

# Wx-0124 (24 Jan 2020)

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## 1. Three day outlook

Synopsis — Shearline extends from Barbados eastward into the tropical Atlantic. Slack pressure gradient contributing to decreasing wind speeds 10 to 15 kts from the east southeast. Subtropical Jet aloft 50 to 75 kts.

Forecast — Decreasing frequency of showers as shear line is expected to move out of Barbados. Seas moderate - waves 3 to 4 metres, swells every 14 to 15 sec from the north and northeast.

3-day outlook — A pre-frontal trough is expected to move into the vicinity of Barbados by early Saturday, inducing instability. A few showers expected. Seas projected to be moderate to rough.

Air mass origin — According to IFS global forecasts, during the next three days, the airmasses in the layer 300-500 hPa are transported to BB from the west to southwest. The airmasses arriving in the layer 500-800 hPa are advected from 30°N and descend along their way into the trades. In the near surface layer (1000-900 hPa) most of the airmasses still originate from the cold sector of the extratropical cyclone, which moved over the US East coast on 20.01. Occasionally, the trades in the layer 700-1000 hPa excursion to the south before advecting the air over BB with an easterly to southeasterly flow. Generally, we expect a slowdown of the airmasses' movement near BB in the layer 1000-500 hPa (link).

## 2. Data for Flight Planning

Yesterday's conditions at various sites representative for local noontime:

Field	BCO	CC	CE	NTAS	BT
Lat	13°09'46"	13°17'	13°21'	14°49'	08°00'
Lon	59°25'44"	57°54'	57°17'	51°01'	55°00'
CBH	n/a	700 (max 800) m	n/a	n/a	n/a
CTH	2 km*, 4-5 km	4-5km	1.2 (max 1.5) km	n/a	n/a
Cirrus Top	n/a	n/a	n/a	n/a	n/a
LCL	137 m				
PW	50 mm				
Sfc Wind	3 m/s, 90°		6 m/s, 90°**	3.8 m/s	
3km Wind	8 m/s, 125°				
6km Wind	9 m/s, 310°				
9km Wind	18 m/s, 273°				
SST	-		26.7 °C**	26.4 °C	
Inversion height	3-4 km				
EIS	2.9 K				
LTS	15.9 K				
Cloud Patterns	fish	fish edge	fish edge	sugar/gravel	sugar

CC: circle center, CE: circle east, BT: Boulevard des Tourbillons

\* Values from 10:45 UTH sounding

\*\* Values from Ron Brown (55.86°W 14.15°N)