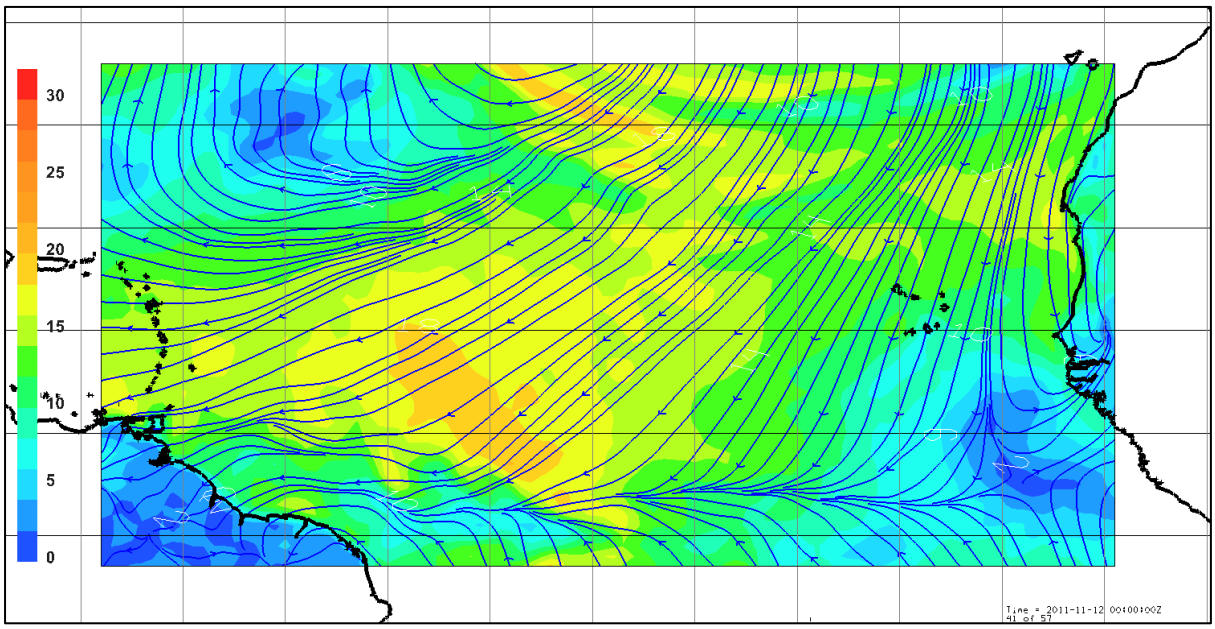
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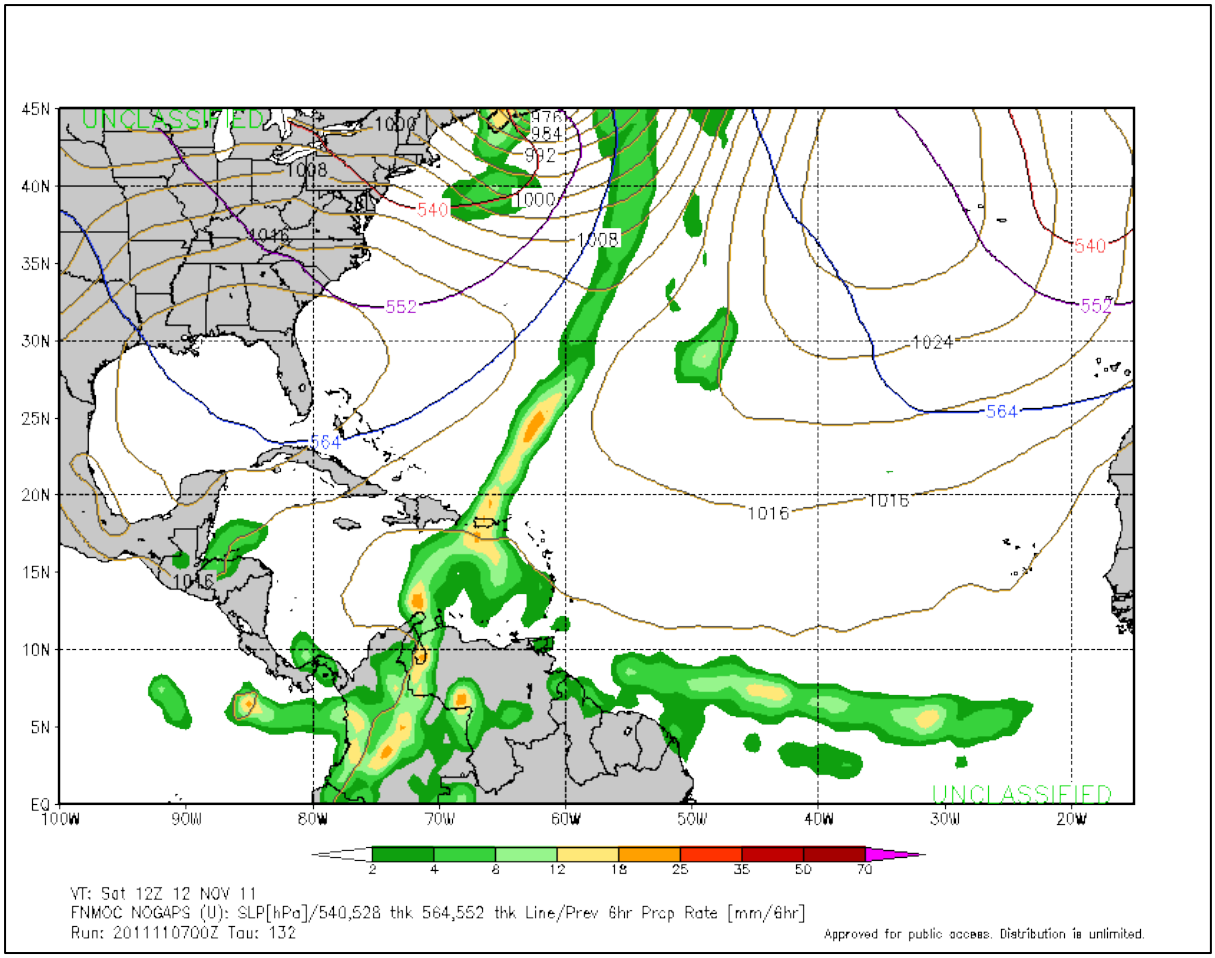
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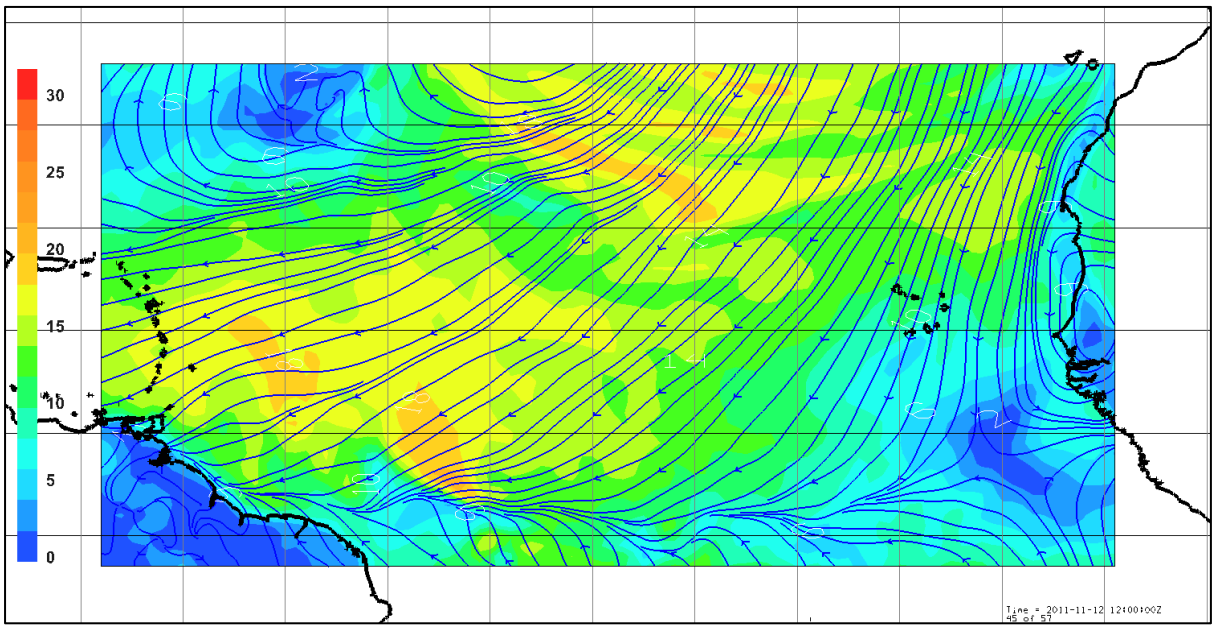
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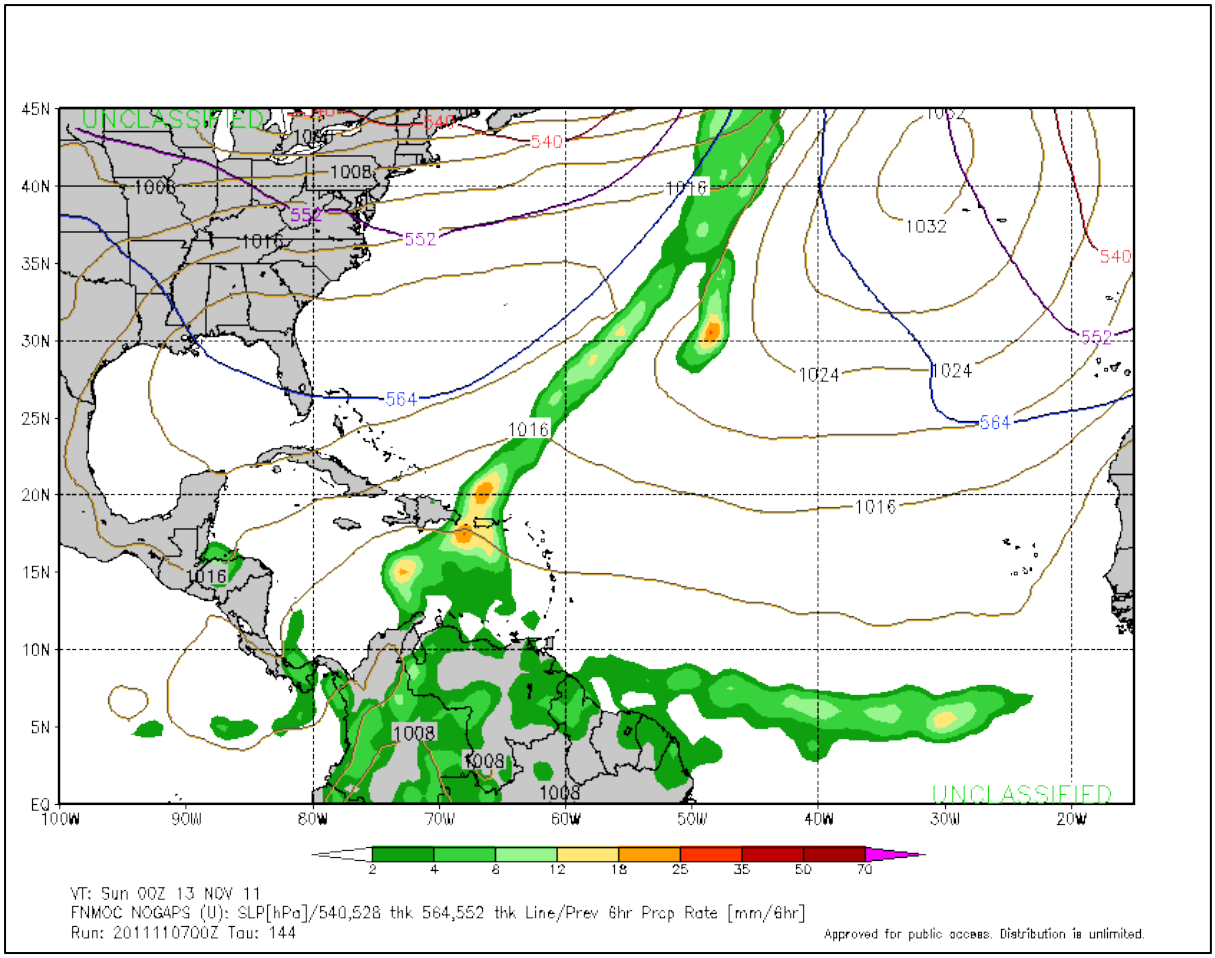
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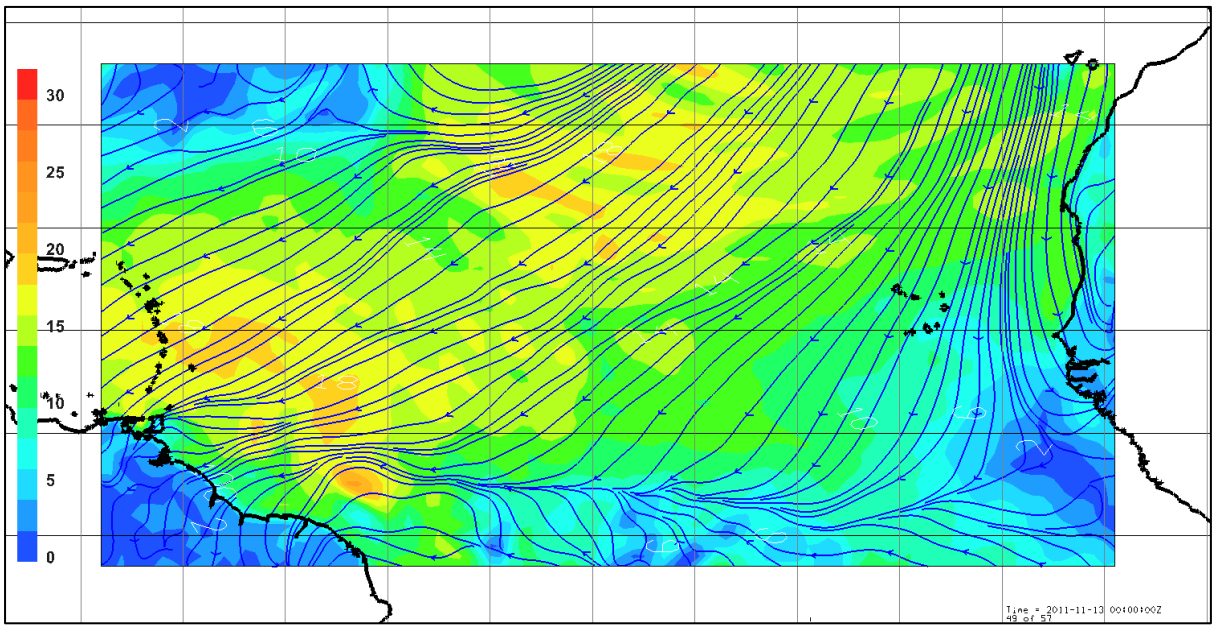
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