



## C-Star Calibration

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Date **3.6.15** S/N# **CST-642PR** Pathlength **25cm**

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### Analog output

**V<sub>d</sub>** **0.058 V**  
**V<sub>air</sub>** **4.836 V**  
**V<sub>ref</sub>** **4.739 V**

Temperature of calibration water **20.3 °C**  
Ambient temperature during calibration **22.0 °C**

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Relationship of transmittance (Tr) to beam attenuation coefficient (c), and pathlength (x, in meters): **Tr = e<sup>-cx</sup>**

To determine beam transmittance: **Tr = (V<sub>sig</sub> - V<sub>dark</sub>) / (V<sub>ref</sub> - V<sub>dark</sub>)**

To determine beam attenuation coefficient: **c = -1/x \* ln (Tr)**

**V<sub>d</sub>** Meter output with the beam blocked. This is the offset.

**V<sub>air</sub>** Meter output in air with a clear beam path.

**V<sub>ref</sub>** Meter output with clean water in the path.

Temperature of calibration water: temperature of clean water used to obtain V<sub>ref</sub>.

Ambient temperature: meter temperature in air during the calibration.

**V<sub>sig</sub>** Measured signal output of meter.