June 30th, 2018, 17:15 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 30th, 2018 at approximately 17:15 UTC. Over land, ozone is very well-mixed in the 1.6 km boundary layer at around 65 ppbv. Over water, the ozone sounding has a chaotic structure, as the air is not well-mixed.

In the first kilometer, ozone is very high over the HMI site, between 80-90 ppbv. This is not mirrored over land. Yesterday's high ozone layer between 2-4 km has all but vanished, and the pollutants must have sloshed in the bay through the night and into the morning of the 30th. Above 1.6 km, the two sondes show very good qualitative and quantitative agreement in all variables.

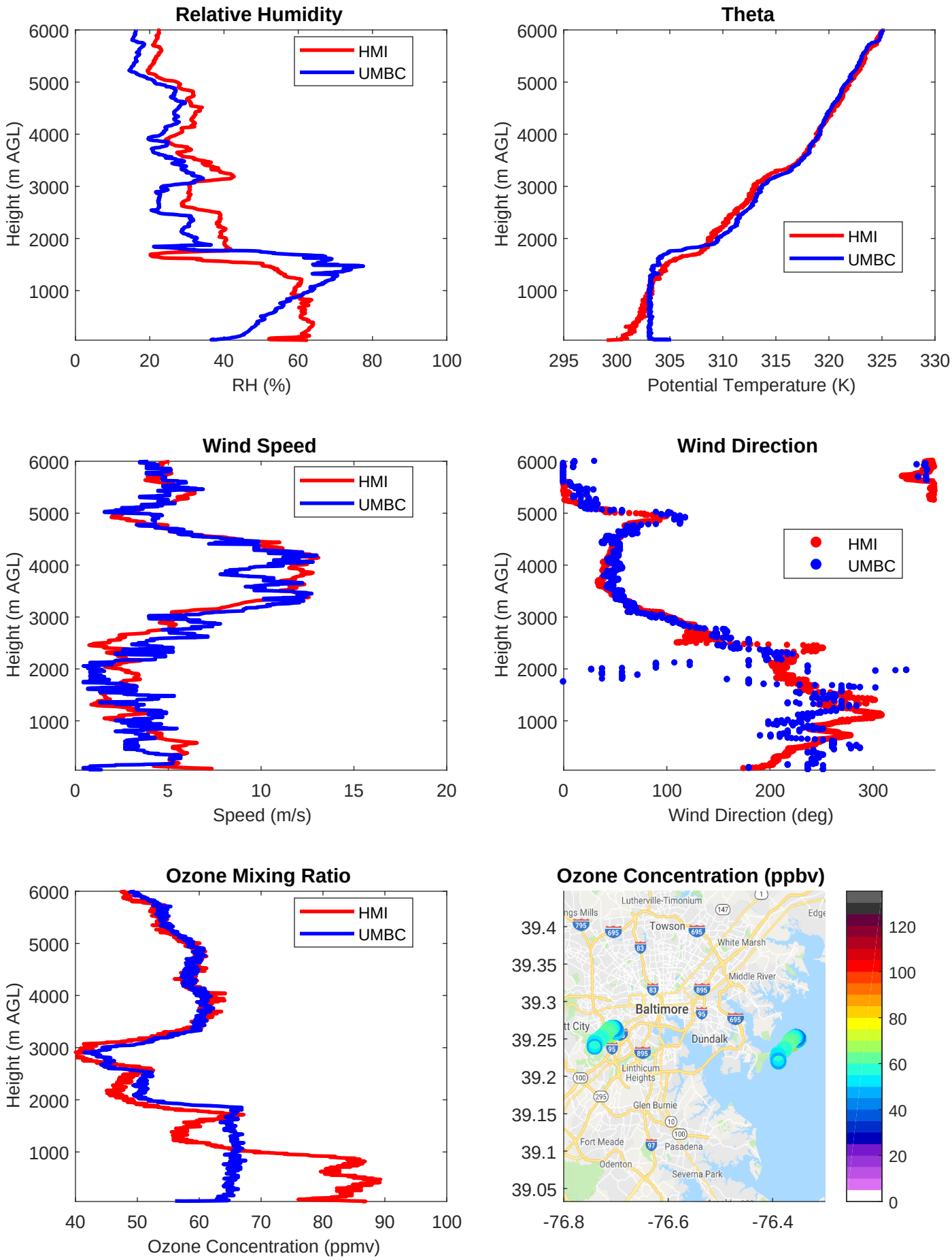
PLEASE NOTE: This data is preliminary and should not be used for official business.

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

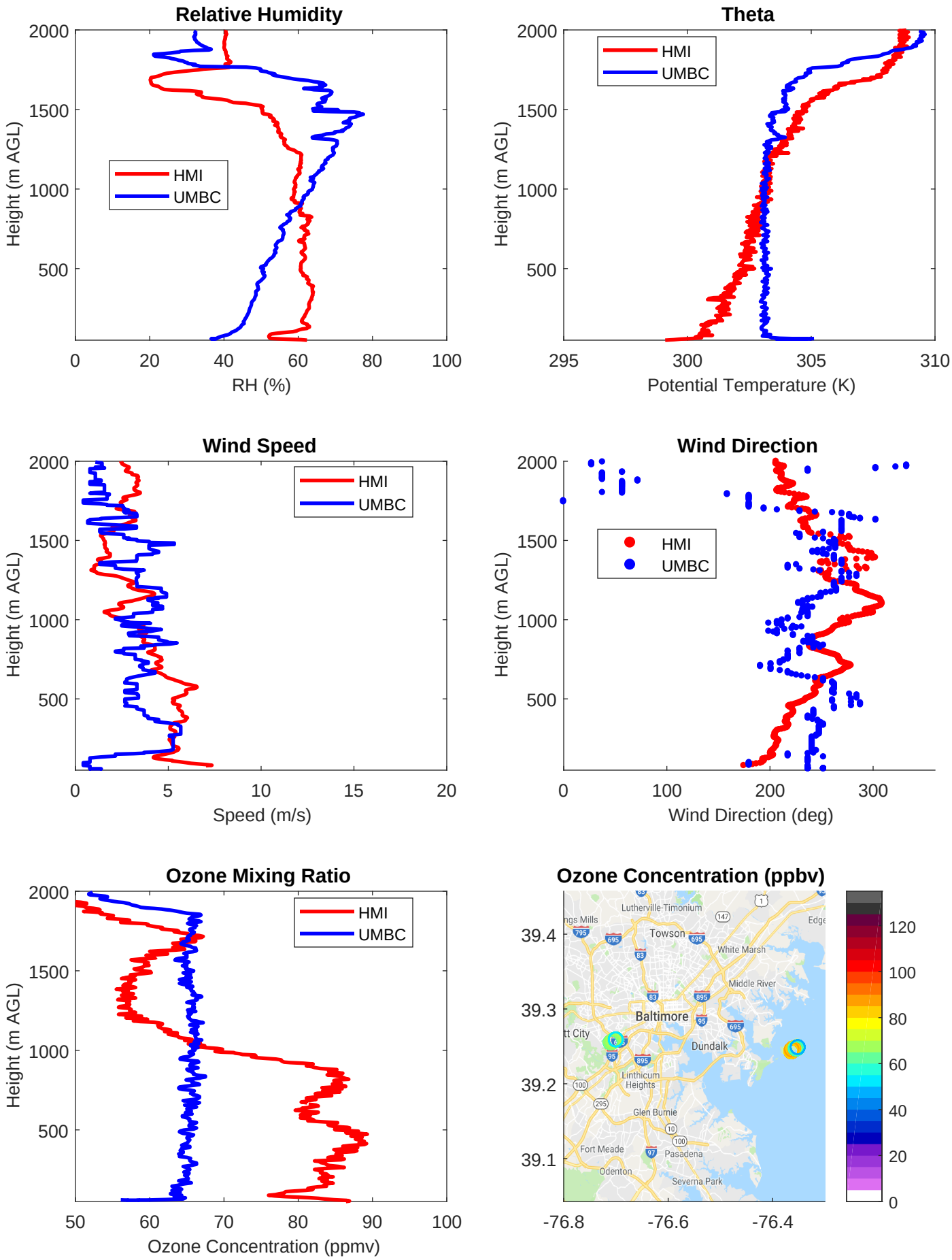
HMI Sonde POC: Lance Niño (lwn4@cornell.edu)

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

Ozonesonde launched June 30th, 2018 at 17:14 (HMI) and 17:16 UTC (UMBC) [0-6 km]



Ozonesonde launched June 30th, 2018 at 17:14 (HMI) and 17:16 UTC (UMBC) [0-2 km]



June 30th, 2018, 20:00 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 30th, 2018 at approximately 20:00 UTC. Please note that the HUBV sonde was launched at 19Z, and so it may not be representative of the conditions across the region at 20Z. Nevertheless, the agreement in RH and potential temperature plots suggests meteorology was similar across the region.

Both the HUBV and HMI sites show higher ozone (80+ ppbv) than the the UMBC site (60-70 ppbv) within the first 2 km. This is a good example of how in the complicated Chesapeake airshed, both pollution and clean air can get trapped in boundary layers over land, while more volatile conditions exist over water. Above 2 km, relatively clean air remains, meaning in the next two very polluted days, most pollution originates from transport in the lower 2 km.

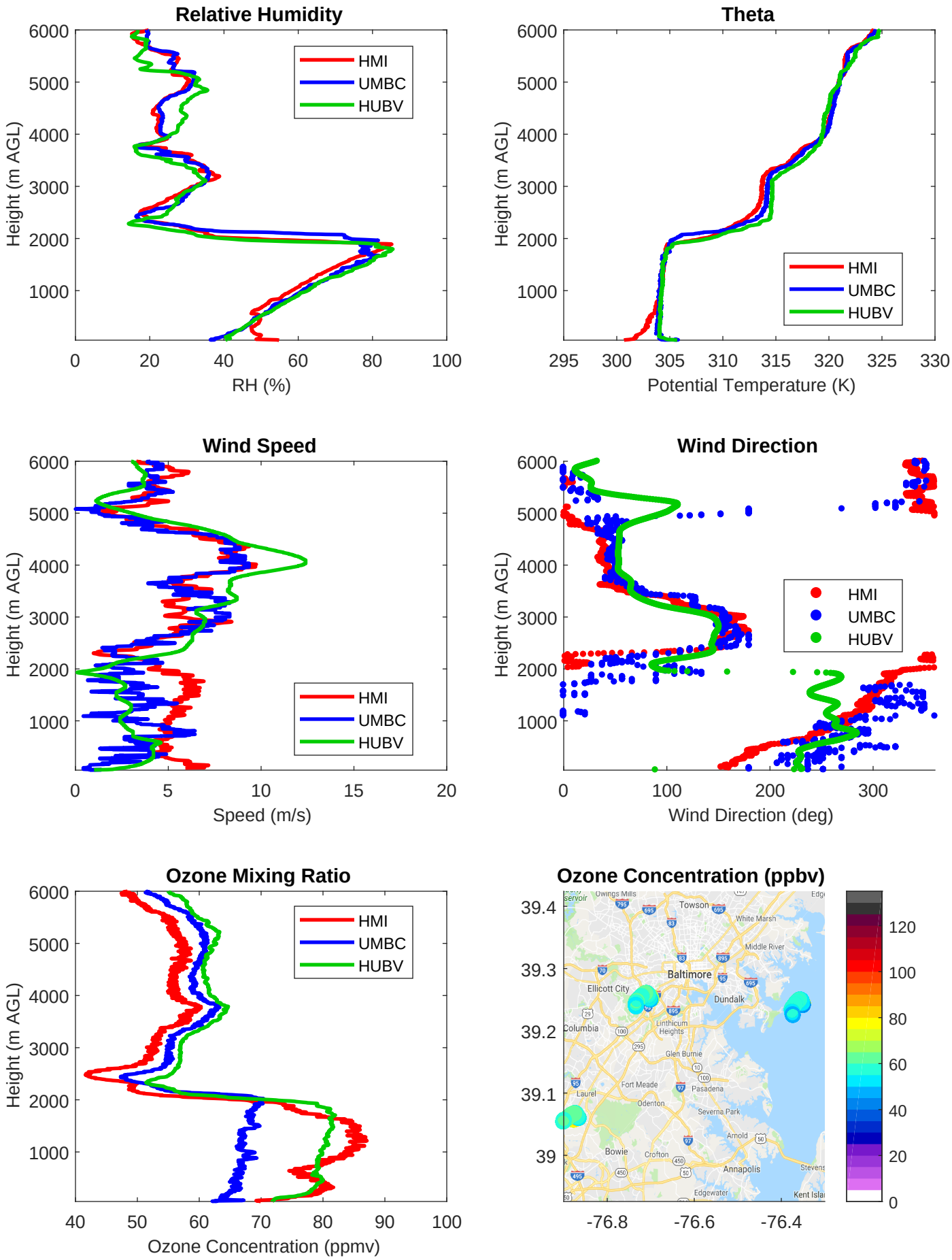
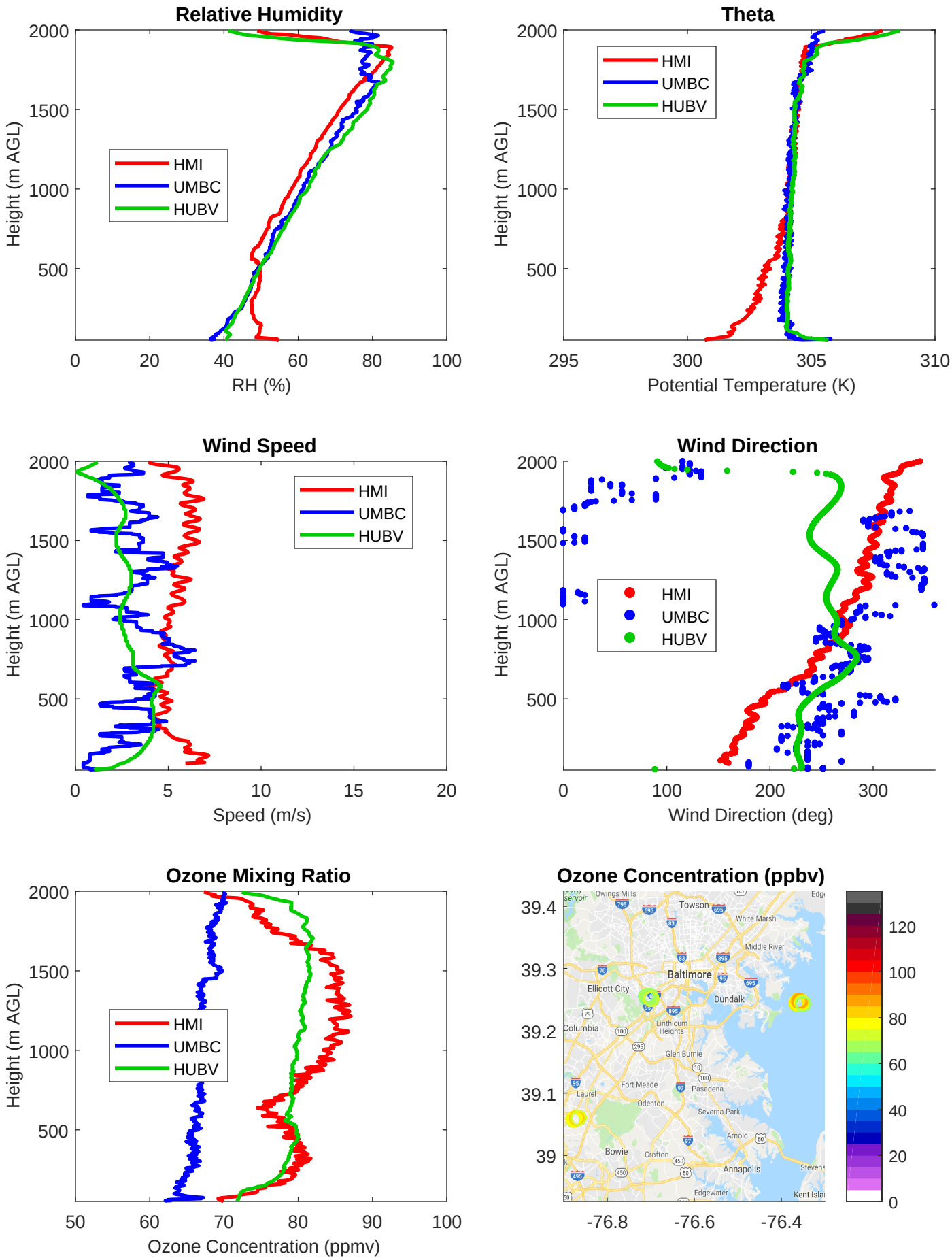
PLEASE NOTE: This data is preliminary and should not be used for official business.

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 30th, 2018 at 20:02 (HMI), 20:05 (UMBC), and 19:05 UTC (HUBV) [0-6 km]



Ozonesonde launched June 30th, 2018 at 20:02 (HMI), 20:05 (UMBC), and 19:05 UTC (HUBV) [0-2 km]