AMMA

Small Pressurized Balloon trajectory forecast Comparisons

Computed at LMD

Contact : Claude Basdevant (basdevant@lmd.ens.fr)

In order to evaluate the stability and the relevance of the predictions, comparisons of SPB trajectory forecasts are carried out with trajectory forecasts corresponding to the same launching date but computed with different meteorological forecasts. These comparisons are obtained twice a day (at 0h UT and 12h UT) and is carried out for 4 days. Therefore, for two launching dates (at D+12h and D+24h), D day trajectories are compared with the ones obtained at (D-1), (D-2) et (D-3) days. SPB trajectories are numerically computed twice a day and available on the web site around 8h00 (forecast at 0h UT) and 20h00 UT (forecast at 12h UT).

On the maps :

- 10 day deterministic forecasts :

- Each launching consists in 50 aerostats distributed on a 50 km radius circle around Cotonou in Benin (longitude 2.3850 E ; latitude 6.3539 N).

- Three density levels are :

  - density d= 1.00 Kg/m^3, around 840 hPa, 1700 m

  - density d= 1.03 Kg/m^3, around 870 hPa, 1400 m

  - density d= 1.06 Kg/m^3, around 900 hPa, 1000 m

- SPBs positions are shown each 24 hours by means of different colors (positions at 0h UT and 12h UT functions of the hour of meteorological forecast).

- 10 day probabilistic forecasts :

- Each launching consists in 1 SPB launched from Cotonou in Benin (longitude 2.3850 E ; latitude 6.3539 N).

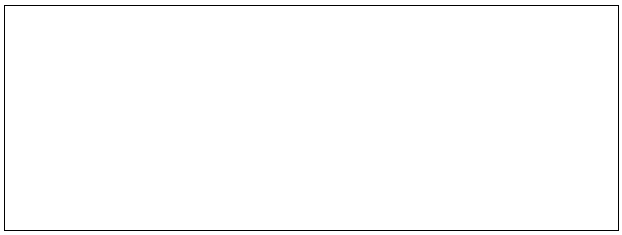
- The pressure level is : P= 850 hPa, around 1500 m, density d = 1.02 Kg/m^3

- SPBs positions (for 50 perturbed trajectories) are shown each 24 hours by means of different colors (positions at 0h UT and 12h UT functions of the hour of meteorological forecast). The nominal trajectory (control forecast) is shown with a black line.

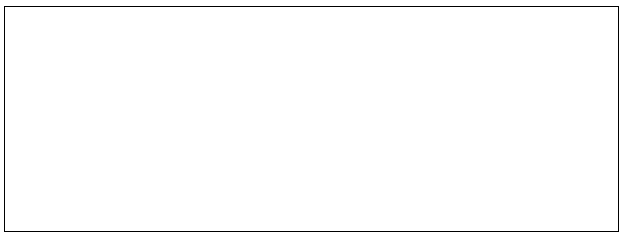
Figure cutting :

SPB launched at D+12h, d=density

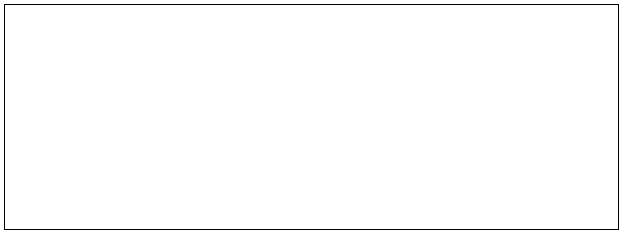
D day forecast, h UTC (h=hour of forecast)



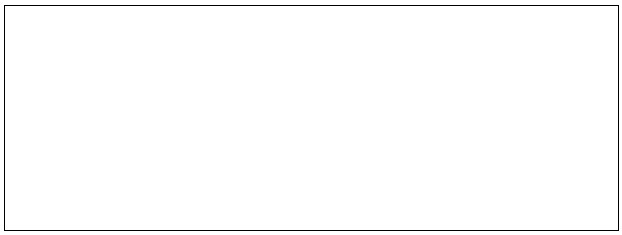
(D-1) day forecast, h UTC (h=hour of forecast)



(D-2) day forecast, h UTC (h=hour of forecast)

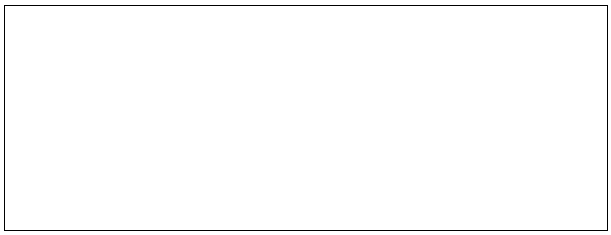


(D-3) day forecast, h UTC (h=hour of forecast)

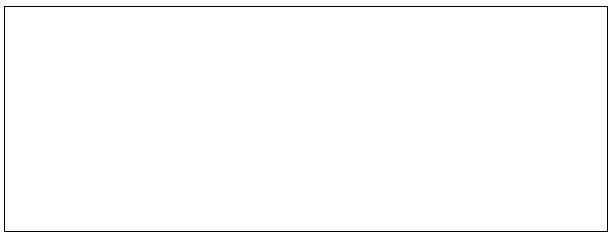


SPB launched at D+24h, d=density

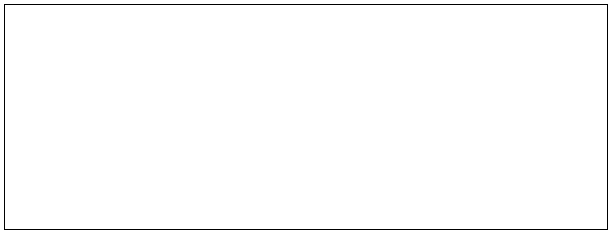
D day forecast, h UTC (h=hour of forecast)



(D-1) day forecast, h UTC (h=hour of forecast)



(D-2) day forecast, h UTC (h=hour of forecast)



(D-3) day forecast, h UTC (h=hour of forecast)