

Weather Report (2010/03/17)

In March 17th, the observations made at Meteorological Facilities of CLA showed few kinds of clouds above Alcântara. This types of clouds were observed during the day: cumulus (570 m, base height), cirrus (9000 m, base height), and stratus cumulus (480 m, base height). But cumulus and cirrus presented the most frequency. The Fig. 1 showed that the morning presented low wind speed values, and during the afternoon the wind was faster with predominant direction of Northeast. Hourly variations of the air temperature and mixing ratio are presented in Fig. 2. A regular distribution was observed for air temperature, computing 4 °C difference between the maximum and minimum values, with minimum along the morning and maximum in the afternoon. It can be noted in Fig. 2 that the mixing ratio showed great variability during the day. It showed values between 18 and 20 g/kg. The sea level pressure variation is shown in Fig. 3.

Light rain was observed by disdrometers. This precipitation occurred mainly in INPE. No rain was registered by rain gauges. The maximum amount observed was 4 mm of precipitation. The CLA RADAR also registered the precipitation at 15:54TC (Fig. 4). The RHI echoes shows that the precipitating cloud top reached to a height of 3 km with few minutes of duration. The thermodynamical conditions at São Luis airport station can be seen at Fig. 5. The atmosphere did not present great value of instability, approximately 1717 J/kg. The Skew T – log P diagram obtained by the radiosondes at the Meteorological Facilities of CLA can be seen at Fig. 6.

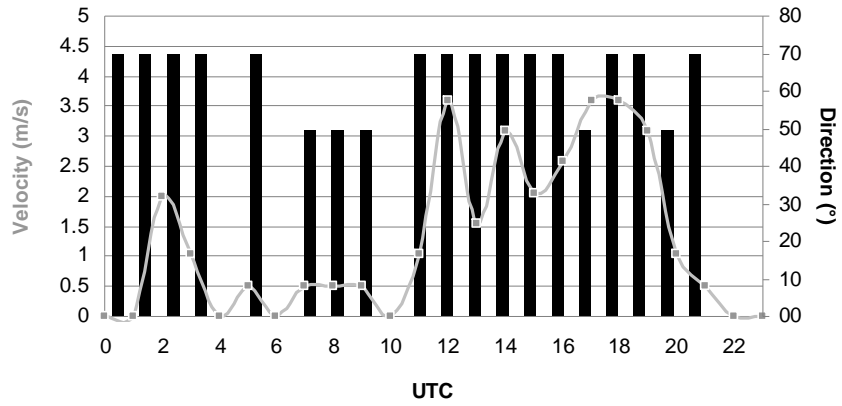


Figure 1 – Hourly wind direction and velocity for 2010/03/17.

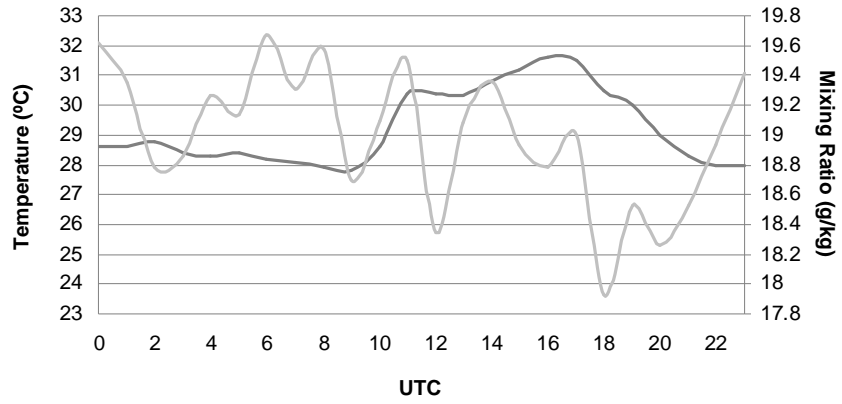


Figure 2 – Hourly temperature (black) and mixing ratio (gray) for 2010/03/17.

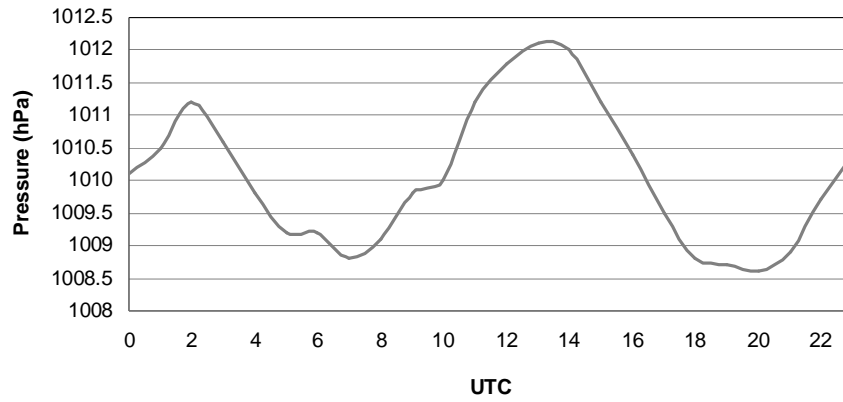


Figure 3 – Hourly sea level pressure for 2010/03/17.

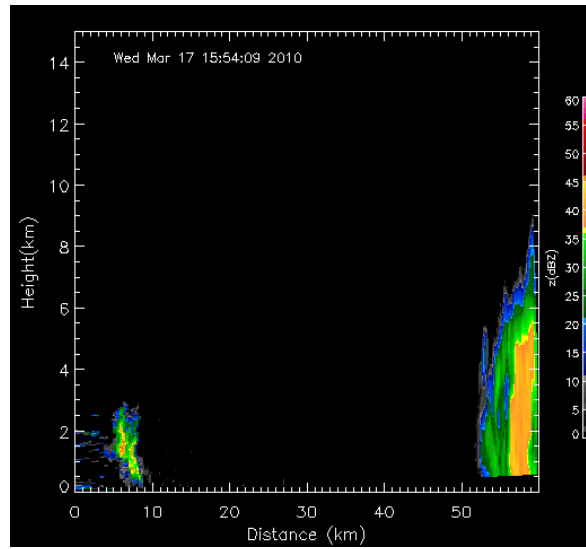


Figure 4 – RHI at 141.2 ° azimuth from CLA RADAR.

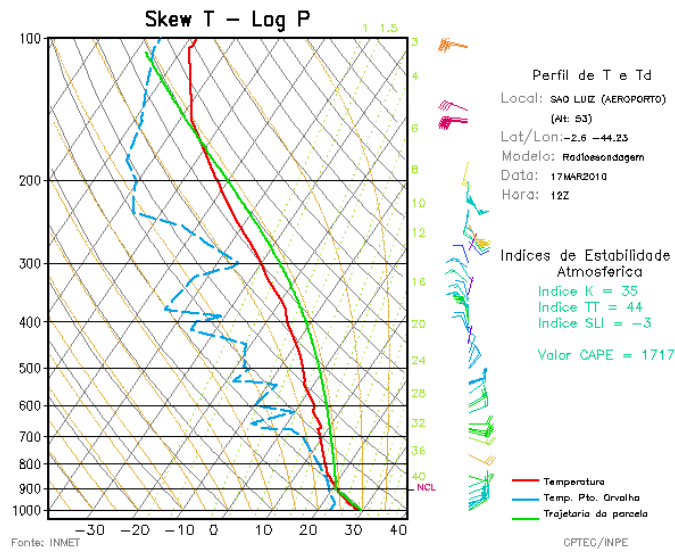


Figure 5 – SkewT LogP diagrams in São Luis airport (Near to Alcântara).

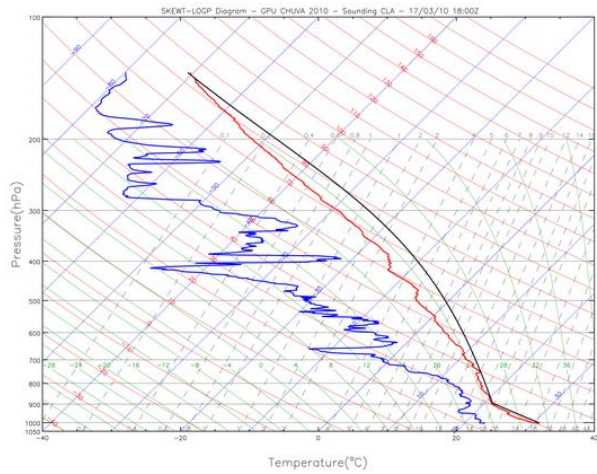
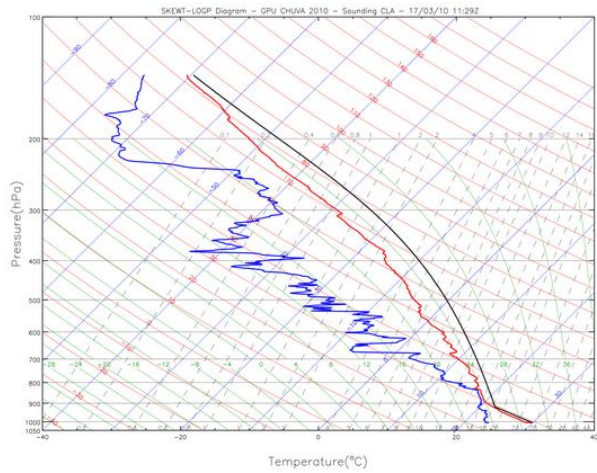
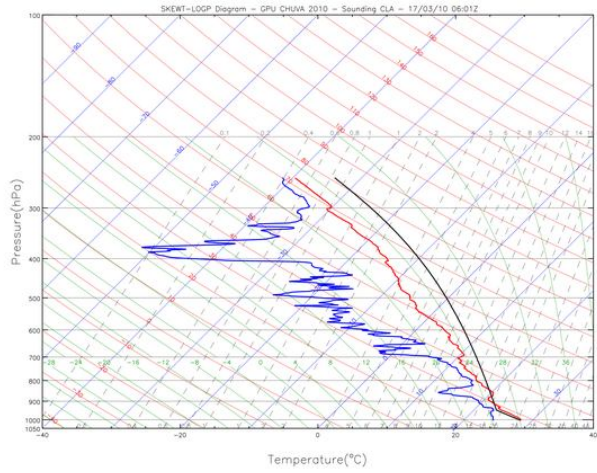


Figure 6 – Sequence of SkewT LogP diagrams. Continue.