June 18th, 2018, 17:20 UTC

The following graphs represent the triple coordinated launch for the University of Maryland – Baltimore County supersite (UMBC: 39.2543, -76.7093), the Hart Miller Island supersite (HMI: 39.24219, -76. 36279), and Howard University: Beltsville (HUBV: 39.056, -76.876) on June 18th, 2018 at approximately 17:20 UTC with initial wind blowing from the south. This launch was preceded by a 06Z ozonesonde from HUBV. We can see a deep layer of elevated ozone over water and over the HUBV site from 500-1500 m ASL. At its peak at around 1000 m, there is over a 20 ppbv difference between the UMBC site and the other two sites.

Boundary layer heights over land look to be about 1200-1500 m. Below 300 m, ozone values sharply decrease from 70 ppbv to about 50-55 ppbv over HMI and UMBC, but not at HUBV. Hours after launch, this higher ozone aloft mixed down to the surface at HMI, creating hourly averages of 70-100 ppbv throughout the Baltimore region.

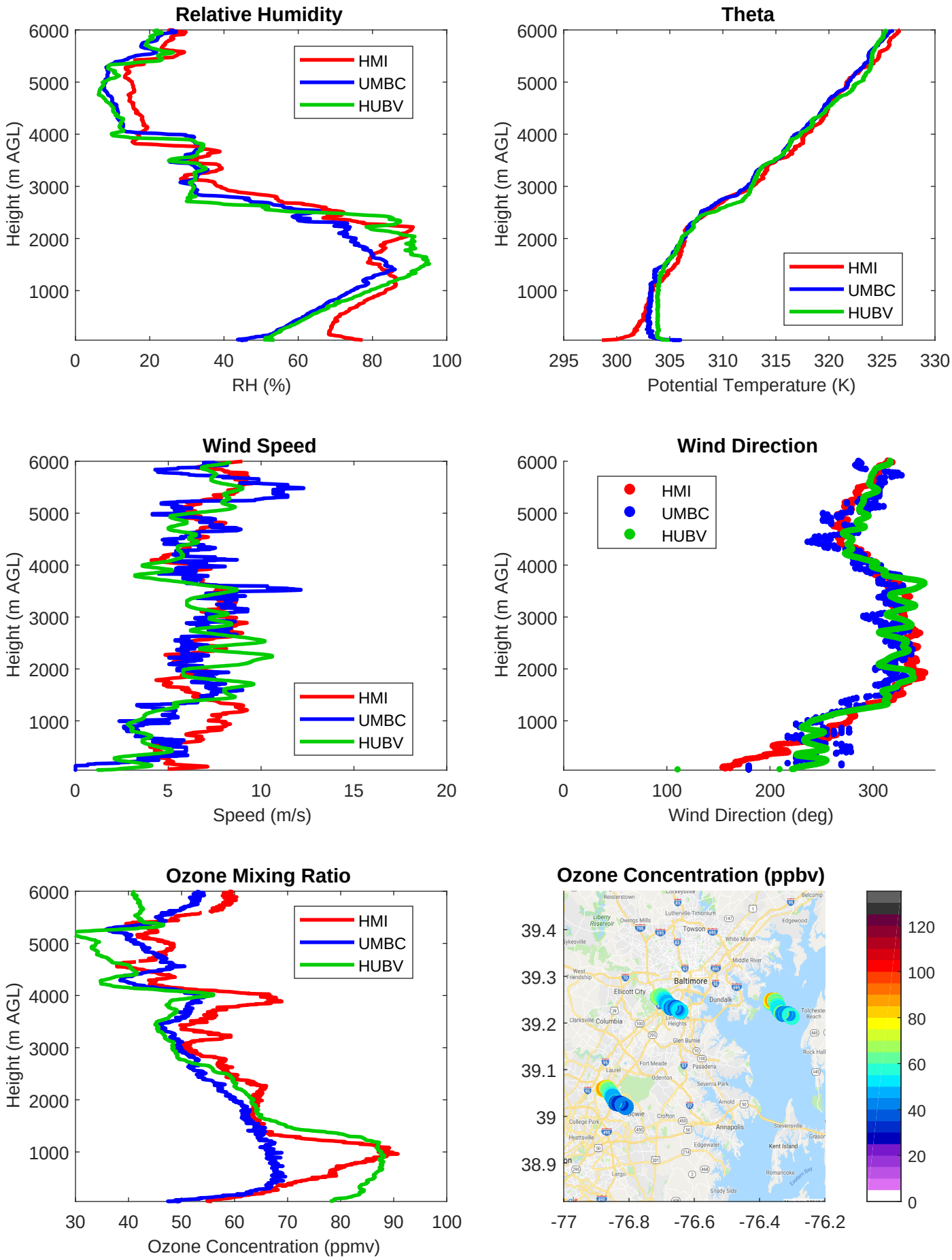
PLEASE NOTE: This data is preliminary and should not be used for official business.

UMBC Sonde POC: John Sullivan (john.t.sullivan@nasa.gov)

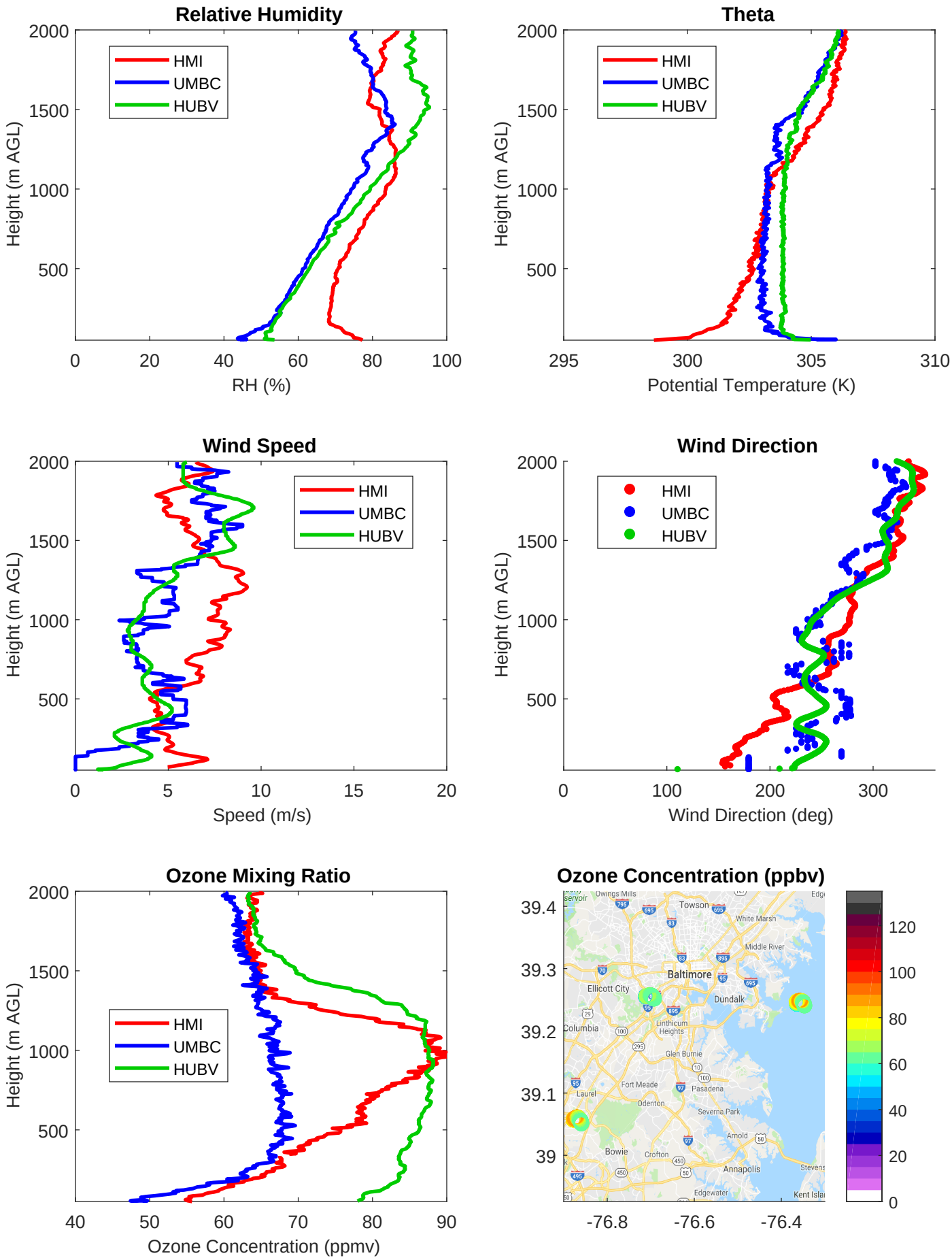
HMI Sonde POC: Lance Niño (lwn4@cornell.edu)

HUBV Sonde POC: Ricardo Sakai (ricardo.k.sakai@howard.edu)

Ozonesonde launched June 18th, 2018 at 17:20 (HMI), 17:24 (UMBC), and 17:29 UTC (HUBV) [0-6 km]



Ozonesonde launched June 18th, 2018 at 17:20 (HMI), 17:24 (UMBC), and 17:29 UTC (HUBV) [0-2 km]



June 18th, 2018, 20:00 UTC

The following graphs represent the coordinated launch for the University of Maryland – Baltimore County supersite (UMBC: 39.2543, -76.7093) and the Hart Miller Island supersite (HMI: 39.24219, -76. 36279) on June 18th, 2018 at approximately 20:00 UTC with initial wind blowing from the south. Preliminary analysis shows a deep layer of high ozone over water between 500-1500 m as strong low-level winds have taken polluted air over land and brought it over the Chesapeake.

Strong surface winds at HMI on the order of 30 kts required overfilling the balloon to avoid obstacles during launch. As a result, the HMI sonde ascended much quicker than its counterpart at UMBC. A boundary layer over land from the surface to 1200 m is present, and a feature resembling a polluted boundary layer carried by the wind over the Chesapeake can be seen over water. Surface ozone at HMI was around 60 ppbv according to the sonde; however, power was down at UMBC for that time so there is no way to verify this. This is the third and last coordinated sonde of the June 17-18 two-day ozone event in the Baltimore area.

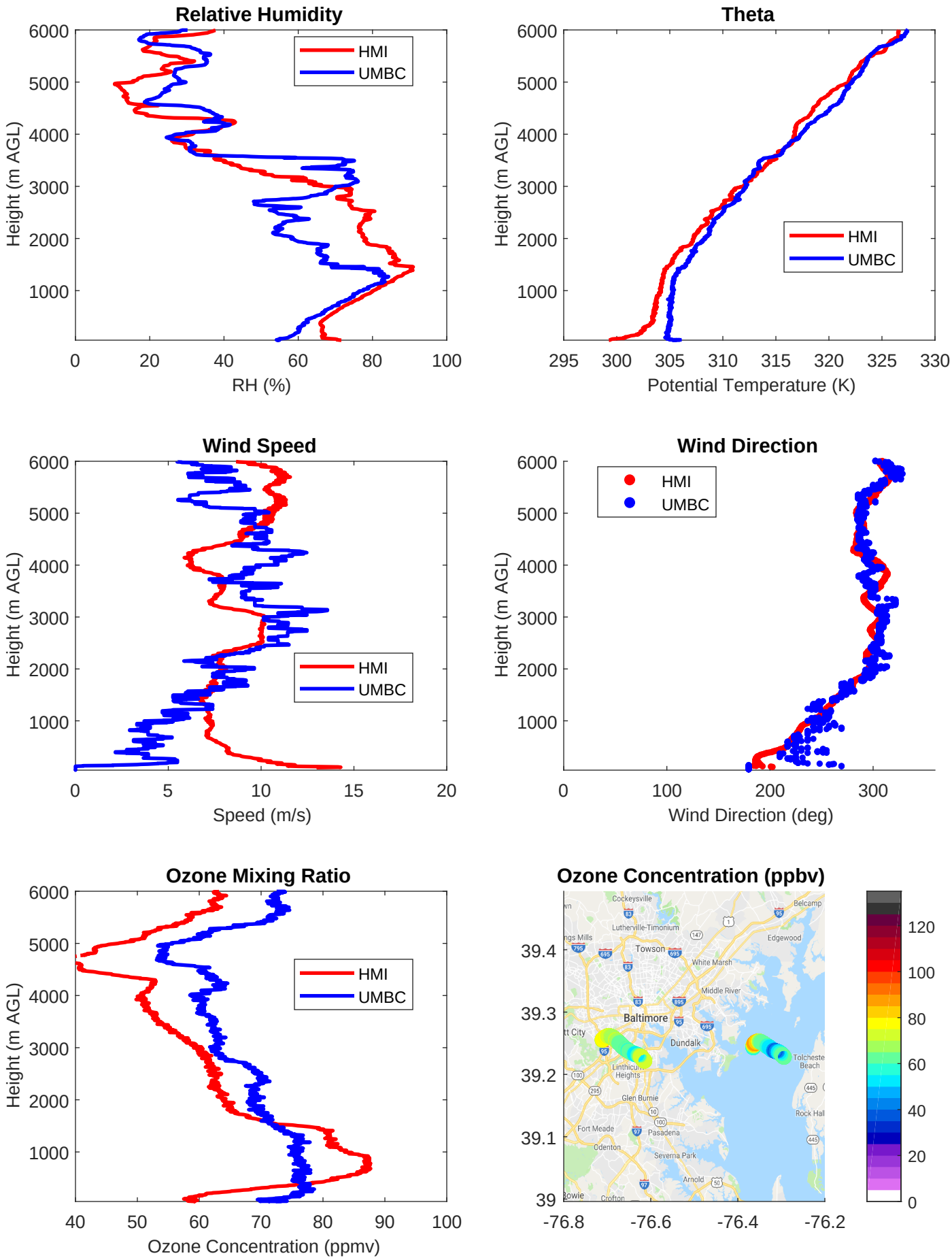
PLEASE NOTE: This data is preliminary and should not be used for official business.

UMBC Sonde POC: John Sullivan (john.t.sullivan@nasa.gov)

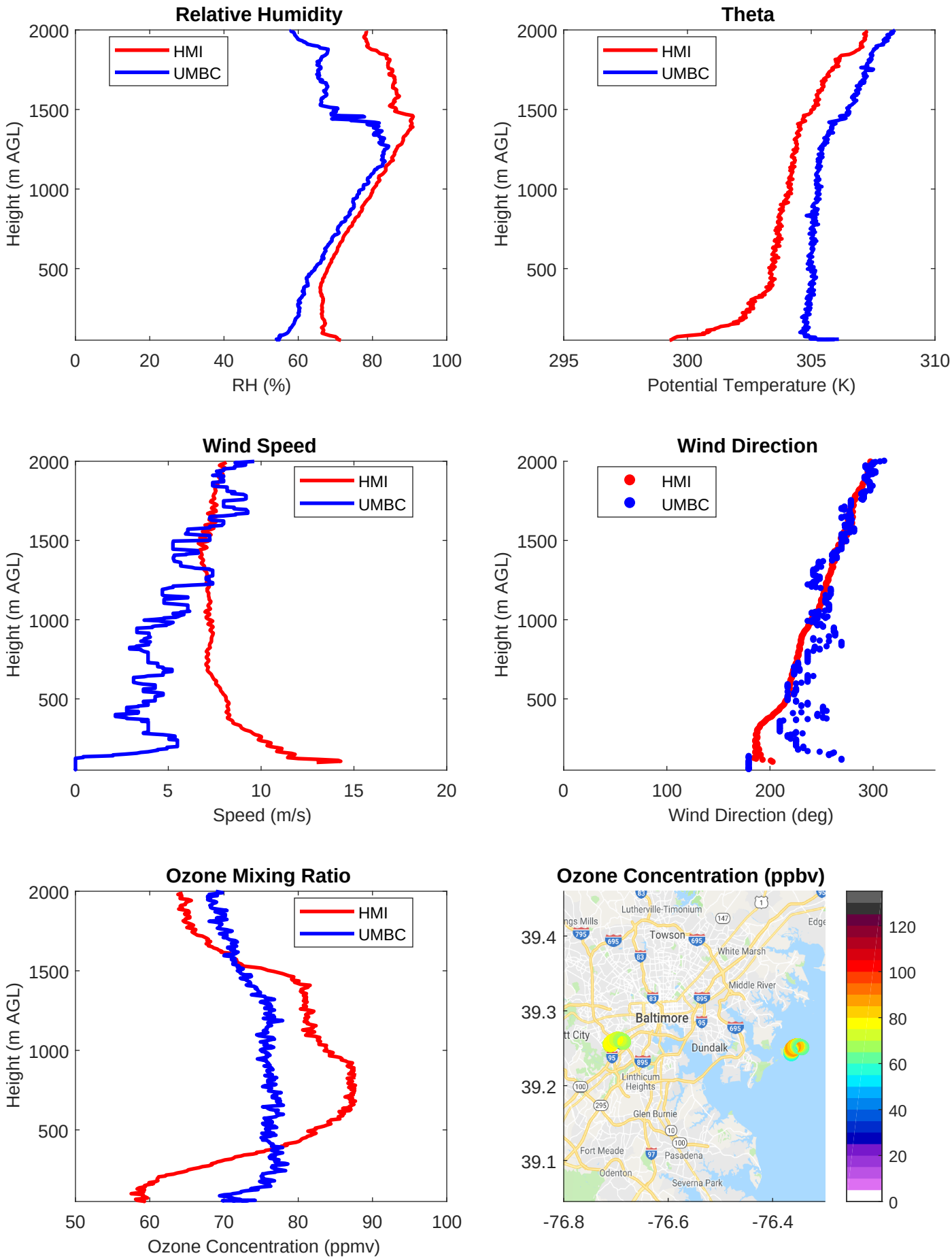
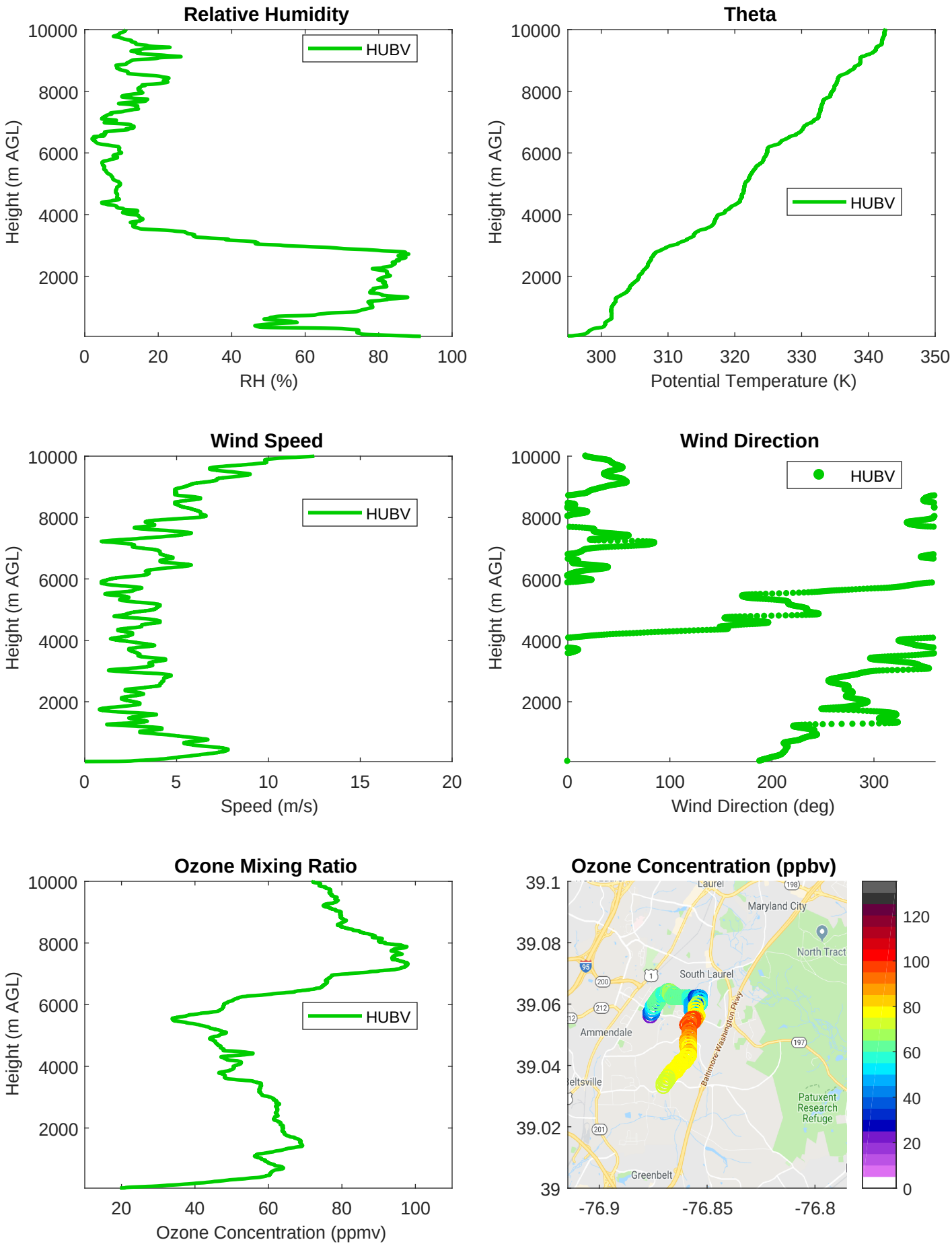
HMI Sonde POC: Lance Niño (lwn4@cornell.edu)

HUBV Sonde POC: Ricardo Sakai (ricardo.k.sakai@howard.edu)

Ozonesonde launched June 18th, 2018 at 20:06 (HMI) and 20:13 UTC (UMBC) [0-6 km]



Ozonesonde launched June 18th, 2018 at 20:06 (HMI) and 20:13 UTC (UMBC) [0-2 km]



Ozonesonde launched June 18th, 2018 at 06:35 UTC (HUBV) [0-10 km]