# Supplement



***Supplementary Figure S1.*** *Distribution, by month (panels) and species (colours), of behavioural parameter (b) values from the fitted behaviour-switching state-space models (Jonsen et al. 2005) fitted to humpback whale and minke whale satellite telemetry data. Black vertical lines indicate the 1.4 and 1.6 threshold used to classify ‘restricted’, ‘uncertain’, and ‘transit’ behaviour at a given location. Locations with b values 1.0 ≤ b ≥ 1.4 were classified as transit, 1.6 ≤ b ≥ 2.0 as restricted, and 1.4 < b > 1.6 as uncertain.*



***Supplementary Figure S2. I****nterannual variance in fishing effort. For each month, December-July, panels show the variance in fishing effort over the study period, December 2015-May 2020 (2016-2020 fishing seasons).*

***Supplementary Table S1.*** *Details of the a) 58 humpback whale tracks and b) 19 minke whale tracks included in the study. PTT - Platform Transmitter Terminal.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PTT ID** | **Deployment region** | **Track start date and time** | **Track end date and time** | **Number or Argos location estimates** |
| a) Humpback whale *(Megaptera novaeangliae)* |
| 112692 | Western Antarctic Peninsula | 2012-01-03 17:34 | 2012-03-08 01:36 | 334 |
| 112704 | Western Antarctic Peninsula | 2012-01-03 19:56 | 2012-01-06 03:50 | 30 |
| 112705 | Western Antarctic Peninsula | 2012-01-19 10:24 | 2012-03-10 15:52 | 773 |
| 112699 | Western Antarctic Peninsula | 2012-01-27 01:16 | 2012-08-09 14:10 | 2902 |
| 112703 | Western Antarctic Peninsula | 2012-01-30 11:28 | 2012-03-08 14:11 | 409 |
| 112701 | Western Antarctic Peninsula | 2012-01-31 12:50 | 2012-04-21 02:40 | 970 |
| 123236 | Western Antarctic Peninsula | 2013-02-05 17:16 | 2013-03-28 13:05 | 1293 |
| 121210 | Western Antarctic Peninsula | 2013-02-05 18:58 | 2013-08-20 11:10 | 3752 |
| 121208 | Western Antarctic Peninsula | 2013-02-05 23:25 | 2013-02-27 07:32 | 149 |
| 123231 | Western Antarctic Peninsula | 2013-02-05 23:26 | 2013-02-14 07:05 | 107 |
| 123224 | Western Antarctic Peninsula | 2013-02-05 23:30 | 2013-06-27 11:01 | 2257 |
| 121212 | Western Antarctic Peninsula | 2013-02-06 17:01 | 2013-02-11 07:45 | 137 |
| 123232 | Western Antarctic Peninsula | 2013-02-06 17:03 | 2013-10-30 07:49 | 3732 |
| 112738 | Western Antarctic Peninsula | 2013-02-06 18:44 | 2013-04-11 13:16 | 1566 |
| 112737 | Western Antarctic Peninsula | 2013-02-06 18:48 | 2013-04-16 11:31 | 1814 |
| 121211 | Western Antarctic Peninsula | 2013-02-06 23:55 | 2013-03-16 12:46 | 977 |
| 112746 | Western Antarctic Peninsula | 2013-02-07 18:31 | 2013-04-09 17:42 | 1825 |
| 121207 | Western Antarctic Peninsula | 2013-02-12 17:42 | 2013-06-23 00:40 | 2632 |
| 131141 | Western Antarctic Peninsula | 2015-01-07 21:08 | 2015-01-31 19:20 | 759 |
| 131153 | Western Antarctic Peninsula | 2015-01-08 13:34 | 2015-02-12 06:31 | 1246 |
| 131151 | Western Antarctic Peninsula | 2015-01-08 15:15 | 2015-03-13 01:18 | 2397 |
| 131143 | Western Antarctic Peninsula | 2015-01-08 19:43 | 2015-03-24 18:05 | 1982 |
| 131144 | Western Antarctic Peninsula | 2015-01-09 00:43 | 2015-04-08 10:48 | 2319 |
| 131146 | Western Antarctic Peninsula | 2015-01-30 12:34 | 2015-03-15 09:06 | 1610 |
| 131147 | Western Antarctic Peninsula | 2015-01-31 00:41 | 2015-03-11 16:34 | 1623 |
| 131142 | Western Antarctic Peninsula | 2016-01-13 00:00 | 2016-02-18 19:41 | 1456 |
| 131159 | Western Antarctic Peninsula | 2016-01-13 00:02 | 2016-02-05 13:15 | 721 |
| 131158 | Western Antarctic Peninsula | 2016-01-13 07:56 | 2016-01-26 08:33 | 434 |
| 131162 | Western Antarctic Peninsula | 2016-01-13 09:14 | 2016-03-15 05:36 | 2200 |
| 131156 | Western Antarctic Peninsula | 2016-01-14 09:10 | 2016-03-01 19:10 | 1946 |
| 131115 | Western Antarctic Peninsula | 2016-02-26 13:20 | 2016-03-01 13:29 | 163 |
| 131116 | Western Antarctic Peninsula | 2016-02-26 21:28 | 2016-03-08 07:17 | 420 |
| 154187 | Western Antarctic Peninsula | 2016-03-21 20:05 | 2016-04-04 08:36 | 441 |
| 131111 | Western Antarctic Peninsula | 2016-03-23 01:01 | 2016-03-27 23:02 | 153 |
| 131130 | Western Antarctic Peninsula | 2016-04-25 17:53 | 2016-07-23 20:43 | 682 |
| 131132 | Western Antarctic Peninsula | 2016-04-25 20:03 | 2016-06-14 23:05 | 1107 |
| 131134 | Western Antarctic Peninsula | 2016-04-26 00:08 | 2016-05-13 03:12 | 566 |
| 131133 | Western Antarctic Peninsula | 2016-04-26 12:39 | 2016-07-31 11:28 | 2019 |
| 131136 | Western Antarctic Peninsula | 2016-04-26 13:25 | 2016-07-27 00:33 | 1858 |
| 131128 | Western Antarctic Peninsula | 2016-04-26 13:25 | 2016-04-28 07:22 | 47 |
| 131127 | Western Antarctic Peninsula | 2016-04-26 14:05 | 2016-08-05 21:28 | 2395 |
| 166128 | Western Antarctic Peninsula | 2017-05-03 18:46 | 2017-05-14 10:52 | 207 |
| 166127 | Western Antarctic Peninsula | 2017-05-03 20:24 | 2017-05-14 12:16 | 277 |
| 166125 | Western Antarctic Peninsula | 2017-05-04 14:50 | 2017-05-14 12:32 | 252 |
| 166123 | Western Antarctic Peninsula | 2017-05-04 19:44 | 2017-05-14 12:37 | 316 |
| 166126 | Western Antarctic Peninsula | 2017-05-04 19:44 | 2017-05-14 12:32 | 301 |
| 166124 | Western Antarctic Peninsula | 2017-05-04 19:52 | 2017-05-14 12:36 | 341 |
| 166122 | Western Antarctic Peninsula | 2017-05-05 02:38 | 2017-05-14 12:32 | 201 |
| 173525 | Western Antarctic Peninsula | 2018-02-26 13:39 | 2018-03-07 03:58 | 184 |
| 173528 | Western Antarctic Peninsula | 2018-02-26 15:05 | 2018-03-10 01:19 | 269 |
| 173531 | Western Antarctic Peninsula | 2018-02-26 15:19 | 2018-03-09 14:50 | 349 |
| 173530 | Western Antarctic Peninsula | 2018-02-28 12:13 | 2018-03-09 05:52 | 198 |
| 173524 | Western Antarctic Peninsula | 2018-02-28 12:16 | 2018-03-08 06:21 | 200 |
| 173523 | Western Antarctic Peninsula | 2018-02-28 13:19 | 2018-03-10 08:52 | 259 |
| 170328 | Western Antarctic Peninsula | 2018-02-28 22:17 | 2018-03-10 05:29 | 152 |
| 173519 | Western Antarctic Peninsula | 2018-03-06 20:50 | 2018-03-10 07:14 | 110 |
| 173526 | Western Antarctic Peninsula | 2018-03-06 20:51 | 2018-03-10 06:52 | 100 |
| 173522 | Western Antarctic Peninsula | 2018-03-06 22:27 | 2018-03-10 14:32 | 120 |
| b) Minke whale *(Balaenoptera bonaerensis)* |
| 112750 | Western Antarctic Peninsula | 2012-06-08 04:56 | 2013-08-08 00:14 | 2559 |
| 112745 | Western Antarctic Peninsula | 2012-06-09 04:35 | 2013-05-29 06:12 | 2301 |
| 112748 | Western Antarctic Peninsula | 2012-06-12 04:07 | 2013-02-25 18:43 | 192 |
| 112733 | Western Antarctic Peninsula | 2013-02-08 19:59 | 2013-02-10 06:05 | 34 |
| 112734 | Western Antarctic Peninsula | 2013-02-09 05:57 | 2013-02-22 07:48 | 320 |
| 112747 | Western Antarctic Peninsula | 2013-02-09 12:32 | 2013-05-30 23:33 | 1428 |
| 112736 | Western Antarctic Peninsula | 2013-02-09 12:32 | 2013-03-17 05:16 | 764 |
| 112731 | Western Antarctic Peninsula | 2013-02-09 18:12 | 2013-02-23 11:01 | 249 |
| 112732 | Western Antarctic Peninsula | 2013-02-25 01:35 | 2013-03-03 23:16 | 25 |
| 131101 | Western Antarctic Peninsula | 2013-12-15 12:42 | 2013-12-20 21:44 | 53 |
| 131107 | Western Antarctic Peninsula | 2014-02-12 20:32 | 2014-03-10 13:33 | 164 |
| 131108 | Western Antarctic Peninsula | 2015-02-23 18:13 | 2015-03-13 11:25 | 605 |
| 131117 | Weddell Sea | 2016-02-28 19:29 | 2016-03-15 04:14 | 328 |
| 131120 | Weddell Sea | 2016-02-28 22:36 | 2016-03-13 08:00 | 346 |
| 154184 | Weddell Sea | 2016-02-29 00:29 | 2016-03-05 12:57 | 15 |
| 131118 | Weddell Sea | 2016-03-02 02:28 | 2016-03-17 06:20 | 146 |
| 166116 | Western Antarctic Peninsula | 2017-03-01 14:57 | 2017-03-13 11:18 | 299 |
| 166118 | Western Antarctic Peninsula | 2017-03-01 19:52 | 2017-03-11 08:06 | 193 |
| 166115 | Western Antarctic Peninsula | 2017-03-02 06:33 | 2017-03-15 12:41 | 259 |