

LMOL report for 2017 Aug 2 operations

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Sonde operator: Travis Knepp

Lidar operations

The lidar performed nominally for the entire time period (midnight:15h LT; 4h-19h UT) : a full coverage has been done. This gives a full continuous coverage from 8h LT on August 1 to 15h LT on August 2. (31h of continuous data, which is a record for LMOL)

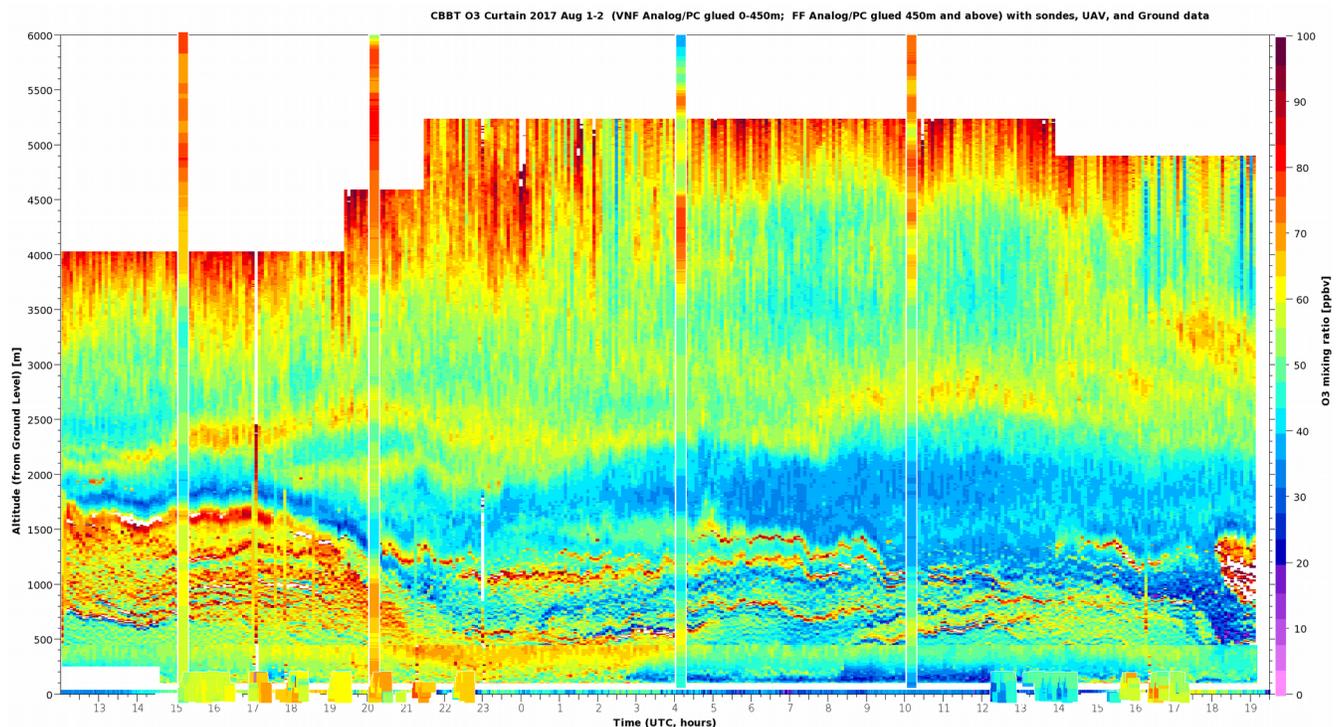
The first quick look is below.

This is an UNOFFICIAL and PRELIMINARY data plot, extreme values, especially at high altitude and low altitude are not to be believed, other problems may have occurred, the absolute values are very likely to change. The sonde temperature/pressure data from the sonde were used in the making of this plot and are shown in comparison; other sondes launched during that time are shown. The UAV legs and the ground data are also shown.

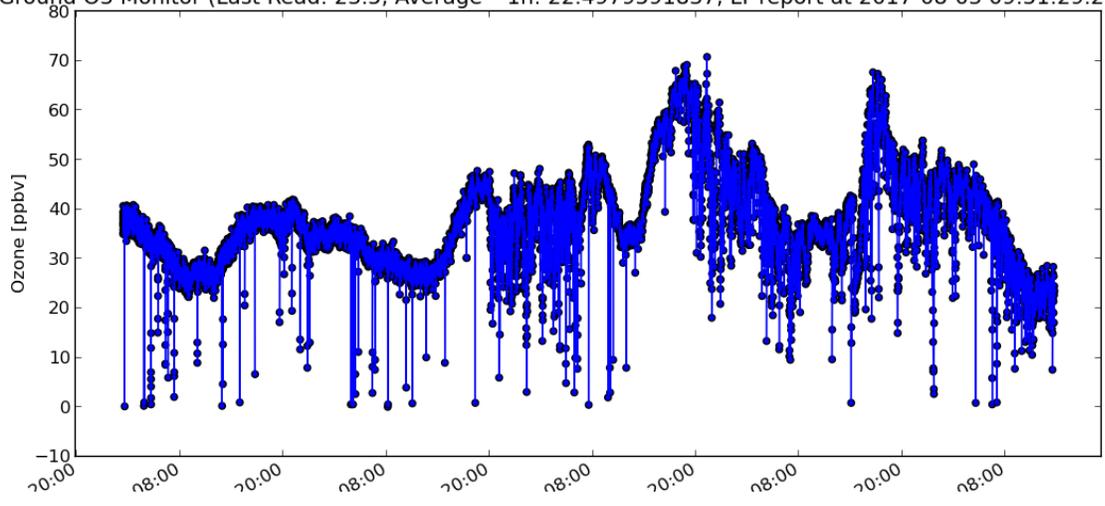
Weather station and O3 monitor:

The weather station performed nominally. **UNOFFICIAL data plots below**

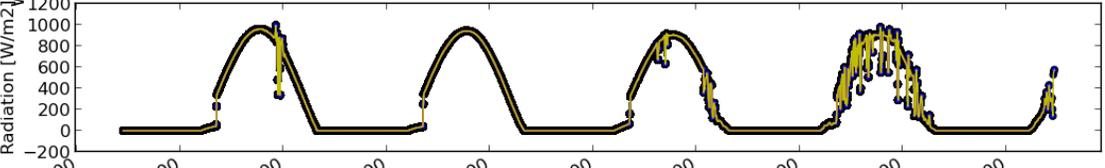
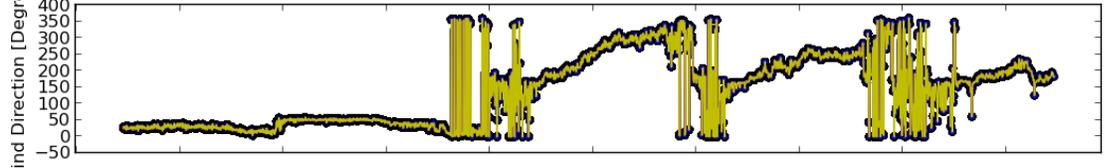
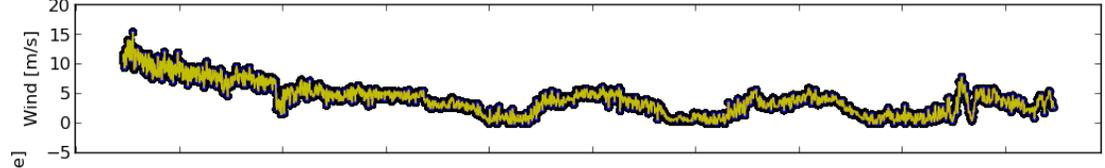
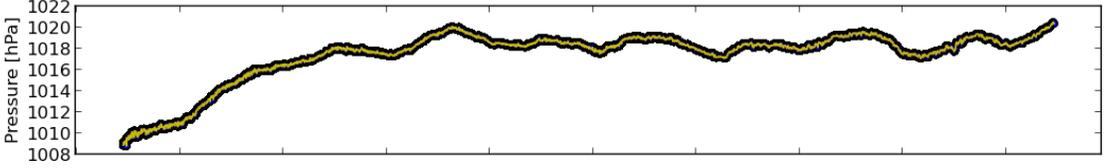
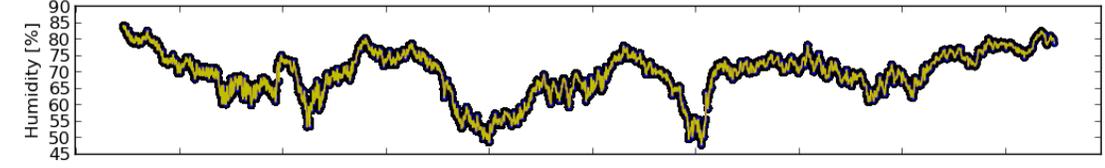
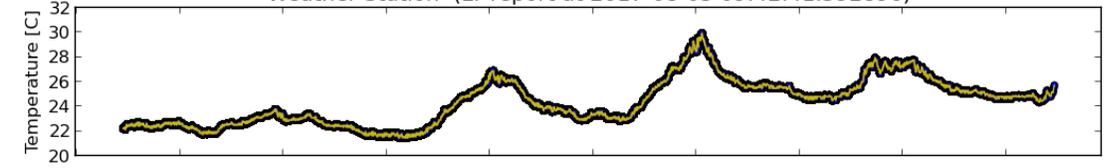
The ground ozone monitor time are in local time.



Ground O3 Monitor (Last Read: 23.5, Average ~1h: 22.4979591837, LT report at 2017-08-03 09:51:29.277987)



Weather Station (LT report at 2017-08-03 09:42:41.592896)



2017-07-29 20:00 2017-07-30 08:00 2017-07-30 20:00 2017-07-31 08:00 2017-07-31 20:00 2017-08-01 08:00 2017-08-01 20:00 2017-08-02 08:00 2017-08-02 20:00 2017-08-03 08:00

Time (UTC)

Other:

- The Davis station is reporting non-official data to internet on <http://www.weatherlink.com/user/lmollarc/> .
- The UAV team performed several flights, including vertical for the validation of the lidar very near field, as well as flights above ships to detect exhaust plumes.
- A second exhaust plume was detected by the UAV flying over the ship around 17h UTC, and later on by the lidar and again by the drone flying over the lidar. A corresponding decrease in the O₃ at ground was observed.