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C-Star Calibration Sheet

Date:	**04-08-03**
Customer:	**Institute of Ocean Sciences**
Serial Number:	**CST-216PR**
Job Number:	**9808012**
Work Order:	**003**

V_d = V dark	**0.059**
V_{air} = V out in air	**4.698**
V_{ref} = V out in water	**4.972**
Calibration Temperature of water	**18.9**
Ambient Temperature	**19.4**

% Transmission = $\mathbf{(V_{sig}-V_d)/(V_{ref}-V_d)}$
$\mathbf{Tr = e^{-cx}}$
To solve for the attenuation coefficient **c** in units of $\mathbf{m^{-1}}$ use the following equation.
$\mathbf{c = -1/x\ (ln(V_{sig}-V_d)/(V_{ref}-V_d))}$
For further information on these calculations please see C-Star User's Guide, Section 2.

Temperature Error: 0.02% F.S./°C

NOTES

- ($\mathbf{V_d}$)—analog output of the instrument with the beam blocked. This is an instrumental offset.
- ($\mathbf{V_{air}}$)—analog output voltage of the instrument with a cleared beam path.
- ($\mathbf{V_{ref}}$)—analog output voltage of the instrument with clean H_2O in the path.
- (**Calibration Temperature of water**)—temperature of the clean water used to obtain $\mathbf{V_{ref}}$.
- (**Ambient Temperature**)—temperature of the instrument during the calibration procedures.
- ($\mathbf{V_{sig}}$)—measured signal voltage of the C-Star.

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C-Star Calibration and Repairs

Date: **04-08-03**

Serial #: **CST-216PR**

Job #: **9808012**

Work Order #: **003**

Customer: **Institute of Ocean Sciences**

Repairs and Modifications:

Evaluated and cleaned instrument. Added new purge port end cap and plug.
Replaced bulkhead & reference detector.
New calibration.

Comments:

• Shake-tested unit	• Performed water calibration
• Pressure-tested unit	• Temperature test: _____°C to _____°C
• Noise test: 1 sample/sec for 30 sec	• Updated unit's calibration sheet
• Stability test: 1 sample/min for 12 hrs	