

Weather Report (2010/03/02)

Following the observations made at Meteorological Facilities of CLA, the total cloud cover was lower than the previous day. On March, 1st, the total cloud cover was about 4/8 while on March, 2nd, it was 2/8. This behavior can be explained by the lack of dynamic mechanisms that would be required for the formation of a greater amount of clouds. The first layer of clouds had a predominance of cumulus and stratocumulus with a mean coverage of 2/8 and a base height between 480 and 600 m. During the morning the major quantity of clouds was observed. Cirrus clouds were also observed during the day, but in small quantities.

The trade winds influenced the local wind direction during almost the whole day (Figure 1), with the main direction from NE. Figure 2 shows that the afternoon was the period of the day that presented the greatest wind speed, and during the morning the wind was near zero.

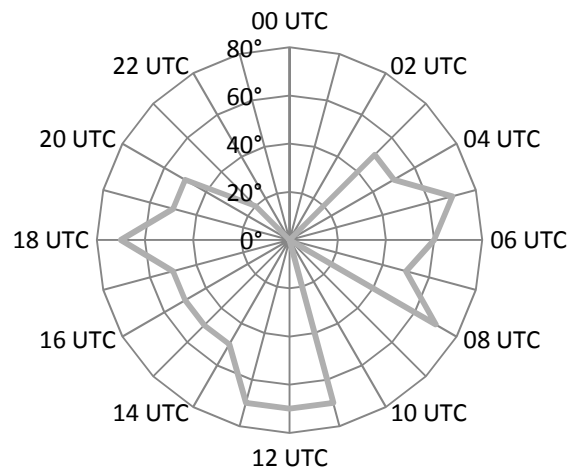


Figure 1 – Hourly wind direction for 2010/03/02.

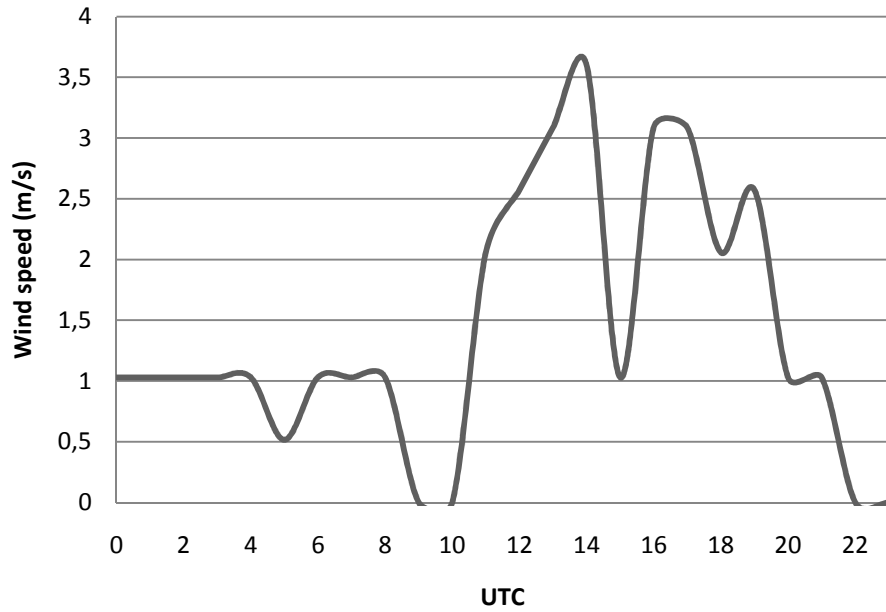


Figure 2 – Hourly wind speed for 2010/03/02.

The daily cycle of air temperature is presented at Figure 3, where we can see that the amplitude was at about 5 °C. Figure 3 also shows the mixing ratio with a maximum of 20.5 g/kg about 10:00 UTC. During the afternoon, the period of the day where local convection generally occurs, a decrease in the mixing ratio was observed. The sea level pressure is shown at Figure 4.

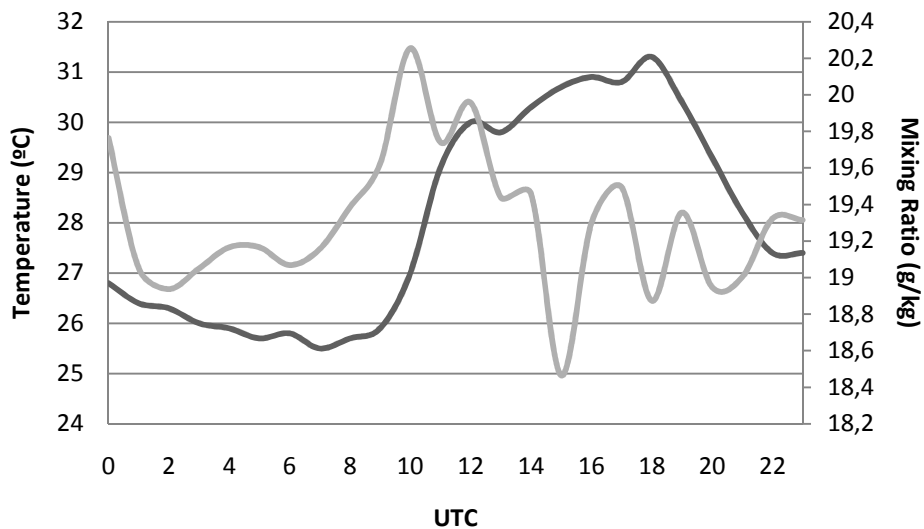


Figure 3 – Hourly temperature (black) and mixing ratio (grey) for 2010/03/02.

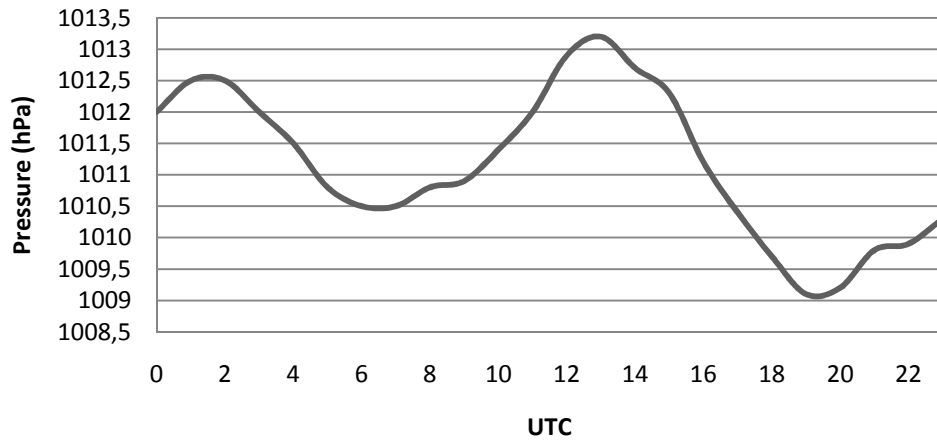


Figure 4 – Hourly sea level pressure for 2010/03/02.

No significant weather events were reported during the day at Meteorological Facilities of CLA. None of the instruments prepared to GPM-Br campaign measured rain. However, the CLA RADAR observed convective activity at a distance of at about 90 km south. (Figure 5).

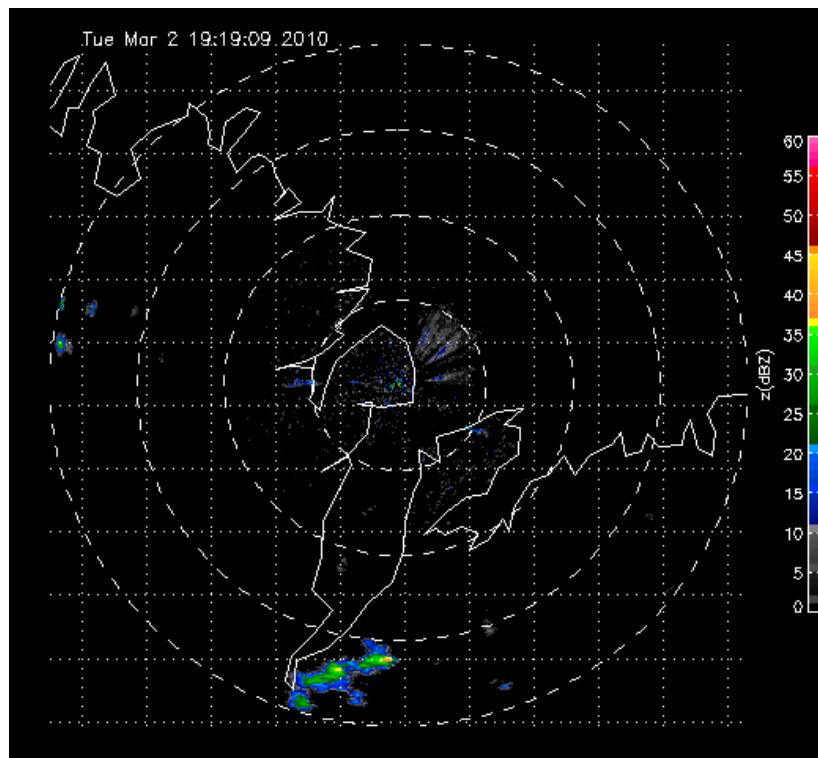
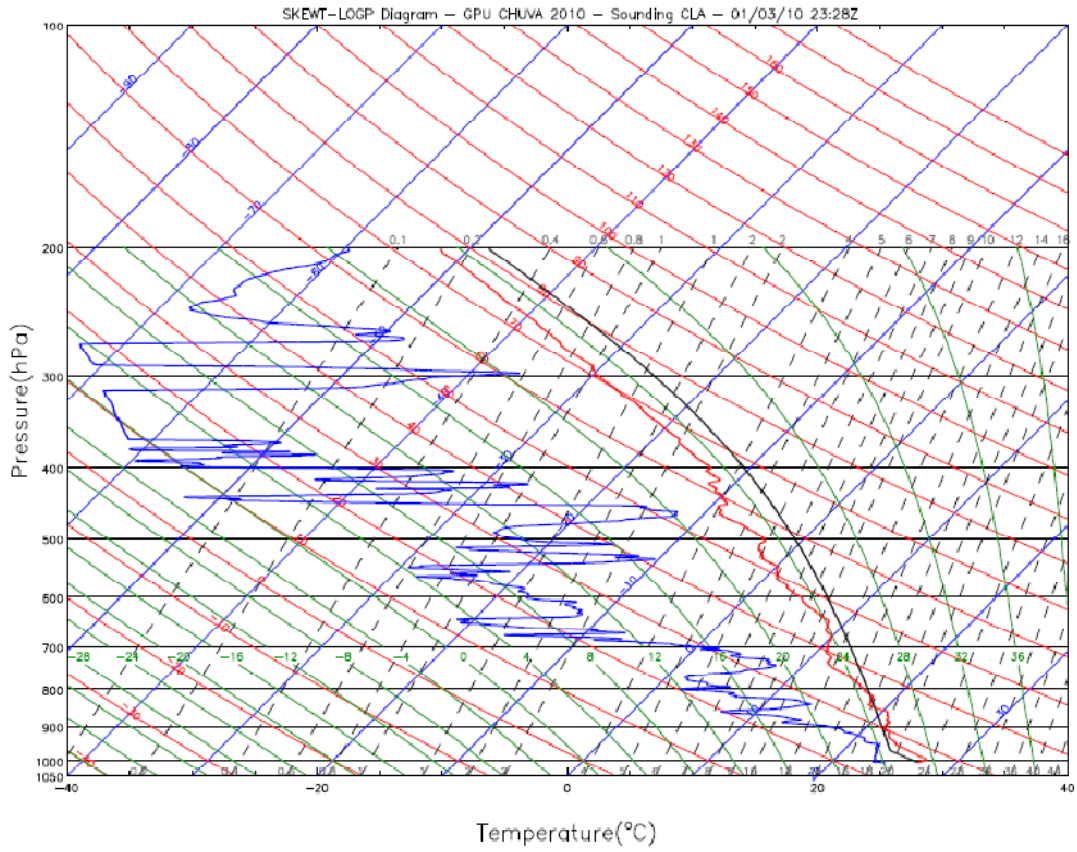
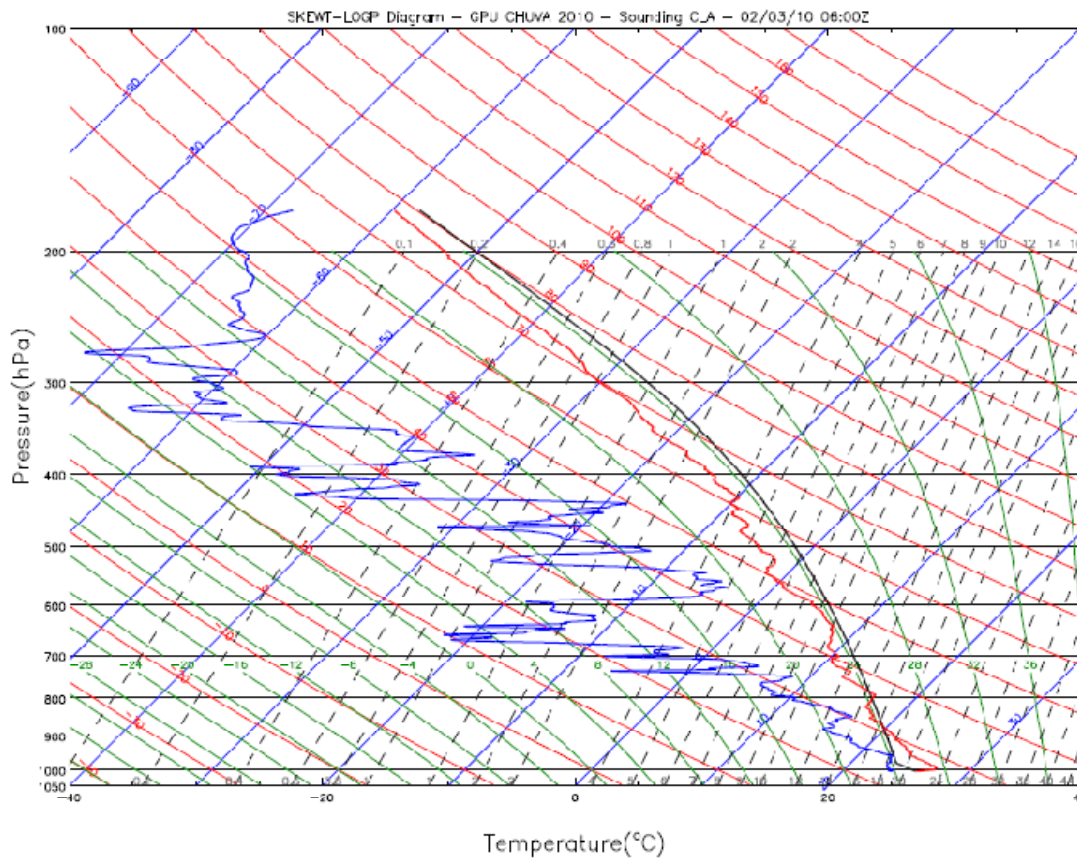


Figure 5 – 5° Inclination PPI for CLA RADAR.

The instability conditions obtained by the launching of radiosondes at the Meteorological Facilities of CLA can be seen at Figure 6.



(a)



(b)

Figure 6- Sequence of SkewT LogP diagrams for March, 2. Continue.

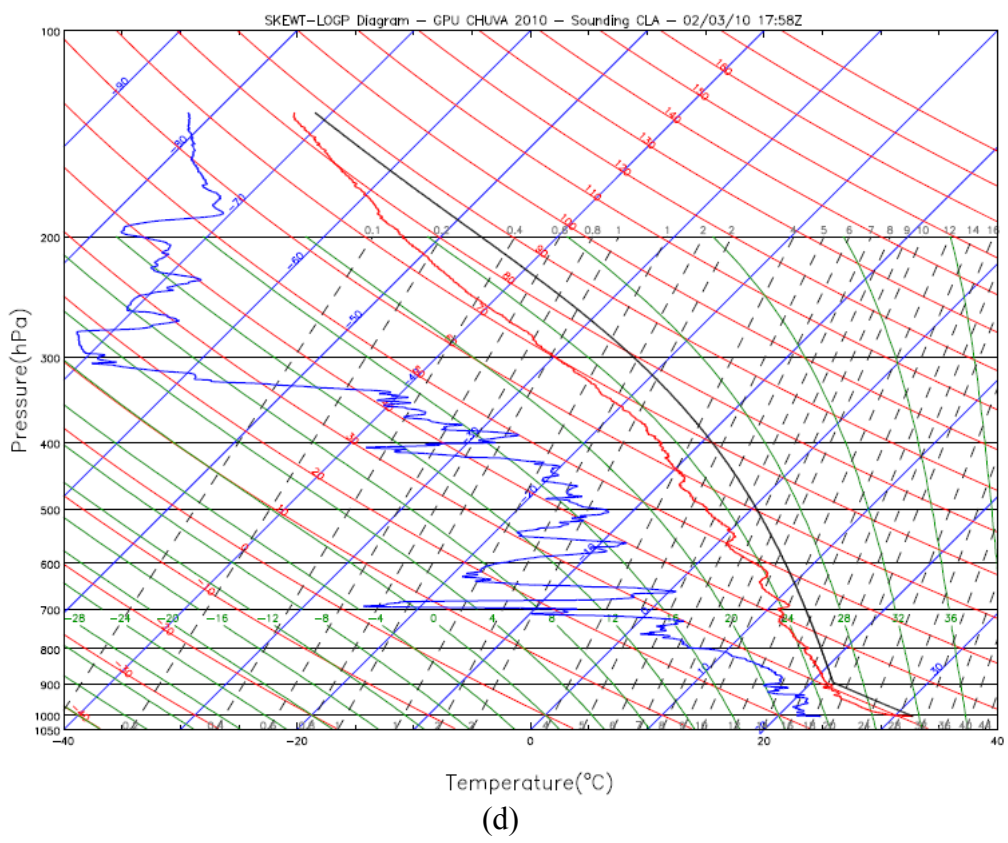
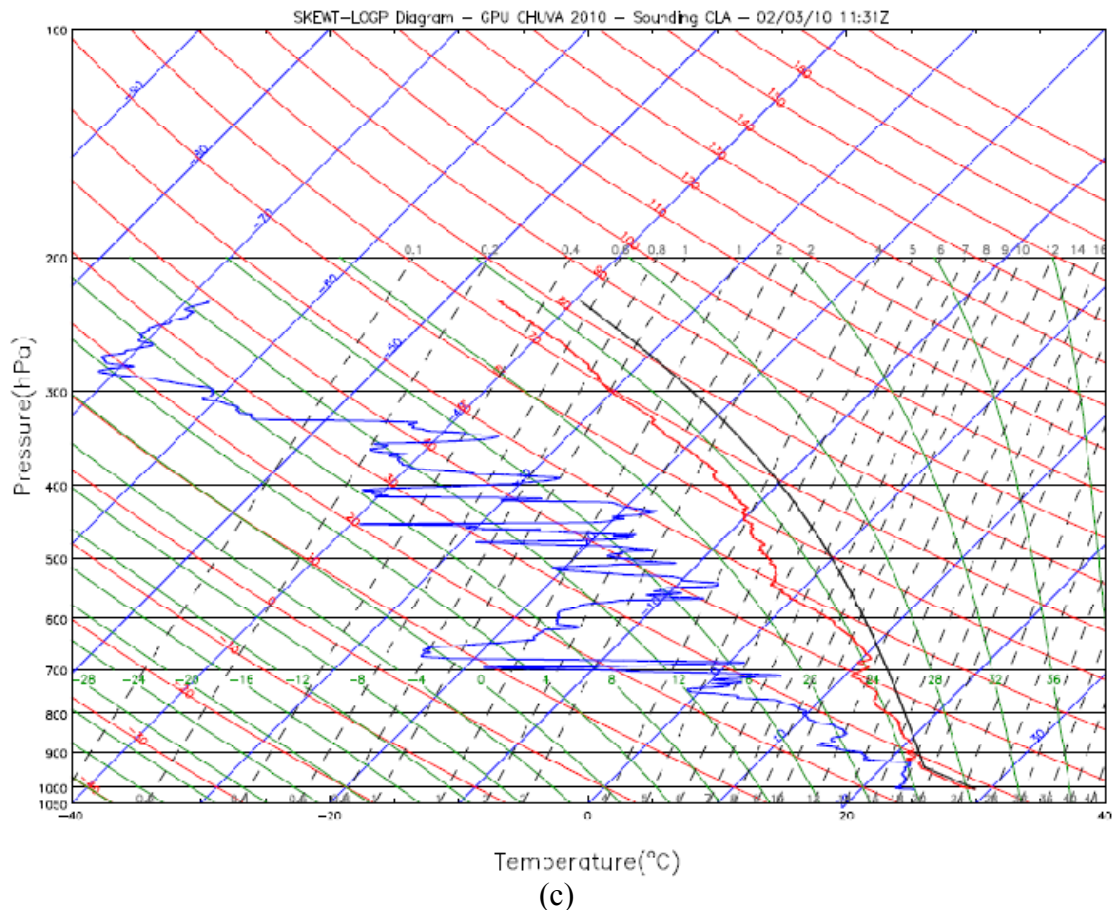


Figure 6 - Conclusion.