Weather Observation & Analysis Project (WxProj)

Screen X   Instrument

Example Data Collection Sheet

DATE	TIME	TEMPERATURE			HUMIDITY (Note wick state & instrument type in RH column)					PRECIPITATION (Note when precip is from melted rain gauge)			SKY Condition & CLOUD				WIND					PRESSURE			COMMENTS
Entered from earliest to latest date & time		Max Temp. (°C)	Min Temp. (°C)	Present Air Temp. (°C)	Wet bulb Temp. (°C) / F = wick is frozen	Dry bulb Temp. (°C)	e (hPa)	RH (%) / B = Bacharach	A = Assmann / W = Weksler	Snow Depth (mm) / Ruler measurement	Snow Water Equivalent (mm)	Rain gauge (mm) T = Trace / M = from melted rain gauge	SKY: CLR FEW SCT BKN OVC OBSCD MISG	Amount (8ths) low mid high	Cloud type: Use 2-letter cloud abbreviations & double dashes for layers you cannot see. low mid high		Visual Observation: Direction Bearing as an 8 point compass	Beaufort number	UNBC Weather Station: Direction Azimuth as degrees (°) from north	Speed (m/s)	Barometer (mm Hg)	Barometer Temp. (°C)	Corrected Pressure (hPa)	

↑ Report data, 1 row each reading time

Each student will calculate their own e (hPa) & RH (%) values from recorded observations.

Each student will calculate their own SWE values from recorded observations.

Each student will calculate their own pressures from recorded observations.

The WxProj data collection sheet remains on the roof top clipboard at all times!

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DATE	TIME	TEMPERATURE			HUMIDITY (Note wick state & instrument type in RH column)						PRECIPITATION (Note when precip is from melted rain gauge)				SKY Condition & CLOUD				WIND					PRESSURE			COMMENTS
Entered from earliest to latest date & time		Max Temp. (^oC)	Min Temp. (^oC)	Present Air Temp. (^oC)	Wet bulb Temp. (^oC) / F = wick is frozen	Dry bulb Temp. (^oC)	e (hPa)	RH (%) / A = Assmann, B = Bacharach, W = Weksler			Snow Depth (mm) Ruler measurement	Snow Water Equivalent (mm)	Rain gauge (mm) T = Trace, M = from melted rain gauge	SKY: CLR FEW SCT BKN OVC OBSCD MISG	Amount (8^{ths}) (low, mid, high)			Cloud type: Use 2-letter cloud abbreviations & double dashes for layers you cannot see. (low, mid, high)	Direction Bearing as an 8 point compass	Beaufort number	Direction Azimuth as degrees (°) from north	Speed (m/s)	Barometer (mm Hg)	Barometer Temp. (^oC)	Corrected Pressure (hPa)	

Report Max-Min Thermometer data here (1 row each reading time)

Each student will calculate their own e (hPa) & RH (%) values from recorded observations.

Each student will calculate their own SWE values from recorded observations.

Each student will calculate their own pressures from recorded observations.

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Stevenson Screen – Instrument Shelter

Double roof keeps out precipitation & sunshine

Wood & white paint reduces heat absorption

Door opens out away from the sun

Slats /louvres allows air flow

Between 1.2 and 1 meters from the ground to stop heat transmission

Max Min Thermometers

Report 3 air temperatures:

- present air temp.
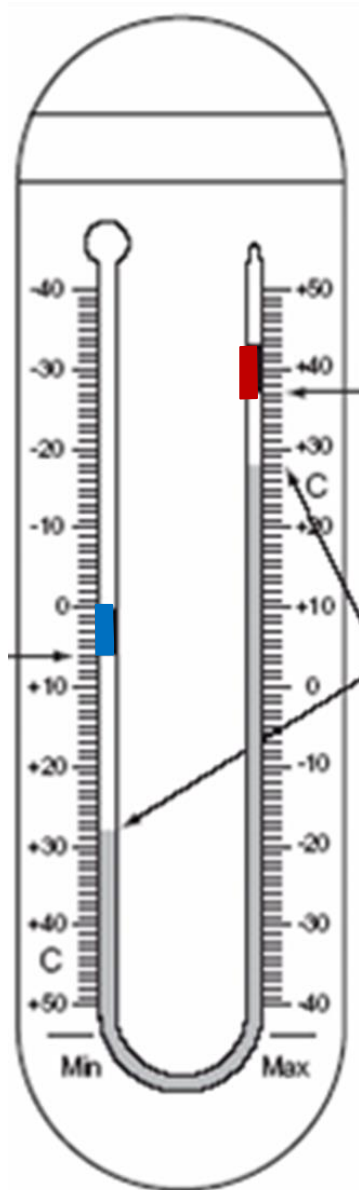- **maximum air temp.**
- **minimum air temp.**

Read (to the proper precision):

- present air - top of the mercury column
- **maximum air – bottom of the pin**
- **minimum air – bottom of the pin**

Correctly report each measurement (including its precision)

Reset pins using the magnet, pins must contact the mercury!

Minimum 6° C

Maximum 37° C

Current 28° C
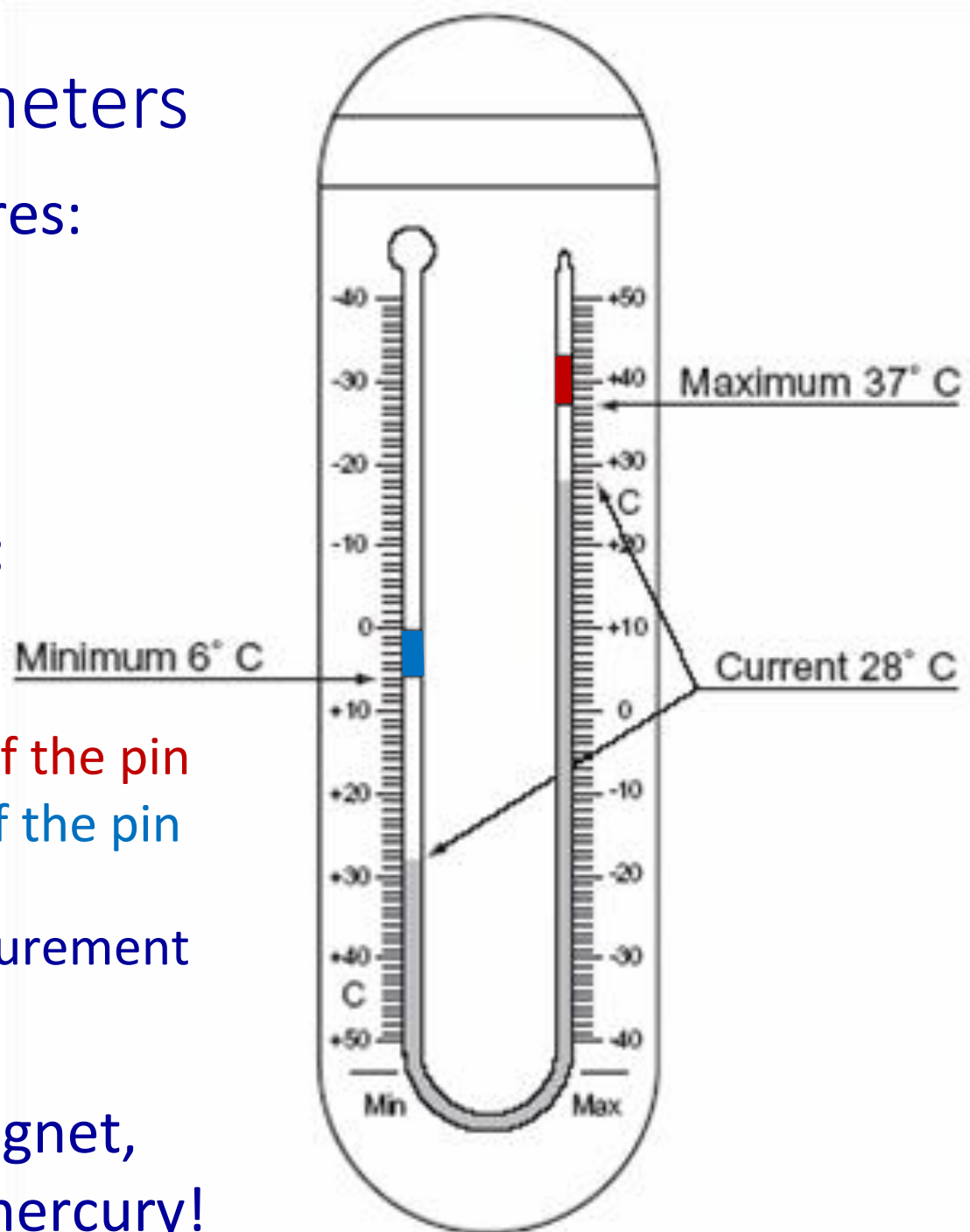
How does it work?
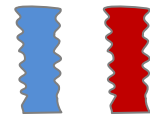
Thermometer pins have barbs

that catch along the sides of the thermometer's glass bore and prevent the pins from falling without extra force.

Check that you properly determined and reported each reading before resetting the pins.