

Wx-0212 (12 Feb 2020)

Marc Prange et al.

1. Three day outlook

Synopsis – Strong Atlantic high pressure maintains the ridge over Obs area, with the steep pressure gradient continuing to maintain strong winds from the east to east north east across the area. Moisture at the surface and lower levels increasing sustains patches of stratocumulus and cumulus clouds. Scattered showered and towering cumulus cells also persist. Haze in place over area. Seas are moderate to rough.

Forecast – Cloudy patches with scattered showers favouring night, early morning. Tomorrow partly cloudy and hazy with brisk isolated showers. Winds easterly at 20 to 25 knots.

Seas moderate to rough with waves 8 to 9 feet. Swells every 11 seconds from the northeast.

3-day outlook – mid to upper level moisture from the south and southwest will increase the likelihood of showers, some heavy on Friday. Hazy conditions gradually abate. Seas remain moderate to rough through Saturday.

Air Mass Origin – missing today due to maintenance.

2. Data for Flight Planning

Yesterday's conditions at various sites represented by daily mean and standard deviation:

FIELD	BCO	CE	NTAS	BT
LAT	13°09'46"	13°21'	14°49'	08°00'
LON	59°25'44"	57°17'	51°01'	55°00'
LCL				
CBH-LCL				
CTH	2.3 - 3.1 km ***	2.3 - 3.1 km ***	0.8 - 1.6 km ***	6.4 - 7.2 km ***
CIRRUS TOP	-	-	-	-
AOD	0.3 ***	0.3 ***	0.2 ***	0.4 ***
PW (MM)	39.5 ± 3 mm	36.2 ± 2.4 mm **		48.8 ± 6 mm *
SFC WIND			8.1 m/s ; 62°	
3KM WIND	2.3 m/s, 234°	2.4 m/s ; 139° **		6.5 m/s ; 75° *
6KM WIND	14.6 m/s, 246°	11.7 m/s ; 261° **		14.2 m/s ; 234° *
9KM WIND	24 m/s, 238°	28.8 m/s ; 244° **		21.9 m/s ; 231° *
SST			25.8 °C	
INVERSION HEIGHT	2.2 ± 0.1 km	2100 ± 100 m **		2.5 ± 0.5 km *
EIS	2.3 ± 0.4 K	2.2 ± 0.5 K **		2.6 ± 0.6 K *
LTS	13.4 ± 0.2 K	13.4 ± 0.8 K **		13.9 ± 0.9 K *
CLOUD PATTERNS	Flowers / messy	Flowers	Flowers	Flowers / messy

* Atalante, ** Ron Brown, *** MODIS on Terra/Aqua
CE: circle east, BT: Boulevard des Tourbillons

3. Model forecast

Comparison of yesterday's conditions to one-day forecasts for 57° 30 'W and 13° 30 ' N:

FIELD	AROME	HARMONIE	UK MET	OBS CE
LCL INVERSION HEIGHT	~ 600-700m		605 m	
CIRRUS TOP	no cirrus (but cirrus southwards to the circle coming from ITCZ)		Could go as deep as 6km with slight forcing	
PW	35-40 mm		36.9mm	
SFC WIND	11m/s, East/NE		85 degrees, 9 m/s	
CLOUD PATTERNS	flower		Gravel/flower	

4. Figures – yesterday's conditions

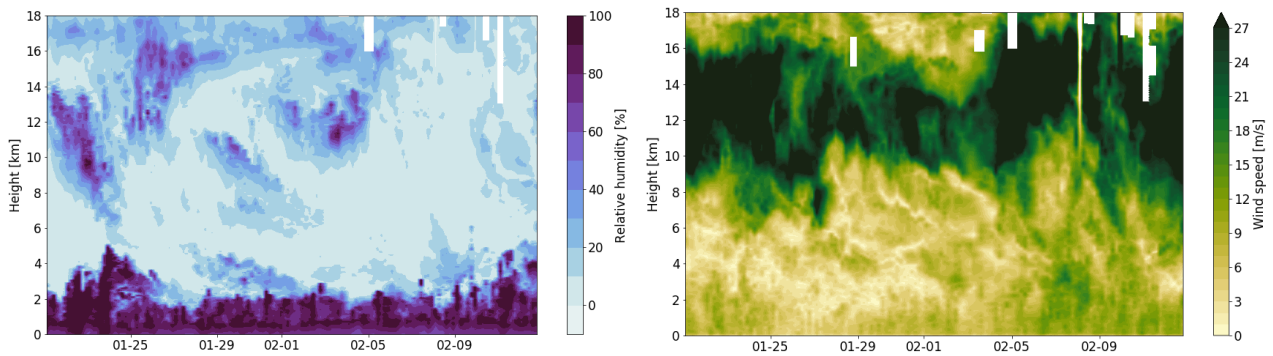


Figure 1: Soundings from BCO throughout EUREC⁴A of relative humidity (left) and wind speed (right). Note that the wind speed color bar is saturated.

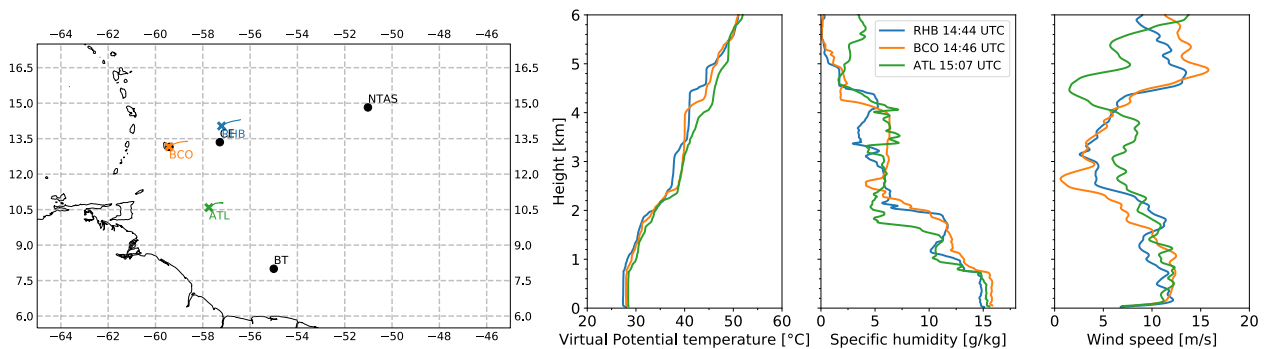


Figure 2: Soundings from four different platforms.