CARSON Air Quality
Data Sheet

Date : _____
Observer Name: _____
Organization Name: _____
Study Site: _____

Observing Your Air Quality

Part I: Estimating Visibility
Location:_____
Sky Color: _____
Visibility_____
Air Temperature:_____
Weather Conditions:_____
% Cloud Cover:_____
Furthest Landmark:_____
Distance between Observation Point and Furthest Landmark:_____
Air Quality Index- Ozone:_____
Air Quality Index- Particles:_____
Color Code:_____

Part II: Measuring Visibility

Measurement Number[1]	Local Time[2]	Universal Time [3]	Max Voltage in Sunlight [4]	Dark Voltage [5]	AOT [6]
1 (green)					
1 (red)					
2 (green)					
2 (red)					
3 (green)					
3 (red)					
4 (green)					
4 (red)					
5 (green)					
5 (red)					

1 At least three sets of measurements are required.

2 Ideally, time should be reported to the nearest 15 seconds, using an accurately set timepiece.

3 Be careful when converting local time to UT.

4 Always report voltages with 3 digits to the right of the decimal point. For example, 1.773 rather than 1.77.

5 Enter dark voltage in units of volts, not millivolts. For example, 0.003 V rather than 3 mV.

6 These values are calculated from your data and provided by GLOBE.

Case temperature: (multiply “T” voltage reading x 100):_____

Cloud and contrail conditions (If sky not obscured)

Cloud Type (Check all types seen):
□Cirrus □Cirrostratus □Cirrocumulus □Altostratus □Altocumulus □Stratus
□Stratocumulus □Cumulus □Nimbostratus □Cumulonimbus

Contrail Type (Record the number of each type observed):
Short-lived: ____ Persistent Non-Spreading:____ Persistent Spreading:____

Cloud Cover:
□No clouds (0%) □Clear (0% - 10%) □ Isolated (10 - 25%)
□ Scattered (25% - 50%) □Broken (50% - 90%) □Overcast (90% - 100%) □Sky Obscured

Contrail Cover:
□None □0-10% □10-25% □25-50% □>50%

Sky Color
□Deep blue □Blue □Light blue □Pale blue □Milky

Sky Clarity
□Very hazy □Extremely hazy □ Somewhat hazy □Clear □Unusually clear

Sky Obscured by
□Haze □Dust □Sand □Marine Spray □Volcanic ash □Smoke □Strong rain
□Strong snow □Fog □Blowing snow

Current Air Temperature *(obtained following GLOBE Protocol*):_____ °C

Relative Humidity *(obtained following GLOBE Protocol) :_____%*

Dry bulb temperature* (oC):_____ Wet bulb temperature* (oC):_____

*Sling Psychrometer only.

Barometric Pressure: _____ mbar

Select data source (check one):

□ Online or broadcast source □ Aneroid barometer □ Other barometer

Comments: Note conditions that could affect your measurements, (such as urban smog, smoke from forest fires, blowing sand, or dust from agricultural activities).

_____
_____
_____
_____
_____

Part III: Measuring Ozone and Particle Pollution

Ozone

Exposed Test Strip

Starting Time (hour:min): _____ (Record the time that the strip was removed from the plastic bag)

Time (In Field): (hour:min): _____ (Record the time that the test strip was placed in the clip)

Cloud Cover:_____

Cloud Type: _____

Current temperature (˚C): _____

Wind direction: (N, NE, E, SE, S, SW, W, NW)

Relative humidity (%): _____

Read Test Strip

Ozone concentration*(parts per billion) :_____

Time Read (hour:min) :_____ (Record the time you read your test strip)

Cloud Cover:_____

Cloud Type:_____

Current Air temperature (˚C):_____

Wind direction (N, NE,E, SE, S, SW, W, NW)

Relative humidity (%):_____

Summary Over Time

	Date 1	Date 2	Date 3	Date 4	Date 5	Date 6	Date 7
ppb							
End Temp							
End Time							
Cloud Type (Exposed)							
Cloud Type (Measured)							
Cloud Cover (Exposed)							
Cloud Cover (Measured)							
Wind Direction (beginning/ending)							
Relative Humidity							
Notes							

Satellite Observation

Attach satellite photograph if you wish.

Part I: Identifying the source of the pollution:

What pollution were you able to see in the satellite image?
Haze____
Smoke___
Dust ____

What Sources of pollution did you identify in the satellite image?:_____

Part II: Compare MODIS true color to EPA Air Quality index

Do areas with poor air quality (orange or red dots) correspond with haze in the satellite image?_____
If so, you can attribute at least some of the pollution to the source identified in the satellite image?_____

Aerosol Optical Depth (from NEO data set):_____