

# Calibration Report: Pressure Transmitter

## S/N: W1442544

Lilly Grear  
NASA Langley/CRAVE Intern  
Hampton, Virginia

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### Summary

Calibration date: 2024 Apr 5

Next Calibration date: As needed

A collection, analysis, and calibration of data from a Pressure Transmitter, S/N: W1442544 has been completed. Vaisala, Inc., the manufacturer of the instrument, performed the calibration. The data was collected by Vaisala on 2024 April 5.

Model: PTB110 Barometer (Vaisala)

Serial Number: W1442544

The test data presented in data table format display the pressure transmitter readings (reference and observed) in millibar and any correction needed. The pressure reading at the CRAVE sites historically range between 950-1060mb.

We used this methodology because CRAVE measurements are collected in voltages and we usually request voltage readings for pressure calibrations. The following pages provide more detail into the calibration process and results.

Application: The pressure sensor is read by a Campbell Scientific data logger that collects raw voltage data. Any correction is applied during processing of raw data.

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## CALIBRATION CERTIFICATE

**Instrument** PTB110 Barometer  
**Serial number** W1442544  
**Manufacturer** Vaisala Oyj, Finland  
**Calibration date** 5th April 2024

The above instrument was calibrated by comparing the readings of the instrument to the factory working standard of Vaisala.

The measurement results are traceable to the international system of units (SI) through national metrology institutes (NIST USA, VTT MIKES Finland, or equivalent) or via ISO/IEC 17025 accredited calibration laboratories.

**Calibration results**

Reference pressure hPa	Calculated pressure hPa	Observed voltage Vdc	Correction* hPa	Uncertainty** hPa
510.4	510.3	0.043	0.1	± 0.15
610.3	610.3	0.460	0.0	± 0.15
700.3	700.3	0.835	0.0	± 0.15
810.2	810.2	1.293	0.0	± 0.15
900.1	900.1	1.667	0.0	± 0.15
1000.3	1000.3	2.085	0.0	± 0.15
1060.3	1060.3	2.335	0.0	± 0.15
1100.0	1100.0	2.500	0.0	± 0.15

\*To obtain the true pressure, add the correction to the barometer reading. Interpolated corrections may be used at intermediate readings of the scale of the barometer.

\*\*The calibration uncertainty given at 95 % confidence level, k = 2

**Equipment used in calibration**

Type	Serial number	Calibration date	Certificate number
HP34970A	EM 13990	2023-09-18	4166425-1
PTB220	PA 14019	2023-06-19	K008-G03703

**Ambient conditions**

Humidity: 38 ± 5 %RH

Temperature: 21 ± 2 °C

Pressure: 1015 ± 20 hPa

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Technician

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