

C-Star Calibration Sheet

Date: December 9,1998
Customer: Institute of Ocean Sciences
Serial Number: CST-216R
Model Number: 9808012

$V_d = V$ dark 0.059
 $V_{air} = V$ out in air 4.841
 $V_{ref} = V$ out in H₂O 4.977
Calibration Temp of H₂O 25.4
Ambient Temperature 23.6

$$\% \text{ Transmission} = (V_{sig} - V_d) / (V_{ref} - V_d)$$

$$Tr = e^{-cx}$$

To solve for the attenuation coefficient c in units of m^{-1} use the following equation.

$$c = -1/x (\ln(V_{sig} - V_d) / (V_{ref} - V_d))$$

For further information on these calculations please see C Star Users Guide section 1.

Temperature Error: 0.02% F.S./°C

NOTES

- (V_d) is the analog output of the instrument with the beam blocked. This is an instrumental offset.
- (V_{air}) is the analog output voltage of the instrument with a cleared beam path.
- (V_{ref}) is the analog output voltage of the instrument with clean H₂O in the path.
- (**Calibration Temp of H₂O**) is the temperature of the clean H₂O used to obtain V_{ref} .
- (**Ambient Temperature**) is the temperature of the instrument during the calibration procedures.
- (V_{sig}) is the measured signal voltage of the C Star.