

Transmissometer Field Calibration

cruise	PE13-13 WLF
date	10/25/2012
tech	AR
factory cal	5/14/2012

serial #	489DR
path length (cm)	25
old M	19.6045429
old B	-0.0725368

light transmission (%) = (M*voltage output) + B
M and B are calibration coefficients

$$M = (Tw/(W0-Y0))*(A0-Y0)/(A1-Y1)$$

$$B = -M*Y1$$

A0 = factory output in air (Vair)

Y0 = factory dark or zero output (Vd)

W0 = factory output in pure water (Vref)

Tw = % transmission in pure water, relative to water Tw = 100%,
relative to air Tw = 91.3% for 25cm and 96.4 for 10cm path

A1 = current output in air

Y1 = current dark (blocked) output

A0	4.796
Y0	0.008
W0	4.706
Tw	91.3
A1	4.31502
Y1	0.00366

M	21.58229
B	-0.07899