

# LMOL report for 2017 Aug 1 operations

**Contact:** Guillaume.P.Gronoff@nasa.gov

**Lidar operators at the CBBT:** William Carrion, Betsy Farris, Tim Berkoff Guillaume Gronoff

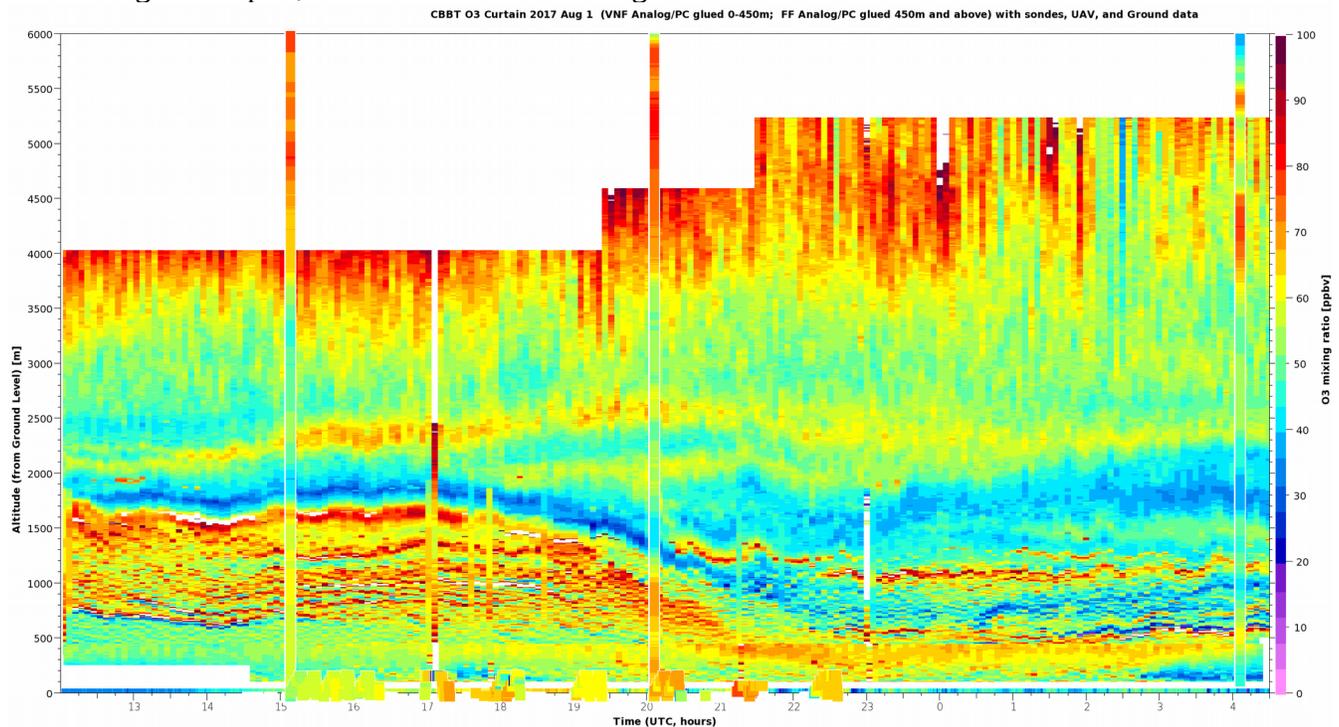
**Sonde operator:** Travis Knepp

## Lidar operations

The lidar performed nominally for the entire time period (11:00 – midnight LT; 15h-4h UT) : a full coverage has been done between 12:00 to ~4h00 UT). (i.e. 8h00-00h00 local time). The Very Near Field was fully optimized for operation at 14h30 UT.

The first quick look is below.

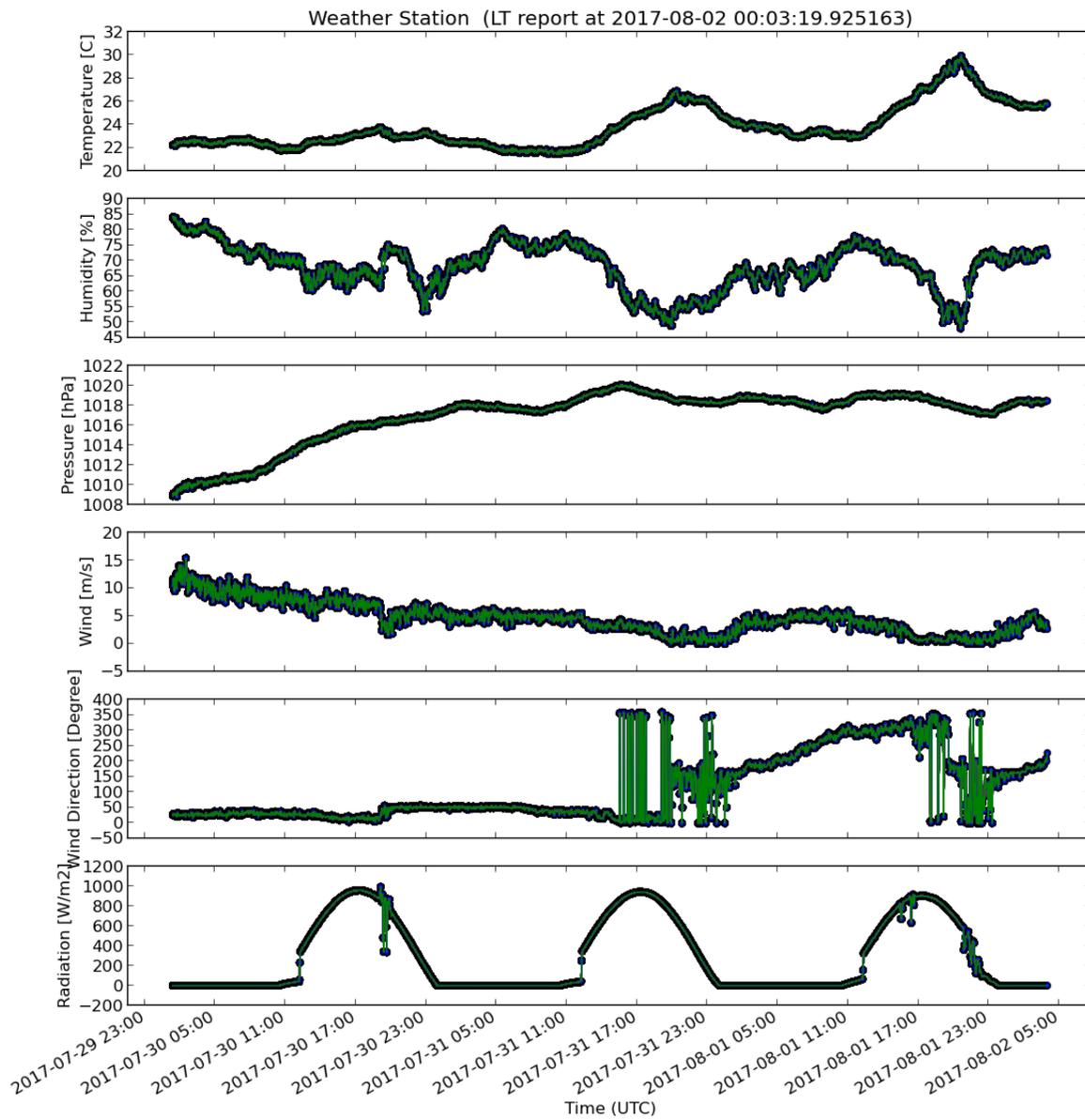
**This is an UNOFFICIAL and PRELIMINARY data plot, extreme values, especially at high altitude and low altitude are not to be believed, other problems may have occurred, the absolute values are very likely to change.** The sonde temperature/pressure data from the sonde were used in the making of this plot, as well as UAV data and ground ozone.



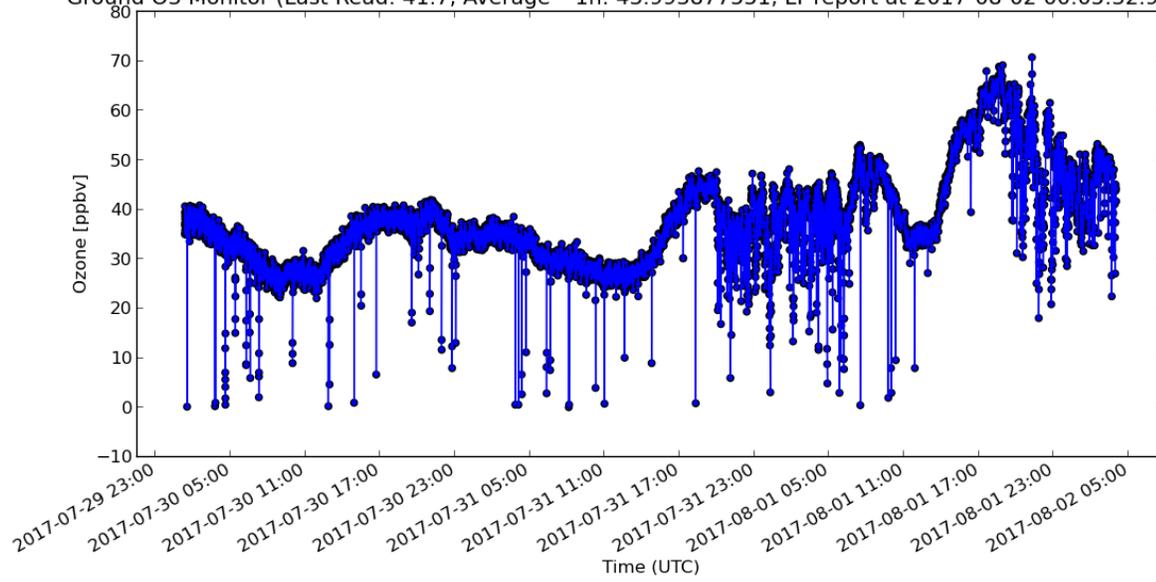
## Weather station and O3 monitor:

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

The ground ozone monitor time are in local time.



Ground O3 Monitor (Last Read: 41.7, Average ~1h: 43.993877551, LT report at 2017-08-02 00:05:32.980054)



## Other:

- The Davis station is reporting non-official data to internet on <http://www.weatherlink.com/user/lmollar/> .

- 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.

- An 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.

- The O3 data from the UAV pom have to be taken carefully due to the response time: if there is a positive gradient with altitude, the upward flight will be reporting at low value while the downward one will be reporting high values. This will be solved through post processing.