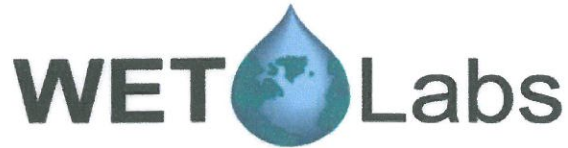


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## C-Star Calibration

Date March 7, 2013 S/N# CST-1609DR Pathlength 25 cm

	Analog output	Digital output
$V_d$	0.005 V	0 counts
$V_{air}$	4.818 V	15858 counts
$V_{ref}$	4.703 V	15511 counts

Temperature of calibration water 20.0 °C  
Ambient temperature during calibration 20.8 °C

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

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

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

$V_d$  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.