# Supplementary Material

Table S1: Calibration parameters and settings for the EK500 scientific echosounder used during the 2001 KACTAS survey and the EK60 scientific echosounder used during the 2003 KAOS survey. For some of the calibration parameters the EK500 has two values (logging and data processing).

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| --- | --- | --- |
| **Survey** | **KACTAS** | **KAOS** |
| Instrument | EK500 | EK60 |
| Channel | T1 | T3 | T2 | T1 | T2 | T3 |
| Frequency (kHz) | 38 | 120 | 200 | 38 | 120 | 200 |
| Absorption Coefficient (dB m-1) | 0.01 | 0.03 | 0.04 | 0.01 | 0.03 | 0.04 |
| Absorption Coefficient Logging (dB m-1) | 0.01 | 0.03 | 0.04 | - | - | - |
| sA correction (dB) |  |  |  | -0.53 | -0.42 | -0.44 |
| Transducer gain (dB) | 24.13 | 18.73 | 17.37 | 21.99 | 21.75 | 20.53 |
| Transducer gain logging (dB) | 23.52 | 18.73 | 17.37 | - | - | - |
| Sv transducer gain (dB) | 24.13 | 18.69 | 17.84 | - | - | - |
| Sv transducer gain logging (dB) | 23.52 | 18.69 | 17.84 | - | - | - |
| Major Axis 3dB beam angle (◦) | 6.81 | 9.6 | 7.40 | 6.97 | 7.41 | 6.92 |
| Major axis angle offset (◦) | -0.06 | 0 | 0 | -0.09 | 0.02 | -0.01 |
| MinorAxis3dbBeamAngle (◦) | 6.85 | 9.6 | 7.40 | 6.92 | 7.59 | 6.77 |
| MinorAxisAngleOffset (◦) | -0.29 | 0 | 0 | 0.01 | 0.26 | -0.03 |
| Power (W) | 2000 | 1000 | 1000 | 2000 | 1000 | 400 |
| Pulse duration (ms) | 1 | 1 | 1 | 1.024 | 1.024 | 1.024 |
| Pulse duration logging (ms) | 1 | 1 | 1 | - | - | - |
| Two-way beam angle (dB re 1 sr) | -20.80 | -18.00 | -20.20 | -20.6 | -20.8 | -20.8 |
| Two-way beam angle logging (dB re 1 sr) | -20.80 | -18.00 | -20.20 | - | - | - |
| Sound speed (ms-1) | 1446 | 1446 | 1446 | 1446 | 1446 | 1446 |
| Sound speed logging (ms-1) | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |