



G³ | Geochemistry, Geophysics, Geosystems

Supporting Information for

[The southwest Indian Ocean Bathymetric Compilation (swIOBC)]

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Additional Supporting Information (Files uploaded separately)

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Introduction

The supporting information contains meta-data and additional data to assess the quality of the swIOBC. Figure (S1-S3) and data grids (available at <https://doi.org/10.1594/PANGAEA.880618>) provide information to assess the accuracy of the swIOBC.

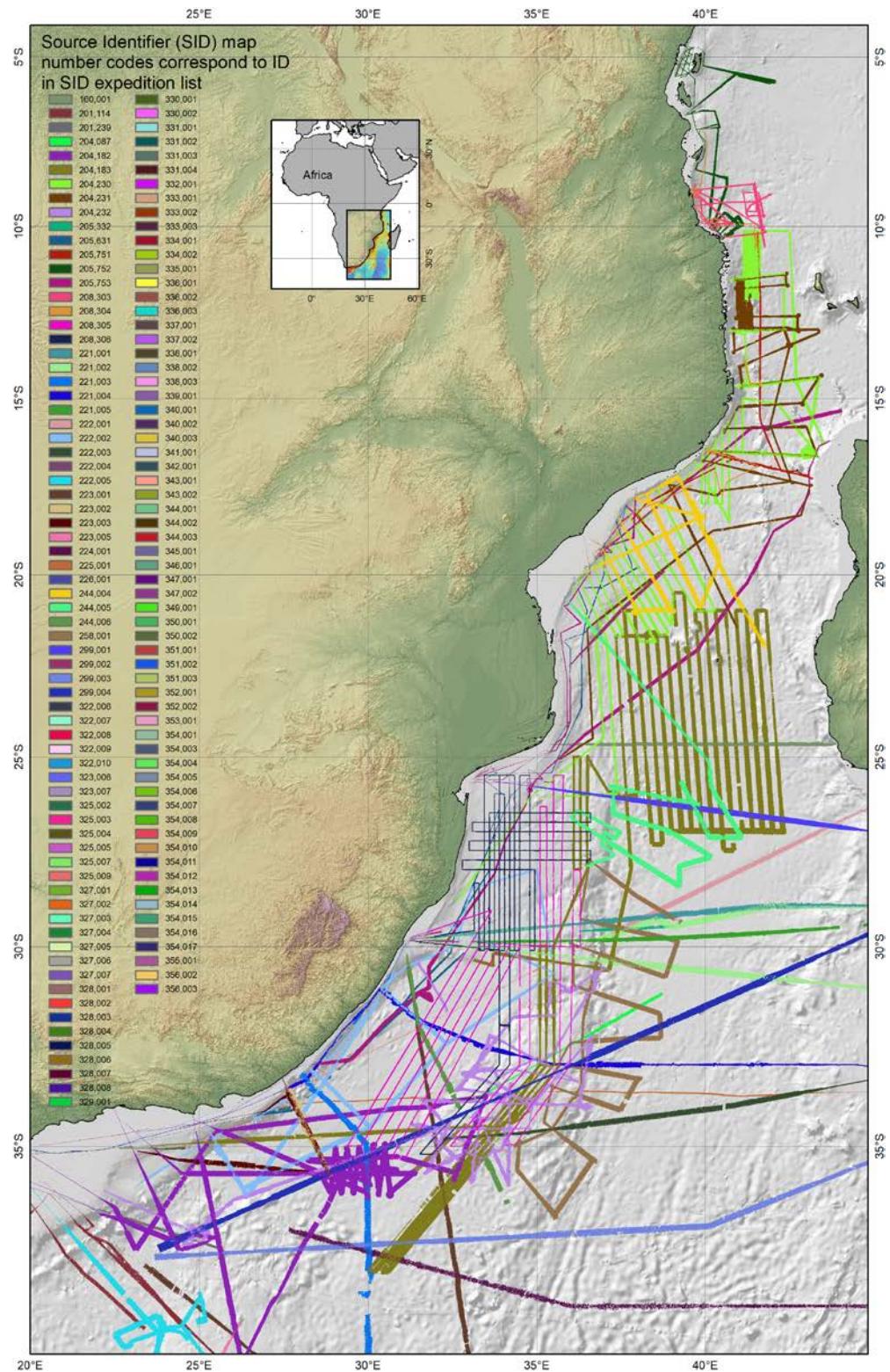


Figure S1. Source Identifier (SID) Map. Number codes correspond to IDs in SID expedition list (S4) that contain additional meta-data for the source data.

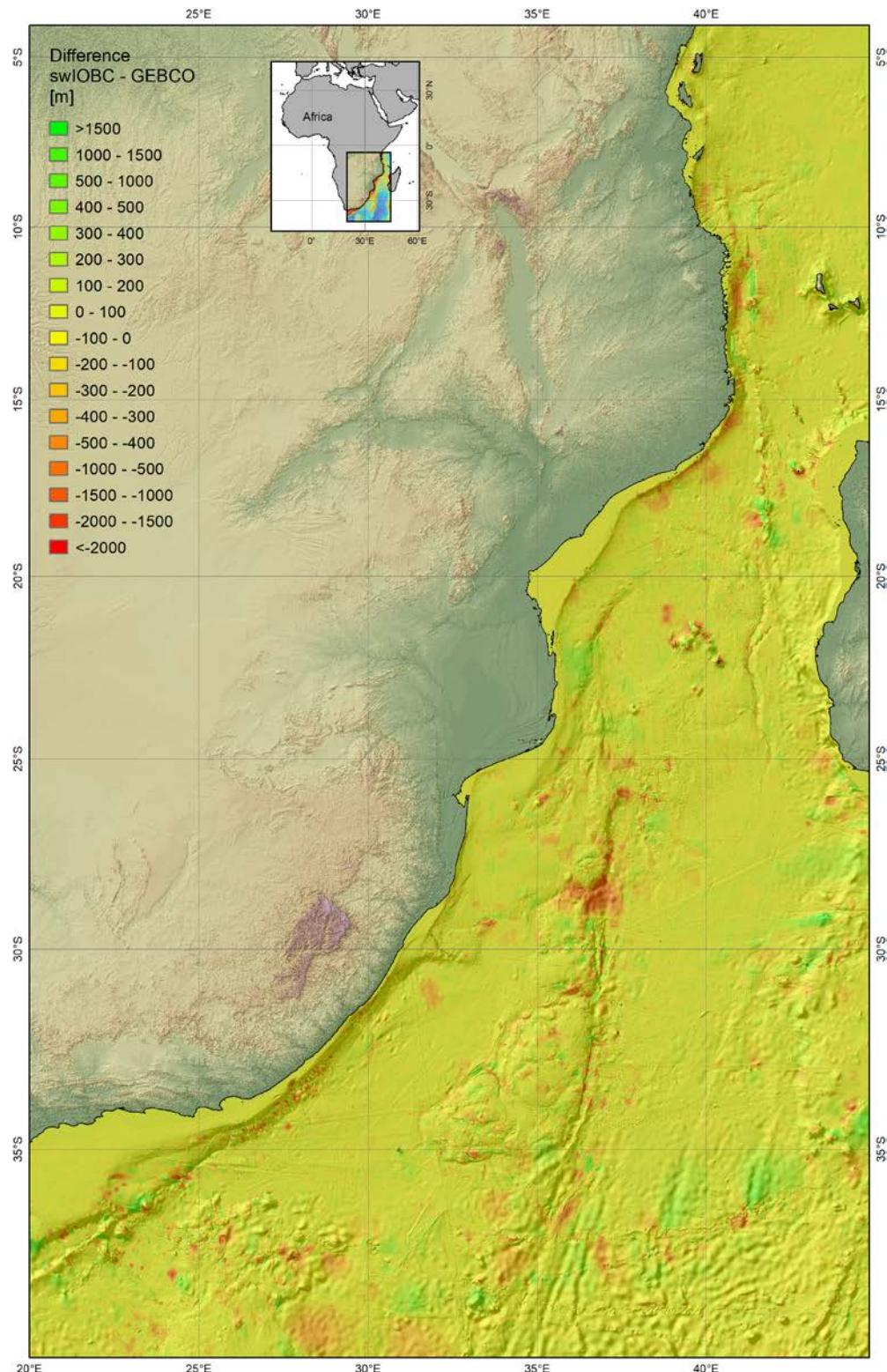


Figure S2. Difference map showing the offset of the swIOBC to the GEBCO_14 Digital Bathymetric Modell (DBM).

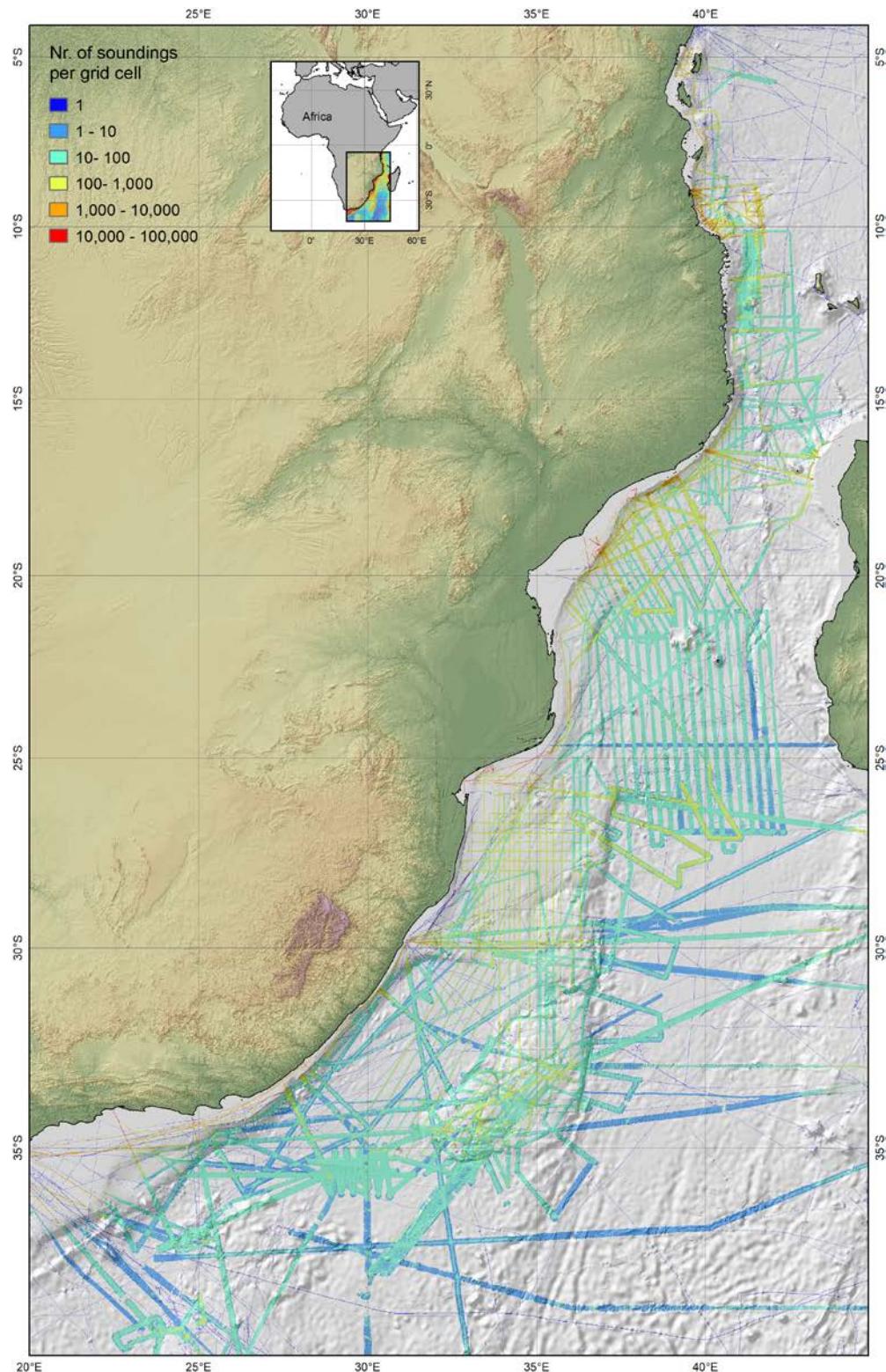


Figure S3. Map showing the number of soundings that were include in the calculation of a grid cell.

| Name | Vessel | Year | Type | Source | Reference (PI) | Weight | ID |
|---------------------|-----------------------|------|-----------|-----------|--------------------------------------|--------|--------|
| MIRAI MR03-K04 Leg5 | | | Grid | JAMSTEC | | 1000 | 160001 |
| ANT-XI/4 | Polarstern | 1994 | Multibeam | AWI | Kuhn | 100 | 201114 |
| ANT-XXIII/9 | Polarstern | 2007 | Multibeam | AWI | Hubberten | 200 | 201239 |
| SO87 | Sonne | 1993 | Multibeam | BSH | Stoffers | 10 | 204087 |
| SO182 | Sonne | 2005 | Multibeam | AWI | Uenzelmann-Neben | 200 | 204182 |
| SO183 | Sonne | 2005 | Multibeam | AWI | Jokat | 200 | 204183 |
| SO230 | Sonne | 2014 | Multibeam | AWI | Jokat | 200 | 204230 |
| SO231 | Sonne | 2014 | Multibeam | AWI | Franke | 200 | 204231 |
| SO232 | Sonne | 2014 | Multibeam | AWI | Uenzelmann-Neben | 200 | 204232 |
| M33/2 | Meteor | 1995 | Multibeam | BSH | Halbach | 100 | 205332 |
| M63/1 | Meteor | 2005 | Multibeam | BSH | Paetzold | 200 | 205631 |
| M75/1B | Meteor | 2008 | Multibeam | BSH | Ridderinkhof | 200 | 205751 |
| M75/2 | Meteor | 2008 | Multibeam | BSH | Paetzold | 200 | 205752 |
| M75/3 | Meteor | 2008 | Multibeam | BSH | Schneider | 200 | 205753 |
| 64PE303 | Pelagia | 2009 | Multibeam | NIOZ | D. Kroon | 200 | 208303 |
| 64PE304 | Pelagia | 2009 | Multibeam | NIOZ | Geert-Jan Brummer | 200 | 208304 |
| 64PE305 | Pelagia | 2009 | Multibeam | AWI | Jokat | 200 | 208305 |
| 64PE306 | Pelagia | 2009 | Multibeam | AWI | Jokat | 200 | 208306 |
| KNOX12RR | Roger Revelle | 2007 | Multibeam | NGDC | MacKinnon | 200 | 221001 |
| KNOX13RR | Roger Revelle | 2008 | Multibeam | NGDC | MacKinnon | 200 | 221002 |
| KNOX14RR | Roger Revelle | 2008 | Multibeam | NGDC | Swift | 200 | 221003 |
| RR0903 | Roger Revelle | 2009 | Multibeam | NGDC | Swift | 200 | 221004 |
| RR1201 | Roger Revelle | 2012 | Multibeam | NGDC | Lien | 200 | 221005 |
| SOJN04MV | Melville | 1997 | Multibeam | NGDC | Whitworth | 100 | 222001 |
| VANC08MV | Melville | 2003 | Multibeam | NGDC | Beal | 200 | 222002 |
| VANC10MV | Melville | 2003 | Multibeam | NGDC | Blackman | 200 | 222003 |
| MV1112 | Melville | 2011 | Multibeam | NGDC | Beal | 200 | 222004 |
| MV1202 | Melville | 2012 | Multibeam | NGDC | Wood | 200 | 222005 |
| KN145L16 | Knorr | 1996 | Multibeam | NGDC | Grindlay | 100 | 223001 |
| KN197-06 | Knorr | 2010 | Multibeam | NGDC | Beal | 200 | 223002 |
| KN210-02 | Knorr | 2013 | Multibeam | NGDC | Beal | 200 | 223003 |
| KN162L07 | Knorr | 2000 | Multibeam | NGDC | NN | 100 | 223004 |
| KN162L09 | Knorr | 2001 | Multibeam | NGDC | Dick | 200 | 223005 |
| NBP0406 | Nathaniel B. Palmer | 2004 | Multibeam | NGDC | Cande | 200 | 224001 |
| RC2709 | Robert Conrad | 1986 | Multibeam | NGDC | Dick | 10 | 225001 |
| EW9309 | Maurice Ewing | 1993 | Multibeam | NGDC | Schilling C. Reichert, D. | 100 | 226001 |
| MD163 | Marion Dufresne | 2007 | Multibeam | AWI | Aslanian | 200 | 244004 |
| MD164 | Marion Dufresne | 2007 | Multibeam | AWI | | 200 | 244005 |
| MD125 | Marion Dufresne | 2002 | Multibeam | Ifremer | D. Aslanian, E. Humler, E. Michel | 200 | 244006 |
| EC2007 | Akademik Boris Petrov | 2007 | Multibeam | PASA | A. Fielies | 200 | 258001 |
| HEE1103T | unknown | 2011 | Multibeam | NAVOCEANO | unknown | 200 | 299001 |

| Name | Vessel | Year | Type | Source | Reference (PI) | Weight | ID |
|------------|------------------|------|------------|-----------|-----------------------------|--------|--------|
| HEE1106t | unknown | 2011 | Multibeam | NAVOCEANO | unknown | 200 | 299002 |
| HEN1101Tfp | unknown | 2011 | Multibeam | NAVOCEANO | unknown | 200 | 299003 |
| SUM1003t | unknown | 2010 | Multibeam | NAVOCEANO | unknown | 200 | 299004 |
| GEBCO | none | 2014 | Other | | | 1 | 300000 |
| TOPO15 | none | 2014 | Other | | | 1 | 300001 |
| PROT05MV | Melville | 1984 | Singlebeam | NGDC | R.L.FISHER | 5 | 322006 |
| INMD08MV | Melville | 1978 | Singlebeam | NGDC | FISHER R.L. | 5 | 322007 |
| ANTP08MV | Melville | 1971 | Singlebeam | NGDC | FISHER R.L. | 5 | 322008 |
| ANTP09MV | Melville | 1971 | Singlebeam | NGDC | ISAACS J.D. | 5 | 322009 |
| ANTP10MV | Melville | 1971 | Singlebeam | NGDC | SHOR G. | 5 | 322010 |
| KN145L14 | Knorr | 1995 | Singlebeam | NGDC | JOHNSON | 5 | 323006 |
| KN145L9 | Knorr | 1995 | Singlebeam | NGDC | TOOLE | 5 | 323007 |
| RC1704 | Robert D. Conrad | 1974 | Singlebeam | NGDC | A. AMOS, J. WEISSEL | 5 | 325002 |
| RC1705 | Robert D. Conrad | 1974 | Singlebeam | NGDC | JACOBS, STANLEY | 5 | 325003 |
| RC1706 | Robert D. Conrad | 1974 | Singlebeam | NGDC | A. BE' J. CHUTE, E. | 5 | 325004 |
| RC1401 | Robert D. Conrad | 1971 | Singlebeam | NGDC | SIMPSON | 5 | 325005 |
| RC1313 | Robert D. Conrad | 1970 | Singlebeam | NGDC | G. BRYAN | 5 | 325006 |
| RC1215 | Robert D. Conrad | 1969 | Singlebeam | NGDC | R. LEYDEN | 5 | 325007 |
| RC1104 | Robert D. Conrad | 1967 | Singlebeam | NGDC | G. DICKSON | 5 | 325008 |
| RC0802 | Robert D. Conrad | 1964 | Singlebeam | NGDC | G. BRYAN | 5 | 325009 |
| CIRC07AR | Argo | 1968 | Singlebeam | NGDC | FISHER R.L. | 5 | 327001 |
| CIRC08AR | Argo | 1968 | Singlebeam | NGDC | VANANDEL T. | 5 | 327002 |
| LUSI7AAR | Argo | 1963 | Singlebeam | NGDC | KNAUSS J.A. | 5 | 327003 |
| LUSI7CAR | Argo | 1963 | Singlebeam | NGDC | TAFT B.A. | 5 | 327004 |
| LUSI7DAR | Argo | 1963 | Singlebeam | NGDC | KEELING D. | 5 | 327005 |
| LUSI03AR | Argo | 1962 | Singlebeam | NGDC | KNAUSS J. | 5 | 327006 |
| LUSI04AR | Argo | 1962 | Singlebeam | NGDC | KNAUSS J. | 5 | 327007 |
| A2093L04 | Atlantis II | 1976 | Singlebeam | NGDC | DR.FREDRICK SAYLES | 5 | 328001 |
| A2093L05 | Atlantis II | 1976 | Singlebeam | NGDC | unknown DR.ELIZABETH | 5 | 328002 |
| A2093L07 | Atlantis II | 1976 | Singlebeam | NGDC | BUNCE | 5 | 328003 |
| A2093L10 | Atlantis II | 1976 | Singlebeam | NGDC | DR.BRUCE WARREN | 5 | 328004 |
| A2067L03 | Atlantis II | 1972 | Singlebeam | NGDC | DR. ELAZAR UCHUPI | 5 | 328005 |
| A2015L03 | Atlantis II | 1965 | Singlebeam | NGDC | DR. EARL HAYES | 5 | 328006 |
| A2015L04 | Atlantis II | 1965 | Singlebeam | NGDC | DR HENRY STOMMEL | 5 | 328007 |
| A2008L02 | Atlantis II | 1963 | Singlebeam | NGDC | DR PUAL FRY HYDROGRAPHER OF | 5 | 328008 |
| 19920016 | Beaver | 1989 | Singlebeam | NGDC | THE NAVY HYDROGRAPHER OF | 5 | 329001 |
| 19920150 | Boxer | 1992 | Singlebeam | NGDC | THE NAVY HYDROGRAPHER OF | 5 | 330001 |
| 19920151 | Boxer | 1992 | Singlebeam | NGDC | THE NAVY | 5 | 330002 |
| CH099L04 | Chain | 1970 | Singlebeam | NGDC | HOSKINS | 5 | 331001 |
| CH099L05 | Chain | 1970 | Singlebeam | NGDC | unknown | 5 | 331002 |

| Name | Vessel | Year | Type | Source | Reference (PI) | Weight | ID |
|----------|-------------------|------|------------|--------|---|--------|--------|
| CH099L07 | Chain | 1970 | Singlebeam | NGDC | unknown | 5 | 331003 |
| CH099L08 | Chain | 1970 | Singlebeam | NGDC | unknown | 5 | 331004 |
| CD2987 | Charles Darwin | 1987 | Singlebeam | NGDC | TOOLE | 5 | 332001 |
| DIS207 | Discovery | 1994 | Singlebeam | NGDC | R.R.DICKSON,MAFF DR R.T. POLLARD, IOSDL | 5 | 333001 |
| DIS201 | Discovery | 1993 | Singlebeam | NGDC | | 5 | 333002 |
| DI101 | Discovery | 1979 | Singlebeam | NGDC | D. ROBERTS GRAVITY CHIEF | 5 | 333003 |
| DME10 | Dmitry Mendeleev | 1973 | Singlebeam | NGDC | KORENFELD V. GRAVITY CHIEF | 5 | 334001 |
| DME07 | Dmitry Mendeleev | 1971 | Singlebeam | NGDC | BAGRAMIJNC | 5 | 334002 |
| SHACK_75 | Ernest Shackleton | 1975 | Singlebeam | NGDC | P.BARKER | 5 | 335001 |
| ANTAC24 | Fuji | 1983 | Singlebeam | NGDC | unknown | 5 | 336001 |
| ANTAC21B | Fuji | 1979 | Singlebeam | NGDC | unknown | 5 | 336002 |
| ANTAC8B | Fuji | 1966 | Singlebeam | NGDC | unknown SIMPSON | 5 | 336003 |
| DSDP25GC | Glomar Challenger | 1972 | Singlebeam | NGDC | F.S.W.,SCHLICH R. LUYENDYK B.,DAVIES | 5 | 337001 |
| DSDP26GC | Glomar Challenger | 1972 | Singlebeam | NGDC | T. HYDROGRAPHER OF | 5 | 337002 |
| 19950320 | Hampshire | 1981 | Singlebeam | NGDC | THE NAVY HYDROGRAPHER OF | 5 | 338001 |
| 19950321 | Hampshire | 1981 | Singlebeam | NGDC | THE NAVY HYDROGRAPHER OF | 5 | 338002 |
| 19950322 | Hampshire | 1981 | Singlebeam | NGDC | THE NAVY HYDROGRAPHER OF | 5 | 338003 |
| 19930071 | Herald | 1981 | Singlebeam | NGDC | THE NAVY HYDROGRAPHER OF | 5 | 339001 |
| 19930067 | Hydra | 1985 | Singlebeam | NGDC | THE NAVY HYDROGRAPHER OF | 5 | 340001 |
| 19930068 | Hydra | 1985 | Singlebeam | NGDC | THE NAVY HYDROGRAPHER OF | 5 | 340002 |
| 19930070 | Hydra | 1983 | Singlebeam | NGDC | THE NAVY HYDROGRAPHER OF | 5 | 340003 |
| 19920152 | Invincible | 1992 | Singlebeam | NGDC | THE NAVY HYDROGRAPHER OF | 5 | 341001 |
| 19910034 | Jeanne D'Arc | 1985 | Singlebeam | NGDC | NOT KNOWN John Casey, Jay Miller | 5 | 342001 |
| ODP179JR | JOIDES Resolution | 1998 | Singlebeam | NGDC | H. Dick, J. Natland, J. Miller | 5 | 343001 |
| ODP176JR | JOIDES Resolution | 1997 | Singlebeam | NGDC | | 5 | 343002 |
| MF103_1 | Marion Dufresne | 1996 | Singlebeam | NGDC | POISSON | 5 | 344001 |
| MD34 | Marion Dufresne | 1983 | Singlebeam | NGDC | PHILIPPE PATRIAT | 5 | 344002 |
| MMDU0 | Marion Dufresne | 1973 | Singlebeam | NGDC | unknown | 5 | 344003 |
| MN766 | Meiring Naude | 1976 | Singlebeam | NGDC | E S W SIMPSON HYDROGRAPHER OF | 5 | 345001 |
| 19920001 | N. Colombo | 1991 | Singlebeam | NGDC | THE NAVY | 5 | 346001 |
| OB3B | Ob | 1957 | Singlebeam | NGDC | unknown | 5 | 347001 |
| OB2B | Ob | 1956 | Singlebeam | NGDC | unknown | 5 | 347002 |
| OWEN63 | Owen | 1963 | Singlebeam | NGDC | B.C. BROWNS | 5 | 348001 |
| OWEN62 | Owen | 1962 | Singlebeam | NGDC | T.F. GASKELL HYDROGRAPHER OF | 5 | 348002 |
| 19920021 | Scylla | 1991 | Singlebeam | NGDC | THE NAVY | 5 | 349001 |
| ANTAC25 | Shirase | 1984 | Singlebeam | NGDC | unknown | 5 | 350001 |
| ANTAC26 | Shirase | 1984 | Singlebeam | NGDC | unknown | 5 | 350002 |

| Name | Vessel | Year | Type | Source | Reference (PI) | Weight | ID |
|----------|--------------------|------|------------|--------|--|--------|--------|
| TBD396 | Thomas B. Davie | 1979 | Singlebeam | NGDC | NO INFN | 5 | 351001 |
| TD277 | Thomas B. Davie | 1972 | Singlebeam | NGDC | E S W SIMPSON | 5 | 351002 |
| TD267 | Thomas B. Davie | 1971 | Singlebeam | NGDC | E S W SIMPSON | 5 | 351003 |
| TN056 | Thomas G. Thompson | 1996 | Singlebeam | NGDC | Neil Bogue | 5 | 352001 |
| TN058 | Thomas G. Thompson | 1996 | Singlebeam | NGDC | George White | 5 | 352002 |
| UM68 | Umitaka Maru | 1968 | Singlebeam | NGDC | unknown | 5 | 353001 |
| V3620 | Vema | 1981 | Singlebeam | NGDC | unknown | 5 | 354001 |
| V3617 | Vema | 1980 | Singlebeam | NGDC | COCHRAN, JAMES P. RABINOWITZ, | 5 | 354002 |
| V3618 | Vema | 1980 | Singlebeam | NGDC | M.COFFIN A.D.FALVEY, G.I.PRASAD, | 5 | 354003 |
| V3619 | Vema | 1980 | Singlebeam | NGDC | M.COFFIN | 5 | 354004 |
| V3411 | Vema | 1978 | Singlebeam | NGDC | BRIAN TUCHOIKE | 5 | 354005 |
| V3501 | Vema | 1978 | Singlebeam | NGDC | JAMES R. COCHRAN | 5 | 354006 |
| V3410 | Vema | 1977 | Singlebeam | NGDC | ERIC SIMPSON | 5 | 354007 |
| V2904 | Vema | 1972 | Singlebeam | NGDC | H. KAHLE | 5 | 354008 |
| V2905 | Vema | 1972 | Singlebeam | NGDC | DR. JOHN LADD | 5 | 354009 |
| V2411 | Vema | 1967 | Singlebeam | NGDC | THOMAS AITKEN | 5 | 354010 |
| V2205 | Vema | 1966 | Singlebeam | NGDC | DR. M. EWING | 5 | 354011 |
| V2010 | Vema | 1964 | Singlebeam | NGDC | M. LANGSETH | 5 | 354012 |
| V1910 | Vema | 1963 | Singlebeam | NGDC | M. LANGSETH | 5 | 354013 |
| V1911 | Vema | 1963 | Singlebeam | NGDC | M. LANGSETH | 5 | 354014 |
| V1810 | Vema | 1962 | Singlebeam | NGDC | M. TALWANI | 5 | 354015 |
| V1605 | Vema | 1959 | Singlebeam | NGDC | Charles Fray | 5 | 354016 |
| V1411 | Vema | 1958 | Singlebeam | NGDC | Dr. John Nafe | 5 | 354017 |
| VIT31B | Vityaz | 1959 | Singlebeam | NGDC | unknown | 5 | 355001 |
| WI343920 | Wilkes | 1979 | Singlebeam | NGDC | unknown NAVOCEANO CODE | 5 | 356001 |
| WI343728 | Wilkes | 1977 | Singlebeam | NGDC | 7220 NAVOCEANO CODE | 5 | 356002 |
| WI343731 | Wilkes | 1977 | Singlebeam | NGDC | 7220 | 5 | 356003 |

Table S1. Source Identifier (SID) expedition list providing meta-data for the source data of the swIOBC. Meta-data in the list can be linked to SID map (S1).