**Windsonde Soundings**

Only two saved to Shawn’s computer (both on 10/12/24). Both launched from McClean St. Park near the SPARC. Additional windsonde files might be located on other team member’s computers.

Sounding 1

File name: Sounding1\_101224.raw

Altitude (MSL), Pressure (Pa), Speed (m/s), Heading, Temperature (C), Relative Humidity (%)

Sounding 2

File name: Sounding2\_101224.raw

Altitude (MSL), Pressure (Pa), Speed (m/s), Heading, Temperature (C), Relative Humidity (%)

**Radiosonde Soundings**

10/12/24 – One sounding conducted at McClain St. Park

Sounding 1

File name: edt\_20241012\_1855.txt

Start 18:55 UTC, seconds since balloon release

Headers: pressure (hPa), temperature (K), relative humidity (%), east-west wind component (m/s), north-south wind component (m/s), rise rate (m/s), height above ground (m), latitude, longitude, wind direction, wind speed (m/s)

10/13/24 – Two soundings conducted

Sounding 1

File name: edt\_20241013\_1757.txt

Start 17:57 UTC

Headers: pressure (hPa), temperature (K), relative humidity (%), east-west wind component (m/s), north-south wind component (m/s), rise rate (m/s), height above ground (m), latitude, longitude, wind direction, wind speed (m/s)

Sounding 2

File name: edt\_20241013\_1959.txt

Start 19:59 UTC

Headers: pressure (hPa), temperature (K), relative humidity (%), east-west wind component (m/s), north-south wind component (m/s), rise rate (m/s), height above ground (m), latitude, longitude, wind direction, wind speed (m/s)

10/14/24 – Two soundings conducted

Sounding 1

File name: edt\_20241014\_1651.txt

Start 16.51 UTC

Headers: pressure (hPa), temperature (K), relative humidity (%), east-west wind component (m/s), north-south wind component (m/s), rise rate (m/s), height above ground (m), latitude, longitude, wind direction, wind speed (m/s)

Sounding 2

File name: edt\_20241014\_2000.txt

Start 20:00 UTC

Headers: pressure (hPa), temperature (K), relative humidity (%), east-west wind component (m/s), north-south wind component (m/s), rise rate (m/s), height above ground (m), latitude, longitude, wind direction, wind speed (m/s)

**Drone Soundings**

10/12/24 – three soundings were conducted from McLean St. Park.

Sounding 1

Sensor Package 1 (PM, CO2)

File name: Sounding\_1\_SP1.xlsx

Headers: UTC Date and Time, pressure (Pa), battery voltage (V), temperature (C), Relative Humidity (%), Satellites, CO2 (ppm), PM 1, PM 2.5, PM 10

Sensor Package 2 (2D Winds)

File name: Sounding\_1\_SP2.xlsx

Headers: UTC Date and Time, heading, pitch, roll, wind direction, wind U-component, wind V-component, wind W-component (this is probably not an accurate measurement), temperature (C), relative humidity (%)

Sounding 2

Sensor Package 1 (PM, CO2)

File name: Sounding\_2\_SP1.xlsx

Headers: UTC Date and Time, pressure (Pa), battery voltage (V), temperature (C), Relative Humidity (%), Satellites, PM 1, PM 2.5, PM 10, rapid relative humidity sensor (%), rapid temperature sensor (C), CO2 (ppm),

Sensor Package 2 (2D Winds)

File name: Sounding\_2\_SP2.xlsx

Headers: UTC Date and Time, altitude, direction, heading, latitude, longitude, pitch, pressure (Pa), pressure sensor 2 (Pa), roll, speed, velocity X-component (m/s?), velocity Y-component (m/s?), velocity Z-component (m/s?), wind direction, wind U-component (m/s), wind V-component (m/s), wind W-component (m/s), rapid temperature (C), rapid relative humidity (%)

Sounding 3

Sensor Package 1 (PM, CO2)

File name: Sounding\_3\_SP1.xlsx

Headers: UTC Date and Time, pressure (Pa), battery voltage (V), temperature (C), relative humidity (%), satellites, rapid relative humidity sensor (%), rapid temperature sensor (C), CO2 (ppm), PM 1, PM 2.5, PM 10

Sensor Package 2 (2D Winds)

File name: Sounding\_3\_SP2.xlsx

Headers: UTC Date and Time, heading, pitch, roll, wind direction, wind U-component (m/s), wind V-component (m/s), wind W-component (m/s), temperature (C), relative humidity (%)

10/13/24 – one sounding was conducted from McLean St. Park at site 124/125.

Sounding 1

Sensor Package 1 (PM, CO2)

File name: Sounding\_1\_SP1.xlsx

Headers: UTC Date and Time, pressure (Pa), battery voltage (V), temperature (C), Relative Humidity (%), Satellites, PM 1, PM 2.5, PM 10, rapid relative humidity (%), rapid temperature (C), CO2 (ppm)

Sensor Package 2 (2D Winds)

File name: Sounding\_1\_SP2.xlsx

Headers: UTC Date and Time, altitude, direction, heading, latitude, longitude, pitch, pressure (Pa), pressure sensor 2 (Pa), roll, speed, velocity X-component (m/s?), velocity Y-component (m/s?), velocity Z-component (m/s?), wind direction, wind U-component (m/s), wind V-component (m/s), wind W-component (m/s), rapid temperature (C), rapid relative humidity (%)

10/14/24 – Two soundings were conducted. Sounding 1 taken at Bishop Baraga Shrine parking lot. Sounding 2 taken at the Picnic tables at the Baraga Shrine

Sounding 1

Sensor Package 1 (PM, CO2)

File name: Sounding\_1\_SP1.xlsx

Headers: UTC Date and Time, pressure (Pa), battery voltage (V), temperature (C), Relative Humidity (%), Satellites, PM 1, PM 2.5, PM 10, rapid relative humidity (%), rapid temperature (C), CO2 (ppm)

Sensor Package 2 (2D Winds)

File name: Sounding\_1\_SP2.xlsx

Headers: UTC Date and Time, altitude, direction, heading, latitude, longitude, pitch, pressure (Pa), pressure sensor 2 (Pa), roll, speed, velocity X-component (m/s?), velocity Y-component (m/s?), velocity Z-component (m/s?), wind direction, wind U-component (m/s), wind V-component (m/s), wind W-component (m/s), rapid temperature (C), rapid relative humidity (%)

Sounding 2

Sensor Package 1 (PM, CO2)

File name: Sounding\_2\_SP1.xlsx

Headers: UTC Date and Time, pressure (Pa), battery voltage (V), temperature (C), Relative Humidity (%), Satellites, PM 1, PM 2.5, PM 10, rapid relative humidity (%), rapid temperature (C), CO2 (ppm)

10/15/24 – One sounding was conducted at Second Sands Beach. Additional soundings were attempted but a corruption in the data logger occurred that lead to an irretrievable loss of data.

Sounding 1

Sensor Package 1 (PM, CO2)

File name: Sounding\_1\_SP1.xlsx

Headers: UTC Date and Time, pressure (Pa), battery voltage (V), temperature (C), Relative Humidity (%), Satellites, CO2 (ppm), rapid relative humidity (%), rapid temperature (C), PM 1, PM 2.5, PM 10

10/17/24 – One sounding was conducted at Meadowbrook arena during the evening with the outreach event with KBOCC. Sensor package 1’s data logger 1 broke and thus only Sensor package 2 was flown.

Sounding 1

Sensor Package 2 (2D Winds)

File name: Sounding\_1\_SP2.xlsx

Headers: UTC Date and Time, altitude, direction, heading, latitude, longitude, pitch, pressure (Pa), pressure sensor 2 (Pa), roll, speed, velocity X-component (m/s?), velocity Y-component (m/s?), velocity Z-component (m/s?), wind direction, wind U-component (m/s), wind V-component (m/s), wind W-component (m/s), rapid temperature (C), rapid relative humidity (%)

10/19/24 – One sounding was conducted at Meadowbrook arena during the public outreach event. Sensor package 1’s data logger 1 broke and thus only Sensor package 2 was flown. This was not a complete sounding but more of a display for the public.

Sounding 1

Sensor Package 2 (2D Winds)

File name: Sounding\_1\_SP2.xlsx

Headers: UTC Date and Time, altitude, direction, heading, latitude, longitude, pitch, pressure (Pa), pressure sensor 2 (Pa), roll, speed, velocity X-component (m/s?), velocity Y-component (m/s?), velocity Z-component (m/s?), wind direction, wind U-component (m/s), wind V-component (m/s), wind W-component (m/s), rapid temperature (C), rapid relative humidity (%)

**Ceilometer**

Ceilometer located near CMX airport. Files are in NetCDF format.

10/12/24

20241012\_NN\_CHM230140\_000.nc

10/13/24

20241013\_NN\_CHM230140\_000.nc

10/14/24

20241014\_NN\_CHM230140\_000.nc

10/15/24

20241015\_NN\_CHM230140\_000.nc

10/16/24

20241016\_NN\_CHM230140\_000.nc

10/17/24

20241017\_NN\_CHM230140\_000.nc

10/18/24

20241018\_NN\_CHM230140\_000.nc

10/19/24

20241019\_NN\_CHM230140\_000.nc

10/20/24

20241020\_NN\_CHM230140\_000.nc

10/21/24

20241021\_NN\_CHM230140\_000.nc

10/22/24

20241022\_NN\_CHM230140\_000.nc

20241022\_KRC\_CHM230140\_007.nc

10/23/24

20241023\_KRC\_CHM230140\_000.nc

10/24/24

20241024\_KRC\_CHM230140\_000.nc