

Revised Figure 4:

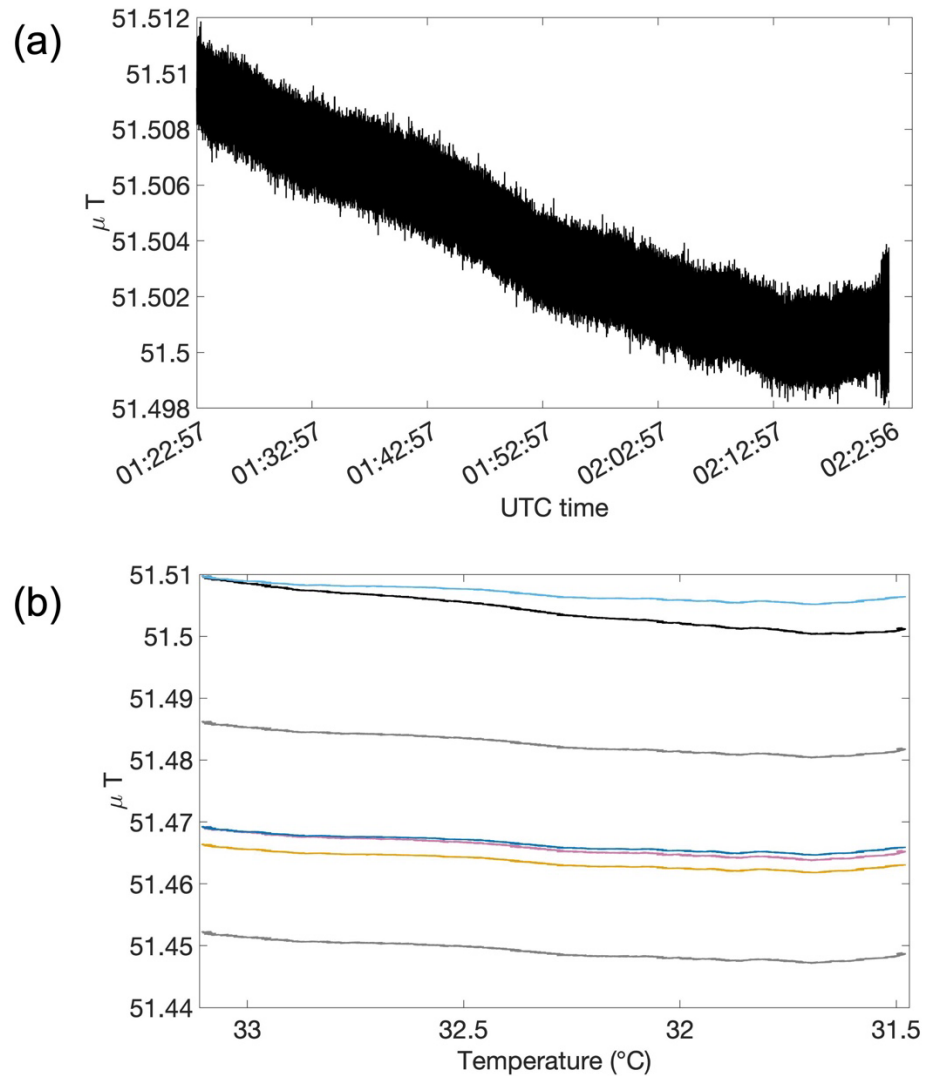


Figure 4: The results of an empirical evaluation of our temperature calibration, during a 1-hour recording under natural temperature variation. (a) The intensity of the raw uncalibrated data, plotted over time. (b) The results of the calibration. Black line: the intensity of the 1-sec uncalibrated vector data. Magenta line: the intensity of the calibrated vector data. Grey lines: the maximum and minimum values of the intensity of the calibrated vector data, accounting for the $1-\sigma$ least-squares uncertainties of the calibration coefficients shown in Figure 3. Orange line: the scalar data. Light blue line: the scalar data, with their baseline adjusted to that of the intensity of the uncalibrated vector data. Blue line: the scalar data, with the baseline adjusted to that of the intensity of the calibrated vector data.

Revised Figure 5:

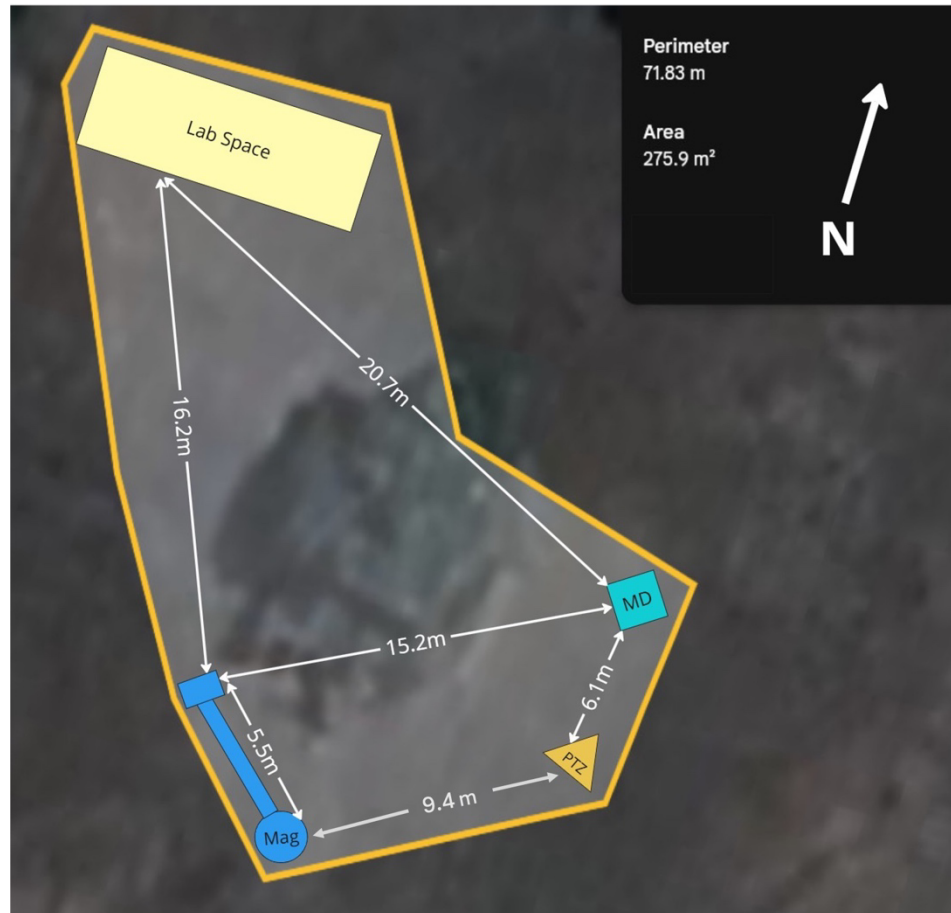


Figure 5: Diagram of the deployment site, showing the location of various instruments, including the magnetometer, and the distance among them. The blue circle shows the location of the hole, inside which the magnetometer was deployed. The blue rectangular shows the location of the magnetometer's data acquisition system. The yellow triangle and cyan square show the location of the Pan-Tilt-Zoom Beacon 8.0 camera (PTZ) and the all-sky camera arrays (MD) (Domine et al., 2025), respectively, which were also deployed at the site. The light yellow rectangular shows the location of the lab space.

Revised Figure 9:

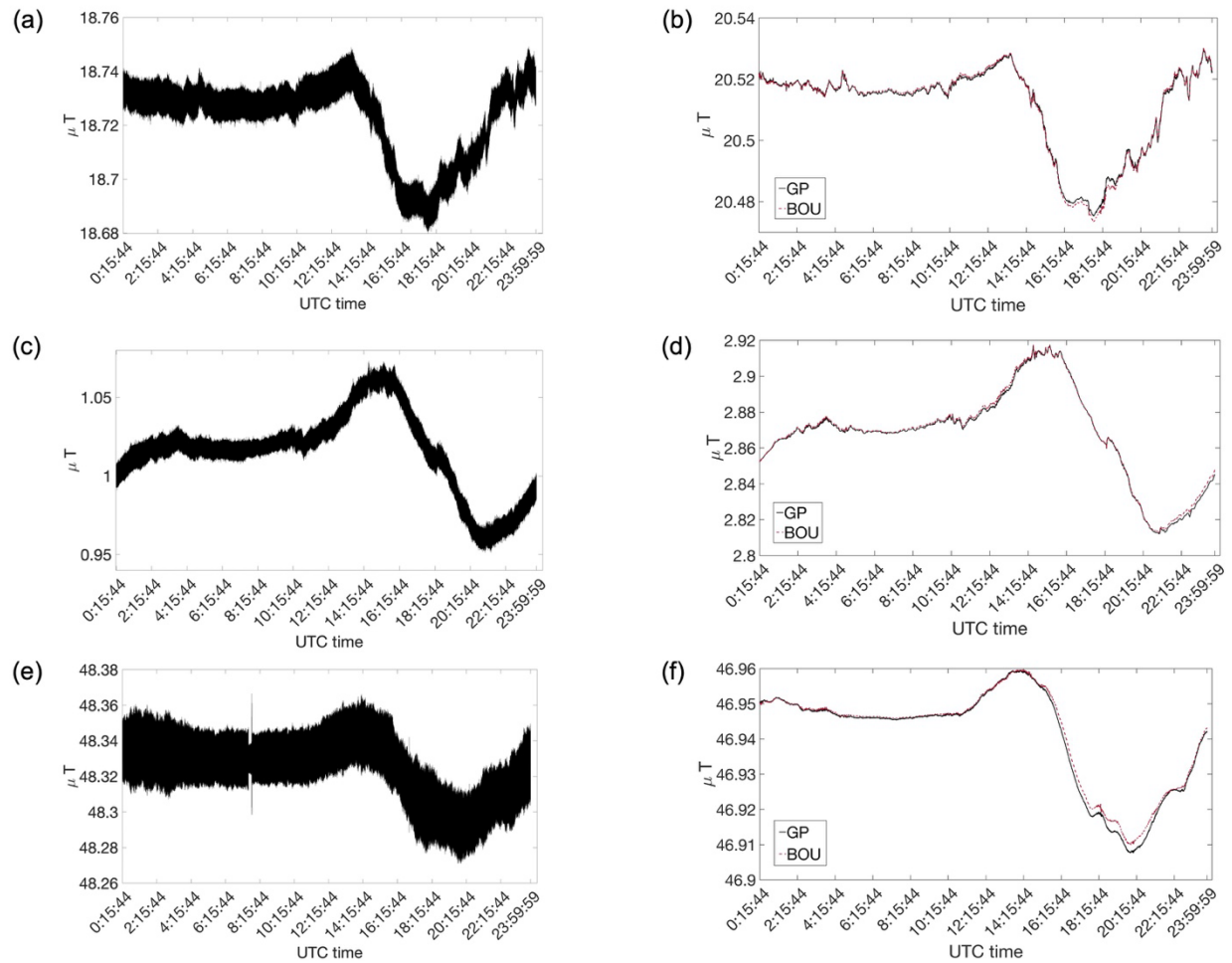
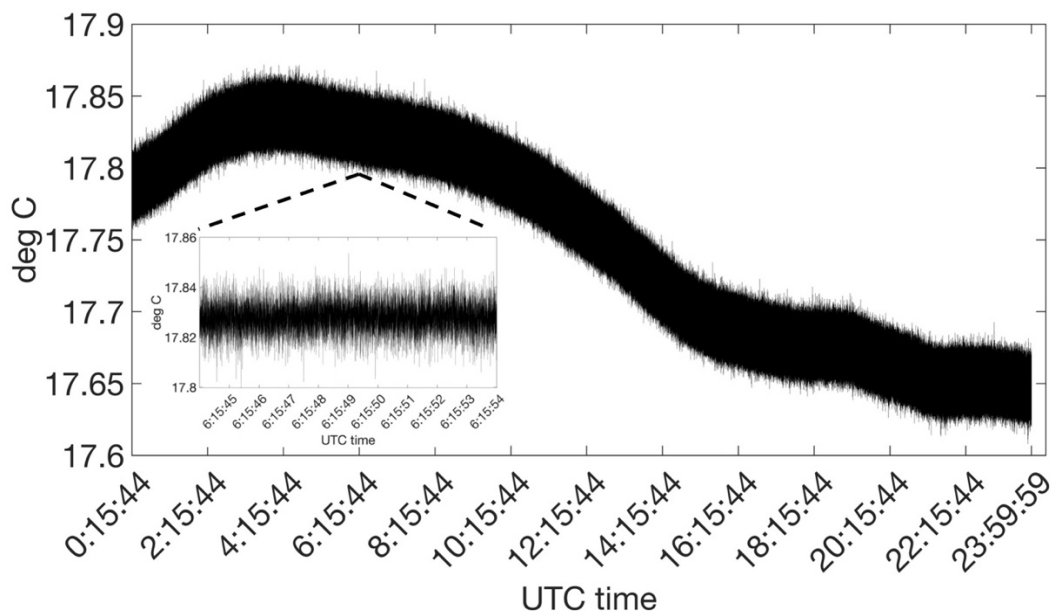


Figure 9 : Vector magnetic field data recorded on May 9, 2024, a magnetically quiet day ($K_p < 3$). Left column: Our raw data. Right column: Our 1-sec magnetic field data (black solid line), after their baseline has been adjusted to the nearest USGS magnetic observatory, which is located in Boulder, Colorado (BOU), and 1-sec magnetic field data recorded at BOU (red dashed line). From top to bottom: The magnetic field components pointing toward geographic North (X), geographic East (E), and Down (Z), respectively.

Former Figure 10 with a 10 sec zoom-in inset:



Revised Figure 10:

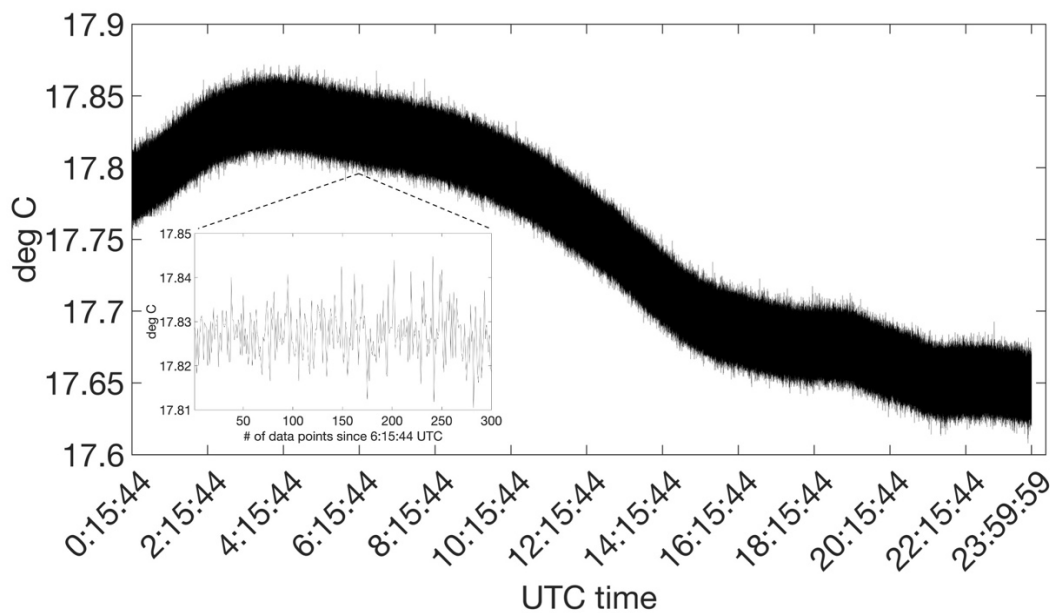


Figure 10: Raw temperature data, recorded with the integrated temperature sensor on May 9, 2024, with a sampling rate of 1612.9 Hz. The inset shows a 300 data points zoom-in. Temperature readings vary by less than 0.3 °C, as a result of the thermal insulation measures we took during deployment. Similar diurnal temperature variations characterize all our data up until July 1st, which is when the temperature readings became erratic (see text for details).

Revised Figure 14:

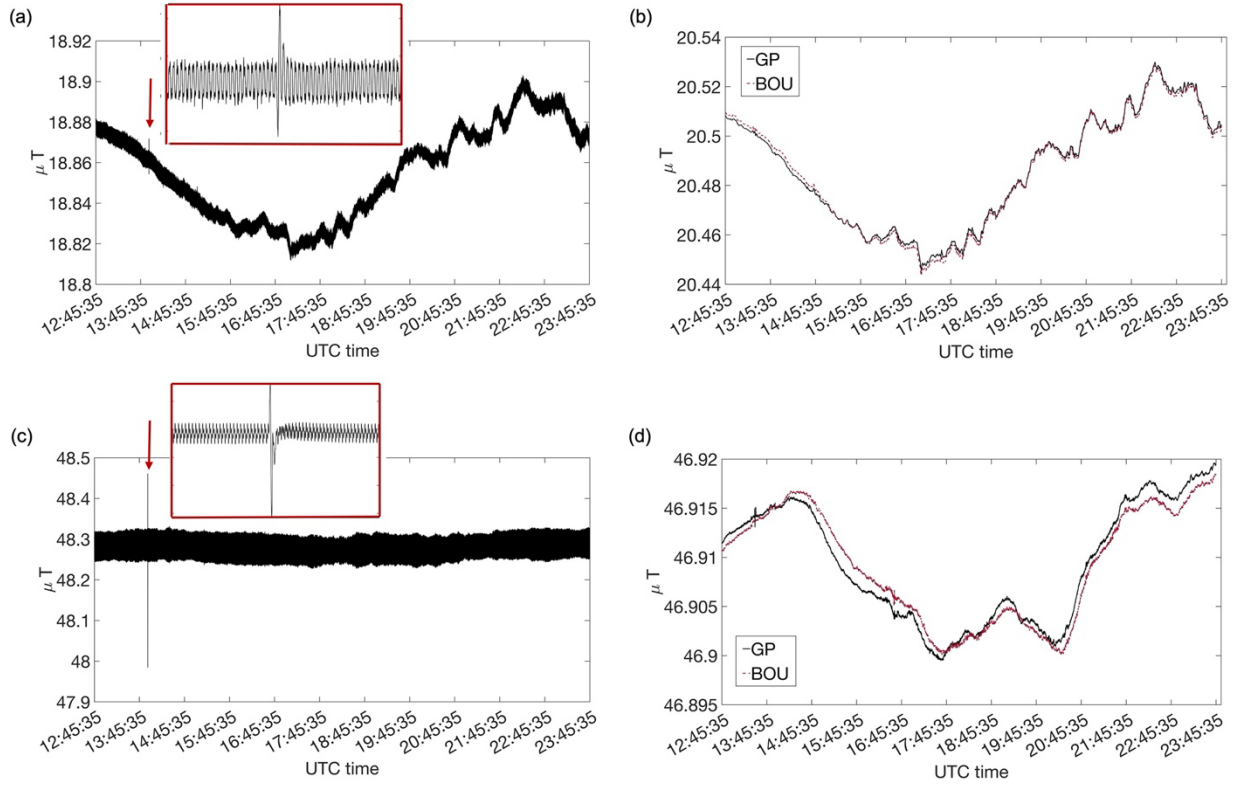


Figure 14: Our magnetic field measurements showing noise in the form of spikes (see text for details). (a) Raw (i.e., unprocessed) measurements of the magnetic field component pointing North (X) on September 9, 2024. Note the spike at 13:56:39 UTC (marked by the arrow). The inset shows a 1 second long extract centered on the spike. (b) The magnetic field component pointing North (X) of 1-sec data. Black solid line shows our magnetic field data, after their baseline has been adjusted to that of BOU. The moving average filtering eliminated the spike. Red dashed line shows 1-sec magnetic field data recorded at BOU. (c-d) Same as (a-b) for the magnetic field component pointing Down (Z). Note that the moving average filtering did not eliminate the spike but only reduced its amplitude.