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C-Star Calibration

Date	February 9, 2012	S/N#	CST-806DR	Pathlength 25
			Analog output	
V_{d}			0.059 V	
V_{air}			4.786 V	
\mathbf{V}_{ref}			4.712 V	
Temperature of calibration water				20.0 °C
Ambient temperature during calibration				21.1 °C

Relationship of transmittance (Tr) to beam attenuation coefficient (c), and pathlength (x, in meters): $Tr = e^{-cx}$

To determine beam transmittance: $Tr = (V_{sig} - V_{dark}) / (V_{ref} - V_{dark})$

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

V_d Meter output with the beam blocked. This is the offset.

V_{air} Meter output in air with a clear beam path.

 V_{ref} Meter output with clean water in the path.

Temperature of calibration water: temperature of clean water used to obtain V_{ref}.

Ambient temperature: meter temperature in air during the calibration.

 V_{sig} Measured signal output of meter.

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