



GLOBE

Water Vapor

Data Sheets

Print the Water Vapor Data Sheet:

- [Water Vapor Data Sheet](#)

Also print the data sheets to record other protocols required with Water Vapor measurements.

- [Water Vapor: Other Required Protocols Data Sheet](#)
- Clouds Data Sheet

Or print the data sheet with the field guide incorporated.

- [Water Vapor with field guide](#)
 - You will also need to print the Clouds data sheet linked above.

Find the field guides for the other required protocols here:

- [Relative Humidity](#)
- [Barometric Pressure](#)
- [Current Air Temperature](#)
- [Clouds](#)

GLOBE Water Vapor Data Sheet

Name: _____ Site Name: _____

Date: _____ Time (local): _____

Photometer Serial number: _____

If you know satellite overflights on measurement date:

Instrument name: _____

Time of overflight (24 hr): _____ Maximum elevation angle: _____°

Water Vapor Measurements

Case Temperature: BEFORE measurements: _____ °C

AFTER measurements: _____ °C

Report voltages with 3 digits to the right of the decimal point (e.g., 1.733)

Sample #	Local Time (24 hr) (hour:minute:second)	Max Sunlight Voltage (volts)	Dark Voltage (volts)
1 (IR1)	: :		
1 (IR2)	: :		
2 (IR1)	: :		
2 (IR2)	: :		
3 (IR1)	: :		
3 (IR2)	: :		
4 (IR1)	: :		
4 (IR2)	: :		
5 (IR1)	: :		
5 (IR2)	: :		

Optional

Comments:

GLOBE Water Vapor Data Sheet: Other Required Protocols

Name: _____ Site Name: _____

Date: _____ Time (local): _____

Barometric Pressure Measurement

Is the pressure reading: Sea level pressure Station pressure

Pressure: _____ mb

Record barometric pressure to the nearest 0.1 millibar (or hectopascal).

Relative Humidity Measurement

Select instrument used and record the appropriate data.

<input type="checkbox"/> Sling Psychrometer	OR	<input type="checkbox"/> Digital Hygrometer
Dry bulb temperature: _____ °C		Air temperature: _____ °C
Wet bulb temperature: _____ °C		Relative Humidity: _____ %
Relative Humidity*: _____ % <i>*GLOBE data entry calculates this for you</i>		
<p>Record the temperature to the nearest 0.5°C</p>		<p>Record relative humidity to the nearest 1%</p>

If there is fog, rain or snow, the relative humidity is 100%; write "condensation occurring" in comments.

Current Air Temperature Measurement

Current Temperature: _____ °C

Record temperature to the nearest 0.5°C (liquid) or 0.1°C (digital).

Comments:

GLOBE Water Vapor Data Sheet and Field Guide (page 1)

Name: _____ Site Name: _____

Date: _____ Time (local): _____

Water Vapor Measurement

1. Turn your instrument on and hold it in front of you in a position where you can read the digital panel meter and can comfortably keep the spot of sunlight shining through the front alignment bracket centered on the rear alignment dot.
2. Set the rotary switch on the top of the case, to the “T” setting. Multiply this voltage times 100 to get the case temperature before measurements.

Case Temperature *before* measurements: _____ °C

3. Select the IR1 channel.
4. Adjust the aim of your instrument until the spot of sunlight coming through the front alignment bracket is centered on the colored alignment dot on the rear bracket. Wait 2–3 seconds. Then, keeping the spot of sunlight centered on the alignment dot, observe the voltage on the voltmeter for the next 10–15 seconds and record the maximum voltage.

Max Sunlight Voltage (IR1): _____ volts

5. Record the time at which you observed the maximum voltage to the nearest 15 seconds.

Local Time (24 hr): _____ hr _____ min _____ sec

6. While still pointing the instrument at the sun, cover the aperture with your finger to block all light from entering the case. Take a voltage reading and record the dark voltage.

Dark Voltage (IR1): _____ volts

7. Set the channel to IR2 and repeat steps 4–6. Record the values on the data table on page 3.
8. Repeat steps 3–7 at least twice more. Record measurements on the data table on page 3.
9. Set the rotary switch on the top of the case, to the “T” setting. Multiply this voltage times 100 to get the case temperature after measurements.

Case Temperature *after* measurements: _____ °C

GLOBE Water Vapor Data Sheet and Field Guide (page 2)

Other Protocol Measurements

- Turn off the instrument.
- Complete the [GLOBE Clouds Protocol](#) and record your data on the [Clouds data sheet](#).
- Complete the [Relative Humidity Protocol](#) and record the data below in the appropriate column depending on your instrument. *If there is fog, rain or snow, the relative humidity is 100%; write "condensation occurring" in comments.*

<input type="checkbox"/> Sling Psychrometer	OR	<input type="checkbox"/> Digital Hygrometer
Dry bulb temperature: _____ °C		Air temperature: _____ °C
Wet bulb temperature: _____ °C		Relative Humidity: _____ %
Relative Humidity*: _____ % <i>*GLOBE data entry calculates this for you</i>		<div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">Record relative humidity to the nearest 1%</div>
<div style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">Record the temperature to the nearest 0.5°C</div>		

- Complete the [Barometric Pressure protocol](#) and record pressure.

Pressure: _____ mb

- Complete the [Current Air Temperature Protocol](#) and record the temperature.

Current Temperature: _____ °C

Record temperature to the nearest 0.5°C (liquid) or 0.1°C (digital).

Comments:

GLOBE Water Vapor Data Sheet and Field Guide (page 3)

Photometer Serial number: _____

If you know satellite overflights on measurement date:

Instrument name: _____

Time of overflight (24 hr): _____ Maximum elevation angle: _____°

Water Vapor Measurements

The “Sample 1 (IR1)” row is the data you recorded on page 1.

Report voltages with 3 digits to the right of the decimal point (e.g., 1.733)

Optional

Sample #	Local Time (24 hr) (hour:minute:second)	Max Sunlight Voltage (volts)	Dark Voltage (volts)
1 (IR1)	: :		
1 (IR2)	: :		
2 (IR1)	: :		
2 (IR2)	: :		
3 (IR1)	: :		
3 (IR2)	: :		
4 (IR1)	: :		
4 (IR2)	: :		
5 (IR1)	: :		
5 (IR2)	: :		

Comments: