

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0670  
CALIBRATION DATE: 19-Sep-07

SBE4 CONDUCTIVITY CALIBRATION DATA  
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

## GHIJ COEFFICIENTS

g = -4.30744227e+000  
h = 4.56837878e-001  
i = 4.82528544e-004  
j = -1.62856377e-006  
CPcor = -9.5700e-008 (nominal)  
CTcor = 3.2500e-006 (nominal)

## ABCDM COEFFICIENTS

a = 6.19773574e-004  
b = 4.56566156e-001  
c = -4.30719419e+000  
d = -8.91189022e-005  
m = 2.9  
CPcor = -9.5700e-008 (nominal)

| BATH TEMP<br>(ITS-90) | BATH SAL<br>(PSU) | BATH COND<br>(Siemens/m) | INST FREQ<br>(kHz) | INST COND<br>(Siemens/m) | RESIDUAL<br>(Siemens/m) |
|-----------------------|-------------------|--------------------------|--------------------|--------------------------|-------------------------|
| 0.0000                | 0.0000            | 0.00000                  | 3.06573            | 0.00000                  | 0.00000                 |
| -1.0002               | 34.9324           | 2.81304                  | 8.39037            | 2.81302                  | -0.00002                |
| 0.9998                | 34.9324           | 2.98492                  | 8.60895            | 2.98494                  | 0.00002                 |
| 14.9998               | 34.9342           | 4.28452                  | 10.10772           | 4.28450                  | -0.00002                |
| 18.4998               | 34.9339           | 4.63226                  | 10.47203           | 4.63227                  | 0.00001                 |
| 28.9998               | 34.9321           | 5.71912                  | 11.53568           | 5.71913                  | 0.00001                 |
| 32.4998               | 34.9261           | 6.09294                  | 11.87920           | 6.09294                  | -0.00001                |

Conductivity =  $(g + hf^2 + if^3 + jf^4) / 10(1 + \delta t + \epsilon p)$  Siemens/meter

Conductivity =  $(af^m + bf^2 + c + dt) / [10(1 + \epsilon p)]$  Siemens/meter

t = temperature[°C]; p = pressure[decibars];  $\delta$  = CTcor;  $\epsilon$  = CPcor;

Residual = (instrument conductivity - bath conductivity) using g, h, i, j coefficients

Date, Slope Correction

