

Maximum/Minimum Thermometer Calibration

Field Guide

Task

Check the calibration of the maximum/minimum thermometer.

Adjust the maximum/minimum thermometer if necessary.

What You Need

- Calibration thermometer that has been checked following the instructions in the *Thermometer Calibration Lab Guide*
- Atmosphere Investigation Data Sheet*

In the Field

Day 1

Hang the calibration thermometer in the instrument shelter so that the bulb of the thermometer is not touching any surface.

Day 2

1. After reading the current, maximum, and minimum temperatures on the maximum/minimum thermometer, read the temperature on the calibration thermometer to the nearest 0.5°C .
2. Compare this reading with the current temperature from both the maximum and the minimum sides of the maximum/minimum thermometer.
3. If these readings are within $\pm 0.5^{\circ}\text{C}$ of the reading on the calibration thermometer, note in your metadata that the calibration of the maximum/minimum thermometer is good and complete the *Maximum, Minimum, and Current Temperature Protocol*.
4. If the current temperature reading from either side of the maximum/minimum thermometer is not within $\pm 0.5^{\circ}\text{C}$ of the reading on the calibration thermometer, proceed with the following steps:
5. Record the current temperatures from both the maximum and minimum sides of the maximum/minimum thermometer and the temperature reading of the calibration thermometer as comments for today on the *Atmosphere Investigation Data Sheet*. (Report all three temperatures.)
6. Leave the calibration thermometer hanging in the instrument shelter.
7. Remove the maximum/minimum thermometer from the instrument shelter. Do not touch the bulb of this thermometer. Keep the thermometer out of direct sunlight.
8. Loosen the screw so that the scales on the thermometer can move.
9. Slide the scales so that the current temperature reading agrees with the calibration thermometer reading.
10. Tighten the screw so that the scales are locked in place once more.
11. Remount the maximum/minimum thermometer in the instrument shelter and reset the indicators to the top of the mercury on both sides.
12. Record and report only the current temperature for today using the value from the calibration thermometer.
13. Record in your metadata for today that the thermometer required recalibration.