

Supplemental Materials For: Assessment of goose-beaked whale responses to mid-frequency active sonar using a hierarchical hidden Markov model

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Supplemental Tables

Dive-cycle Summary

Table S 1: Summary information about each foraging dive cycle included in the HHMM analysis.

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | MFAS RL | MFAS cSEL | Echosounder Present? | Impulsive Sounds Present? | Orca Sounds Present? | Foraging Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) | |
|----------------------|-------------------------|---------|-------------------|---------|-----------|----------------------|---------------------------|----------------------|---------------------------|----------------------|-----------------------------------|----------------------|--|-------------------------|------------------------|-----|
| Zica-20191012-144029 | 2019-10-12 18:46:51.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.2 | 4 | 0.4 | 0.2 | 30.7 | 1.5 | 1.4 |
| Zica-20191012-144029 | 2019-10-12 21:39:22.052 | Variant | No | None | 0 | No | No | No | 5.6 | 1.3 | 10 | 0.7 | 0.3 | 36.6 | 1.2 | 1.8 |
| Zica-20191012-144029 | 2019-10-13 03:18:12.052 | Variant | No | None | 0 | No | No | No | 2.2 | 1.2 | 2 | 0.5 | 0.1 | 30.1 | 1.0 | 0.8 |
| Zica-20191012-144029 | 2019-10-13 05:32:07.052 | Variant | No | None | 0 | No | No | No | 5.7 | 1.4 | 6 | 0.8 | 0.3 | 25.7 | 0.9 | 1.0 |
| Zica-20191012-144029 | 2019-10-13 11:14:32.052 | Variant | No | None | 0 | No | No | No | 2.0 | 1.3 | 1 | 0.5 | 0.1 | 14.3 | 0.9 | 2.7 |
| Zica-20191012-144029 | 2019-10-13 13:12:13.052 | Typical | No | None | 0 | Yes | No | No | 3.8 | 1.6 | 6 | 0.4 | 0.2 | 32.4 | 1.3 | 1.6 |
| Zica-20191012-144029 | 2019-10-13 17:03:06.052 | Variant | No | 136.5 | 145.9 | No | No | No | 19.1 | 1.4 | 28 | 1.4 | 1.0 | 39.0 | 1.3 | 0.6 |
| Zica-20191012-144029 | 2019-10-14 12:07:16.052 | Typical | No | None | 0 | No | No | No | 3.7 | 1.2 | 9 | 0.6 | 0.2 | 21.7 | 1.2 | 1.1 |
| Zica-20191012-144029 | 2019-10-14 15:52:10.052 | Typical | No | None | 0 | No | No | No | 3.8 | 1.4 | 7 | 0.4 | 0.2 | 35.6 | 1.5 | 1.3 |
| Zica-20191012-144029 | 2019-10-14 19:37:45.052 | Typical | No | None | 0 | No | No | No | 3.7 | 1.5 | 7 | 0.3 | 0.2 | 36.6 | 1.7 | 1.6 |
| Zica-20191012-144029 | 2019-10-14 23:16:59.052 | Variant | No | None | 0 | No | No | No | 2.8 | 1.2 | 6 | 0.3 | 0.3 | 27.9 | 1.6 | 3.5 |
| Zica-20191012-144029 | 2019-10-15 02:04:23.052 | Typical | No | None | 0 | No | No | No | 2.3 | 1.2 | 3 | 0.3 | 0.2 | 26.5 | 1.7 | 2.0 |
| Zica-20191012-144029 | 2019-10-15 04:20:37.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.1 | 4 | 0.5 | 0.3 | 29.0 | 1.7 | 2.7 |
| Zica-20191012-144029 | 2019-10-15 07:19:13.052 | Variant | No | None | 0 | No | No | No | 4.6 | 1.4 | 1 | 0.2 | 1.6 | 58.5 | 1.4 | 3.1 |
| Zica-20191012-144029 | 2019-10-15 11:55:02.052 | Variant | No | None | 0 | No | No | No | 1.5 | 0.8 | 2 | 0.4 | 0.3 | 15.0 | 0.7 | 5.9 |
| Zica-20191012-144029 | 2019-10-15 13:24:34.052 | Variant | No | None | 0 | No | No | No | 3.3 | 0.9 | 7 | 0.4 | 0.2 | 19.2 | 0.9 | 3.9 |
| Zica-20191012-144029 | 2019-10-15 16:40:00.052 | Typical | No | None | 0 | No | No | No | 2.3 | 1.1 | 4 | 0.3 | 0.2 | 30.7 | 1.1 | 3.5 |
| Zica-20191012-144029 | 2019-10-15 19:00:27.052 | Typical | No | 106.4 | 117.2 | No | No | No | 2.7 | 1.2 | 5 | 0.4 | 0.2 | 37.4 | 1.5 | 3.2 |
| Zica-20191012-144029 | 2019-10-15 21:44:03.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.2 | 6 | 0.4 | 0.2 | 28.9 | 1.5 | 3.6 |
| Zica-20191012-144029 | 2019-10-16 01:05:08.052 | Variant | No | None | 0 | No | No | No | 2.8 | 1.3 | 3 | 0.8 | 0.1 | 30.9 | 1.6 | 2.8 |
| Zica-20191012-144029 | 2019-10-16 03:52:56.052 | Variant | No | None | 0 | No | No | No | 3.5 | 1.1 | 2 | 0.8 | 0.5 | 25.8 | 1.6 | 2.9 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | MFAS RL | MFAS cSEL | Echosounder Present? | Impulsive Sounds Present? | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) | |
|----------------------|-------------------------|---------|-------------------|---------|-----------|----------------------|---------------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|--|-------------------------|------------------------|-----|
| | | | | | | | | | | | | | | | | |
| Zica-20191012-144029 | 2019-10-16 07:20:53.052 | Variant | No | None | 0 | No | No | No | 1.7 | 1.4 | 1 | 0.1 | 0.2 | 24.5 | 1.8 | 3.5 |
| Zica-20191012-144029 | 2019-10-16 09:03:12.052 | Variant | No | None | 0 | No | No | No | 2.3 | 1.7 | 1 | 0.4 | 0.2 | 20.4 | 1.8 | 2.1 |
| Zica-20191012-144029 | 2019-10-16 11:24:09.052 | Variant | No | None | 0 | No | No | No | 1.5 | 1.2 | 0 | NA | 0.2 | 18.2 | 1.9 | 3.1 |
| Zica-20191012-144029 | 2019-10-16 12:55:30.052 | Variant | No | None | 0 | No | No | No | 3.7 | 1.2 | 8 | 0.4 | 0.2 | 26.8 | 2.0 | 2.8 |
| Zica-20191012-144029 | 2019-10-16 16:38:31.052 | Variant | No | None | 0 | No | No | No | 4.4 | 1.4 | 9 | 0.4 | 0.3 | 33.5 | 2.0 | 2.7 |
| Zica-20191012-144029 | 2019-10-16 21:02:09.052 | Variant | No | None | 0 | No | No | No | 3.0 | 1.1 | 6 | 0.3 | 0.2 | 34.8 | 1.2 | 3.1 |
| Zica-20191012-144029 | 2019-10-17 00:03:42.052 | Variant | No | None | 0 | No | No | No | 1.9 | 1.0 | 3 | 0.2 | 0.2 | 24.1 | 1.5 | 3.0 |
| Zica-20191012-144029 | 2019-10-17 01:58:51.052 | Variant | No | None | 0 | No | No | No | 3.0 | 0.9 | 4 | 0.5 | 0.2 | 15.3 | 1.4 | 2.0 |
| Zica-20191012-144029 | 2019-10-17 04:56:43.052 | Variant | No | None | 0 | No | No | No | 1.9 | 1.1 | 1 | 0.5 | 0.3 | 31.3 | 1.7 | 3.2 |
| Zica-20191012-144029 | 2019-10-17 06:53:04.052 | Variant | No | None | 0 | No | No | No | 2.9 | 1.6 | 1 | 0.5 | 0.6 | 43.3 | 1.8 | 3.1 |
| Zica-20191012-144029 | 2019-10-17 09:46:41.052 | Variant | No | None | 0 | No | No | No | 1.7 | 1.3 | 0 | NA | 0.3 | 35.3 | 1.7 | 3.8 |
| Zica-20191012-144029 | 2019-10-17 11:26:54.052 | Variant | No | None | 0 | No | No | No | 2.5 | 1.3 | 6 | 0.2 | 0.3 | 25.1 | 1.6 | 1.6 |
| Zica-20191012-144029 | 2019-10-17 13:56:52.052 | Variant | No | None | 0 | No | No | No | 2.6 | 1.1 | 7 | 0.3 | 0.2 | 24.4 | 1.6 | 1.2 |
| Zica-20191012-144029 | 2019-10-17 16:30:51.052 | Typical | No | None | 0 | No | No | No | 3.3 | 1.2 | 8 | 0.3 | 0.2 | 31.1 | 1.0 | 0.7 |
| Zica-20191012-144029 | 2019-10-17 19:50:04.052 | Typical | No | None | 0 | No | No | No | 2.5 | 1.2 | 5 | 0.3 | 0.2 | 37.5 | 1.6 | 1.5 |
| Zica-20191012-144029 | 2019-10-17 22:22:02.052 | Typical | No | None | 0 | No | No | No | NA | 1.2 | NA | NA | NA | 40.4 | 1.8 | NA |
| Zica-20191012-145101 | 2019-10-12 20:58:41.052 | Variant | No | None | 0 | No | No | No | 1.2 | 0.8 | 1 | 0.3 | 0.1 | 18.0 | 1.3 | 2.3 |
| Zica-20191012-145101 | 2019-10-12 22:12:21.052 | Variant | No | None | 0 | No | No | No | 2.5 | 0.8 | 4 | 0.5 | 0.2 | 19.4 | 1.2 | 2.1 |
| Zica-20191012-145101 | 2019-10-13 00:44:13.052 | Typical | No | None | 0 | No | No | No | 4.2 | 1.1 | 8 | 0.4 | 0.3 | 38.1 | 1.5 | 0.3 |
| Zica-20191012-145101 | 2019-10-13 04:53:57.052 | Typical | No | None | 0 | No | No | No | 4.0 | 1.2 | 6 | 0.5 | 0.2 | 36.6 | 1.5 | 0.7 |
| Zica-20191012-145101 | 2019-10-13 08:51:45.052 | Typical | No | None | 0 | No | No | No | 3.3 | 1.1 | 7 | 0.3 | 0.2 | 30.3 | 1.5 | 1.2 |
| Zica-20191012-145101 | 2019-10-13 12:07:33.052 | Typical | No | None | 0 | No | No | No | 3.5 | 1.2 | 6 | 0.4 | 0.2 | 37.1 | 1.5 | 0.2 |
| Zica-20191012-145101 | 2019-10-13 15:36:56.052 | Typical | No | None | 0 | No | No | No | 2.3 | 1.1 | 3 | 0.4 | 0.1 | 33.0 | 1.5 | 0.8 |
| Zica-20191012-145101 | 2019-10-13 17:57:13.052 | Typical | No | 95.1 | 102.6 | No | No | No | 2.6 | 1.1 | 4 | 0.4 | 0.2 | 32.6 | 1.5 | 1.4 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|-----|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | Present? | | | | | | | | | | |
| Zica-20191012-145101 | 2019-10-13 20:36:10.052 | Typical | Yes | 147.9 | 145.1 | No | No | No | 2.3 | 1.0 | 4 | 0.3 | 0.2 | 28.2 | 1.4 | 0.9 | |
| Zica-20191012-145101 | 2019-10-13 22:53:17.052 | Variant | Yes | 136 | 138.8 | No | No | No | 6.3 | 1.1 | 11 | 0.6 | 0.4 | 29.4 | 1.5 | 1.3 | |
| Zica-20191012-145101 | 2019-10-14 05:12:39.052 | Variant | No | None | 0 | No | Yes | No | 2.7 | 1.4 | 3 | 0.3 | 0.2 | 35.2 | 1.5 | 2.2 | |
| Zica-20191012-145101 | 2019-10-14 07:55:46.052 | Typical | No | None | 0 | No | Yes | No | 2.2 | 1.2 | 3 | 0.3 | 0.1 | 43.7 | 1.5 | 1.0 | |
| Zica-20191012-145101 | 2019-10-14 10:08:51.052 | Typical | No | None | 0 | No | Yes | No | 2.7 | 1.0 | 2 | 0.4 | 0.3 | 28.8 | 1.5 | 2.4 | |
| Zica-20191012-145101 | 2019-10-14 12:51:55.052 | Typical | No | None | 0 | No | Yes | No | 3.3 | 1.0 | 6 | 0.4 | 0.2 | 26.0 | 1.3 | 1.3 | |
| Zica-20191012-145101 | 2019-10-14 16:11:24.052 | Typical | No | None | 0 | No | Yes | No | 2.1 | 1.0 | 3 | 0.4 | 0.1 | 27.2 | 1.2 | 1.4 | |
| Zica-20191012-145101 | 2019-10-14 18:14:56.052 | Typical | No | None | 0 | No | No | No | 2.5 | 1.2 | 4 | 0.3 | 0.2 | 35.4 | 1.5 | 0.5 | |
| Zica-20191012-145101 | 2019-10-14 20:46:16.052 | Typical | No | None | 0 | Yes | Yes | No | 3.4 | 1.1 | 6 | 0.4 | 0.2 | 30.4 | 1.4 | 0.3 | |
| Zica-20191012-145101 | 2019-10-15 00:13:00.052 | Variant | No | None | 0 | Yes | Yes | No | 4.1 | 0.7 | 3 | 0.3 | 1.6 | 3.5 | 0.8 | 4.1 | |
| Zica-20191012-145101 | 2019-10-15 04:19:01.052 | Typical | No | None | 0 | No | Yes | No | 3.0 | 1.3 | 3 | 0.4 | 0.3 | 34.3 | 1.3 | 1.4 | |
| Zica-20191012-145101 | 2019-10-15 07:16:16.052 | Variant | No | None | 0 | No | No | No | 3.4 | 1.2 | 1 | 0.3 | 0.5 | 30.3 | 1.4 | 2.9 | |
| Zica-20191012-145101 | 2019-10-15 10:42:44.052 | Variant | No | None | 0 | No | Yes | No | 2.3 | 0.8 | 1 | 0.3 | 0.2 | 19.9 | 0.9 | 3.2 | |
| Zica-20191012-145101 | 2019-10-15 12:58:49.052 | Variant | No | None | 0 | No | No | No | 1.8 | 1.0 | 2 | 0.3 | 0.1 | 27.9 | 1.1 | 1.7 | |
| Zica-20191012-145101 | 2019-10-15 14:44:48.052 | Variant | No | None | 0 | No | No | No | 2.2 | 0.9 | 4 | 0.3 | 0.1 | 21.6 | 1.1 | 1.3 | |
| Zica-20191012-145101 | 2019-10-15 16:59:48.052 | Typical | No | None | 0 | No | Yes | No | 2.7 | 1.1 | 4 | 0.3 | 0.2 | 31.3 | 1.4 | 0.7 | |
| Zica-20191012-145101 | 2019-10-15 19:44:07.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.1 | 5 | 0.4 | 0.3 | 27.4 | 1.3 | 1.6 | |
| Zica-20191012-145101 | 2019-10-15 22:37:12.052 | Variant | No | None | 0 | No | Yes | No | 6.2 | 1.1 | 10 | 0.5 | 0.9 | 31.3 | 1.4 | 0.5 | |
| Zica-20191012-145101 | 2019-10-16 04:50:03.052 | Typical | No | None | 0 | No | Yes | No | 3.8 | 1.2 | 6 | 0.4 | 0.2 | 33.0 | 1.3 | 0.7 | |
| Zica-20191012-145101 | 2019-10-16 08:38:23.052 | Typical | No | None | 0 | No | Yes | No | 2.8 | 1.1 | 4 | 0.4 | 0.2 | 27.5 | 1.1 | 1.0 | |
| Zica-20191012-145101 | 2019-10-16 11:27:21.052 | Typical | No | None | 0 | No | Yes | No | 2.9 | 1.0 | 6 | 0.4 | 0.2 | 28.6 | 1.3 | 1.0 | |
| Zica-20191012-145101 | 2019-10-16 14:22:29.052 | Typical | No | None | 0 | No | No | No | 3.5 | 1.1 | 6 | 0.5 | 0.2 | 27.3 | 1.2 | 1.5 | |
| Zica-20191012-145101 | 2019-10-16 17:50:04.052 | Typical | No | 140.1 | 148.8 | No | No | No | 4.1 | 1.2 | 7 | 0.5 | 0.2 | 34.8 | 1.3 | 1.1 | |
| Zica-20191012-145101 | 2019-10-16 21:53:49.052 | Typical | No | None | 0 | No | Yes | No | 2.1 | 1.1 | 4 | 0.3 | 0.1 | 25.0 | 1.5 | 0.6 | |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|----------|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | | | | | Present? | Present? | | | | |
| Zica-20191012-145101 | 2019-10-16 23:59:45.052 | Typical | No | None | 0 | No | Yes | No | 2.9 | 1.3 | 4 | 0.3 | 0.3 | 36.0 | 1.5 | 1.1 |
| Zica-20191012-145101 | 2019-10-17 02:54:01.052 | Typical | No | None | 0 | No | Yes | No | 3.0 | 1.1 | 4 | 0.5 | 0.2 | 34.4 | 1.5 | 0.5 |
| Zica-20191012-145101 | 2019-10-17 05:53:16.052 | Typical | No | None | 0 | No | Yes | No | 3.0 | 1.1 | 4 | 0.4 | 0.3 | 36.0 | 1.4 | 0.9 |
| Zica-20191012-145101 | 2019-10-17 08:55:31.052 | Variant | Yes | 107.4 | 122.2 | No | No | No | 3.5 | 1.1 | 2 | 0.3 | 1.6 | 29.6 | 1.4 | 5.7 |
| Zica-20191012-145101 | 2019-10-17 12:26:56.052 | Variant | No | None | 0 | No | No | No | 1.9 | 0.9 | 3 | 0.4 | 0.2 | 21.7 | 1.1 | 2.3 |
| Zica-20191012-145101 | 2019-10-17 14:21:53.052 | Variant | No | None | 0 | No | No | No | 2.0 | 0.9 | 3 | 0.3 | 0.2 | 18.6 | 1.2 | 1.5 |
| Zica-20191012-145101 | 2019-10-17 16:23:04.052 | Variant | No | None | 0 | No | No | No | 2.9 | 0.9 | 5 | 0.4 | 0.3 | 24.6 | 1.1 | 3.0 |
| Zica-20191012-145101 | 2019-10-17 19:17:00.052 | Variant | No | None | 0 | No | No | No | 2.2 | 0.9 | 3 | 0.4 | 0.2 | 23.9 | 1.0 | 3.6 |
| Zica-20191012-145101 | 2019-10-17 21:28:56.052 | Variant | No | None | 0 | No | No | No | 1.7 | 0.9 | 2 | 0.4 | 0.1 | 20.5 | 1.1 | 2.0 |
| Zica-20191012-145101 | 2019-10-17 23:11:29.052 | Variant | No | None | 0 | No | No | No | NA | 0.9 | NA | NA | NA | 26.2 | 1.2 | NA |
| Zica-20191111-94810 | 2019-11-12 00:37:49.052 | Typical | No | None | 0 | No | No | No | 2.5 | 1.1 | 4 | 0.6 | 0.2 | 35.3 | 1.6 | 1.4 |
| Zica-20191111-94810 | 2019-11-12 03:09:32.052 | Typical | No | None | 0 | No | No | No | 2.5 | 1.3 | 3 | 0.5 | 0.1 | 33.5 | 1.5 | 2.0 |
| Zica-20191111-94810 | 2019-11-12 05:42:22.052 | Typical | No | None | 0 | No | Yes | No | 2.8 | 1.4 | 3 | 0.4 | 0.2 | 34.5 | 1.6 | 1.1 |
| Zica-20191111-94810 | 2019-11-12 08:27:50.052 | Variant | No | None | 0 | No | Yes | No | 1.7 | 1.4 | 1 | 0.2 | 0.1 | 32.8 | 1.6 | 0.1 |
| Zica-20191111-94810 | 2019-11-12 10:09:44.052 | Variant | No | None | 0 | No | No | No | 2.4 | 1.3 | 3 | 0.5 | 0.2 | 21.0 | 1.6 | 2.0 |
| Zica-20191111-94810 | 2019-11-12 12:35:04.052 | Variant | No | None | 0 | No | No | No | 2.4 | 1.1 | 4 | 0.3 | 0.2 | 19.2 | 1.7 | 1.5 |
| Zica-20191111-94810 | 2019-11-12 14:58:11.052 | Typical | No | None | 0 | No | No | No | 3.6 | 1.3 | 6 | 0.4 | 0.2 | 35.7 | 1.7 | 1.7 |
| Zica-20191111-94810 | 2019-11-12 18:36:08.052 | Typical | No | None | 0 | No | No | No | 2.6 | 1.3 | 4 | 0.3 | 0.2 | 46.0 | 1.7 | 1.5 |
| Zica-20191111-94810 | 2019-11-12 21:10:10.052 | Typical | No | None | 0 | No | No | No | 2.1 | 1.1 | 3 | 0.3 | 0.2 | 41.4 | 1.7 | 1.3 |
| Zica-20191111-94810 | 2019-11-12 23:17:11.052 | Variant | No | None | 0 | No | No | No | 4.1 | 1.1 | 7 | 0.4 | 0.6 | 37.7 | 1.6 | 2.0 |
| Zica-20191111-94810 | 2019-11-13 03:22:10.052 | Variant | No | None | 0 | No | Yes | No | 3.6 | 0.9 | 7 | 0.5 | 0.4 | 30.4 | 1.2 | 1.0 |
| Zica-20191111-94810 | 2019-11-13 07:00:16.052 | Variant | No | None | 0 | No | Yes | No | 0.7 | 0.7 | 0 | NA | 0.0 | 14.3 | 1.0 | 1.8 |
| Zica-20191111-94810 | 2019-11-13 07:44:39.052 | Variant | No | None | 0 | Yes | No | No | 5.2 | 0.9 | 11 | 0.5 | 0.5 | 13.3 | 1.0 | 1.2 |
| Zica-20191111-94810 | 2019-11-13 12:55:59.052 | Variant | No | None | 0 | No | No | No | 3.2 | 0.7 | 5 | 0.6 | 0.2 | 14.0 | 1.0 | 2.5 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|---------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|-----|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | Present? | | | | | | | | | | |
| Zica-20191111-94810 | 2019-11-13 16:07:03.052 | Typical | No | None | 0 | No | No | No | 3.3 | 1.1 | 5 | 0.5 | 0.2 | 26.5 | 1.2 | 1.9 | |
| Zica-20191111-94810 | 2019-11-13 19:22:08.052 | Typical | No | None | 0 | No | No | No | 2.7 | 1.1 | 4 | 0.4 | 0.2 | 32.0 | 1.3 | 1.8 | |
| Zica-20191111-94810 | 2019-11-13 22:03:50.052 | Typical | No | None | 0 | No | No | No | 2.6 | 1.1 | 5 | 0.3 | 0.2 | 37.2 | 1.0 | 1.1 | |
| Zica-20191111-94810 | 2019-11-14 00:41:54.052 | Typical | No | None | 0 | No | No | No | 2.8 | 1.1 | 4 | 0.4 | 0.3 | 36.1 | 1.5 | 0.4 | |
| Zica-20191111-94810 | 2019-11-14 03:28:12.052 | Typical | No | None | 0 | No | No | No | 3.1 | 1.2 | 4 | 0.4 | 0.2 | 31.4 | 1.5 | 0.5 | |
| Zica-20191111-94810 | 2019-11-14 06:36:11.052 | Typical | No | None | 0 | No | No | No | 3.1 | 1.3 | 4 | 0.4 | 0.2 | 37.3 | 1.5 | 0.8 | |
| Zica-20191111-94810 | 2019-11-14 09:44:12.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.3 | 4 | 0.4 | 0.3 | 38.3 | 1.5 | 0.5 | |
| Zica-20191111-94810 | 2019-11-14 13:06:04.052 | Typical | No | None | 0 | Yes | No | No | 4.6 | 1.2 | 8 | 0.5 | 0.3 | 33.1 | 1.5 | 0.1 | |
| Zica-20191111-94810 | 2019-11-14 17:39:37.052 | Typical | No | None | 0 | No | No | No | 2.7 | 1.4 | 3 | 0.4 | 0.2 | 33.0 | 1.5 | 0.0 | |
| Zica-20191111-94810 | 2019-11-14 20:23:18.052 | Typical | No | None | 0 | No | No | No | 2.6 | 1.3 | 3 | 0.4 | 0.2 | 33.0 | 1.5 | 1.8 | |
| Zica-20191111-94810 | 2019-11-14 23:00:48.052 | Typical | Yes | 103.4 | 110.6 | No | No | No | 2.6 | 1.1 | 3 | 0.4 | 0.2 | 24.9 | 1.1 | 1.6 | |
| Zica-20191111-94810 | 2019-11-15 01:37:36.052 | Variant | No | 141.2 | 137.2 | No | No | No | 9.2 | 1.0 | 13 | 1.2 | 0.7 | 31.1 | 1.5 | 1.3 | |
| Zica-20191111-94810 | 2019-11-15 10:46:51.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.3 | 5 | 0.4 | 0.2 | 36.2 | 1.5 | 1.1 | |
| Zica-20191111-94810 | 2019-11-15 13:49:06.052 | Typical | No | None | 0 | Yes | No | No | 2.7 | 1.4 | 3 | 0.5 | 0.2 | 40.5 | 1.6 | 1.7 | |
| Zica-20191111-94810 | 2019-11-15 16:31:54.052 | Typical | No | None | 0 | No | No | No | 3.8 | 1.3 | 6 | 0.6 | 0.2 | 39.5 | 1.5 | 1.8 | |
| Zica-20191111-94810 | 2019-11-15 20:17:48.052 | Typical | No | None | 0 | No | No | No | 1.9 | 1.0 | 2 | 0.4 | 0.2 | 27.0 | 1.0 | 2.2 | |
| Zica-20191111-94810 | 2019-11-15 22:09:36.052 | Typical | No | None | 0 | No | No | No | 1.9 | 1.0 | 2 | 0.4 | 0.1 | 36.7 | 1.0 | 3.6 | |
| Zica-20191111-94810 | 2019-11-16 00:06:20.052 | Typical | No | None | 0 | No | No | No | 4.3 | 1.3 | 6 | 0.5 | 0.3 | 40.5 | 1.5 | 1.2 | |
| Zica-20191111-94810 | 2019-11-16 04:23:21.052 | Typical | No | 97.5 | 108 | No | No | No | 3.4 | 1.1 | 5 | 0.5 | 0.2 | 26.4 | 1.5 | 2.3 | |
| Zica-20191111-94810 | 2019-11-16 07:49:35.052 | Typical | Yes | 119.9 | 125.6 | No | No | No | 2.9 | 1.2 | 5 | 0.4 | 0.2 | 37.8 | 1.4 | 1.8 | |
| Zica-20191111-94810 | 2019-11-16 10:42:57.052 | Typical | No | None | 0 | No | No | No | 4.5 | 1.3 | 7 | 0.6 | 0.3 | 41.0 | 1.6 | 0.9 | |
| Zica-20191111-94810 | 2019-11-16 15:10:21.052 | Typical | No | None | 0 | No | No | No | 2.6 | 1.3 | 3 | 0.4 | 0.2 | 38.7 | 1.4 | 2.3 | |
| Zica-20191111-94810 | 2019-11-16 17:46:06.052 | Typical | No | None | 0 | No | No | No | 2.1 | 1.2 | 2 | 0.4 | 0.1 | 37.9 | 1.5 | 2.5 | |
| Zica-20191111-94810 | 2019-11-16 19:50:46.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.1 | 5 | 0.4 | 0.3 | 39.0 | 1.1 | 1.9 | |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|-----|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | | | | | NA | NA | | | | |
| Zica-20191111-94810 | 2019-11-16 23:12:16.052 | Typical | No | None | 0 | No | No | NA | 1.4 | NA | NA | NA | 42.0 | 1.5 | NA | |
| Zica-20191117-195993 | 2019-11-17 20:12:57.052 | Variant | No | None | 0 | No | No | No | 2.7 | 0.7 | 4 | 0.5 | 0.2 | 20.0 | 0.8 | 4.1 |
| Zica-20191117-195993 | 2019-11-17 22:53:53.052 | Typical | No | None | 0 | No | No | No | NA | 1.3 | NA | NA | NA | 47.2 | 1.4 | NA |
| Zica-20211112-94819 | 2021-11-12 22:03:22.052 | Typical | No | None | 0 | No | No | No | 2.5 | 1.2 | 3 | 0.4 | 0.2 | 37.5 | 1.7 | 3.1 |
| Zica-20211112-94819 | 2021-11-13 00:31:32.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.2 | 4 | 0.4 | 0.2 | 40.4 | 1.7 | 1.6 |
| Zica-20211112-94819 | 2021-11-13 03:23:50.052 | Typical | No | None | 0 | No | No | No | 4.0 | 1.2 | 7 | 0.4 | 0.3 | 40.9 | 1.8 | 0.9 |
| Zica-20211112-94819 | 2021-11-13 07:22:40.052 | Typical | No | None | 0 | No | No | No | 2.4 | 1.2 | 3 | 0.4 | 0.2 | 42.9 | 1.8 | 1.9 |
| Zica-20211112-94819 | 2021-11-13 09:44:30.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.1 | 4 | 0.4 | 0.3 | 39.4 | 1.8 | 1.3 |
| Zica-20211112-94819 | 2021-11-13 12:46:01.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.1 | 6 | 0.4 | 0.2 | 37.5 | 1.7 | 0.7 |
| Zica-20211112-94819 | 2021-11-13 16:12:39.052 | Typical | No | None | 0 | No | No | No | 3.5 | 1.1 | 6 | 0.4 | 0.3 | 39.3 | 1.7 | 1.0 |
| Zica-20211112-94819 | 2021-11-13 19:43:27.052 | Typical | No | None | 0 | No | No | No | 3.9 | 1.1 | 6 | 0.5 | 0.3 | 39.3 | 1.7 | 0.0 |
| Zica-20211112-94819 | 2021-11-13 23:35:46.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.2 | 5 | 0.3 | 0.2 | 41.4 | 1.7 | 0.4 |
| Zica-20211112-94819 | 2021-11-14 02:36:12.052 | Typical | No | None | 0 | No | No | No | 2.7 | 1.1 | 4 | 0.4 | 0.2 | 41.0 | 1.7 | 1.2 |
| Zica-20211112-94819 | 2021-11-14 05:19:12.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.1 | 6 | 0.4 | 0.3 | 39.5 | 1.7 | 1.2 |
| Zica-20211112-94819 | 2021-11-14 08:44:06.052 | Typical | No | None | 0 | No | No | No | 4.7 | 1.2 | 8 | 0.6 | 0.4 | 37.1 | 1.7 | 1.2 |
| Zica-20211112-94819 | 2021-11-14 13:26:53.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.0 | 4 | 0.5 | 0.2 | 26.6 | 1.1 | 1.7 |
| Zica-20211112-94819 | 2021-11-14 16:25:03.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.1 | 4 | 0.5 | 0.2 | 39.3 | 1.7 | 1.1 |
| Zica-20211112-94819 | 2021-11-14 19:24:33.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.2 | 4 | 0.5 | 0.2 | 44.3 | 1.7 | 1.4 |
| Zica-20211112-94819 | 2021-11-14 22:21:35.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.1 | 5 | 0.4 | 0.2 | 40.0 | 1.7 | 1.0 |
| Zica-20211112-94819 | 2021-11-15 01:34:14.052 | Typical | No | None | 0 | No | No | No | 2.8 | 1.0 | 5 | 0.4 | 0.2 | 40.2 | 1.7 | 1.5 |
| Zica-20211112-94819 | 2021-11-15 04:24:21.052 | Typical | No | None | 0 | No | No | No | 2.7 | 1.0 | 4 | 0.4 | 0.2 | 39.1 | 1.7 | 1.0 |
| Zica-20211112-94819 | 2021-11-15 07:05:27.052 | Typical | Yes | 89.2 | 87.7 | No | No | No | 2.8 | 1.0 | 5 | 0.3 | 0.3 | 38.5 | 1.7 | 1.9 |
| Zica-20211112-94819 | 2021-11-15 09:53:35.052 | Typical | No | 81.8 | 80.9 | No | No | No | 2.9 | 1.1 | 5 | 0.4 | 0.3 | 42.9 | 1.7 | 1.2 |
| Zica-20211112-94819 | 2021-11-15 12:47:35.052 | Typical | No | None | 0 | No | No | No | 4.4 | 1.2 | 7 | 0.5 | 0.3 | 41.2 | 1.7 | 1.0 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|---------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|-----|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | Present? | | | | | | | | | | |
| Zica-20211112-94819 | 2021-11-15 17:09:42.052 | Variant | No | None | 0 | No | No | No | 3.0 | 1.3 | 4 | 0.5 | 0.2 | 9.4 | 1.7 | 2.2 | |
| Zica-20211112-94819 | 2021-11-15 20:06:51.052 | Typical | No | None | 0 | No | No | No | 4.3 | 1.3 | 8 | 0.4 | 0.3 | 38.9 | 0.7 | 2.2 | |
| Zica-20211112-94819 | 2021-11-16 00:24:40.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.0 | 7 | 0.3 | 0.3 | 31.4 | 1.7 | 0.9 | |
| Zica-20211112-94819 | 2021-11-16 03:37:25.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.1 | 5 | 0.4 | 0.2 | 28.4 | 1.7 | 1.0 | |
| Zica-20211112-94819 | 2021-11-16 06:48:34.052 | Variant | No | None | 0 | No | No | No | 2.7 | 1.0 | 6 | 0.3 | 0.2 | 32.4 | 1.7 | 2.4 | |
| Zica-20211112-94819 | 2021-11-16 09:28:12.052 | Variant | No | None | 0 | No | No | No | 0.8 | 0.7 | 0 | NA | 0.1 | 30.9 | 1.8 | 3.3 | |
| Zica-20211112-94819 | 2021-11-16 10:16:46.052 | Variant | No | None | 0 | No | No | No | 2.7 | 0.6 | 6 | 0.5 | 0.4 | 2.4 | 1.1 | 1.9 | |
| Zica-20211112-94819 | 2021-11-16 13:00:48.052 | Typical | No | None | 0 | No | No | No | 4.3 | 1.0 | 8 | 0.5 | 0.3 | 30.6 | 1.8 | 1.3 | |
| Zica-20211112-94819 | 2021-11-16 17:16:23.052 | Typical | No | None | 0 | No | No | No | 4.7 | 1.0 | 9 | 0.5 | 0.4 | 31.1 | 1.8 | 1.4 | |
| Zica-20211112-94819 | 2021-11-16 21:55:32.052 | Typical | Yes | 122.6 | 118.1 | No | No | No | 2.6 | 1.0 | 4 | 0.4 | 0.2 | 26.1 | 1.1 | 2.4 | |
| Zica-20211112-94819 | 2021-11-17 00:34:28.052 | Typical | Yes | 124.9 | 123.9 | No | No | No | 2.7 | 1.0 | 5 | 0.4 | 0.3 | 32.5 | 1.6 | 1.6 | |
| Zica-20211112-94819 | 2021-11-17 03:19:22.052 | Typical | No | None | 0 | No | No | No | 2.7 | 0.9 | 5 | 0.5 | 0.2 | 27.5 | 1.1 | 0.7 | |
| Zica-20211112-94819 | 2021-11-17 06:03:24.052 | Variant | Yes | 140.3 | 136.1 | No | No | No | 1.9 | 0.9 | 3 | 0.3 | 0.6 | 28.9 | 1.2 | 3.9 | |
| Zica-20211112-94819 | 2021-11-17 07:59:25.052 | Variant | No | None | 0 | No | No | No | 2.3 | 1.0 | 3 | 0.4 | 0.3 | 5.7 | 1.6 | 3.5 | |
| Zica-20211112-94819 | 2021-11-17 10:15:54.052 | Variant | No | None | 0 | No | No | No | 2.6 | 1.0 | 5 | 0.4 | 0.3 | 26.4 | 0.8 | 1.3 | |
| Zica-20211112-94819 | 2021-11-17 12:53:57.052 | Variant | No | None | 0 | No | No | No | 3.8 | 1.0 | 8 | 0.5 | 0.3 | 27.8 | 1.1 | 1.6 | |
| Zica-20211112-94819 | 2021-11-17 16:41:19.052 | Variant | No | None | 0 | No | No | No | 3.8 | 1.0 | 6 | 0.5 | 0.4 | 34.8 | 1.6 | 1.8 | |
| Zica-20211112-94819 | 2021-11-17 20:32:17.052 | Typical | No | None | 0 | No | No | No | 3.8 | 1.3 | 5 | 0.6 | 0.3 | 39.3 | 1.6 | 1.7 | |
| Zica-20211112-94819 | 2021-11-18 00:22:29.052 | Typical | No | None | 0 | No | No | No | 3.7 | 1.4 | 5 | 0.5 | 0.3 | 40.3 | 1.6 | 0.4 | |
| Zica-20211112-94819 | 2021-11-18 04:03:51.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.6 | 4 | 0.5 | 0.2 | 42.4 | 1.7 | 1.1 | |
| Zica-20211112-94819 | 2021-11-18 07:27:39.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.3 | 4 | 0.5 | 0.2 | 37.9 | 1.8 | 1.3 | |
| Zica-20211112-94819 | 2021-11-18 10:42:02.052 | Typical | No | None | 0 | No | No | No | 4.5 | 1.5 | 6 | 0.6 | 0.3 | 30.6 | 1.8 | 0.6 | |
| Zica-20211112-94819 | 2021-11-18 15:12:32.052 | Typical | No | None | 0 | No | No | No | 2.7 | 1.3 | 3 | 0.4 | 0.2 | 41.8 | 1.8 | 0.9 | |
| Zica-20211112-94819 | 2021-11-18 17:52:40.052 | Typical | No | 88.9 | 87.4 | No | No | No | 3.0 | 1.1 | 5 | 0.4 | 0.2 | 41.3 | 1.8 | 1.6 | |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|-----|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | Present? | | | | | | | | | | |
| Zica-20211112-94819 | 2021-11-18 20:52:08.052 | Typical | Yes | 118.3 | 116.2 | No | No | No | 4.7 | 1.2 | 7 | 0.5 | 0.4 | 36.1 | 1.8 | 2.4 | |
| Zica-20211112-94819 | 2021-11-19 01:35:09.052 | Typical | No | None | 0 | No | No | No | 4.0 | 1.4 | 5 | 0.6 | 0.3 | 35.7 | 1.7 | 1.2 | |
| Zica-20211112-94819 | 2021-11-19 05:37:29.052 | Typical | No | 105.5 | 108 | No | No | No | 3.2 | 1.5 | 4 | 0.4 | 0.2 | 39.2 | 1.7 | 0.2 | |
| Zica-20211112-94819 | 2021-11-19 08:51:47.052 | Typical | No | None | 0 | No | No | No | 3.6 | 1.2 | 4 | 0.6 | 0.3 | 39.9 | 1.6 | 0.8 | |
| Zica-20211112-94819 | 2021-11-19 12:25:24.052 | Typical | No | None | 0 | No | No | No | 4.5 | 1.4 | 6 | 0.6 | 0.3 | 39.2 | 1.8 | 1.9 | |
| Zica-20211112-94819 | 2021-11-19 16:54:31.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.4 | 4 | 0.5 | 0.2 | 38.9 | 1.5 | 3.3 | |
| Zica-20211112-94819 | 2021-11-19 20:17:49.052 | Typical | No | None | 0 | No | No | No | NA | 1.1 | NA | NA | NA | 35.6 | 1.0 | NA | |
| Zica-20211113-195993 | 2021-11-13 19:40:02.052 | Variant | No | None | 0 | No | No | No | 0.8 | 0.8 | 0 | NA | 0.1 | 25.5 | 1.5 | 1.9 | |
| Zica-20211113-195993 | 2021-11-13 20:30:26.052 | Variant | No | None | 0 | No | No | No | 2.7 | 1.0 | 4 | 0.5 | 0.2 | 25.4 | 1.5 | 1.0 | |
| Zica-20211113-195993 | 2021-11-13 23:14:02.052 | Variant | No | None | 0 | No | No | No | 1.4 | 1.0 | 1 | 0.3 | 0.1 | 27.8 | 1.6 | 0.8 | |
| Zica-20211113-195993 | 2021-11-14 00:35:36.052 | Variant | No | None | 0 | No | No | No | 1.9 | 0.9 | 3 | 0.3 | 0.1 | 24.0 | 1.6 | 0.9 | |
| Zica-20211113-195993 | 2021-11-14 02:26:36.052 | Variant | No | None | 0 | No | No | No | 1.0 | 0.8 | 1 | 0.2 | 0.1 | 27.6 | 1.6 | 1.3 | |
| Zica-20211113-195993 | 2021-11-14 03:29:22.052 | Typical | No | None | 0 | No | No | No | 2.5 | 0.9 | 4 | 0.4 | 0.2 | 32.5 | 0.7 | 2.3 | |
| Zica-20211113-195993 | 2021-11-14 05:57:22.052 | Typical | No | None | 0 | No | No | No | 2.4 | 0.8 | 4 | 0.4 | 0.2 | 30.0 | 0.8 | 1.0 | |
| Zica-20211113-195993 | 2021-11-14 08:22:24.052 | Variant | No | None | 0 | No | No | No | 0.8 | 0.7 | 0 | NA | 0.1 | 26.4 | 1.1 | 2.5 | |
| Zica-20211113-195993 | 2021-11-14 09:07:35.052 | Variant | No | None | 0 | No | No | No | 1.2 | 0.5 | 2 | 0.3 | 0.1 | 14.1 | 0.7 | 0.1 | |
| Zica-20211113-195993 | 2021-11-14 10:18:20.052 | Variant | No | None | 0 | No | No | No | 0.6 | 0.5 | 0 | NA | 0.1 | 16.9 | 1.1 | 0.6 | |
| Zica-20211113-195993 | 2021-11-14 10:55:09.052 | Variant | No | None | 0 | No | No | No | 1.8 | 0.6 | 3 | 0.4 | 0.2 | 15.0 | 1.2 | 1.0 | |
| Zica-20211113-195993 | 2021-11-14 12:40:46.052 | Variant | No | None | 0 | No | No | No | 0.7 | 0.6 | 0 | NA | 0.1 | 18.3 | 1.1 | 2.3 | |
| Zica-20211113-195993 | 2021-11-14 13:20:24.052 | Variant | No | None | 0 | No | No | No | 3.6 | 0.8 | 6 | 0.5 | 0.2 | 18.6 | 1.1 | 0.9 | |
| Zica-20211113-195993 | 2021-11-14 16:54:31.052 | Variant | No | None | 0 | No | No | No | 1.4 | 1.0 | 1 | 0.3 | 0.1 | 28.6 | 1.1 | 1.4 | |
| Zica-20211113-195993 | 2021-11-14 18:18:35.052 | Variant | No | None | 0 | No | No | No | 1.8 | 1.0 | 2 | 0.4 | 0.1 | 19.8 | 1.1 | 1.4 | |
| Zica-20211113-195993 | 2021-11-14 20:09:00.052 | Variant | No | None | 0 | No | No | No | 1.3 | 0.8 | 1 | 0.4 | 0.1 | 19.0 | 1.1 | 1.4 | |
| Zica-20211113-195993 | 2021-11-14 21:27:53.052 | Variant | No | None | 0 | No | No | No | 3.1 | 0.9 | 5 | 0.4 | 0.2 | 24.7 | 1.2 | 1.9 | |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | MFAS RL | MFAS cSEL | Echosounder Present? | Impulsive Sounds Present? | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) | |
|----------------------|-------------------------|---------|-------------------|---------|-----------|----------------------|---------------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|--|-------------------------|------------------------|-----|
| | | | | | | | | | | | | | | | | |
| Zica-20211113-195993 | 2021-11-15 00:32:31.052 | Variant | No | None | 0 | No | No | No | 1.1 | 0.8 | 1 | 0.2 | 0.1 | 27.6 | 1.1 | 2.2 |
| Zica-20211113-195993 | 2021-11-15 01:39:34.052 | Variant | No | None | 0 | No | No | No | 2.5 | 0.6 | 5 | 0.5 | 0.3 | 20.8 | 1.1 | 1.1 |
| Zica-20211113-195993 | 2021-11-15 04:08:14.052 | Variant | No | None | 0 | No | No | No | 1.8 | 0.8 | 2 | 0.4 | 0.2 | 23.9 | 0.8 | 4.1 |
| Zica-20211113-195993 | 2021-11-15 05:53:51.052 | Variant | No | None | 0 | No | No | No | 1.3 | 0.8 | 1 | 0.4 | 0.1 | 27.4 | 0.7 | 1.0 |
| Zica-20211113-195993 | 2021-11-15 07:11:27.052 | Variant | No | None | 0 | No | No | No | 2.5 | 0.8 | 4 | 0.5 | 0.2 | 26.0 | 0.8 | 2.3 |
| Zica-20211113-195993 | 2021-11-15 09:44:17.052 | Variant | No | None | 0 | No | No | No | 3.4 | 0.8 | 6 | 0.4 | 0.3 | 29.0 | 1.1 | 2.0 |
| Zica-20211113-195993 | 2021-11-15 13:09:07.052 | Variant | No | None | 0 | No | No | No | 4.0 | 1.1 | 7 | 0.6 | 0.3 | 26.5 | 1.0 | 0.6 |
| Zica-20211113-195993 | 2021-11-15 17:08:14.052 | Variant | No | None | 0 | No | No | No | 3.1 | 1.1 | 4 | 0.6 | 0.3 | 22.9 | 0.9 | 2.1 |
| Zica-20211113-195993 | 2021-11-15 20:15:47.052 | Variant | No | None | 0 | No | No | No | 2.6 | 0.4 | 7 | 0.4 | 0.3 | 5.5 | 0.9 | 5.3 |
| Zica-20211113-195993 | 2021-11-15 22:50:35.052 | Variant | No | None | 0 | No | No | No | 0.9 | 0.6 | 1 | 0.2 | 0.1 | 11.7 | 0.6 | 4.6 |
| Zica-20211113-195993 | 2021-11-15 23:41:58.052 | Variant | No | None | 0 | No | No | No | 1.2 | 0.8 | 1 | 0.3 | 0.1 | 19.7 | 0.8 | 4.2 |
| Zica-20211113-195993 | 2021-11-16 00:53:00.052 | Variant | No | None | 0 | No | No | No | 0.8 | 0.6 | 1 | 0.1 | 0.1 | 14.5 | 1.0 | 3.5 |
| Zica-20211113-195993 | 2021-11-16 01:38:19.052 | Variant | No | None | 0 | No | No | No | 0.5 | 0.5 | 0 | NA | 0.0 | 8.4 | 1.0 | 3.7 |
| Zica-20211113-195993 | 2021-11-16 02:09:30.052 | Variant | No | None | 0 | No | No | No | 0.9 | 0.7 | 1 | 0.2 | 0.1 | 20.9 | 1.0 | 3.5 |
| Zica-20211113-195993 | 2021-11-16 03:04:06.052 | Variant | No | None | 0 | No | No | No | 1.7 | 0.6 | 4 | 0.3 | 0.2 | 17.6 | 0.7 | 2.6 |
| Zica-20211113-195993 | 2021-11-16 04:49:01.052 | Variant | No | None | 0 | No | No | No | 1.9 | 1.0 | 3 | 0.3 | 0.2 | 28.2 | 1.5 | 1.5 |
| Zica-20211113-195993 | 2021-11-16 06:40:13.052 | Variant | No | None | 0 | No | No | No | 2.8 | 1.2 | 4 | 0.4 | 0.2 | 39.2 | 0.8 | 1.8 |
| Zica-20211113-195993 | 2021-11-16 09:25:56.052 | Variant | No | None | 0 | No | No | No | 2.7 | 1.1 | 5 | 0.4 | 0.2 | 34.1 | 1.8 | 2.4 |
| Zica-20211113-195993 | 2021-11-16 12:09:42.052 | Variant | No | None | 0 | No | No | No | 4.6 | 1.2 | 10 | 0.6 | 0.2 | 31.8 | 1.8 | 1.9 |
| Zica-20211113-195993 | 2021-11-16 16:43:22.052 | Variant | No | None | 0 | No | No | No | 3.6 | 1.0 | 8 | 0.4 | 0.2 | 25.3 | 1.7 | 2.2 |
| Zica-20211113-195993 | 2021-11-16 20:17:20.052 | Variant | No | 107.9 | 115.6 | No | No | No | 3.4 | 0.8 | 6 | 0.5 | 0.2 | 17.2 | 0.9 | 2.0 |
| Zica-20211113-195993 | 2021-11-16 23:44:01.052 | Variant | No | None | 0 | No | No | No | 2.3 | 0.9 | 5 | 0.3 | 0.1 | 20.0 | 1.0 | 1.3 |
| Zica-20211113-195993 | 2021-11-17 02:00:50.052 | Variant | No | None | 0 | No | No | No | 1.0 | 0.6 | 1 | 0.3 | 0.1 | 15.2 | 1.0 | 0.8 |
| Zica-20211113-195993 | 2021-11-17 03:00:50.052 | Variant | No | None | 0 | No | No | No | 1.2 | 0.7 | 2 | 0.2 | 0.1 | 21.6 | 0.7 | 2.1 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|----------|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | | | | | Present? | Present? | | | | |
| Zica-20211113-195993 | 2021-11-17 04:13:44.052 | Variant | No | None | 0 | No | No | No | 1.5 | 0.7 | 3 | 0.3 | 0.1 | 19.9 | 0.7 | 2.8 |
| Zica-20211113-195993 | 2021-11-17 05:44:48.052 | Variant | No | None | 0 | No | No | No | 1.1 | 0.6 | 2 | 0.3 | 0.1 | 14.4 | 0.7 | 3.3 |
| Zica-20211113-195993 | 2021-11-17 06:51:47.052 | Variant | Yes | 118.2 | 125.7 | No | No | No | 1.9 | 0.6 | 4 | 0.3 | 0.1 | 21.0 | 0.8 | 3.1 |
| Zica-20211113-195993 | 2021-11-17 08:47:44.052 | Typical | No | None | 0 | No | No | No | 3.1 | 1.2 | 5 | 0.4 | 0.2 | 27.2 | 0.7 | 1.4 |
| Zica-20211113-195993 | 2021-11-17 11:51:09.052 | Variant | No | None | 0 | No | No | No | 1.4 | 1.1 | 1 | 0.2 | 0.1 | 26.6 | 1.1 | 2.2 |
| Zica-20211113-195993 | 2021-11-17 13:14:01.052 | Variant | No | None | 0 | No | No | No | 3.3 | 0.8 | 5 | 0.5 | 0.2 | 22.1 | 1.0 | 1.0 |
| Zica-20211113-195993 | 2021-11-17 16:29:47.052 | Variant | No | None | 0 | No | No | No | 1.8 | 0.9 | 2 | 0.5 | 0.1 | 25.3 | 1.0 | 1.7 |
| Zica-20211113-195993 | 2021-11-17 18:20:32.052 | Variant | No | None | 0 | No | No | No | 1.8 | 1.0 | 2 | 0.4 | 0.1 | 23.8 | 1.1 | 3.0 |
| Zica-20211113-195993 | 2021-11-17 20:11:11.052 | Variant | No | None | 0 | No | No | No | NA | 1.0 | NA | NA | NA | 19.2 | 1.0 | NA |
| Zica-20220112-195994 | 2022-01-12 18:45:25.053 | Typical | No | 77.6 | 71.3 | No | No | No | 1.9 | 1.0 | 2 | 0.4 | 0.1 | 36.6 | 1.4 | 1.6 |
| Zica-20220112-195994 | 2022-01-12 20:38:10.053 | Typical | No | 76.3 | 69.9 | No | No | No | 3.0 | 1.0 | 5 | 0.4 | 0.2 | 42.1 | 1.3 | 0.7 |
| Zica-20220112-195994 | 2022-01-12 23:37:05.053 | Typical | No | None | 0 | No | No | No | 3.0 | 1.0 | 4 | 0.6 | 0.2 | 40.9 | 1.5 | 1.0 |
| Zica-20220112-195994 | 2022-01-13 02:39:34.053 | Typical | No | None | 0 | No | No | No | 2.0 | 1.0 | 2 | 0.5 | 0.1 | 40.3 | 1.4 | 0.2 |
| Zica-20220112-195994 | 2022-01-13 04:39:56.053 | Typical | No | None | 0 | No | No | No | 1.5 | 1.0 | 1 | 0.4 | 0.1 | 38.7 | 1.5 | 2.6 |
| Zica-20220112-195994 | 2022-01-13 06:09:22.053 | Typical | No | None | 0 | No | No | No | 1.9 | 0.9 | 2 | 0.5 | 0.2 | 37.0 | 1.5 | 0.5 |
| Zica-20220112-195994 | 2022-01-13 08:06:20.053 | Typical | No | None | 0 | No | No | No | 2.2 | 0.9 | 3 | 0.4 | 0.2 | 37.1 | 1.6 | 0.4 |
| Zica-20220112-195994 | 2022-01-13 10:17:09.053 | Typical | No | None | 0 | No | No | No | 2.0 | 0.9 | 2 | 0.4 | 0.2 | 38.0 | 1.4 | 0.8 |
| Zica-20220112-195994 | 2022-01-13 12:16:52.053 | Typical | No | None | 0 | No | No | No | 2.2 | 1.0 | 2 | 0.4 | 0.2 | 32.1 | 1.5 | 0.8 |
| Zica-20220112-195994 | 2022-01-13 14:31:30.053 | Typical | No | None | 0 | No | No | No | 3.4 | 1.3 | 5 | 0.5 | 0.2 | 40.8 | 1.6 | 1.1 |
| Zica-20220112-195994 | 2022-01-13 17:56:47.053 | Typical | No | 102.8 | 107.8 | No | No | No | 3.6 | 1.3 | 5 | 0.5 | 0.2 | 44.8 | 1.6 | 0.3 |
| Zica-20220112-195994 | 2022-01-13 21:32:29.053 | Typical | Yes | 119.1 | 125.2 | No | No | No | 3.7 | 1.0 | 5 | 0.6 | 0.2 | 40.5 | 1.6 | 1.3 |
| Zica-20220112-195994 | 2022-01-14 01:16:49.053 | Typical | No | None | 0 | No | No | No | 3.5 | 1.3 | 4 | 0.5 | 0.2 | 42.0 | 1.7 | 0.8 |
| Zica-20220112-195994 | 2022-01-14 04:44:14.053 | Typical | No | None | 0 | No | No | No | 3.5 | 1.4 | 4 | 0.6 | 0.2 | 45.4 | 1.6 | 0.9 |
| Zica-20220112-195994 | 2022-01-14 08:16:59.053 | Typical | No | None | 0 | No | No | No | 2.4 | 1.2 | 3 | 0.4 | 0.1 | 37.4 | 1.6 | 1.1 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | MFAS RL | MFAS cSEL | Echosounder Present? | Impulsive Sounds Present? | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) | |
|----------------------|-------------------------|---------|-------------------|---------|-----------|----------------------|---------------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|--|-------------------------|------------------------|-----|
| | | | | | | | | | | | | | | | | |
| Zica-20220112-195994 | 2022-01-14 10:40:06.053 | Typical | No | None | 0 | No | No | No | 1.8 | 1.2 | 2 | 0.3 | 0.1 | 38.3 | 1.4 | 1.7 |
| Zica-20220112-195994 | 2022-01-14 12:30:49.053 | Typical | No | None | 0 | No | No | No | 1.4 | 1.0 | 1 | 0.4 | 0.1 | 37.8 | 1.1 | 1.2 |
| Zica-20220112-195994 | 2022-01-14 13:57:27.053 | Typical | No | None | 0 | No | No | No | 4.1 | 1.0 | 6 | 0.5 | 0.2 | 28.7 | 1.5 | 1.1 |
| Zica-20220112-195994 | 2022-01-14 18:02:47.053 | Typical | No | None | 0 | No | No | No | 4.2 | 1.3 | 6 | 0.7 | 0.2 | 43.0 | 1.6 | 1.1 |
| Zica-20220112-195994 | 2022-01-14 22:16:27.053 | Typical | No | None | 0 | No | No | No | 3.5 | 1.3 | 4 | 0.6 | 0.2 | 37.7 | 1.1 | 0.5 |
| Zica-20220112-195994 | 2022-01-15 01:47:33.053 | Typical | No | None | 0 | No | No | No | 2.2 | 1.4 | 2 | 0.4 | 0.1 | 36.1 | 1.7 | 1.2 |
| Zica-20220112-195994 | 2022-01-15 04:02:12.053 | Typical | No | None | 0 | No | No | No | 2.0 | 1.2 | 2 | 0.3 | 0.1 | 36.9 | 1.7 | 1.5 |
| Zica-20220112-195994 | 2022-01-15 06:03:56.053 | Variant | No | 139 | 143.9 | No | No | No | 16.9 | 1.2 | 24 | 1.0 | 1.6 | 40.0 | 1.7 | 0.7 |
| Zica-20220112-195994 | 2022-01-15 23:00:12.053 | Typical | No | None | 0 | No | No | No | 3.1 | 1.3 | 3 | 0.6 | 0.1 | 31.6 | 1.6 | 2.6 |
| Zica-20220112-195994 | 2022-01-16 02:05:32.053 | Typical | No | None | 0 | No | No | No | 2.3 | 1.3 | 2 | 0.5 | 0.1 | 31.0 | 1.6 | 2.6 |
| Zica-20220112-195994 | 2022-01-16 04:26:04.053 | Typical | No | None | 0 | No | No | No | 1.7 | 1.2 | 1 | 0.4 | 0.1 | 26.5 | 1.7 | 2.1 |
| Zica-20220112-195994 | 2022-01-16 06:07:13.053 | Typical | No | None | 0 | No | No | No | 2.7 | 1.3 | 3 | 0.5 | 0.2 | 41.7 | 1.7 | 2.1 |
| Zica-20220112-195994 | 2022-01-16 08:50:31.053 | Typical | No | None | 0 | No | No | No | 2.3 | 1.2 | 2 | 0.5 | 0.2 | 42.4 | 1.7 | 2.6 |
| Zica-20220112-195994 | 2022-01-16 11:09:17.053 | Typical | No | None | 0 | No | No | No | 2.4 | 1.3 | 2 | 0.4 | 0.2 | 39.8 | 1.8 | 1.5 |
| Zica-20220112-195994 | 2022-01-16 13:35:07.053 | Typical | No | None | 0 | No | No | No | 3.9 | 1.1 | 5 | 0.6 | 0.2 | 35.0 | 1.8 | 1.0 |
| Zica-20220112-195994 | 2022-01-16 17:26:19.053 | Typical | No | None | 0 | No | No | No | 2.7 | 1.3 | 3 | 0.5 | 0.2 | 44.7 | 1.8 | 0.7 |
| Zica-20220112-195994 | 2022-01-16 20:10:43.053 | Typical | No | None | 0 | No | No | No | 3.3 | 1.2 | 4 | 0.5 | 0.2 | 41.1 | 1.8 | 0.3 |
| Zica-20220112-195994 | 2022-01-16 23:27:19.053 | Typical | No | None | 0 | No | No | No | 3.9 | 1.4 | 6 | 0.5 | 0.3 | 51.4 | 1.8 | 0.7 |
| Zica-20220112-195994 | 2022-01-17 03:18:28.053 | Typical | No | None | 0 | No | No | No | 3.3 | 1.3 | 5 | 0.5 | 0.2 | 45.6 | 1.8 | 0.9 |
| Zica-20220112-195994 | 2022-01-17 06:35:23.053 | Typical | No | None | 0 | No | No | No | 2.5 | 1.2 | 3 | 0.5 | 0.1 | 42.7 | 1.8 | 0.9 |
| Zica-20220112-195994 | 2022-01-17 09:06:09.053 | Typical | No | None | 0 | No | No | No | 3.9 | 1.2 | 6 | 0.5 | 0.4 | 37.0 | 1.8 | 0.4 |
| Zica-20220112-195994 | 2022-01-17 13:02:07.053 | Variant | No | None | 0 | No | No | Yes | 8.1 | 1.3 | 10 | 1.6 | 0.3 | 40.4 | 1.8 | 0.8 |
| Zica-20220112-195994 | 2022-01-17 21:09:42.053 | Typical | No | None | 0 | No | No | No | 3.4 | 1.3 | 4 | 0.6 | 0.2 | 40.3 | 1.8 | 1.4 |
| Zica-20220112-195994 | 2022-01-18 00:34:35.053 | Typical | No | None | 0 | No | No | No | 2.0 | 1.2 | 2 | 0.3 | 0.1 | 45.7 | 1.8 | 1.8 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | MFAS RL | MFAS cSEL | Echosounder Present? | Impulsive Sounds Present? | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) | |
|----------------------|-------------------------|---------|-------------------|---------|-----------|----------------------|---------------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|--|-------------------------|------------------------|-----|
| | | | | | | | | | | | | | | | | |
| Zica-20220112-195994 | 2022-01-18 02:33:16.053 | Typical | No | None | 0 | No | No | No | 2.2 | 1.0 | 3 | 0.4 | 0.1 | 32.0 | 1.8 | 0.3 |
| Zica-20220112-195994 | 2022-01-18 04:46:27.053 | Typical | No | None | 0 | No | No | No | 2.0 | 1.0 | 2 | 0.4 | 0.1 | 36.9 | 1.8 | 1.2 |
| Zica-20220112-195994 | 2022-01-18 06:45:52.053 | Typical | No | None | 0 | No | No | No | 1.9 | 1.1 | 2 | 0.4 | 0.1 | 35.4 | 1.8 | 1.0 |
| Zica-20220112-195994 | 2022-01-18 08:41:00.053 | Typical | No | None | 0 | No | No | No | 5.1 | 1.2 | 7 | 0.8 | 0.3 | 33.0 | 1.8 | 1.7 |
| Zica-20220112-195994 | 2022-01-18 13:48:52.053 | Typical | No | None | 0 | No | No | No | 2.7 | 1.3 | 3 | 0.5 | 0.1 | 39.2 | 1.8 | 0.6 |
| Zica-20220112-195994 | 2022-01-18 16:33:08.053 | Typical | No | None | 0 | No | No | No | 2.6 | 1.3 | 3 | 0.5 | 0.1 | 38.9 | 1.8 | 2.3 |
| Zica-20220112-195994 | 2022-01-18 19:10:52.053 | Typical | No | None | 0 | No | No | No | 3.8 | 1.3 | 5 | 0.5 | 0.2 | 35.8 | 1.1 | 1.1 |
| Zica-20220112-195994 | 2022-01-18 22:59:37.053 | Typical | No | None | 0 | No | No | No | 3.6 | 1.4 | 5 | 0.5 | 0.2 | 40.8 | 1.7 | 0.5 |
| Zica-20220112-195994 | 2022-01-19 02:37:23.053 | Typical | No | None | 0 | No | No | No | 2.9 | 1.2 | 4 | 0.4 | 0.3 | 42.2 | 1.7 | 1.6 |
| Zica-20220112-195994 | 2022-01-19 05:28:34.053 | Typical | No | None | 0 | No | No | No | 2.6 | 1.1 | 2 | 0.6 | 0.3 | 35.7 | 1.8 | 0.2 |
| Zica-20220112-195994 | 2022-01-19 08:07:15.053 | Typical | No | None | 0 | No | No | No | 2.9 | 1.2 | 4 | 0.5 | 0.2 | 40.0 | 1.8 | 1.2 |
| Zica-20220112-195994 | 2022-01-19 11:02:01.053 | Typical | No | None | 0 | No | No | No | NA | 1.2 | NA | NA | NA | 39.6 | 1.7 | NA |
| Zica-20230518-233391 | 2023-05-18 21:15:43.053 | Typical | No | None | 0 | No | No | No | 2.4 | 1.1 | 3 | 0.4 | 0.2 | 37.3 | 1.6 | 1.7 |
| Zica-20230518-233391 | 2023-05-18 23:37:42.053 | Typical | No | None | 0 | No | No | No | 2.4 | 1.0 | 3 | 0.4 | 0.2 | 34.9 | 1.6 | 0.9 |
| Zica-20230518-233391 | 2023-05-19 02:00:05.053 | Typical | No | None | 0 | No | Yes | No | 2.1 | 1.1 | 3 | 0.3 | 0.2 | 33.9 | 1.6 | 1.4 |
| Zica-20230518-233391 | 2023-05-19 04:04:22.053 | Variant | No | None | 0 | No | Yes | No | 1.7 | 0.9 | 2 | 0.3 | 0.2 | 36.0 | 1.6 | 1.1 |
| Zica-20230518-233391 | 2023-05-19 05:44:09.053 | Variant | No | None | 0 | No | Yes | No | 1.7 | 0.9 | 1 | 0.3 | 0.2 | 32.3 | 1.6 | 1.4 |
| Zica-20230518-233391 | 2023-05-19 07:26:29.053 | Variant | No | None | 0 | No | No | No | 2.2 | 0.9 | 4 | 0.3 | 0.2 | 35.7 | 1.4 | 0.9 |
| Zica-20230518-233391 | 2023-05-19 09:38:13.053 | Variant | No | None | 0 | No | No | No | 1.5 | 0.8 | 1 | 0.2 | 0.2 | 31.2 | 1.2 | 0.7 |
| Zica-20230518-233391 | 2023-05-19 11:09:41.053 | Variant | No | None | 0 | No | No | No | 7.4 | 1.0 | 12 | 0.9 | 0.4 | 38.2 | 1.1 | 1.2 |
| Zica-20230518-233391 | 2023-05-19 18:34:43.053 | Typical | No | None | 0 | No | No | No | 2.5 | 0.9 | 3 | 0.5 | 0.2 | 18.9 | 1.0 | 0.2 |
| Zica-20230518-233391 | 2023-05-19 21:04:02.053 | Typical | No | None | 0 | No | No | No | 3.4 | 1.2 | 4 | 0.6 | 0.2 | 45.8 | 1.0 | 1.1 |
| Zica-20230518-233391 | 2023-05-20 00:26:24.053 | Typical | No | None | 0 | No | Yes | No | 3.5 | 1.1 | 5 | 0.5 | 0.2 | 43.9 | 1.3 | 1.2 |
| Zica-20230518-233391 | 2023-05-20 03:58:23.053 | Typical | No | None | 0 | No | Yes | No | 2.3 | 1.2 | 3 | 0.4 | 0.2 | 45.8 | 1.3 | 1.3 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | MFAS RL | MFAS cSEL | Echosounder Present? | Impulsive Sounds Present? | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) | |
|----------------------|-------------------------|---------|-------------------|---------|-----------|----------------------|---------------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|--|-------------------------|------------------------|-----|
| | | | | | | | | | | | | | | | | |
| Zica-20230518-233391 | 2023-05-20 06:14:06.053 | Typical | No | None | 0 | No | Yes | No | 1.9 | 1.2 | 2 | 0.4 | 0.2 | 39.3 | 1.1 | 0.3 |
| Zica-20230518-233391 | 2023-05-20 08:08:16.053 | Typical | No | None | 0 | No | No | No | 2.7 | 1.1 | 3 | 0.4 | 0.2 | 40.6 | 1.2 | 1.0 |
| Zica-20230518-233391 | 2023-05-20 10:50:28.053 | Typical | No | None | 0 | No | No | No | 3.8 | 1.1 | 6 | 0.5 | 0.2 | 35.1 | 1.1 | 0.1 |
| Zica-20230518-233391 | 2023-05-20 14:40:17.053 | Typical | No | None | 0 | No | No | No | 2.9 | 1.5 | 3 | 0.5 | 0.2 | 49.7 | 1.0 | 0.6 |
| Zica-20230518-233391 | 2023-05-20 17:36:56.053 | Typical | No | None | 0 | No | No | No | 2.3 | 1.4 | 2 | 0.4 | 0.1 | 41.5 | 0.9 | 1.2 |
| Zica-20230518-233391 | 2023-05-20 19:57:04.053 | Typical | No | None | 0 | No | No | No | 3.7 | 1.2 | 5 | 0.5 | 0.2 | 44.1 | 1.1 | 1.2 |
| Zica-20230518-233391 | 2023-05-20 23:37:26.053 | Variant | No | None | 0 | No | Yes | No | 7.0 | 1.5 | 12 | 0.7 | 0.5 | 42.5 | 1.5 | 2.4 |
| Zica-20230518-233391 | 2023-05-21 06:36:06.053 | Variant | No | None | 0 | No | No | No | 1.6 | 1.1 | 1 | 0.2 | 0.1 | 28.0 | 1.8 | 3.4 |
| Zica-20230518-233391 | 2023-05-21 08:11:45.053 | Variant | No | None | 0 | No | No | No | 1.7 | 1.0 | 1 | 0.2 | 0.2 | 38.1 | 1.1 | 3.6 |
| Zica-20230518-233391 | 2023-05-21 09:52:08.053 | Variant | No | None | 0 | No | No | No | 2.3 | 1.1 | 3 | 0.2 | 0.3 | 31.7 | 1.3 | 3.4 |
| Zica-20230518-233391 | 2023-05-21 12:09:40.053 | Typical | No | None | 0 | No | No | No | 3.8 | 1.1 | 6 | 0.5 | 0.2 | 39.5 | 1.2 | 0.0 |
| Zica-20230518-233391 | 2023-05-21 15:54:56.053 | Variant | No | None | 0 | No | No | No | 6.1 | 1.1 | 10 | 0.7 | 0.3 | 33.7 | 1.1 | 2.0 |
| Zica-20230518-233391 | 2023-05-21 21:58:11.053 | Variant | No | None | 0 | No | No | No | 1.7 | 1.1 | 2 | 0.3 | 0.1 | 29.0 | 1.7 | 0.7 |
| Zica-20230518-233391 | 2023-05-21 23:37:24.053 | Typical | No | None | 0 | No | No | No | 3.4 | 1.1 | 4 | 0.6 | 0.3 | 35.8 | 1.6 | 2.1 |
| Zica-20230518-233391 | 2023-05-22 02:58:40.053 | Variant | No | None | 0 | No | No | No | 2.8 | 0.7 | 6 | 0.5 | 0.4 | 23.0 | 1.8 | 0.6 |
| Zica-20230518-233391 | 2023-05-22 05:44:22.053 | Typical | No | None | 0 | No | No | No | 2.5 | 1.3 | 3 | 0.3 | 0.2 | 46.1 | 1.8 | 1.4 |
| Zica-20230518-233391 | 2023-05-22 08:12:52.053 | Typical | No | None | 0 | No | No | No | 5.4 | 1.2 | 8 | 0.6 | 0.3 | 33.3 | 1.8 | 1.0 |
| Zica-20230518-233391 | 2023-05-22 13:39:03.053 | Typical | No | None | 0 | No | No | No | 3.1 | 1.1 | 5 | 0.4 | 0.2 | 32.4 | 1.7 | 1.0 |
| Zica-20230518-233391 | 2023-05-22 16:45:29.053 | Typical | No | None | 0 | No | No | No | 3.0 | 1.1 | 4 | 0.5 | 0.2 | 31.6 | 1.7 | 1.6 |
| Zica-20230518-233391 | 2023-05-22 19:45:07.053 | Variant | No | None | 0 | No | No | No | 5.0 | 1.3 | 8 | 0.6 | 0.3 | 36.5 | 1.8 | 3.1 |
| Zica-20230518-233391 | 2023-05-23 00:43:40.053 | Variant | No | None | 0 | No | No | No | 1.7 | 1.2 | 2 | 0.3 | 0.1 | 37.1 | 1.1 | 2.6 |
| Zica-20230518-233391 | 2023-05-23 02:24:22.053 | Variant | No | None | 0 | No | Yes | No | 1.5 | 0.9 | 3 | 0.2 | 0.1 | 26.7 | 1.1 | 2.5 |
| Zica-20230518-233391 | 2023-05-23 03:52:29.053 | Variant | No | None | 0 | No | No | No | 1.9 | 0.9 | 2 | 0.3 | 0.2 | 32.6 | 1.3 | 0.5 |
| Zica-20230518-233391 | 2023-05-23 05:46:35.053 | Variant | No | None | 0 | No | No | No | 1.4 | 0.9 | 2 | 0.2 | 0.1 | 32.9 | 1.2 | 2.6 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | MFAS RL | MFAS cSEL | Echosounder Present? | Impulsive Sounds Present? | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) | |
|----------------------|-------------------------|---------|-------------------|---------|-----------|----------------------|---------------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|--|-------------------------|------------------------|-----|
| | | | | | | | | | | | | | | | | |
| Zica-20230518-233391 | 2023-05-23 07:11:12.053 | Variant | No | None | 0 | No | Yes | No | 1.9 | 1.0 | 3 | 0.3 | 0.1 | 31.3 | 1.1 | 0.4 |
| Zica-20230518-233391 | 2023-05-23 09:05:11.053 | Typical | No | None | 0 | No | No | No | 2.5 | 1.0 | 4 | 0.4 | 0.2 | 20.6 | 1.1 | 1.8 |
| Zica-20230518-233391 | 2023-05-23 11:35:49.053 | Typical | No | None | 0 | No | No | No | 4.3 | 1.0 | 8 | 0.6 | 0.2 | 28.8 | 1.3 | 1.4 |
| Zica-20230518-233391 | 2023-05-23 15:51:54.053 | Typical | No | None | 0 | No | No | No | 2.6 | 1.1 | 4 | 0.4 | 0.1 | 38.2 | 1.1 | 0.8 |
| Zica-20230518-233391 | 2023-05-23 18:25:50.053 | Typical | No | None | 0 | No | No | No | 3.7 | 1.4 | 6 | 0.4 | 0.2 | 56.3 | 1.1 | 1.1 |
| Zica-20230518-233391 | 2023-05-23 22:08:45.053 | Typical | No | None | 0 | No | No | No | 2.9 | 1.2 | 4 | 0.5 | 0.2 | 26.6 | 1.0 | 1.9 |
| Zica-20230518-233391 | 2023-05-24 01:02:36.053 | Typical | No | 104.4 | 112.2 | No | Yes | No | 2.3 | 1.0 | 3 | 0.4 | 0.2 | 28.2 | 0.9 | 1.2 |
| Zica-20230518-233391 | 2023-05-24 03:22:02.053 | Variant | Yes | 120.9 | 126.7 | No | Yes | No | 1.6 | 1.1 | 1 | 0.5 | 0.1 | 4.7 | 0.9 | 2.3 |
| Zica-20230518-233391 | 2023-05-24 04:57:39.053 | Variant | Yes | 120.7 | 129.4 | No | Yes | No | 1.7 | 1.0 | 2 | 0.3 | 0.1 | 25.8 | 1.1 | 1.4 |
| Zica-20230518-233391 | 2023-05-24 06:42:08.053 | Variant | No | None | 0 | No | Yes | No | 1.3 | 0.9 | 0 | NA | 0.4 | 29.6 | 1.0 | 2.6 |
| Zica-20230518-233391 | 2023-05-24 08:02:51.053 | Variant | No | None | 0 | No | Yes | No | 2.3 | 1.5 | 1 | 0.4 | 0.4 | 42.0 | 1.2 | 2.3 |
| Zica-20230518-233391 | 2023-05-24 10:20:38.053 | Variant | No | None | 0 | No | No | No | 6.3 | 1.0 | 11 | 0.6 | 0.4 | 35.7 | 1.1 | 0.6 |
| Zica-20230518-233391 | 2023-05-24 16:36:17.053 | Variant | No | None | 0 | No | No | No | 5.2 | 1.0 | 8 | 0.7 | 0.4 | 28.6 | 1.0 | 1.6 |
| Zica-20230518-233391 | 2023-05-24 21:48:27.053 | Typical | No | None | 0 | No | No | No | 2.9 | 1.5 | 4 | 0.3 | 0.2 | 43.8 | 1.0 | 2.6 |
| Zica-20230518-233391 | 2023-05-25 00:41:53.053 | Typical | No | None | 0 | No | No | No | 2.4 | 1.3 | 3 | 0.3 | 0.1 | 46.6 | 1.4 | 0.7 |
| Zica-20230518-233391 | 2023-05-25 03:03:32.053 | Variant | No | None | 0 | No | Yes | No | 2.6 | 1.5 | 3 | 0.4 | 0.1 | 8.0 | 1.3 | 1.8 |
| Zica-20230518-233391 | 2023-05-25 05:40:10.053 | Variant | No | None | 0 | No | No | No | 2.1 | 1.2 | 2 | 0.2 | 0.5 | 36.2 | 1.4 | 1.5 |
| Zica-20230518-233391 | 2023-05-25 07:45:33.053 | Variant | No | None | 0 | No | No | No | 2.6 | 1.4 | 2 | 0.3 | 0.2 | 41.0 | 1.6 | 2.2 |
| Zica-20230518-233391 | 2023-05-25 10:23:54.053 | Variant | No | None | 0 | No | No | No | 6.9 | 1.1 | 12 | 0.8 | 0.4 | 37.0 | 1.6 | 2.6 |
| Zica-20230518-233391 | 2023-05-25 17:17:21.053 | Variant | No | None | 0 | No | No | No | 2.1 | 1.1 | 2 | 0.5 | 0.1 | 30.8 | 1.1 | 1.0 |
| Zica-20230518-233391 | 2023-05-25 19:21:43.053 | Variant | No | None | 0 | No | Yes | No | 9.7 | 1.3 | 15 | 0.8 | 0.5 | 37.8 | 1.5 | 0.6 |
| Zica-20230518-233391 | 2023-05-26 05:01:28.053 | Variant | No | None | 0 | No | No | No | 3.0 | 1.0 | 5 | 0.4 | 0.2 | 16.0 | 1.5 | 2.7 |
| Zica-20230518-233391 | 2023-05-26 08:02:44.053 | Variant | No | None | 0 | No | No | No | 2.2 | 1.2 | 3 | 0.3 | 0.1 | 27.2 | 1.1 | 2.7 |
| Zica-20230518-233391 | 2023-05-26 10:16:09.053 | Variant | No | None | 0 | No | No | No | 2.9 | 1.2 | 5 | 0.5 | 0.2 | 35.5 | 1.6 | 3.4 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|-----|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | Present? | | | | | | | | | | |
| Zica-20230518-233391 | 2023-05-26 13:09:22.053 | Typical | No | None | 0 | No | No | No | 2.3 | 1.2 | 3 | 0.4 | 0.1 | 37.9 | 1.1 | 3.0 | |
| Zica-20230518-233391 | 2023-05-26 15:30:14.053 | Typical | No | None | 0 | No | No | No | 2.5 | 1.2 | 4 | 0.4 | 0.1 | 45.4 | 1.2 | 1.7 | |
| Zica-20230518-233391 | 2023-05-26 18:02:56.053 | Typical | No | None | 0 | No | No | No | 2.4 | 1.4 | 3 | 0.3 | 0.1 | 38.0 | 1.6 | 2.4 | |
| Zica-20230518-233391 | 2023-05-26 20:25:59.053 | Typical | No | None | 0 | No | No | No | 2.7 | 1.2 | 4 | 0.5 | 0.2 | 41.6 | 1.5 | 1.8 | |
| Zica-20230518-233391 | 2023-05-26 23:09:59.053 | Variant | No | None | 0 | No | No | No | 1.7 | 1.2 | 2 | 0.3 | 0.1 | 37.1 | 1.6 | 2.4 | |
| Zica-20230518-233391 | 2023-05-27 00:51:18.053 | Typical | No | None | 0 | No | No | No | 2.7 | 1.2 | 4 | 0.5 | 0.2 | 37.2 | 1.7 | 1.3 | |
| Zica-20230518-233391 | 2023-05-27 03:34:56.053 | Variant | No | None | 0 | No | No | No | 2.1 | 1.2 | 2 | 0.3 | 0.1 | 40.8 | 1.5 | 2.9 | |
| Zica-20230518-233391 | 2023-05-27 05:39:21.053 | Variant | No | None | 0 | No | No | No | 1.8 | 1.0 | 3 | 0.3 | 0.1 | 35.7 | 1.3 | 2.4 | |
| Zica-20230518-233391 | 2023-05-27 07:24:27.053 | Variant | No | None | 0 | No | No | No | 1.7 | 0.9 | 3 | 0.3 | 0.1 | 28.6 | 1.2 | 1.3 | |
| Zica-20230518-233391 | 2023-05-27 09:07:32.053 | Variant | No | None | 0 | No | No | No | 2.2 | 1.1 | 3 | 0.4 | 0.2 | 38.2 | 1.1 | 1.1 | |
| Zica-20230518-233391 | 2023-05-27 11:21:41.053 | Variant | No | None | 0 | No | No | No | 8.0 | 1.1 | 13 | 0.6 | 0.8 | 35.4 | 1.0 | 1.7 | |
| Zica-20230518-233391 | 2023-05-27 19:21:33.053 | Variant | No | None | 0 | No | No | No | 5.2 | 1.2 | 7 | 0.7 | 0.3 | 39.3 | 1.1 | 2.2 | |
| Zica-20230518-233391 | 2023-05-28 00:32:59.053 | Variant | No | None | 0 | No | No | No | 1.8 | 1.1 | 2 | 0.3 | 0.2 | 34.3 | 1.1 | 1.1 | |
| Zica-20230518-233391 | 2023-05-28 02:18:33.053 | Variant | No | None | 0 | No | Yes | No | 2.1 | 1.1 | 2 | 0.3 | 0.7 | 39.2 | 1.2 | 1.9 | |
| Zica-20230518-233391 | 2023-05-28 04:26:03.053 | Variant | No | None | 0 | No | No | No | 2.1 | 1.1 | 1 | 0.2 | 0.6 | 40.9 | 1.3 | 3.2 | |
| Zica-20230518-233391 | 2023-05-28 06:30:56.053 | Typical | No | None | 0 | No | No | No | 2.6 | 1.3 | 0 | NA | 0.3 | 39.8 | 1.6 | 1.9 | |
| Zica-20230518-233391 | 2023-05-28 09:06:35.053 | Typical | No | None | 0 | No | Yes | No | 2.4 | 1.1 | 1 | 0.3 | 0.3 | 35.7 | 1.6 | 1.8 | |
| Zica-20230518-233391 | 2023-05-28 11:29:08.053 | Typical | No | None | 0 | No | No | No | 3.2 | 1.3 | 6 | 0.4 | 0.2 | 39.0 | 1.6 | 0.6 | |
| Zica-20230518-233391 | 2023-05-28 14:42:46.053 | Typical | No | None | 0 | No | No | No | 3.5 | 1.4 | 5 | 0.5 | 0.2 | 36.5 | 1.6 | 1.2 | |
| Zica-20230518-233391 | 2023-05-28 18:12:41.053 | Typical | No | None | 0 | No | Yes | No | 3.9 | 1.5 | 5 | 0.6 | 0.2 | 39.5 | 1.6 | 0.6 | |
| Zica-20230518-233391 | 2023-05-28 22:06:39.053 | Variant | No | None | 0 | No | Yes | No | 6.2 | 1.3 | 10 | 0.6 | 0.3 | 34.9 | 1.6 | 1.1 | |
| Zica-20230518-233391 | 2023-05-29 04:19:43.053 | Variant | No | None | 0 | No | No | No | 1.6 | 1.3 | 1 | 0.3 | 0.1 | 45.2 | 1.5 | 3.5 | |
| Zica-20230518-233391 | 2023-05-29 05:57:31.053 | Typical | No | None | 0 | No | No | No | 3.2 | 1.1 | 5 | 0.6 | 0.2 | 25.1 | 1.6 | 1.1 | |
| Zica-20230518-233391 | 2023-05-29 09:11:45.053 | Typical | No | None | 0 | No | No | No | NA | 1.5 | NA | NA | NA | 35.0 | 1.8 | NA | |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|----------|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | | | | | Present? | Present? | | | | |
| Zica-20230519-232950 | 2023-05-20 00:37:59.052 | Typical | No | None | 0 | No | No | 1.9 | 1.1 | 2 | 0.3 | 0.1 | 40.6 | 1.6 | 0.5 | |
| Zica-20230519-232950 | 2023-05-20 02:30:28.052 | Typical | No | None | 0 | No | Yes | No | 1.9 | 1.0 | 3 | 0.3 | 0.2 | 39.5 | 1.6 | 1.0 |
| Zica-20230519-232950 | 2023-05-20 04:25:51.052 | Typical | No | None | 0 | No | Yes | No | 2.5 | 0.9 | 4 | 0.4 | 0.3 | 37.0 | 1.6 | 1.6 |
| Zica-20230519-232950 | 2023-05-20 06:52:53.052 | Typical | No | None | 0 | No | Yes | No | 2.7 | 1.0 | 4 | 0.4 | 0.2 | 46.4 | 1.6 | 0.4 |
| Zica-20230519-232950 | 2023-05-20 09:33:59.052 | Variant | No | None | 0 | No | No | No | 6.2 | 1.2 | 12 | 0.6 | 0.4 | 44.1 | 1.6 | 1.6 |
| Zica-20230519-232950 | 2023-05-20 15:48:54.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.6 | 3 | 0.5 | 0.1 | 42.3 | 1.6 | 1.2 |
| Zica-20230519-232950 | 2023-05-20 18:42:08.052 | Typical | No | None | 0 | No | No | No | 2.4 | 1.3 | 3 | 0.4 | 0.1 | 35.2 | 1.7 | 1.9 |
| Zica-20230519-232950 | 2023-05-20 21:06:59.052 | Typical | No | None | 0 | No | No | No | 3.1 | 1.4 | 5 | 0.4 | 0.2 | 36.6 | 1.7 | 2.0 |
| Zica-20230519-232950 | 2023-05-21 00:13:34.052 | Typical | No | None | 0 | No | Yes | No | 4.7 | 1.4 | 8 | 0.5 | 0.2 | 30.2 | 1.7 | 1.5 |
| Zica-20230519-232950 | 2023-05-21 04:53:13.052 | Typical | No | None | 0 | No | No | No | 2.2 | 1.3 | 2 | 0.5 | 0.1 | 34.6 | 1.5 | 2.1 |
| Zica-20230519-232950 | 2023-05-21 07:07:32.052 | Typical | No | None | 0 | No | No | No | 2.3 | 1.2 | 3 | 0.3 | 0.2 | 26.6 | 1.1 | 1.2 |
| Zica-20230519-232950 | 2023-05-21 09:25:42.052 | Variant | No | None | 0 | No | Yes | No | 2.1 | 1.0 | 3 | 0.3 | 0.2 | 22.6 | 1.1 | 2.7 |
| Zica-20230519-232950 | 2023-05-21 11:32:39.052 | Typical | No | None | 0 | No | No | No | 3.1 | 1.2 | 5 | 0.4 | 0.2 | 22.5 | 1.1 | 1.5 |
| Zica-20230519-232950 | 2023-05-21 14:39:09.052 | Typical | No | None | 0 | No | No | No | 2.7 | 1.1 | 4 | 0.4 | 0.2 | 30.4 | 1.1 | 1.1 |
| Zica-20230519-232950 | 2023-05-21 17:19:05.052 | Typical | No | None | 0 | No | No | No | 4.5 | 1.8 | 7 | 0.4 | 0.3 | 61.9 | 1.1 | 0.5 |
| Zica-20230519-232950 | 2023-05-21 21:46:17.052 | Typical | No | None | 0 | No | Yes | No | 2.9 | 1.2 | 5 | 0.3 | 0.2 | 34.0 | 1.1 | 2.1 |
| Zica-20230519-232950 | 2023-05-22 00:39:26.052 | Variant | No | None | 0 | No | No | No | 2.2 | 1.1 | 3 | 0.3 | 0.2 | 30.2 | 1.2 | 3.0 |
| Zica-20230519-232950 | 2023-05-22 02:48:48.052 | Variant | No | None | 0 | No | Yes | No | 2.0 | 1.0 | 1 | 0.4 | 0.5 | 27.0 | 1.8 | 1.7 |
| Zica-20230519-232950 | 2023-05-22 04:46:08.052 | Variant | No | None | 0 | No | No | No | 1.6 | 1.0 | 1 | 0.1 | 0.3 | 37.2 | 1.1 | 1.8 |
| Zica-20230519-232950 | 2023-05-22 06:24:23.052 | Variant | No | None | 0 | No | No | No | 2.0 | 1.0 | 2 | 0.4 | 0.3 | 32.9 | 1.2 | 3.1 |
| Zica-20230519-232950 | 2023-05-22 08:26:35.052 | Variant | No | None | 0 | No | Yes | No | 2.0 | 0.9 | 3 | 0.3 | 0.2 | 35.7 | 1.2 | 1.8 |
| Zica-20230519-232950 | 2023-05-22 10:29:26.052 | Variant | No | None | 0 | No | No | No | 1.5 | 0.9 | 2 | 0.3 | 0.2 | 32.1 | 1.2 | 1.3 |
| Zica-20230519-232950 | 2023-05-22 11:57:04.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.1 | 5 | 0.4 | 0.2 | 30.9 | 1.1 | 1.7 |
| Zica-20230519-232950 | 2023-05-22 15:06:14.052 | Typical | No | None | 0 | No | No | No | 2.2 | 1.1 | 3 | 0.4 | 0.2 | 38.1 | 1.1 | 0.7 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|----------|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | | | | | Present? | Present? | | | | |
| Zica-20230519-232950 | 2023-05-22 17:21:10.052 | Typical | No | None | 0 | No | No | 1.8 | 1.0 | 2 | 0.4 | 0.1 | 39.1 | 1.1 | 1.5 | |
| Zica-20230519-232950 | 2023-05-22 19:07:46.052 | Typical | No | None | 0 | No | No | 4.4 | 1.1 | 7 | 0.6 | 0.3 | 26.8 | 1.1 | 2.1 | |
| Zica-20230519-232950 | 2023-05-22 23:34:18.052 | Typical | No | None | 0 | No | No | 2.4 | 1.3 | 3 | 0.4 | 0.1 | 33.7 | 1.5 | 2.4 | |
| Zica-20230519-232950 | 2023-05-23 02:00:10.052 | Typical | No | None | 0 | No | Yes | No | 3.4 | 1.4 | 6 | 0.4 | 0.2 | 31.4 | 1.7 | 2.3 |
| Zica-20230519-232950 | 2023-05-23 05:22:57.052 | Typical | No | None | 0 | No | No | No | 2.6 | 1.2 | 4 | 0.3 | 0.2 | 34.7 | 1.7 | 0.4 |
| Zica-20230519-232950 | 2023-05-23 07:59:25.052 | Typical | No | None | 0 | No | No | No | 2.5 | 1.4 | 3 | 0.3 | 0.2 | 38.1 | 1.7 | 0.4 |
| Zica-20230519-232950 | 2023-05-23 10:31:22.052 | Typical | No | None | 0 | No | No | No | 3.9 | 1.2 | 6 | 0.6 | 0.2 | 39.1 | 1.7 | 1.3 |
| Zica-20230519-232950 | 2023-05-23 14:27:41.052 | Typical | No | 93.4 | 105.5 | Yes | No | No | 3.3 | 1.2 | 5 | 0.6 | 0.2 | 26.9 | 1.6 | 1.9 |
| Zica-20230519-232950 | 2023-05-23 17:43:16.052 | Variant | No | None | 0 | Yes | No | No | 3.7 | 1.0 | 9 | 0.4 | 0.3 | 25.3 | 1.6 | 4.1 |
| Zica-20230519-232950 | 2023-05-23 21:28:13.052 | Variant | No | None | 0 | No | No | No | 1.8 | 1.2 | 2 | 0.2 | 0.1 | 36.6 | 1.3 | 2.1 |
| Zica-20230519-232950 | 2023-05-23 23:17:16.052 | Typical | No | None | 0 | Yes | No | No | 2.7 | 1.1 | 4 | 0.4 | 0.2 | 31.5 | 1.1 | 1.2 |
| Zica-20230519-232950 | 2023-05-24 01:57:07.052 | Variant | No | 151.1 | 160.3 | Yes | Yes | No | 7.9 | 2.8 | 9 | 1.4 | 0.6 | 27.7 | 1.5 | 1.2 |
| Zica-20230519-232950 | 2023-05-24 09:54:01.052 | Variant | No | None | 0 | No | No | No | 2.2 | 0.9 | 1 | 0.3 | 0.4 | 12.6 | 1.2 | 2.0 |
| Zica-20230519-232950 | 2023-05-24 12:08:56.052 | Typical | No | None | 0 | No | Yes | No | 3.0 | 1.2 | 4 | 0.4 | 0.3 | 28.5 | 1.1 | 1.1 |
| Zica-20230519-232950 | 2023-05-24 15:09:39.052 | Typical | No | None | 0 | No | Yes | No | 4.5 | 1.4 | 7 | 0.5 | 0.3 | 36.4 | 1.0 | 1.8 |
| Zica-20230519-232950 | 2023-05-24 19:37:31.052 | Typical | No | None | 0 | No | No | No | 3.6 | 1.5 | 6 | 0.4 | 0.2 | 31.1 | 1.4 | 1.8 |
| Zica-20230519-232950 | 2023-05-24 23:14:07.052 | Typical | No | None | 0 | No | No | No | 3.7 | 1.5 | 5 | 0.5 | 0.2 | 34.3 | 1.4 | 0.9 |
| Zica-20230519-232950 | 2023-05-25 02:58:47.052 | Typical | No | None | 0 | No | Yes | No | 3.6 | 1.3 | 5 | 0.7 | 0.2 | 27.9 | 1.4 | 2.1 |
| Zica-20230519-232950 | 2023-05-25 06:34:51.052 | Typical | No | None | 0 | No | No | No | 3.5 | 1.5 | 5 | 0.5 | 0.2 | 33.0 | 1.4 | 0.3 |
| Zica-20230519-232950 | 2023-05-25 10:03:05.052 | Typical | No | None | 0 | No | No | No | 2.3 | 1.2 | 3 | 0.4 | 0.1 | 31.9 | 1.4 | 1.4 |
| Zica-20230519-232950 | 2023-05-25 12:23:41.052 | Typical | No | None | 0 | No | No | No | 2.2 | 1.1 | 3 | 0.4 | 0.1 | 25.3 | 1.4 | 2.0 |
| Zica-20230519-232950 | 2023-05-25 14:36:01.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.3 | 5 | 0.4 | 0.2 | 38.6 | 1.4 | 0.6 |
| Zica-20230519-232950 | 2023-05-25 17:50:11.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.3 | 5 | 0.4 | 0.2 | 35.4 | 1.4 | 0.7 |
| Zica-20230519-232950 | 2023-05-25 21:04:11.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.3 | 4 | 0.5 | 0.2 | 41.1 | 1.5 | 1.7 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|-----|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | Present? | | | | | | | | | | |
| Zica-20230519-232950 | 2023-05-26 00:02:08.052 | Typical | No | None | 0 | No | No | No | 4.7 | 1.3 | 8 | 0.5 | 0.3 | 36.1 | 1.4 | 2.7 | |
| Zica-20230519-232950 | 2023-05-26 04:44:21.052 | Typical | No | None | 0 | No | No | No | 2.5 | 1.2 | 2 | 0.4 | 0.3 | 15.0 | 1.0 | 2.3 | |
| Zica-20230519-232950 | 2023-05-26 07:12:40.052 | Variant | No | None | 0 | No | No | No | 1.4 | 1.1 | 1 | 0.2 | 0.1 | 28.2 | 1.0 | 2.9 | |
| Zica-20230519-232950 | 2023-05-26 08:34:53.052 | Variant | No | None | 0 | Yes | No | No | 5.5 | 1.1 | 12 | 0.5 | 0.5 | 25.2 | 1.1 | 1.8 | |
| Zica-20230519-232950 | 2023-05-26 14:04:58.052 | Variant | No | None | 0 | No | No | No | 3.7 | 1.1 | 6 | 0.5 | 0.2 | 26.0 | 1.0 | 3.0 | |
| Zica-20230519-232950 | 2023-05-26 17:46:30.052 | Typical | No | None | 0 | No | No | No | 3.9 | 1.1 | 6 | 0.5 | 0.3 | 26.4 | 1.1 | 2.3 | |
| Zica-20230519-232950 | 2023-05-26 21:42:38.052 | Typical | No | None | 0 | No | No | No | 2.8 | 1.3 | 4 | 0.4 | 0.1 | 37.5 | 0.9 | 2.5 | |
| Zica-20230519-232950 | 2023-05-27 00:28:38.052 | Typical | No | None | 0 | No | No | No | 4.6 | 1.8 | 8 | 0.4 | 0.2 | 39.3 | 1.1 | 1.8 | |
| Zica-20230519-232950 | 2023-05-27 05:06:03.052 | Typical | No | None | 0 | No | No | No | 3.1 | 1.5 | 4 | 0.3 | 0.2 | 35.8 | 1.5 | 1.8 | |
| Zica-20230519-232950 | 2023-05-27 08:10:54.052 | Typical | No | None | 0 | No | Yes | No | 2.8 | 1.4 | 4 | 0.4 | 0.3 | 49.7 | 1.5 | 2.7 | |
| Zica-20230519-232950 | 2023-05-27 11:01:21.052 | Typical | No | None | 0 | No | No | No | 3.3 | 1.4 | 5 | 0.4 | 0.2 | 42.3 | 1.6 | 1.8 | |
| Zica-20230519-232950 | 2023-05-27 14:22:16.052 | Typical | No | None | 0 | No | No | No | 4.0 | 1.4 | 6 | 0.5 | 0.2 | 40.7 | 1.6 | 0.4 | |
| Zica-20230519-232950 | 2023-05-27 18:19:41.052 | Typical | No | None | 0 | No | Yes | No | 2.9 | 1.4 | 4 | 0.4 | 0.2 | 41.8 | 1.5 | 2.0 | |
| Zica-20230519-232950 | 2023-05-27 21:14:40.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.3 | 4 | 0.4 | 0.2 | 38.9 | 1.6 | 1.6 | |
| Zica-20230519-232950 | 2023-05-28 00:06:06.052 | Typical | No | None | 0 | No | Yes | No | 2.7 | 1.3 | 4 | 0.3 | 0.2 | 35.8 | 1.3 | 3.7 | |
| Zica-20230519-232950 | 2023-05-28 02:50:00.052 | Typical | No | None | 0 | No | Yes | No | 2.2 | 1.0 | 4 | 0.3 | 0.2 | 36.1 | 1.5 | 2.1 | |
| Zica-20230519-232950 | 2023-05-28 05:04:51.052 | Typical | No | None | 0 | No | No | No | 2.5 | 1.1 | 5 | 0.3 | 0.2 | 35.3 | 1.6 | 2.0 | |
| Zica-20230519-232950 | 2023-05-28 07:34:21.052 | Variant | No | None | 0 | No | No | No | 5.0 | 1.1 | 7 | 0.5 | 0.8 | 31.8 | 1.3 | 2.4 | |
| Zica-20230519-232950 | 2023-05-28 12:32:11.052 | Typical | No | None | 0 | No | No | No | 4.5 | 1.1 | 9 | 0.5 | 0.2 | 25.5 | 1.7 | 0.6 | |
| Zica-20230519-232950 | 2023-05-28 17:03:23.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.0 | 5 | 0.4 | 0.2 | 11.8 | 1.6 | 1.5 | |
| Zica-20230519-232950 | 2023-05-28 19:58:13.052 | Typical | No | None | 0 | No | No | No | 2.8 | 1.1 | 5 | 0.3 | 0.2 | 36.3 | 1.7 | 3.2 | |
| Zica-20230519-232950 | 2023-05-28 22:47:39.052 | Typical | No | None | 0 | No | No | No | 3.8 | 1.1 | 7 | 0.5 | 0.2 | 26.4 | 1.2 | 1.8 | |
| Zica-20230519-232950 | 2023-05-29 02:37:06.052 | Typical | No | None | 0 | No | No | No | 2.4 | 1.0 | 4 | 0.4 | 0.2 | 32.0 | 1.0 | 1.5 | |
| Zica-20230519-232950 | 2023-05-29 05:01:01.052 | Variant | No | None | 0 | No | No | No | 2.0 | 1.0 | 3 | 0.3 | 0.2 | 33.4 | 1.0 | 1.5 | |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|-----|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | Present? | | | | | | | | | | |
| Zica-20230519-232950 | 2023-05-29 07:01:29.052 | Variant | No | None | 0 | No | No | No | 2.6 | 0.9 | 5 | 0.4 | 0.3 | 29.3 | 0.9 | 2.1 | |
| Zica-20230519-232950 | 2023-05-29 09:38:12.052 | Variant | No | None | 0 | No | No | No | 2.1 | 1.0 | 4 | 0.3 | 0.2 | 31.3 | 0.9 | 2.7 | |
| Zica-20230519-232950 | 2023-05-29 11:46:44.052 | Variant | No | None | 0 | No | No | No | 3.3 | 1.2 | 6 | 0.4 | 0.2 | 27.1 | 1.1 | 3.4 | |
| Zica-20230519-232950 | 2023-05-29 15:04:10.052 | Typical | No | None | 0 | No | No | No | 2.1 | 1.1 | 3 | 0.3 | 0.1 | 28.6 | 0.9 | 0.1 | |
| Zica-20230519-232950 | 2023-05-29 17:10:26.052 | Typical | No | None | 0 | No | No | No | 2.2 | 1.1 | 3 | 0.4 | 0.1 | 29.7 | 0.9 | 2.2 | |
| Zica-20230519-232950 | 2023-05-29 19:25:01.052 | Typical | No | None | 0 | No | No | No | 3.1 | 1.3 | 5 | 0.4 | 0.2 | 37.9 | 1.1 | 0.5 | |
| Zica-20230519-232950 | 2023-05-29 22:31:14.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.1 | 5 | 0.4 | 0.2 | 32.7 | 1.1 | 0.5 | |
| Zica-20230519-232950 | 2023-05-30 01:34:08.052 | Typical | No | None | 0 | No | No | No | NA | 1.3 | NA | NA | NA | 33.9 | 1.1 | NA | |
| Zica-20230723-233394 | 2023-07-23 20:46:59.052 | Typical | Yes | 123.8 | 135.2 | No | No | No | 2.7 | 1.2 | 3 | 0.5 | 0.2 | 32.2 | 1.6 | 2.6 | |
| Zica-20230723-233394 | 2023-07-23 23:26:19.052 | Typical | No | None | 0 | No | No | No | 4.1 | 1.7 | 6 | 0.5 | 0.3 | 42.2 | 1.6 | 0.4 | |
| Zica-20230723-233394 | 2023-07-24 03:34:14.052 | Variant | Yes | 121.5 | 126.3 | No | Yes | No | 1.8 | 1.5 | 1 | 0.2 | 0.1 | 32.3 | 1.6 | 1.9 | |
| Zica-20230723-233394 | 2023-07-24 05:22:59.052 | Typical | No | None | 0 | No | Yes | No | 2.5 | 1.1 | 3 | 0.5 | 0.2 | 31.5 | 1.2 | 1.0 | |
| Zica-20230723-233394 | 2023-07-24 07:53:01.052 | Variant | No | None | 0 | No | No | No | 1.3 | 1.1 | 1 | 0.1 | 0.1 | 36.1 | 1.2 | 2.0 | |
| Zica-20230723-233394 | 2023-07-24 09:10:45.052 | Variant | No | None | 0 | No | No | No | 2.2 | 0.9 | 1 | 0.6 | 0.2 | 29.4 | 1.2 | 1.1 | |
| Zica-20230723-233394 | 2023-07-24 11:25:24.052 | Variant | No | None | 0 | No | No | No | 4.3 | 0.9 | 10 | 0.5 | 0.4 | 25.3 | 1.0 | 0.1 | |
| Zica-20230723-233394 | 2023-07-24 15:43:01.052 | Variant | No | None | 0 | No | No | No | 4.7 | 1.2 | 9 | 0.5 | 0.4 | 25.9 | 1.1 | 0.3 | |
| Zica-20230723-233394 | 2023-07-24 20:27:19.052 | Typical | No | None | 0 | No | No | No | 3.1 | 1.1 | 5 | 0.4 | 0.2 | 22.9 | 1.0 | 1.3 | |
| Zica-20230723-233394 | 2023-07-24 23:34:28.052 | Typical | No | 88.5 | 91.5 | No | No | No | 3.6 | 1.1 | 6 | 0.4 | 0.2 | 27.6 | 1.0 | 0.6 | |
| Zica-20230723-233394 | 2023-07-25 03:07:29.052 | Typical | Yes | 121.2 | 121.8 | No | Yes | No | 2.5 | 1.1 | 4 | 0.3 | 0.2 | 35.1 | 1.2 | 0.3 | |
| Zica-20230723-233394 | 2023-07-25 05:36:03.052 | Typical | No | None | 0 | No | Yes | No | 3.2 | 1.1 | 6 | 0.4 | 0.3 | 37.8 | 1.1 | 0.6 | |
| Zica-20230723-233394 | 2023-07-25 08:45:16.052 | Typical | No | None | 0 | No | Yes | No | 2.9 | 1.1 | 4 | 0.3 | 0.2 | 36.8 | 1.4 | 0.1 | |
| Zica-20230723-233394 | 2023-07-25 11:37:13.052 | Typical | No | None | 0 | No | No | No | 3.7 | 1.2 | 6 | 0.4 | 0.2 | 33.5 | 1.2 | 0.7 | |
| Zica-20230723-233394 | 2023-07-25 15:21:43.052 | Typical | No | 104.9 | 109.6 | No | Yes | No | 3.1 | 1.1 | 4 | 0.5 | 0.2 | 34.8 | 1.1 | 0.3 | |
| Zica-20230723-233394 | 2023-07-25 18:26:05.052 | Typical | Yes | 122.5 | 132.9 | No | Yes | No | 4.4 | 1.2 | 7 | 0.5 | 0.3 | 35.0 | 1.0 | 0.6 | |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | MFAS RL | MFAS cSEL | Echosounder Present? | Impulsive Sounds Present? | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|---------|-----------|----------------------|---------------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|----------------------|--|-------------------------|------------------------|
| | | | | | | | | | | | | | | | | |
| Zica-20230723-233394 | 2023-07-25 22:47:23.052 | Typical | Yes | 120.9 | 120.7 | No | No | No | 4.1 | 1.2 | 7 | 0.5 | 0.2 | 33.1 | 1.0 | 1.1 |
| Zica-20230723-233394 | 2023-07-26 02:52:09.052 | Typical | No | None | 0 | No | Yes | No | 2.4 | 1.2 | 3 | 0.4 | 0.2 | 40.1 | 0.9 | 2.2 |
| Zica-20230723-233394 | 2023-07-26 05:16:34.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.1 | 5 | 0.5 | 0.2 | 35.8 | 1.2 | 0.9 |
| Zica-20230723-233394 | 2023-07-26 08:13:22.052 | Typical | No | None | 0 | No | No | No | NA | 1.1 | NA | NA | NA | 38.6 | 1.1 | NA |
| Zica-20230723-233395 | 2023-07-23 20:45:43.052 | Typical | Yes | 126.8 | 125.4 | No | No | No | 2.9 | 1.3 | 3 | 0.6 | 0.2 | 37.2 | NA | 1.4 |
| Zica-20230723-233395 | 2023-07-23 23:41:51.052 | Typical | No | None | 0 | No | No | No | 3.3 | 1.3 | 4 | 0.5 | 0.2 | 33.8 | NA | 1.5 |
| Zica-20230723-233395 | 2023-07-24 03:00:46.052 | Typical | Yes | 114.8 | 120.4 | No | Yes | No | 2.4 | 1.1 | 3 | 0.5 | 0.2 | 38.0 | NA | 2.0 |
| Zica-20230723-233395 | 2023-07-24 05:23:13.052 | Typical | No | None | 0 | No | Yes | No | 3.0 | 1.2 | 3 | 0.7 | 0.2 | 38.2 | NA | 2.4 |
| Zica-20230723-233395 | 2023-07-24 08:25:59.052 | Typical | No | None | 0 | No | Yes | No | 3.1 | 1.1 | 5 | 0.4 | 0.3 | 32.0 | NA | 0.5 |
| Zica-20230723-233395 | 2023-07-24 11:32:31.052 | Typical | No | None | 0 | Yes | No | No | 3.7 | 1.0 | 5 | 0.5 | 0.2 | 36.6 | NA | 0.4 |
| Zica-20230723-233395 | 2023-07-24 15:16:15.052 | Typical | No | None | 0 | No | No | No | 2.6 | 1.1 | 4 | 0.4 | 0.2 | 44.9 | NA | 1.8 |
| Zica-20230723-233395 | 2023-07-24 17:51:45.052 | Typical | No | None | 0 | No | No | No | 1.8 | 0.9 | 2 | 0.4 | 0.1 | 31.1 | NA | 0.7 |
| Zica-20230723-233395 | 2023-07-24 19:38:58.052 | Typical | No | 67 | 0 | No | No | No | 3.7 | 1.1 | 6 | 0.4 | 0.2 | 36.8 | NA | 0.4 |
| Zica-20230723-233395 | 2023-07-24 23:19:25.052 | Typical | Yes | 67 | 0 | No | Yes | No | 4.6 | 1.6 | 7 | 0.4 | 0.3 | 53.5 | NA | 0.5 |
| Zica-20230723-233395 | 2023-07-25 03:58:24.052 | Variant | Yes | 109.6 | 115.1 | No | Yes | No | 3.5 | 1.2 | 3 | 0.9 | 0.2 | 40.4 | NA | 0.7 |
| Zica-20230723-233395 | 2023-07-25 07:25:46.052 | Typical | No | None | 0 | No | Yes | No | 2.3 | 1.4 | 2 | 0.3 | 0.2 | 39.5 | NA | 1.3 |
| Zica-20230723-233395 | 2023-07-25 09:45:14.052 | Typical | No | None | 0 | No | Yes | No | 2.3 | 1.2 | 3 | 0.4 | 0.2 | 39.5 | NA | 1.4 |
| Zica-20230723-233395 | 2023-07-25 12:04:35.052 | Typical | No | None | 0 | No | Yes | No | 3.5 | 1.4 | 4 | 0.5 | 0.2 | 41.5 | NA | 1.6 |
| Zica-20230723-233395 | 2023-07-25 15:34:14.052 | Typical | No | 124.9 | 120.9 | No | No | No | 2.5 | 1.1 | 3 | 0.5 | 0.2 | 29.5 | NA | 0.6 |
| Zica-20230723-233395 | 2023-07-25 18:05:29.052 | Variant | Yes | 106.1 | 112.6 | No | Yes | No | 0.7 | 0.6 | 0 | NA | 0.1 | 13.6 | NA | 3.4 |
| Zica-20230723-233395 | 2023-07-25 18:47:33.052 | Variant | Yes | 119.4 | 129.5 | No | Yes | No | 1.2 | 1.2 | 0 | NA | 0.1 | 32.8 | NA | 2.1 |
| Zica-20230723-233395 | 2023-07-25 20:00:45.052 | Variant | Yes | None | 0 | No | No | No | NA | 0.8 | NA | NA | NA | 27.7 | NA | NA |
| Zica-20240227-233396 | 2024-02-28 03:58:45.052 | Variant | No | 137 | 144.4 | No | No | No | 4.7 | 1.4 | 5 | 0.8 | 0.4 | 41.9 | 1.6 | 1.7 |
| Zica-20240227-233396 | 2024-02-28 08:40:32.052 | Typical | No | None | 0 | No | No | No | 3.9 | 1.1 | 7 | 0.4 | 0.3 | 39.6 | 1.3 | 2.1 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | MFAS RL | MFAS cSEL | Echosounder Present? | Impulsive Sounds Present? | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) | |
|----------------------|-------------------------|---------|-------------------|---------|-----------|----------------------|---------------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|--|-------------------------|------------------------|-----|
| | | | | | | | | | | | | | | | | |
| Zica-20240227-233396 | 2024-02-28 12:34:19.052 | Typical | No | None | 0 | No | No | No | 4.0 | 1.3 | 6 | 0.6 | 0.3 | 39.0 | 1.8 | 0.4 |
| Zica-20240227-233396 | 2024-02-28 16:36:41.052 | Typical | No | None | 0 | No | Yes | No | 3.1 | 1.1 | 5 | 0.4 | 0.2 | 38.7 | 1.8 | 0.8 |
| Zica-20240227-233396 | 2024-02-28 19:43:54.052 | Typical | No | None | 0 | No | No | No | 3.3 | 1.2 | 5 | 0.4 | 0.2 | 38.8 | 1.8 | 1.0 |
| Zica-20240227-233396 | 2024-02-28 22:59:08.052 | Typical | No | None | 0 | No | No | No | 4.6 | 1.2 | 8 | 0.5 | 0.4 | 38.6 | 1.8 | 1.6 |
| Zica-20240227-233396 | 2024-02-29 03:32:51.052 | Typical | No | None | 0 | No | Yes | No | 2.6 | 1.1 | 5 | 0.3 | 0.2 | 40.5 | 1.8 | 1.2 |
| Zica-20240227-233396 | 2024-02-29 06:10:52.052 | Variant | No | None | 0 | No | No | No | 5.9 | 0.9 | 11 | 0.6 | 0.5 | 33.5 | 1.7 | 1.3 |
| Zica-20240227-233396 | 2024-02-29 12:02:10.052 | Typical | No | None | 0 | No | Yes | No | 4.1 | 1.3 | 6 | 0.6 | 0.3 | 41.4 | 1.8 | 1.3 |
| Zica-20240227-233396 | 2024-02-29 16:10:56.052 | Typical | No | None | 0 | No | No | No | 2.7 | 1.2 | 4 | 0.4 | 0.2 | 42.4 | 1.8 | 1.8 |
| Zica-20240227-233396 | 2024-02-29 18:55:48.052 | Typical | No | None | 0 | No | No | No | 3.7 | 1.2 | 6 | 0.4 | 0.3 | 43.9 | 1.8 | 1.6 |
| Zica-20240227-233396 | 2024-02-29 22:36:48.052 | Typical | No | None | 0 | No | Yes | No | 3.9 | 1.1 | 6 | 0.4 | 0.3 | 40.8 | 1.2 | 1.5 |
| Zica-20240227-233396 | 2024-03-01 02:29:38.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.0 | 6 | 0.4 | 0.3 | 33.8 | 1.1 | 3.0 |
| Zica-20240227-233396 | 2024-03-01 05:39:29.052 | Typical | No | None | 0 | No | Yes | No | 2.8 | 1.0 | 4 | 0.5 | 0.2 | 38.6 | 1.6 | 2.3 |
| Zica-20240227-233396 | 2024-03-01 08:29:47.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.1 | 5 | 0.4 | 0.3 | 37.3 | 1.7 | 2.0 |
| Zica-20240227-233396 | 2024-03-01 11:51:13.052 | Typical | No | None | 0 | No | No | No | 4.2 | 1.1 | 7 | 0.5 | 0.3 | 38.4 | 1.1 | 1.6 |
| Zica-20240227-233396 | 2024-03-01 16:01:46.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.2 | 4 | 0.4 | 0.2 | 41.6 | 1.1 | 1.2 |
| Zica-20240227-233396 | 2024-03-01 18:56:32.052 | Typical | No | None | 0 | No | No | No | 4.2 | 1.2 | 7 | 0.4 | 0.3 | 38.7 | 1.6 | 1.4 |
| Zica-20240227-233396 | 2024-03-01 23:05:59.052 | Typical | No | None | 0 | No | No | No | 4.2 | 1.3 | 7 | 0.4 | 0.3 | 38.9 | 1.7 | 3.0 |
| Zica-20240227-233396 | 2024-03-02 03:18:08.052 | Typical | No | None | 0 | No | No | No | 2.8 | 1.3 | 2 | 0.3 | 0.3 | 41.3 | 1.7 | 0.8 |
| Zica-20240227-233396 | 2024-03-02 06:03:32.052 | Variant | No | None | 0 | No | No | No | 2.9 | 1.0 | 2 | 0.3 | 1.1 | 41.6 | 1.7 | 1.7 |
| Zica-20240227-233396 | 2024-03-02 08:54:46.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.0 | 5 | 0.4 | 0.5 | 39.3 | 1.8 | 1.7 |
| Zica-20240227-233396 | 2024-03-02 12:18:15.052 | Typical | No | None | 0 | No | No | No | 4.7 | 0.9 | 9 | 0.5 | 0.4 | 25.4 | 1.1 | 1.1 |
| Zica-20240227-233396 | 2024-03-02 17:00:08.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.1 | 5 | 0.5 | 0.2 | 34.8 | 1.1 | 0.7 |
| Zica-20240227-233396 | 2024-03-02 19:51:19.052 | Typical | No | None | 0 | No | No | No | 3.7 | 1.2 | 6 | 0.4 | 0.3 | 39.0 | 1.8 | 2.5 |
| Zica-20240227-233396 | 2024-03-02 23:32:04.052 | Typical | No | None | 0 | No | No | No | 2.6 | 1.1 | 4 | 0.4 | 0.2 | 37.5 | 1.8 | 0.5 |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|-----|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | Present? | | | | | | | | | | |
| Zica-20240227-233396 | 2024-03-03 02:10:43.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.5 | 4 | 0.3 | 0.3 | 34.7 | 1.1 | 0.9 | |
| Zica-20240227-233396 | 2024-03-03 05:32:14.052 | Variant | No | None | 0 | No | No | No | 2.5 | 1.0 | 1 | 0.4 | 0.7 | 38.0 | 1.7 | 1.9 | |
| Zica-20240227-233396 | 2024-03-03 08:04:10.052 | Variant | No | None | 0 | No | No | No | 1.9 | 1.0 | 0 | NA | 0.8 | 33.3 | 1.6 | 3.5 | |
| Zica-20240227-233396 | 2024-03-03 09:57:09.052 | Variant | No | None | 0 | No | No | No | 3.0 | 1.0 | 2 | 0.4 | 1.0 | 29.6 | 1.7 | 0.5 | |
| Zica-20240227-233396 | 2024-03-03 12:58:13.052 | Typical | No | None | 0 | No | No | No | 3.3 | 1.0 | 5 | 0.4 | 0.3 | 32.7 | 1.7 | 1.7 | |
| Zica-20240227-233396 | 2024-03-03 16:18:50.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.1 | 4 | 0.4 | 0.3 | 44.6 | 1.2 | 1.3 | |
| Zica-20240227-233396 | 2024-03-03 19:11:13.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.2 | 5 | 0.4 | 0.3 | 42.9 | 1.0 | 2.7 | |
| Zica-20240227-233396 | 2024-03-03 22:23:04.052 | Typical | No | 67 | 0 | No | No | No | 3.7 | 1.2 | 7 | 0.4 | 0.3 | 45.3 | 1.1 | 1.8 | |
| Zica-20240227-233396 | 2024-03-04 02:04:37.052 | Variant | No | None | 0 | No | No | No | 2.1 | 0.9 | 1 | 0.4 | 0.7 | 34.1 | 1.4 | 1.7 | |
| Zica-20240227-233396 | 2024-03-04 04:10:40.052 | Variant | Yes | 110.8 | 116.9 | No | No | No | 2.2 | 0.9 | 1 | 0.3 | 0.8 | 33.4 | 1.7 | 1.6 | |
| Zica-20240227-233396 | 2024-03-04 06:24:27.052 | Variant | No | None | 0 | No | No | No | 2.0 | 1.0 | 1 | 0.3 | 0.3 | 35.3 | 1.7 | 2.1 | |
| Zica-20240227-233396 | 2024-03-04 08:22:19.052 | Variant | No | None | 0 | No | No | No | 2.5 | 0.9 | 2 | 0.4 | 0.8 | 32.2 | 1.7 | 3.6 | |
| Zica-20240227-233396 | 2024-03-04 10:53:02.052 | Variant | No | None | 0 | No | Yes | No | 2.4 | 1.0 | 3 | 0.3 | 0.4 | 35.2 | 1.7 | 3.3 | |
| Zica-20240227-233396 | 2024-03-04 13:19:25.052 | Typical | No | None | 0 | No | No | No | 3.1 | 0.9 | 5 | 0.5 | 0.3 | 21.7 | 1.1 | 2.6 | |
| Zica-20240227-233396 | 2024-03-04 16:28:10.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.2 | 5 | 0.4 | 0.2 | 41.5 | 1.1 | 1.6 | |
| Zica-20240227-233396 | 2024-03-04 19:25:24.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.1 | 5 | 0.4 | 0.3 | 39.5 | 1.1 | 1.0 | |
| Zica-20240227-233396 | 2024-03-04 22:38:00.052 | Typical | No | None | 0 | No | No | No | 3.8 | 1.2 | 6 | 0.4 | 0.3 | 46.7 | 1.1 | 0.7 | |
| Zica-20240227-233396 | 2024-03-05 02:24:28.052 | Variant | No | None | 0 | No | No | No | 2.3 | 1.3 | 1 | 0.2 | 0.6 | 42.6 | 1.5 | 2.7 | |
| Zica-20240227-233396 | 2024-03-05 04:42:11.052 | Variant | No | None | 0 | No | No | No | 2.0 | 0.9 | 1 | 0.3 | 0.6 | 27.4 | 1.1 | 1.5 | |
| Zica-20240227-233396 | 2024-03-05 06:42:20.052 | Variant | No | None | 0 | No | No | No | 2.6 | 1.0 | 1 | 0.5 | 0.5 | 30.7 | 1.0 | 1.6 | |
| Zica-20240227-233396 | 2024-03-05 09:15:57.052 | Variant | No | None | 0 | No | No | No | 3.6 | 0.8 | 5 | 0.4 | 0.6 | 28.7 | 1.0 | 2.2 | |
| Zica-20240227-233396 | 2024-03-05 12:51:24.052 | Typical | No | None | 0 | Yes | Yes | No | 4.4 | 1.2 | 6 | 0.6 | 0.3 | 28.0 | 1.6 | 1.1 | |
| Zica-20240227-233396 | 2024-03-05 17:14:39.052 | Typical | No | 119 | 112.8 | No | No | No | 5.1 | 1.3 | 7 | 0.6 | 0.4 | 42.3 | 1.0 | 1.1 | |
| Zica-20240227-233396 | 2024-03-05 22:20:46.052 | Variant | Yes | 148 | 155.8 | No | No | No | 6.6 | 1.0 | 10 | 0.9 | 0.6 | 3.8 | 0.9 | 2.1 | |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|-----|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | Present? | | | | | | | | | | |
| Zica-20240227-233396 | 2024-03-06 04:56:40.052 | Variant | No | 150.3 | 151.5 | Yes | No | No | 5.3 | 0.8 | 7 | 0.8 | 0.5 | 20.0 | 0.7 | 0.1 | |
| Zica-20240227-233396 | 2024-03-06 10:14:32.052 | Variant | No | None | 0 | No | No | No | 2.2 | 0.8 | 3 | 0.5 | 0.2 | 12.4 | 0.7 | 3.6 | |
| Zica-20240227-233396 | 2024-03-06 12:28:43.052 | Typical | No | None | 0 | No | No | No | 4.6 | 1.2 | 6 | 0.6 | 0.3 | 27.9 | 1.1 | 2.7 | |
| Zica-20240227-233396 | 2024-03-06 17:04:26.052 | Typical | No | None | 0 | No | No | No | 3.7 | 1.5 | 5 | 0.5 | 0.3 | 48.3 | 1.3 | 2.6 | |
| Zica-20240227-233396 | 2024-03-06 20:46:40.052 | Typical | No | None | 0 | No | No | No | 2.5 | 1.0 | 4 | 0.4 | 0.2 | 31.7 | 1.1 | 2.2 | |
| Zica-20240227-233396 | 2024-03-06 23:16:40.052 | Typical | Yes | 105.3 | 112.3 | No | No | No | 2.9 | 1.2 | 4 | 0.4 | 0.2 | 39.4 | 1.2 | 1.4 | |
| Zica-20240227-233396 | 2024-03-07 02:08:41.052 | Variant | No | None | 0 | No | No | No | 2.2 | 0.9 | 2 | 0.3 | 0.8 | 35.1 | 1.3 | 0.7 | |
| Zica-20240227-233396 | 2024-03-07 04:18:17.052 | Typical | No | None | 0 | No | No | No | 2.8 | 1.1 | 3 | 0.5 | 0.3 | 37.1 | 1.3 | 1.4 | |
| Zica-20240227-233396 | 2024-03-07 07:06:11.052 | Variant | No | None | 0 | No | No | No | 2.6 | 0.9 | 2 | 0.3 | 1.0 | 37.5 | 1.5 | 5.0 | |
| Zica-20240227-233396 | 2024-03-07 09:40:26.052 | Variant | No | None | 0 | No | No | No | 2.7 | 1.0 | 2 | 0.3 | 0.9 | 33.5 | 1.7 | 3.2 | |
| Zica-20240227-233396 | 2024-03-07 12:20:10.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.0 | 6 | 0.4 | 0.3 | 33.6 | 1.0 | 1.9 | |
| Zica-20240227-233396 | 2024-03-07 15:41:51.052 | Typical | No | None | 0 | No | No | No | 3.3 | 1.1 | 5 | 0.4 | 0.3 | 33.0 | 1.7 | 1.7 | |
| Zica-20240227-233396 | 2024-03-07 18:57:59.052 | Typical | No | None | 0 | No | No | No | 4.0 | 1.2 | 9 | 0.3 | 0.4 | 37.2 | 1.7 | 0.5 | |
| Zica-20240227-233396 | 2024-03-07 22:57:57.052 | Typical | No | 117.9 | 123.4 | No | No | No | 3.5 | 1.1 | 6 | 0.4 | 0.3 | 34.0 | 1.0 | 1.9 | |
| Zica-20240227-233396 | 2024-03-08 02:29:58.052 | Variant | No | None | 0 | No | No | No | 2.8 | 1.0 | 3 | 0.3 | 0.6 | 31.7 | 1.7 | 1.0 | |
| Zica-20240227-233396 | 2024-03-08 05:20:21.052 | Variant | No | None | 0 | No | No | No | NA | 0.7 | NA | NA | NA | 18.1 | 1.0 | NA | |
| Zica-20240227-240128 | 2024-02-27 23:11:18.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.5 | 4 | 0.4 | 0.2 | 36.3 | 1.4 | 2.2 | |
| Zica-20240227-240128 | 2024-02-28 02:05:33.052 | Typical | No | None | 0 | No | No | No | 2.4 | 1.3 | 3 | 0.4 | 0.1 | 35.7 | 1.5 | 1.9 | |
| Zica-20240227-240128 | 2024-02-28 04:28:44.052 | Typical | No | 138.4 | 141.2 | No | No | No | 4.3 | 1.2 | 7 | 0.5 | 0.3 | 37.6 | 1.0 | 3.2 | |
| Zica-20240227-240128 | 2024-02-28 08:47:14.052 | Typical | No | None | 0 | No | No | No | 3.7 | 1.0 | 6 | 0.5 | 0.2 | 26.9 | 0.9 | 2.4 | |
| Zica-20240227-240128 | 2024-02-28 12:28:20.052 | Typical | No | None | 0 | No | No | No | 3.6 | 1.2 | 5 | 0.5 | 0.2 | 43.2 | 0.9 | 1.3 | |
| Zica-20240227-240128 | 2024-02-28 16:01:33.052 | Typical | No | None | 0 | No | No | No | 4.0 | 1.1 | 6 | 0.5 | 0.2 | 34.6 | 1.0 | 1.0 | |
| Zica-20240227-240128 | 2024-02-28 20:00:27.052 | Typical | No | None | 0 | No | No | No | 4.4 | 1.5 | 7 | 0.5 | 0.2 | 43.9 | 1.3 | 1.0 | |
| Zica-20240227-240128 | 2024-02-29 00:23:31.052 | Typical | No | None | 0 | No | No | No | 3.6 | 1.5 | 6 | 0.4 | 0.2 | 41.1 | 1.2 | 0.4 | |

| Whale ID | Start Time (UTC) | State | Sonar before EOE? | Impulsive Sounds | | | Orca Sounds Present? | Duration (hours) | Foraging Dive Duration (hours) | N Non-foraging Dives | Longest Non-foraging Dive (hours) | | Surface Time (hours) | Echolocation Clicking Duration (minutes) | Maximum Dive Depth (km) | Distance Traveled (km) |
|----------------------|-------------------------|---------|-------------------|------------------|-----------|----------------------|----------------------|------------------|--------------------------------|----------------------|-----------------------------------|----------|----------------------|--|-------------------------|------------------------|
| | | | | MFAS RL | MFAS cSEL | Echosounder Present? | | | | | Present? | Present? | | | | |
| Zica-20240227-240128 | 2024-02-29 04:00:20.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.1 | 5 | 0.4 | 0.2 | 39.2 | 0.9 | 1.3 |
| Zica-20240227-240128 | 2024-02-29 06:58:59.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.2 | 6 | 0.4 | 0.2 | 39.7 | 1.2 | 1.0 |
| Zica-20240227-240128 | 2024-02-29 10:11:45.052 | Typical | No | None | 0 | No | No | No | 6.0 | 1.2 | 11 | 0.5 | 0.4 | 35.2 | 0.9 | 0.3 |
| Zica-20240227-240128 | 2024-02-29 16:11:55.052 | Typical | No | None | 0 | No | No | No | 3.9 | 1.5 | 5 | 0.5 | 0.2 | 43.6 | 1.1 | 0.9 |
| Zica-20240227-240128 | 2024-02-29 20:06:57.052 | Typical | No | None | 0 | No | No | No | 4.1 | 1.3 | 6 | 0.5 | 0.2 | 35.3 | 1.0 | 0.4 |
| Zica-20240227-240128 | 2024-03-01 00:15:25.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.5 | 3 | 0.5 | 0.2 | 44.4 | 1.0 | 0.9 |
| Zica-20240227-240128 | 2024-03-01 03:18:15.052 | Typical | No | None | 0 | No | No | No | 3.0 | 1.3 | 5 | 0.4 | 0.2 | 43.1 | 1.1 | 1.2 |
| Zica-20240227-240128 | 2024-03-01 06:21:11.052 | Typical | No | None | 0 | No | No | No | 4.4 | 1.3 | 8 | 0.4 | 0.3 | 41.1 | 1.0 | 0.6 |
| Zica-20240227-240128 | 2024-03-01 10:47:12.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.2 | 5 | 0.4 | 0.2 | 36.1 | 0.9 | 0.5 |
| Zica-20240227-240128 | 2024-03-01 14:12:14.052 | Typical | No | None | 0 | No | No | No | 3.5 | 1.5 | 4 | 0.5 | 0.2 | 40.5 | 1.0 | 1.3 |
| Zica-20240227-240128 | 2024-03-01 17:39:46.052 | Typical | No | None | 0 | No | No | No | 3.6 | 1.5 | 5 | 0.4 | 0.2 | 37.7 | 1.1 | 2.0 |
| Zica-20240227-240128 | 2024-03-01 21:12:54.052 | Typical | No | None | 0 | No | No | No | 3.5 | 1.3 | 5 | 0.4 | 0.2 | 35.6 | 0.9 | 0.5 |
| Zica-20240227-240128 | 2024-03-02 00:42:37.052 | Typical | No | None | 0 | No | No | No | 2.9 | 1.1 | 5 | 0.4 | 0.2 | 37.7 | 0.9 | 2.4 |
| Zica-20240227-240128 | 2024-03-02 03:39:15.052 | Variant | No | None | 0 | No | No | No | 1.2 | 0.6 | 2 | 0.3 | 0.1 | 13.7 | 0.8 | 3.2 |
| Zica-20240227-240128 | 2024-03-02 04:49:01.052 | Typical | No | None | 0 | No | No | No | 2.3 | 1.2 | 2 | 0.4 | 0.3 | 48.7 | 0.9 | 1.7 |
| Zica-20240227-240128 | 2024-03-02 07:05:07.052 | Typical | No | None | 0 | No | No | No | 2.1 | 1.2 | 3 | 0.3 | 0.3 | 46.3 | 1.1 | 2.4 |
| Zica-20240227-240128 | 2024-03-02 09:11:52.052 | Typical | No | None | 0 | No | No | No | 2.5 | 1.2 | 3 | 0.4 | 0.2 | 36.9 | 1.1 | 1.1 |
| Zica-20240227-240128 | 2024-03-02 11:41:18.052 | Typical | No | None | 0 | No | No | No | 3.4 | 1.1 | 6 | 0.4 | 0.3 | 37.0 | 1.2 | 1.3 |
| Zica-20240227-240128 | 2024-03-02 15:05:51.052 | Typical | No | None | 0 | No | No | No | 3.2 | 1.3 | 4 | 0.5 | 0.2 | 42.0 | 1.1 | 1.3 |
| Zica-20240227-240128 | 2024-03-02 18:17:34.052 | Variant | No | None | 0 | No | No | No | NA | 1.0 | NA | NA | NA | 24.7 | 0.8 | NA |

MFAS exposure details

Table S 2: MFAS exposure data summarised by SMRT tag deployment. Note that dive cycles where acoustic audits indicated MFAS presence, but for which SNR was too low to report any measures RMS or cSEL values, are not included in this table.

| Whale ID | Dives | MFAS | | | MFAS | | | MFAS | | | MFAS | | |
|----------------------|-----------|-----------------|-----------------|--------------|----------------|-----------------|----------|-------------|-------------|---------------|-----------------|-------------|----------------|
| | with MFAS | MFAS RMS (Min.) | MFAS RMS (Max.) | RMS (Median) | MFAS RMS (IQR) | MFAS RMS (Mean) | RMS (SD) | cSEL (Min.) | cSEL (Max.) | cSEL (Median) | MFAS cSEL (IQR) | cSEL (Mean) | MFAS cSEL (SD) |
| Zica-20191012-144029 | 2 | 106.4 | 136.5 | 121.4 | 15.0 | 121.4 | 21.3 | 117.2 | 145.9 | 131.6 | 14.4 | 131.6 | 20.3 |
| Zica-20191012-145101 | 5 | 95.1 | 147.9 | 136.0 | 32.7 | 125.3 | 22.8 | 102.6 | 148.8 | 138.8 | 22.9 | 131.5 | 19.1 |
| Zica-20191111-94810 | 4 | 97.5 | 141.2 | 111.7 | 23.3 | 115.5 | 19.6 | 108.0 | 137.2 | 118.1 | 18.6 | 120.3 | 13.7 |
| Zica-20211112-94819 | 8 | 81.8 | 140.3 | 111.9 | 34.0 | 108.9 | 20.9 | 80.9 | 136.1 | 112.1 | 31.9 | 107.3 | 19.9 |
| Zica-20211113-195993 | 2 | 107.9 | 118.2 | 113.1 | 5.1 | 113.1 | 7.3 | 115.6 | 125.7 | 120.7 | 5.1 | 120.7 | 7.1 |
| Zica-20220112-195994 | 5 | 76.3 | 139.0 | 102.8 | 41.5 | 103.0 | 27.0 | 69.9 | 143.9 | 107.8 | 53.9 | 103.6 | 32.7 |
| Zica-20230518-233391 | 3 | 104.4 | 120.9 | 120.7 | 8.2 | 115.3 | 9.5 | 112.2 | 129.4 | 126.7 | 8.6 | 122.8 | 9.3 |
| Zica-20230519-232950 | 2 | 93.4 | 151.1 | 122.2 | 28.8 | 122.2 | 40.8 | 105.5 | 160.3 | 132.9 | 27.4 | 132.9 | 38.7 |
| Zica-20230723-233394 | 7 | 88.5 | 123.8 | 121.2 | 9.1 | 114.8 | 13.2 | 91.5 | 135.2 | 121.8 | 14.4 | 119.7 | 15.1 |
| Zica-20230723-233395 | 6 | 106.1 | 126.8 | 117.1 | 12.6 | 116.9 | 8.3 | 112.6 | 129.5 | 120.7 | 7.9 | 120.7 | 6.3 |
| Zica-20240227-233396 | 7 | 105.3 | 150.3 | 119.0 | 28.2 | 126.9 | 18.1 | 112.3 | 155.8 | 123.4 | 33.1 | 131.0 | 18.9 |
| Zica-20240227-240128 | 1 | 138.4 | 138.4 | 138.4 | 0.0 | 138.4 | NA | 141.2 | 141.2 | 141.2 | 0.0 | 141.2 | NA |
| Total | 52 | 76.3 | 151.1 | 119.0 | 20.2 | 116.7 | 18.8 | 69.9 | 160.3 | 121.3 | 21.7 | 120.7 | 19.9 |

Variant State Occurrence per MFAS-exposed Dive Cycle

Table S 3: Occurrence of Variant state for each dive cycle that contained detected MFAS sounds. The “State” column indicates the current dive-cycle-level state, while the “Switched to Variant State?” column indicates whether or not the whale switched from Typical to Variant state during the current dive cycle. In six cases, the whale was already *in* Variant state before the dive cycle with MFAS began, and then remained in Variant state during the exposed dive cycle; these rows have “Started Earlier” in the “Switched to Variant State?” column.

| MFAS cSEL | MFAS RL | Sonar before EOE? | Whale ID | Start Time (UTC) | Previous State | State | Switched State? | to Variant | N Variant Dive Cycles | Variant State Duration (hr) |
|-----------|---------|-------------------|----------------------|-------------------------|----------------|---------|-----------------|------------|-----------------------|-----------------------------|
| 69.9 | 76.3 | No | Zica-20220112-195994 | 2022-01-12 20:38:10.053 | Typical | Typical | No | | NA | NA |
| 71.3 | 77.6 | No | Zica-20220112-195994 | 2022-01-12 18:45:25.053 | Variant | Typical | No | | NA | NA |
| 80.9 | 81.8 | No | Zica-20211112-94819 | 2021-11-15 09:53:35.052 | Typical | Typical | No | | NA | NA |
| 87.4 | 88.9 | No | Zica-20211112-94819 | 2021-11-18 17:52:40.052 | Typical | Typical | No | | NA | NA |

| MFAS cSEL | MFAS RL | Sonar before EOE? | Whale ID | Start Time (UTC) | Previous State | State | Switched State? | to Variant | N Variant Dive Cycles | Variant State Duration (hr) |
|-----------|---------|-------------------|----------------------|-------------------------|----------------|---------|-----------------|------------|-----------------------|-----------------------------|
| 87.7 | 89.2 | Yes | Zica-20211112-94819 | 2021-11-15 07:05:27.052 | Typical | Typical | No | | NA | NA |
| 91.5 | 88.5 | No | Zica-20230723-233394 | 2023-07-24 23:34:28.052 | Typical | Typical | No | | NA | NA |
| 102.6 | 95.1 | No | Zica-20191012-145101 | 2019-10-13 17:57:13.052 | Typical | Typical | No | | NA | NA |
| 105.5 | 93.4 | No | Zica-20230519-232950 | 2023-05-23 14:27:41.052 | Typical | Typical | No | | NA | NA |
| 107.8 | 102.8 | No | Zica-20220112-195994 | 2022-01-13 17:56:47.053 | Typical | Typical | No | | NA | NA |
| 108.0 | 97.5 | No | Zica-20191111-94810 | 2019-11-16 04:23:21.052 | Typical | Typical | No | | NA | NA |
| 108.0 | 105.5 | No | Zica-20211112-94819 | 2021-11-19 05:37:29.052 | Typical | Typical | No | | NA | NA |
| 109.6 | 104.9 | No | Zica-20230723-233394 | 2023-07-25 15:21:43.052 | Typical | Typical | No | | NA | NA |
| 110.6 | 103.4 | Yes | Zica-20191111-94810 | 2019-11-14 23:00:48.052 | Typical | Typical | No | | NA | NA |
| 112.2 | 104.4 | No | Zica-20230518-233391 | 2023-05-24 01:02:36.053 | Typical | Typical | No | | NA | NA |
| 112.3 | 105.3 | Yes | Zica-20240227-233396 | 2024-03-06 23:16:40.052 | Typical | Typical | No | | NA | NA |
| 112.6 | 106.1 | Yes | Zica-20230723-233395 | 2023-07-25 18:05:29.052 | Typical | Variant | Yes | | 3 | 2.7 |
| 112.8 | 119.0 | No | Zica-20240227-233396 | 2024-03-05 17:14:39.052 | Typical | Typical | No | | NA | NA |
| 115.1 | 109.6 | Yes | Zica-20230723-233395 | 2023-07-25 03:58:24.052 | Typical | Variant | Yes | | 1 | 3.5 |
| 115.6 | 107.9 | No | Zica-20211113-195993 | 2021-11-16 20:17:20.052 | Variant | Variant | Started Earlier | | 37 | 72.4 |
| 116.2 | 118.3 | Yes | Zica-20211112-94819 | 2021-11-18 20:52:08.052 | Typical | Typical | No | | NA | NA |
| 116.9 | 110.8 | Yes | Zica-20240227-233396 | 2024-03-04 04:10:40.052 | Variant | Variant | Started Earlier | | 5 | 11.2 |
| 117.2 | 106.4 | No | Zica-20191012-144029 | 2019-10-15 19:00:27.052 | Typical | Typical | No | | NA | NA |
| 118.1 | 122.6 | Yes | Zica-20211112-94819 | 2021-11-16 21:55:32.052 | Typical | Typical | No | | NA | NA |
| 120.4 | 114.8 | Yes | Zica-20230723-233395 | 2023-07-24 03:00:46.052 | Typical | Typical | No | | NA | NA |
| 120.7 | 120.9 | Yes | Zica-20230723-233394 | 2023-07-25 22:47:23.052 | Typical | Typical | No | | NA | NA |
| 120.9 | 124.9 | No | Zica-20230723-233395 | 2023-07-25 15:34:14.052 | Typical | Typical | No | | NA | NA |
| 121.8 | 121.2 | Yes | Zica-20230723-233394 | 2023-07-25 03:07:29.052 | Typical | Typical | No | | NA | NA |
| 122.2 | 107.4 | Yes | Zica-20191012-145101 | 2019-10-17 08:55:31.052 | Typical | Variant | Yes | | 7 | 15.2 |

| MFAS cSEL | MFAS RL | Sonar before EOE? | Whale ID | Start Time (UTC) | Previous State | State | Switched State? | to Variant | N Variant Dive Cycles | Variant State Duration (hr) |
|-----------|---------|-------------------|----------------------|-------------------------|----------------|---------|-----------------|------------|-----------------------|-----------------------------|
| 123.4 | 117.9 | No | Zica-20240227-233396 | 2024-03-07 22:57:57.052 | Typical | Typical | No | | NA | NA |
| 123.9 | 124.9 | Yes | Zica-20211112-94819 | 2021-11-17 00:34:28.052 | Typical | Typical | No | | NA | NA |
| 125.2 | 119.1 | Yes | Zica-20220112-195994 | 2022-01-13 21:32:29.053 | Typical | Typical | No | | NA | NA |
| 125.4 | 126.8 | Yes | Zica-20230723-233395 | 2023-07-23 20:45:43.052 | Typical | Typical | No | | NA | NA |
| 125.6 | 119.9 | Yes | Zica-20191111-94810 | 2019-11-16 07:49:35.052 | Typical | Typical | No | | NA | NA |
| 125.7 | 118.2 | Yes | Zica-20211113-195993 | 2021-11-17 06:51:47.052 | Variant | Variant | Started Earlier | | 37 | 72.4 |
| 126.3 | 121.5 | Yes | Zica-20230723-233394 | 2023-07-24 03:34:14.052 | Typical | Variant | Yes | | 1 | 1.8 |
| 126.7 | 120.9 | Yes | Zica-20230518-233391 | 2023-05-24 03:22:02.053 | Typical | Variant | Yes | | 6 | 18.4 |
| 129.4 | 120.7 | Yes | Zica-20230518-233391 | 2023-05-24 04:57:39.053 | Variant | Variant | Started Earlier | | 6 | 18.4 |
| 129.5 | 119.4 | Yes | Zica-20230723-233395 | 2023-07-25 18:47:33.052 | Variant | Variant | Started Earlier | | 3 | 2.7 |
| 132.9 | 122.5 | Yes | Zica-20230723-233394 | 2023-07-25 18:26:05.052 | Typical | Typical | No | | NA | NA |
| 135.2 | 123.8 | Yes | Zica-20230723-233394 | 2023-07-23 20:46:59.052 | Typical | Typical | No | | NA | NA |
| 136.1 | 140.3 | Yes | Zica-20211112-94819 | 2021-11-17 06:03:24.052 | Typical | Variant | Yes | | 5 | 14.5 |
| 137.2 | 141.2 | No | Zica-20191111-94810 | 2019-11-15 01:37:36.052 | Typical | Variant | Yes | | 1 | 9.2 |
| 138.8 | 136.0 | Yes | Zica-20191012-145101 | 2019-10-13 22:53:17.052 | Typical | Variant | Yes | | 2 | 9.0 |
| 141.2 | 138.4 | No | Zica-20240227-240128 | 2024-02-28 04:28:44.052 | Typical | Typical | No | | NA | NA |
| 143.9 | 139.0 | No | Zica-20220112-195994 | 2022-01-15 06:03:56.053 | Typical | Variant | Yes | | 1 | 16.9 |
| 144.4 | 137.0 | No | Zica-20240227-233396 | 2024-02-28 03:58:45.052 | Variant | Variant | No | | NA | NA |
| 145.1 | 147.9 | Yes | Zica-20191012-145101 | 2019-10-13 20:36:10.052 | Typical | Typical | No | | NA | NA |
| 145.9 | 136.5 | No | Zica-20191012-144029 | 2019-10-13 17:03:06.052 | Typical | Variant | Yes | | 1 | 19.1 |
| 148.8 | 140.1 | No | Zica-20191012-145101 | 2019-10-16 17:50:04.052 | Typical | Typical | No | | NA | NA |
| 151.5 | 150.3 | No | Zica-20240227-233396 | 2024-03-06 04:56:40.052 | Variant | Variant | Started Earlier | | 3 | 14.1 |
| 155.8 | 148.0 | Yes | Zica-20240227-233396 | 2024-03-05 22:20:46.052 | Typical | Variant | Yes | | 3 | 14.1 |
| 160.3 | 151.1 | No | Zica-20230519-232950 | 2023-05-24 01:57:07.052 | Typical | Variant | Yes | | 2 | 10.2 |

Here, we see that whales transitioned to Variant state in 12 out of 52 MFAS-exposed dive cycles (23.1 percent).

If we consider only dive cycles where the MFAS cSEL was above $110 \text{ dB re } 1\mu\text{Pa}^2*\text{sec}$, then that becomes 12 out of 40 MFAS-exposed dive cycles (30 percent).

MFAS Received Level Data Table

All received level values (for each received sound, as opposed to summarised over 5-minute or dive-cycle periods) are also available as text files.

File name: `mfas-raw-rls.csv` (located in the `data` directory).

Note: Each table printed above is also available as a text file in the data directory.

Tallying 5-Minute States

Table S 4: Occurrences of each of the four states at the five-minute timescale, by HHMM state and MFAS presence.

| 5-minute State | Typical Minute | 5- Interval | Variant Minute | 5- Interval | Typical | Per- cent | Variant | Per- cent |
|----------------|----------------|-------------|----------------|-------------|---------|-----------|---------|-----------|
| MFAS | | | | | | | | |
| 1 | 90 | | 70 | | 10.3 | | 7.2 | |
| 2 | 37 | | 60 | | 4.2 | | 6.1 | |
| 3 | 496 | | 555 | | 56.8 | | 56.7 | |
| 4 | 251 | | 294 | | 28.7 | | 30.0 | |
| No MFAS | | | | | | | | |
| 1 | 3763 | | 1772 | | 28.5 | | 26.8 | |
| 2 | 556 | | 481 | | 4.2 | | 7.3 | |
| 3 | 5662 | | 3606 | | 42.9 | | 54.4 | |
| 4 | 3232 | | 764 | | 24.5 | | 11.5 | |

Duration of Variant State

Data Variant State bouts

Table S 5: Variant state bouts observed in the SMRT data, according to the fitted HHMM.

| Whale ID | Bout Number | N Dive Cycles | Total Duration (h) | Initial MFAS cSEL | Start Time (UTC) |
|----------------------|-------------|---------------|--------------------|-------------------|-------------------------|
| Zica-20191012-144029 | 1 | 4 | 15.5 | 0.0 | 2019-10-12 21:39:22.052 |
| Zica-20191012-144029 | 2 | 1 | 19.1 | 145.9 | 2019-10-13 17:03:06.052 |
| Zica-20191012-144029 | 3 | 1 | 2.8 | 0.0 | 2019-10-14 23:16:59.052 |
| Zica-20191012-144029 | 4 | 3 | 9.3 | 0.0 | 2019-10-15 07:19:13.052 |
| Zica-20191012-144029 | 5 | 15 | 39.4 | 0.0 | 2019-10-16 01:05:08.052 |
| Zica-20191012-145101 | 6 | 2 | 9.0 | 138.8 | 2019-10-13 22:53:17.052 |
| Zica-20191012-145101 | 7 | 1 | 4.1 | 0.0 | 2019-10-15 00:13:00.052 |
| Zica-20191012-145101 | 8 | 4 | 9.7 | 0.0 | 2019-10-15 07:16:16.052 |
| Zica-20191012-145101 | 9 | 1 | 6.2 | 0.0 | 2019-10-15 22:37:12.052 |
| Zica-20191012-145101 | 10 | 7 | 15.2 | 122.2 | 2019-10-17 08:55:31.052 |
| Zica-20191111-94810 | 11 | 3 | 6.5 | 0.0 | 2019-11-12 08:27:50.052 |
| Zica-20191111-94810 | 12 | 5 | 16.8 | 0.0 | 2019-11-12 23:17:11.052 |

| Whale ID | Bout Number | N Dive Cycles | Total Duration (h) | Initial MFAS cSEL | Start Time (UTC) |
|----------------------|-------------|---------------|--------------------|-------------------|-------------------------|
| Zica-20191111-94810 | 13 | 1 | 9.2 | 137.2 | 2019-11-15 01:37:36.052 |
| Zica-20211112-94819 | 14 | 1 | 3.0 | 0.0 | 2021-11-15 17:09:42.052 |
| Zica-20211112-94819 | 15 | 3 | 6.2 | 0.0 | 2021-11-16 06:48:34.052 |
| Zica-20211112-94819 | 16 | 5 | 14.5 | 136.1 | 2021-11-17 06:03:24.052 |
| Zica-20211113-195993 | 17 | 37 | 72.4 | 0.0 | 2021-11-14 08:22:24.052 |
| Zica-20211113-195993 | 18 | 5 | 9.3 | 0.0 | 2021-11-17 11:51:09.052 |
| Zica-20220112-195994 | 19 | 1 | 16.9 | 143.9 | 2022-01-15 06:03:56.053 |
| Zica-20220112-195994 | 20 | 1 | 8.1 | 0.0 | 2022-01-17 13:02:07.053 |
| Zica-20230518-233391 | 21 | 5 | 14.5 | 0.0 | 2023-05-19 04:04:22.053 |
| Zica-20230518-233391 | 22 | 4 | 12.5 | 0.0 | 2023-05-20 23:37:26.053 |
| Zica-20230518-233391 | 23 | 2 | 7.7 | 0.0 | 2023-05-21 15:54:56.053 |
| Zica-20230518-233391 | 24 | 1 | 2.8 | 0.0 | 2023-05-22 02:58:40.053 |
| Zica-20230518-233391 | 25 | 6 | 13.3 | 0.0 | 2023-05-22 19:45:07.053 |
| Zica-20230518-233391 | 26 | 6 | 18.4 | 126.7 | 2023-05-24 03:22:02.053 |
| Zica-20230518-233391 | 27 | 9 | 34.1 | 0.0 | 2023-05-25 03:03:32.053 |
| Zica-20230518-233391 | 28 | 1 | 1.7 | 0.0 | 2023-05-26 23:09:59.053 |
| Zica-20230518-233391 | 29 | 9 | 26.9 | 0.0 | 2023-05-27 03:34:56.053 |
| Zica-20230518-233391 | 30 | 2 | 7.8 | 0.0 | 2023-05-28 22:06:39.053 |
| Zica-20230519-232950 | 31 | 1 | 6.2 | 0.0 | 2023-05-20 09:33:59.052 |
| Zica-20230519-232950 | 32 | 1 | 2.1 | 0.0 | 2023-05-21 09:25:42.052 |
| Zica-20230519-232950 | 33 | 6 | 11.3 | 0.0 | 2023-05-22 00:39:26.052 |
| Zica-20230519-232950 | 34 | 2 | 5.6 | 0.0 | 2023-05-23 17:43:16.052 |
| Zica-20230519-232950 | 35 | 2 | 10.2 | 160.3 | 2023-05-24 01:57:07.052 |
| Zica-20230519-232950 | 36 | 3 | 10.6 | 0.0 | 2023-05-26 07:12:40.052 |
| Zica-20230519-232950 | 37 | 1 | 5.0 | 0.0 | 2023-05-28 07:34:21.052 |
| Zica-20230519-232950 | 38 | 4 | 10.1 | 0.0 | 2023-05-29 05:01:01.052 |
| Zica-20230723-233394 | 39 | 1 | 1.8 | 126.3 | 2023-07-24 03:34:14.052 |
| Zica-20230723-233394 | 40 | 4 | 12.6 | 0.0 | 2023-07-24 07:53:01.052 |
| Zica-20230723-233395 | 41 | 1 | 3.5 | 115.1 | 2023-07-25 03:58:24.052 |
| Zica-20230723-233395 | 42 | 3 | 2.7 | 112.6 | 2023-07-25 18:05:29.052 |
| Zica-20240227-233396 | 43 | 1 | 5.9 | 0.0 | 2024-02-29 06:10:52.052 |
| Zica-20240227-233396 | 44 | 1 | 2.9 | 0.0 | 2024-03-02 06:03:32.052 |
| Zica-20240227-233396 | 45 | 3 | 7.4 | 0.0 | 2024-03-03 05:32:14.052 |
| Zica-20240227-233396 | 46 | 5 | 11.2 | 0.0 | 2024-03-04 02:04:37.052 |
| Zica-20240227-233396 | 47 | 4 | 10.4 | 0.0 | 2024-03-05 02:24:28.052 |
| Zica-20240227-233396 | 48 | 3 | 14.1 | 155.8 | 2024-03-05 22:20:46.052 |

| Whale ID | Bout Number | N Dive Cycles | Total Duration (h) | Initial MFAS cSEL | Start Time (UTC) |
|----------------------|-------------|---------------|--------------------|-------------------|-------------------------|
| Zica-20240227-233396 | 49 | 1 | 2.2 | 0.0 | 2024-03-07 02:08:41.052 |
| Zica-20240227-233396 | 50 | 2 | 5.2 | 0.0 | 2024-03-07 07:06:11.052 |
| Zica-20240227-233396 | 51 | 2 | 3.6 | 0.0 | 2024-03-08 02:29:58.052 |
| Zica-20240227-240128 | 52 | 1 | 1.2 | 0.0 | 2024-03-02 03:39:15.052 |
| Zica-20240227-240128 | 53 | 1 | 1.0 | 0.0 | 2024-03-02 18:17:34.052 |

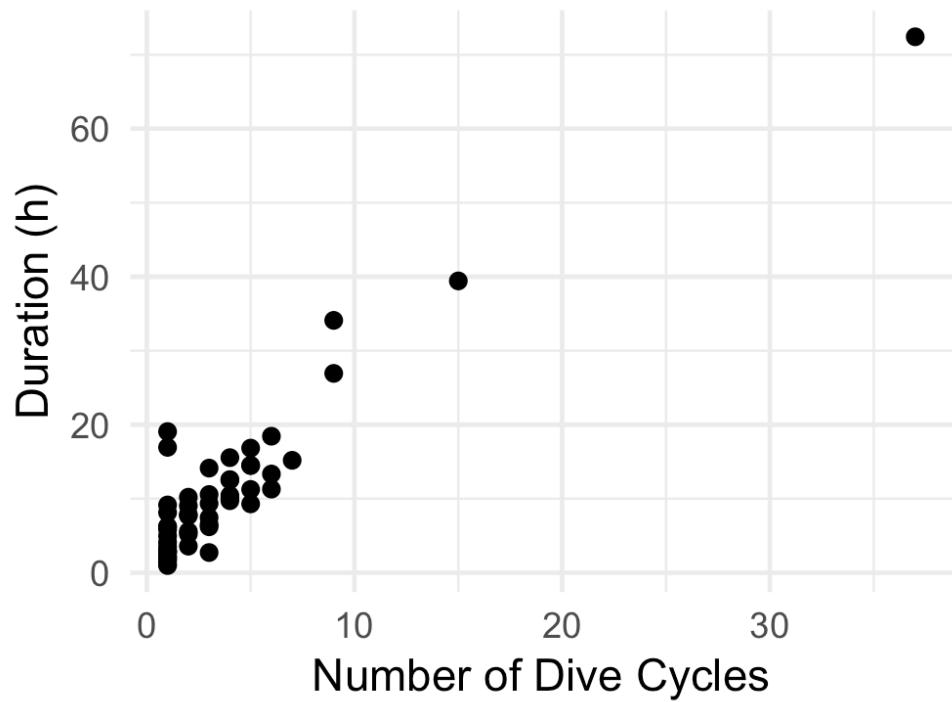


Figure S 1: Histogram of observed and simulated Variant state bouts.

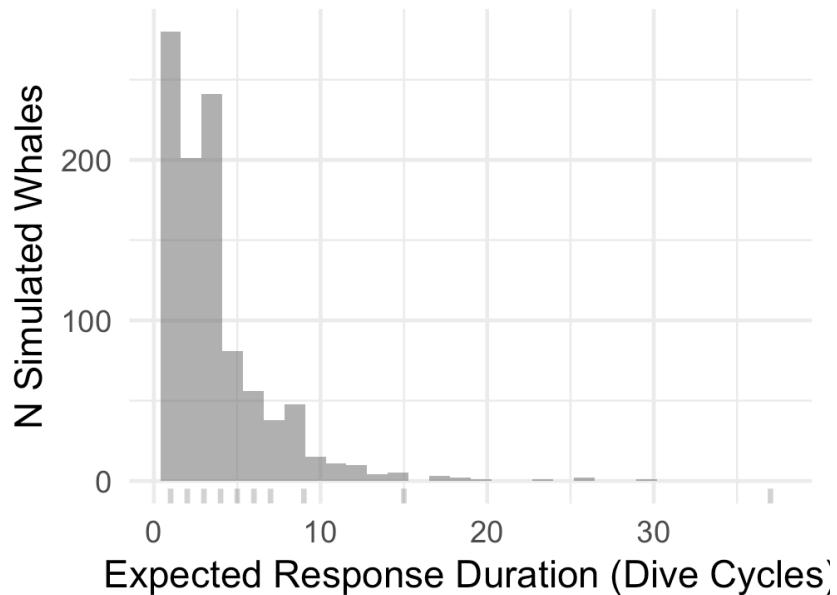


Figure S 2: Histogram of observed and simulated Variant state bouts.

Variant State Summary

Table S 6: Summary of Variant state bout duration in dive cycles and hours, for both observed data and simulations based on the fitted HHMM (in which no MFAS exposure occurs after initiation of Variant state).

| Type | Metric | median | IQR | mean | sd | min | max |
|-----------|--------------|--------|------|------|------|-----|-------|
| Observed | Dive Cycles | 2.0 | 3.0 | 3.8 | 5.4 | 1.0 | 37.0 |
| Observed | Duration (h) | 9.0 | 9.2 | 10.9 | 11.5 | 1.0 | 72.4 |
| Simulated | Dive Cycles | 3.0 | 4.0 | 3.6 | 3.3 | 1.0 | 29.0 |
| Simulated | Duration (h) | 7.5 | 10.7 | 10.7 | 10.5 | 0.3 | 109.6 |

Time-series plots for each tag deployment

Dive Profile Plots

Below are dive trace time-series plots for all whales with RLs and coarse-scale state indicated.

In these plots:

- Grey shading indicates a dive cycle that was classed as Variant state
- Received levels are shown in lower plots. The lines indicate cumulative SEL (cumulative by dive cycle; for the 5-minute scale, SEL is cumulative across a single dive cycle up to the end of the current 5-minute interval). Dots indicate RMS RL.
- Depths shown are the medians in 5-minute intervals (so may not reach the surface, etc.)
- Colors indicate the fine-scale (5-minute) states
- In interactive plots (in html output file format),
 - You can zoom!
 - Mouse over the RL dot to get the exact RL value

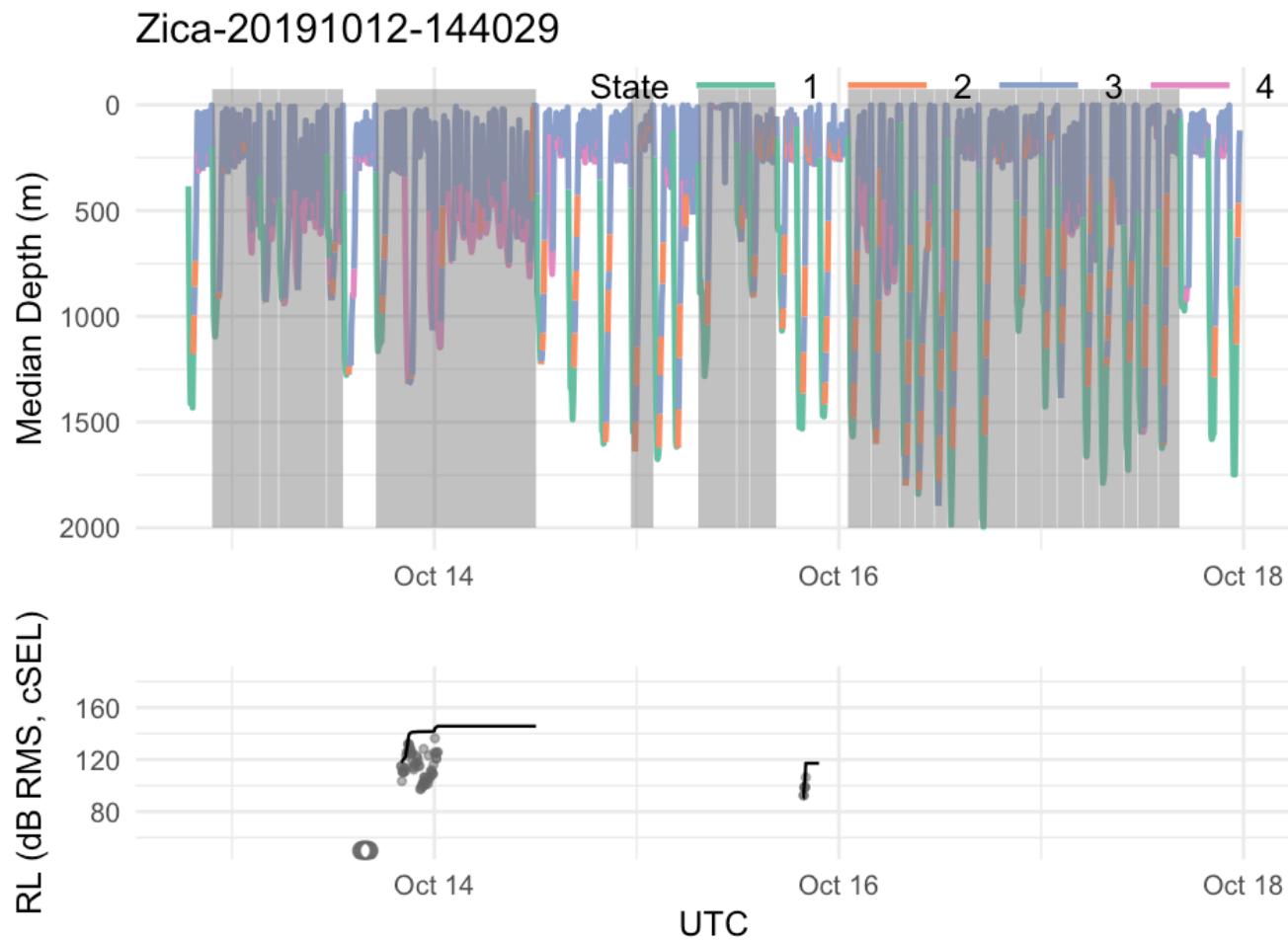


Figure S 3: Dive depth profile for tag Zica-20191012-144029, with HHMM state and sound exposure information. Open circles indicate times echosounders were detected on the tag record.

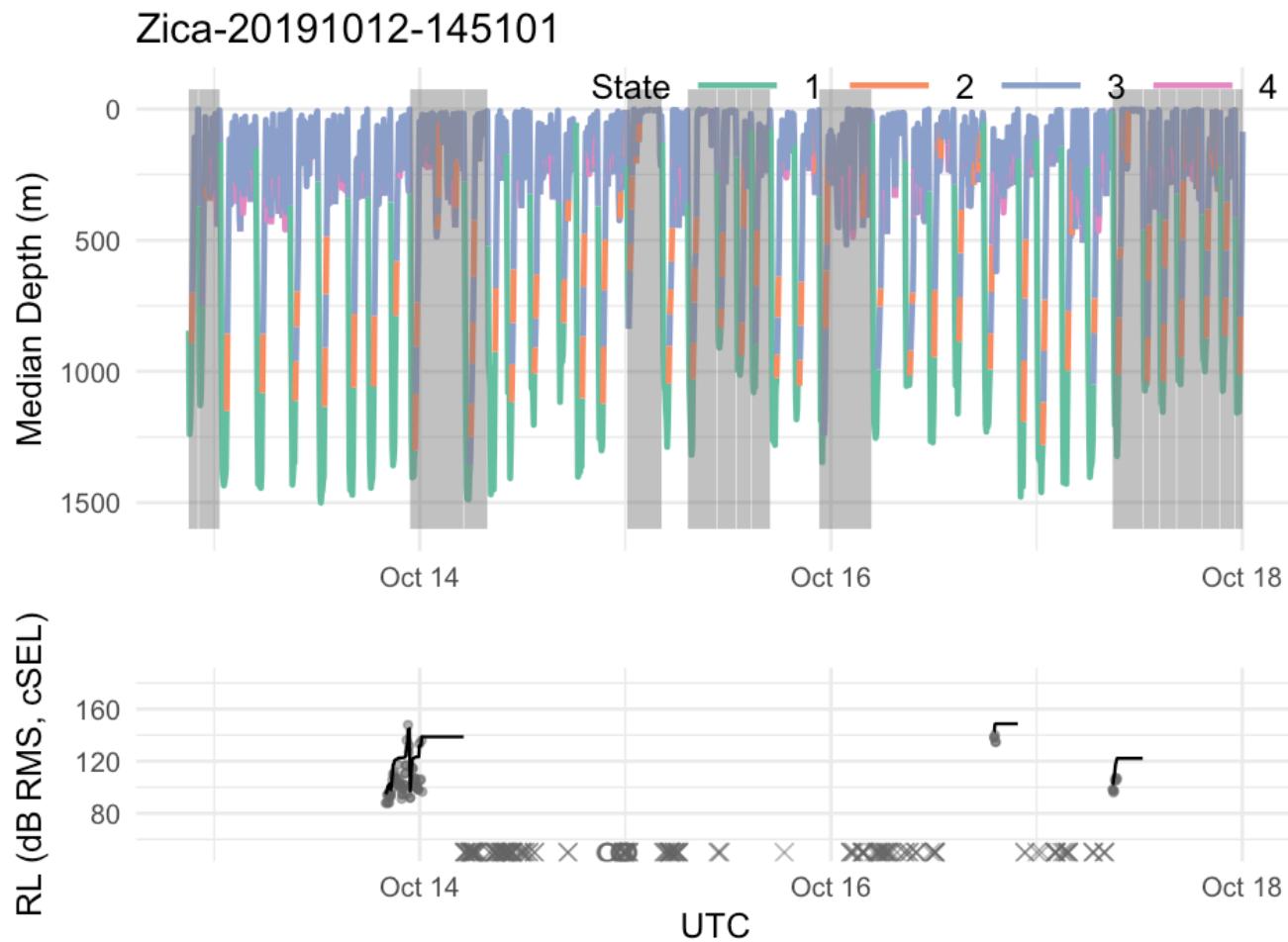


Figure S 4: Dive depth profile for tag Zica-20191012-145101, with HHMM state and sound exposure information. Symbols indicate times various sounds were detected on the tag record: open circles for echosounders and Xs for impulsive sounds.

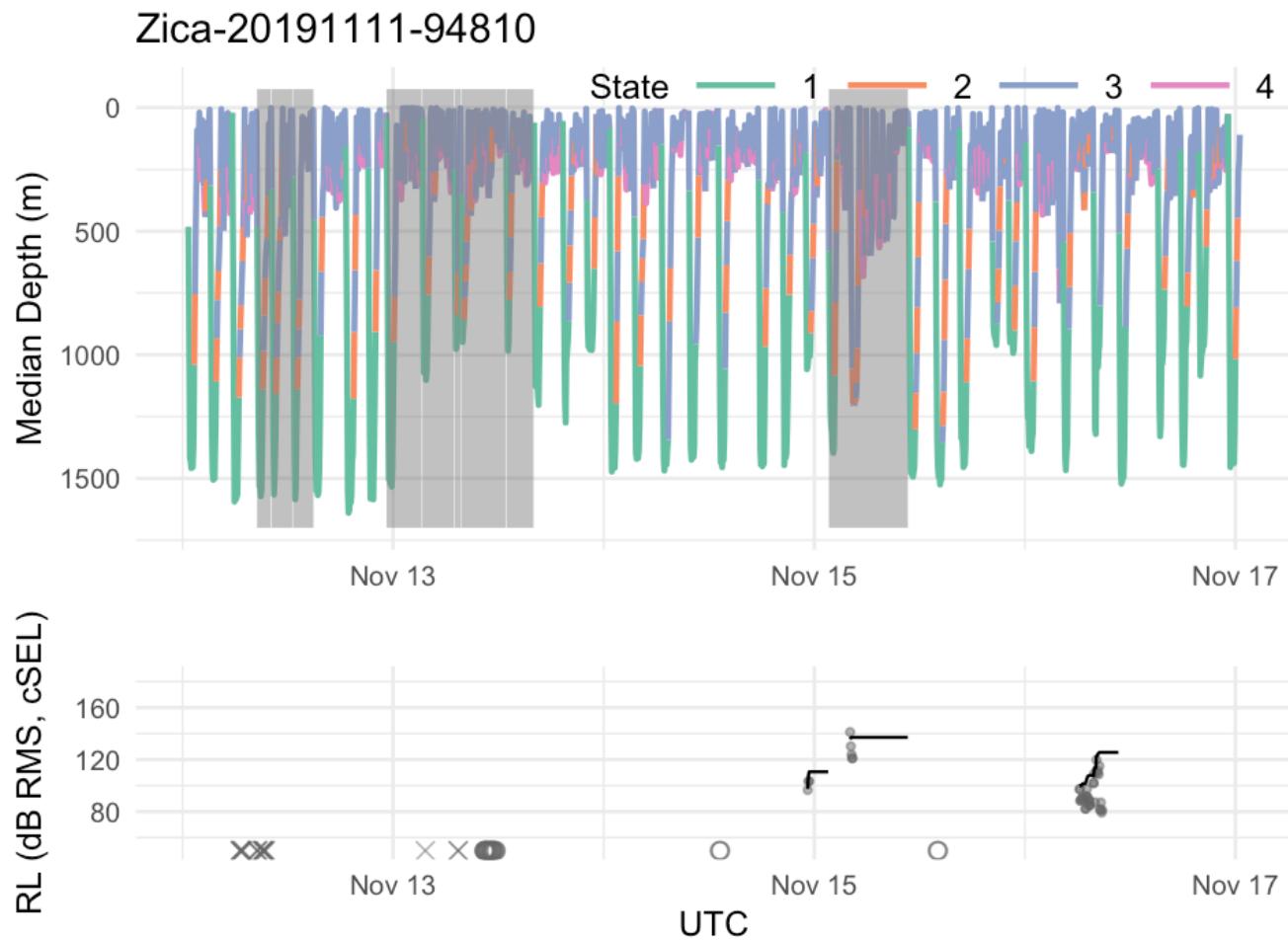


Figure S 5: Dive depth profile for tag Zica-20191111-94810, with HHMM state and sound exposure information. Symbols indicate times various sounds were detected on the tag record: open circles for echosounders and Xs for impulsive sounds.

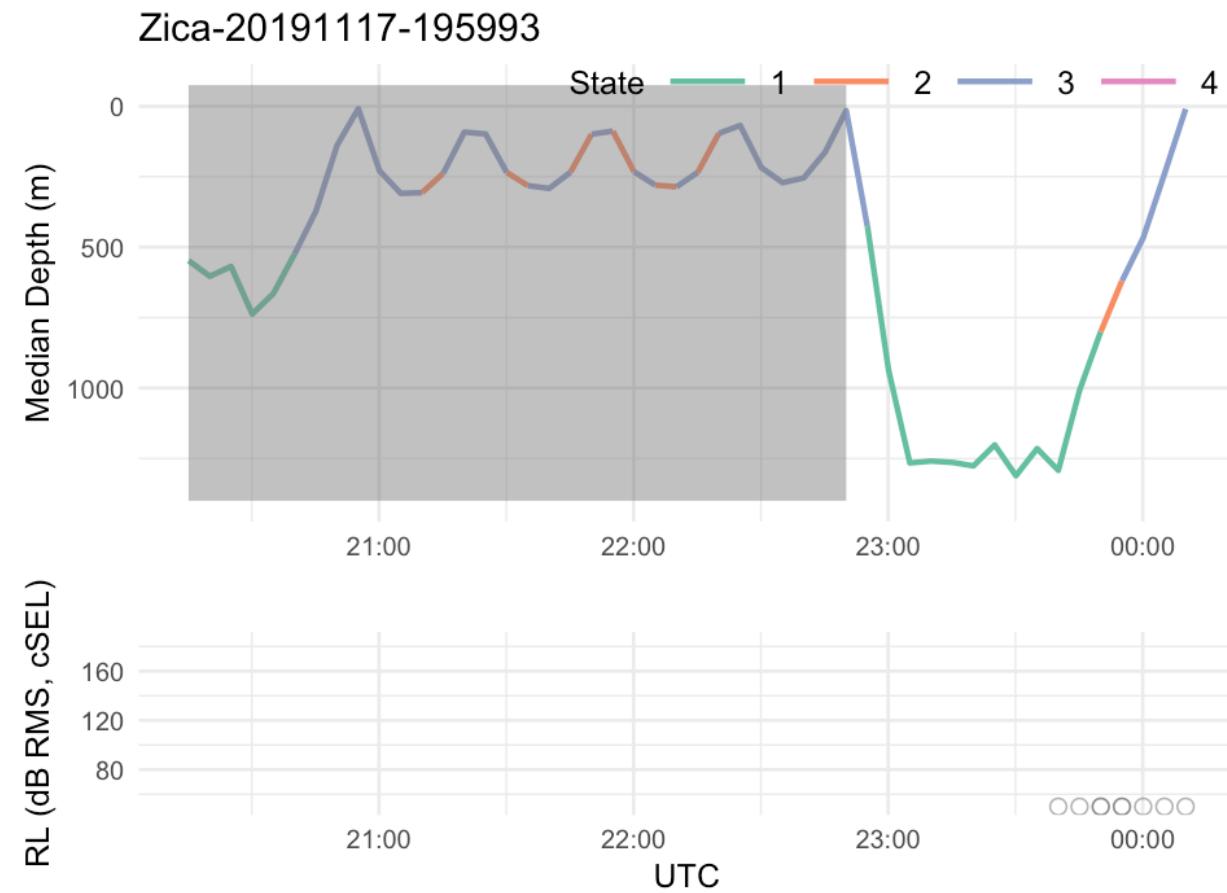


Figure S 6: Dive depth profile for tag Zica-20191117-195993, with HHMM state and sound exposure information. Open circles indicate times echosounders were detected on the tag record.

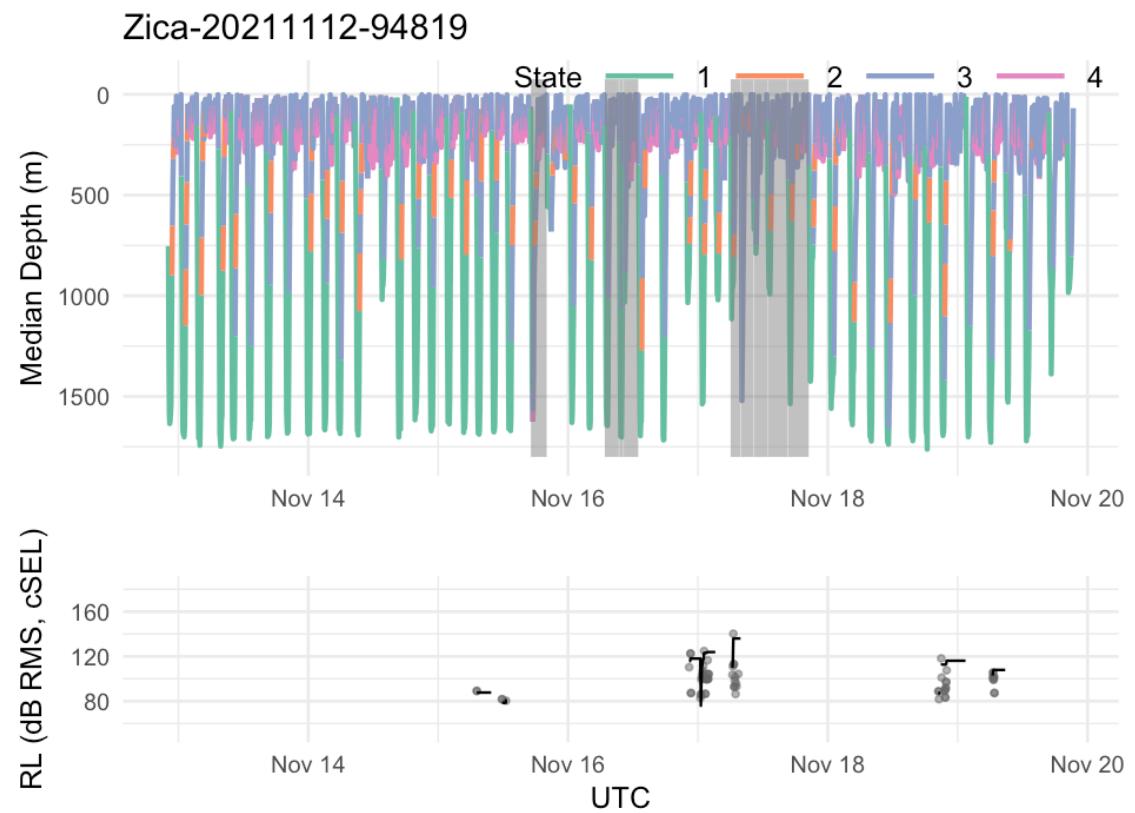


Figure S 7: Dive depth profile for tag Zica-20211112-94819, with HHMM state and sound exposure information.

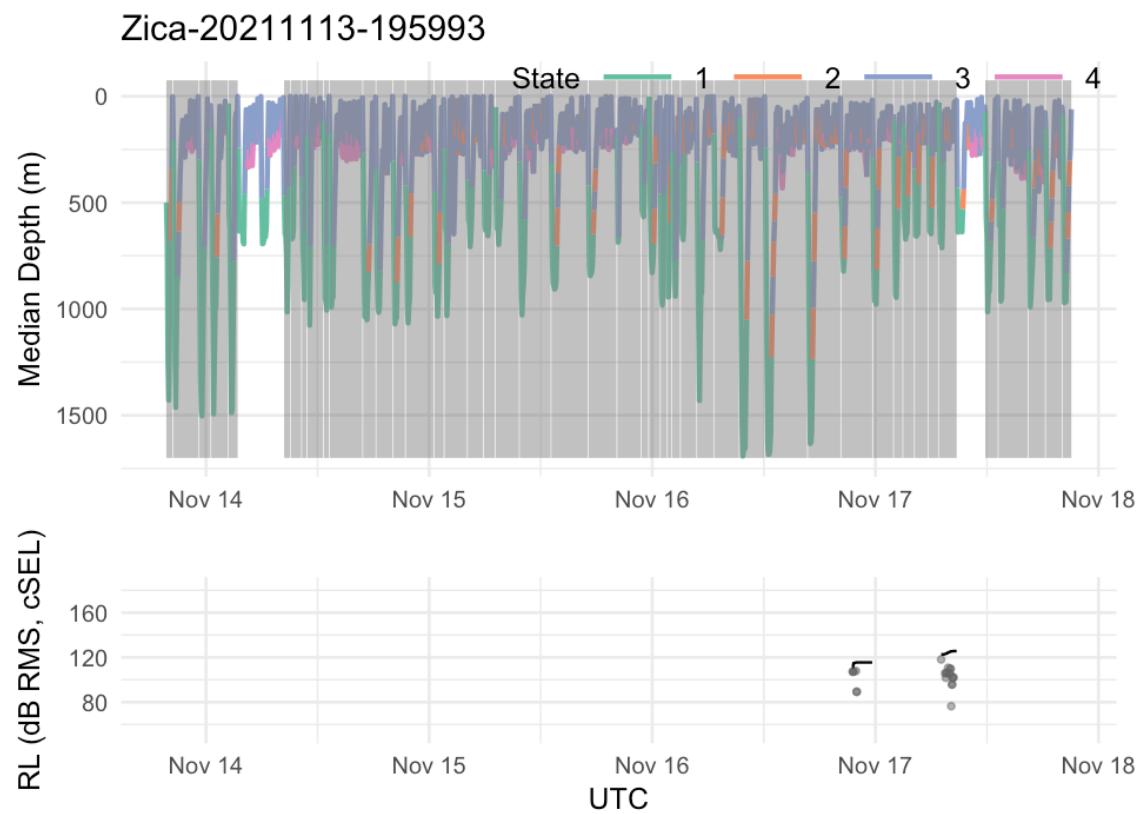


Figure S 8: Dive depth profile for tag Zica-20211113-195993, with HHMM state and sound exposure information.

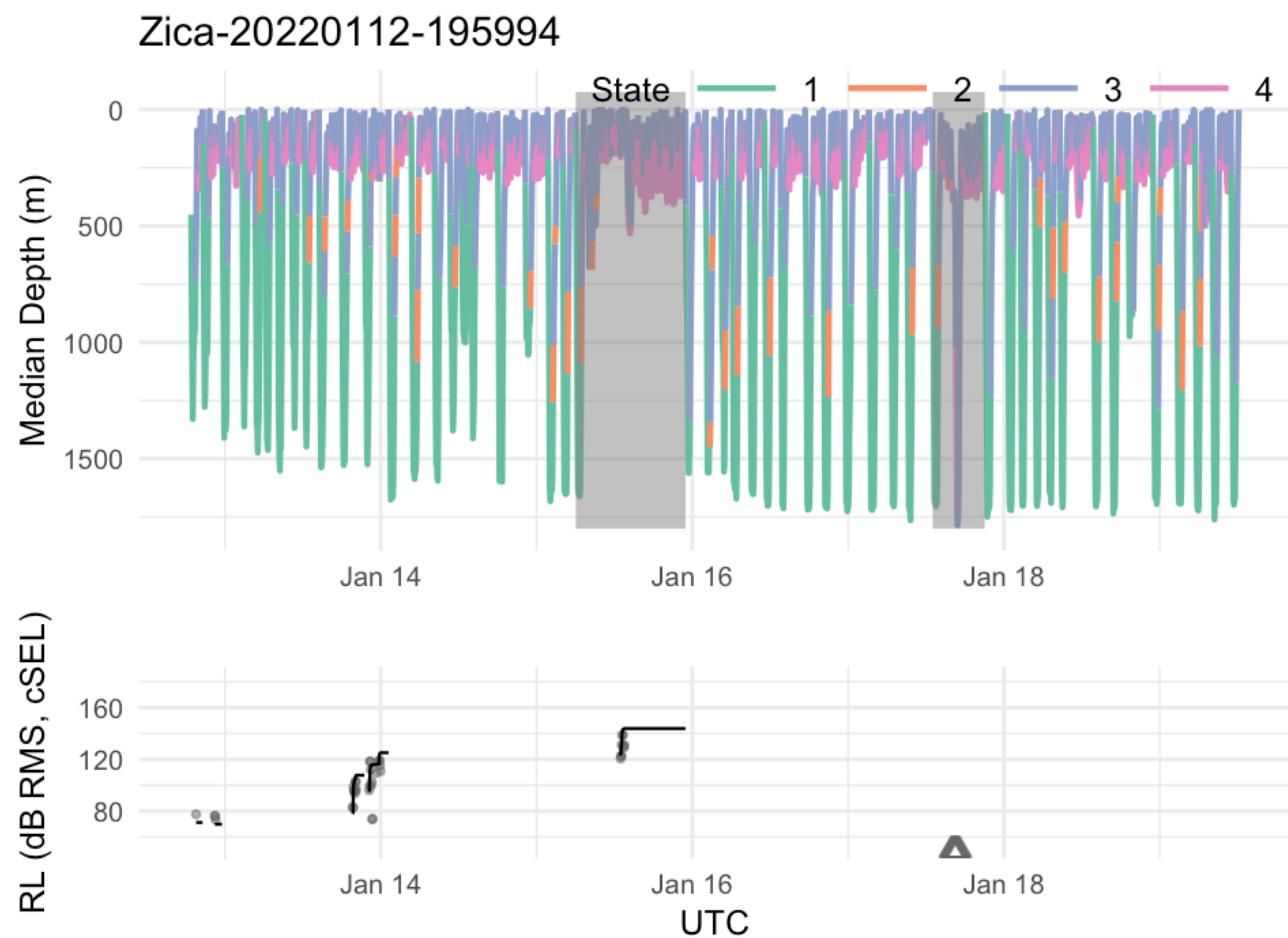


Figure S 9: Dive depth profile for tag Zica-20220112-195994, with HHMM state and sound exposure information. Open triangles indicate times orca sounds were detected on the tag record.

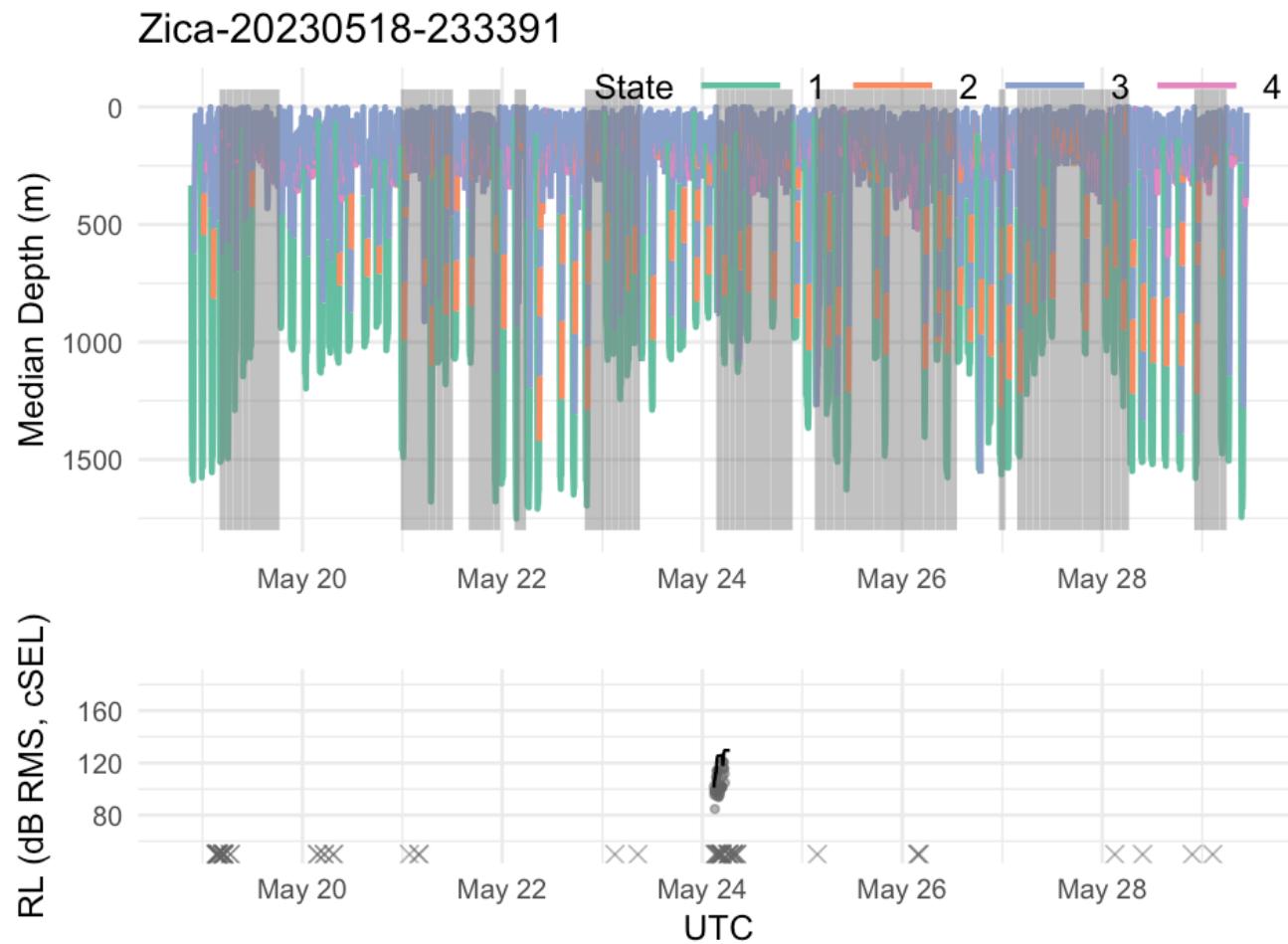


Figure S 10: Dive depth profile for tag Zica-20230518-233391, with HHMM state and sound exposure information. Xs indicate times impulsive sounds were detected on the tag record.

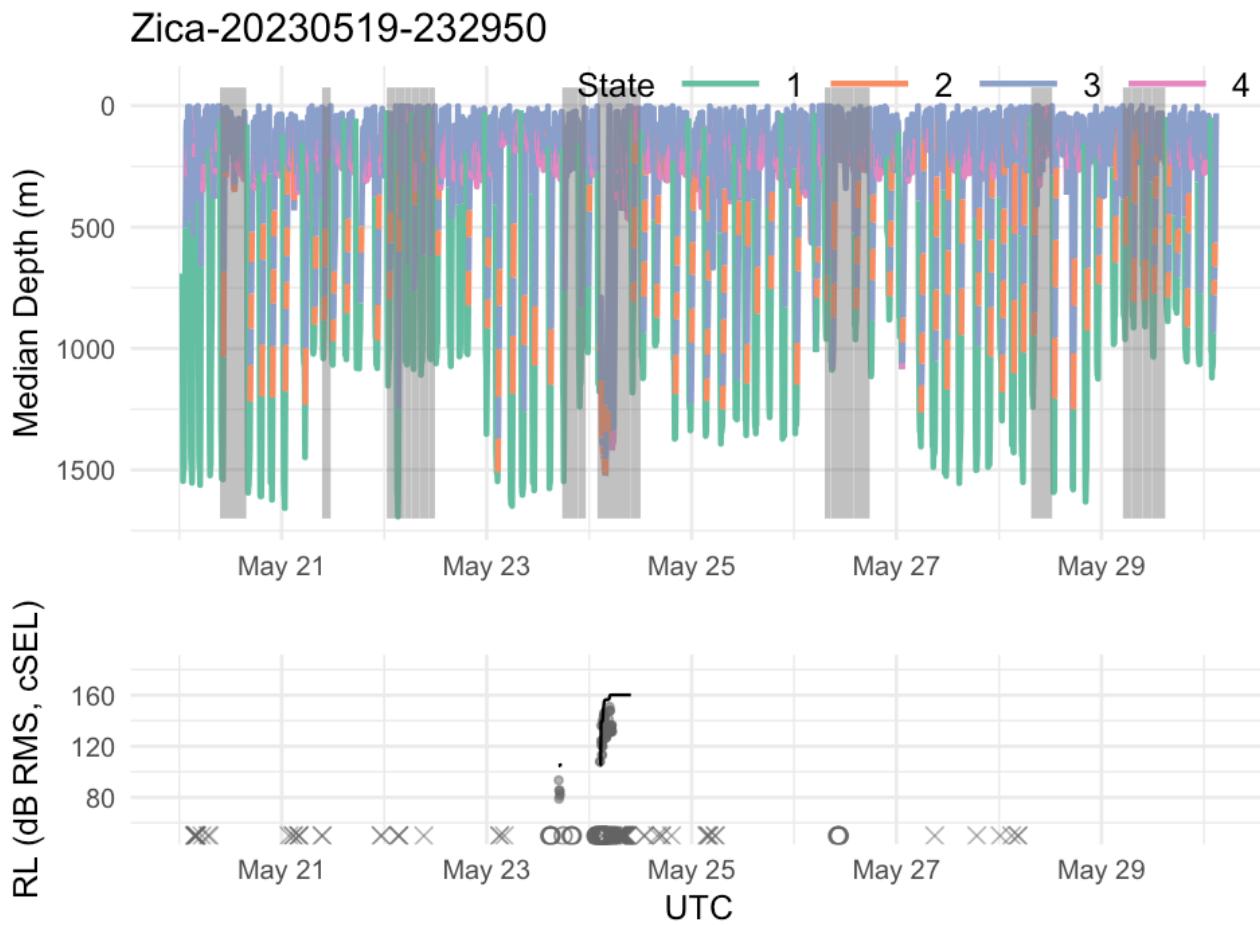


Figure S 11: Dive depth profile for tag Zica-20230519-232950, with HHMM state and sound exposure information. Symbols indicate times various sounds were detected on the tag record: open circles for echosounders and Xs for impulsive sounds.

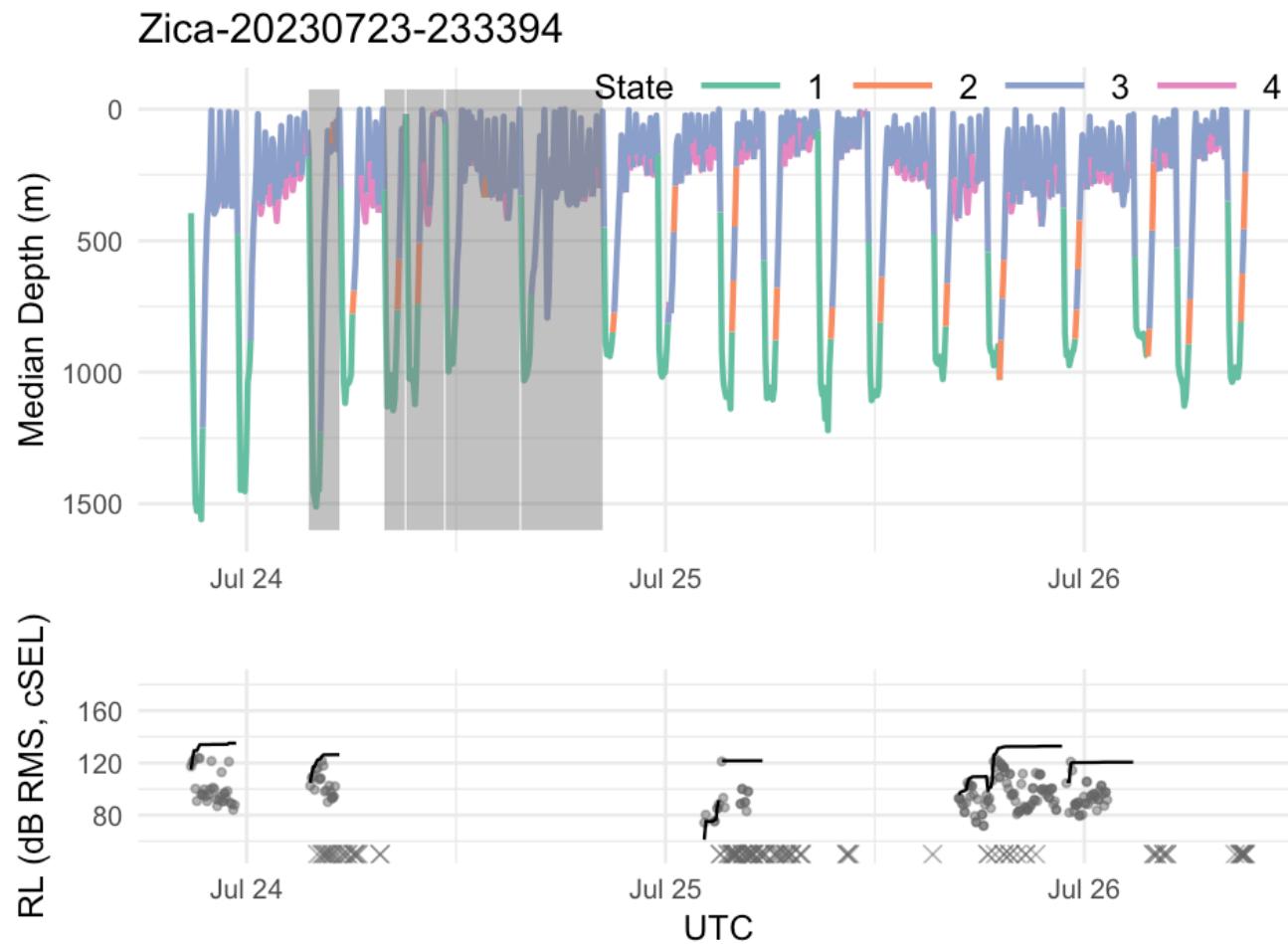


Figure S 12: Dive depth profile for tag Zica-20230723-233394, with HHMM state and sound exposure information. Xs indicate times impulsive sounds were detected on the tag record.

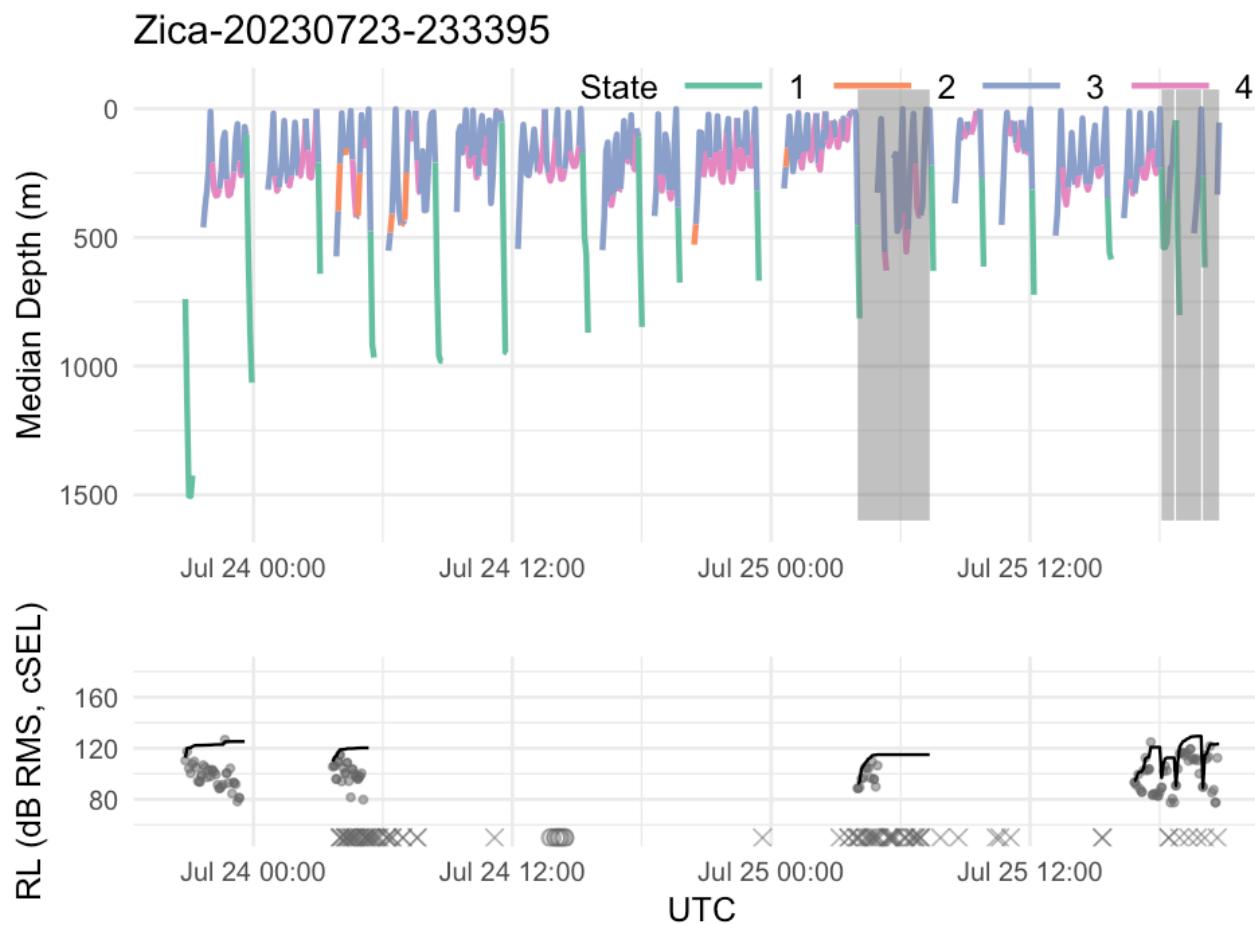


Figure S 13: Dive depth profile for tag Zica-20230723-233395, with HHMM state and sound exposure information. Symbols indicate times various sounds were detected on the tag record: open circles for echosounders and Xs for impulsive sounds.

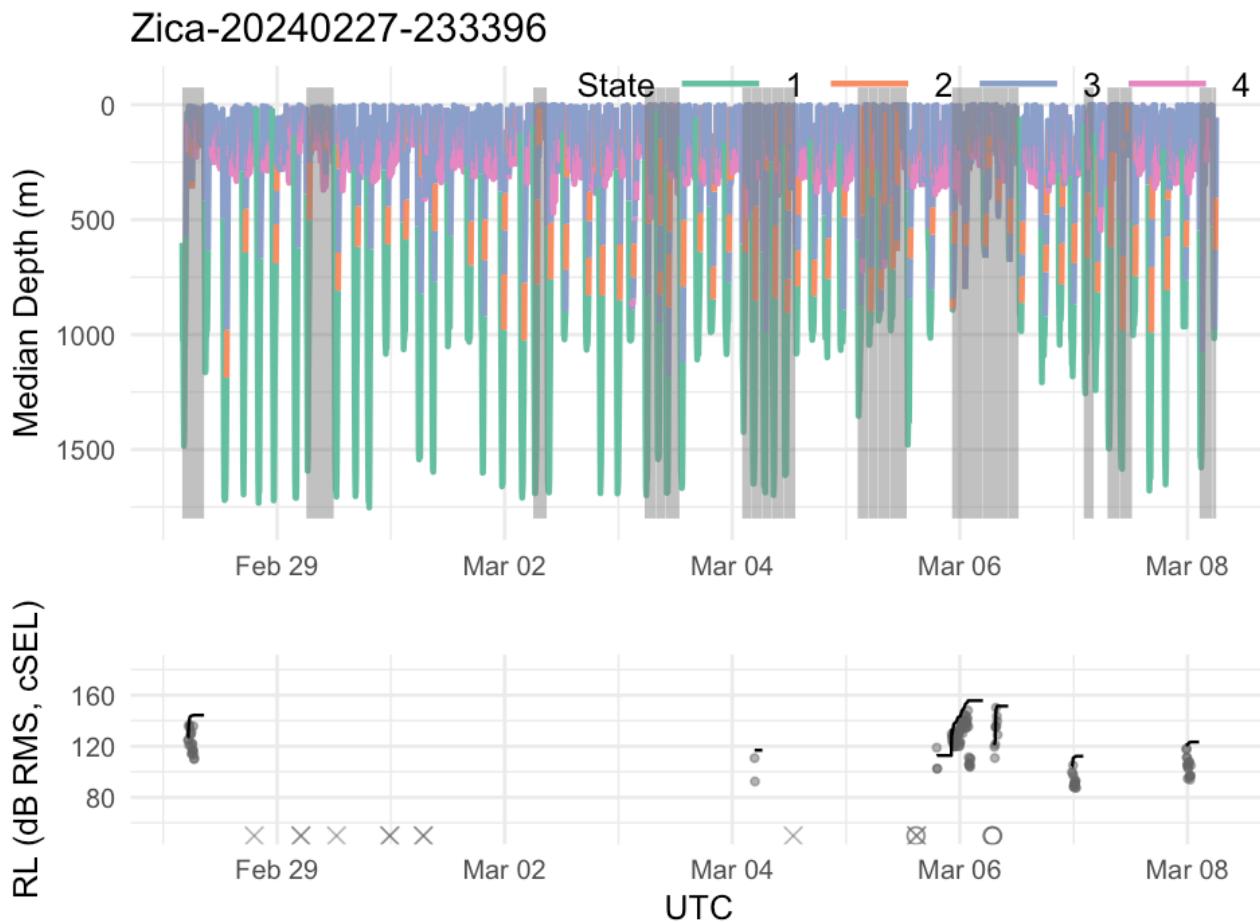


Figure S 14: Dive depth profile for tag Zica-20240227-233396, with HHMM state and sound exposure information. Symbols indicate times various sounds were detected on the tag record: open circles for echosounders and Xs for impulsive sounds.

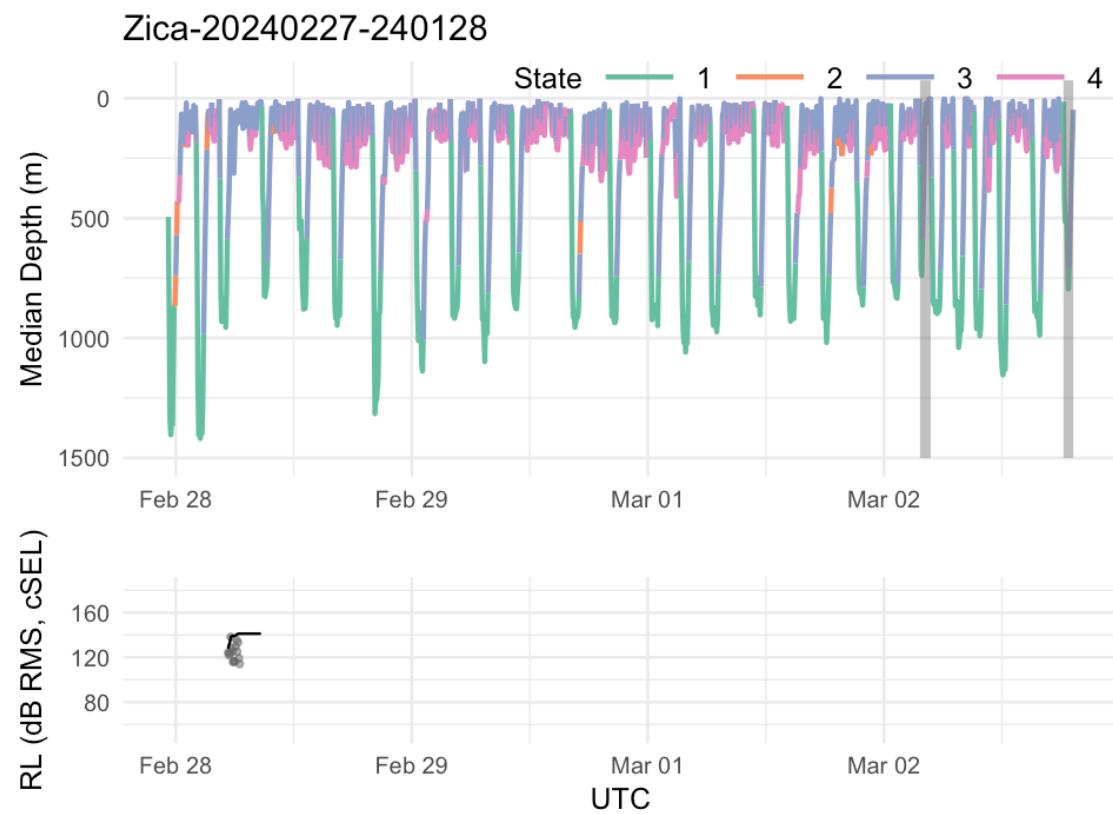


Figure S 15: Dive depth profile for tag Zica-20240227-240128, with HHMM state and sound exposure information.

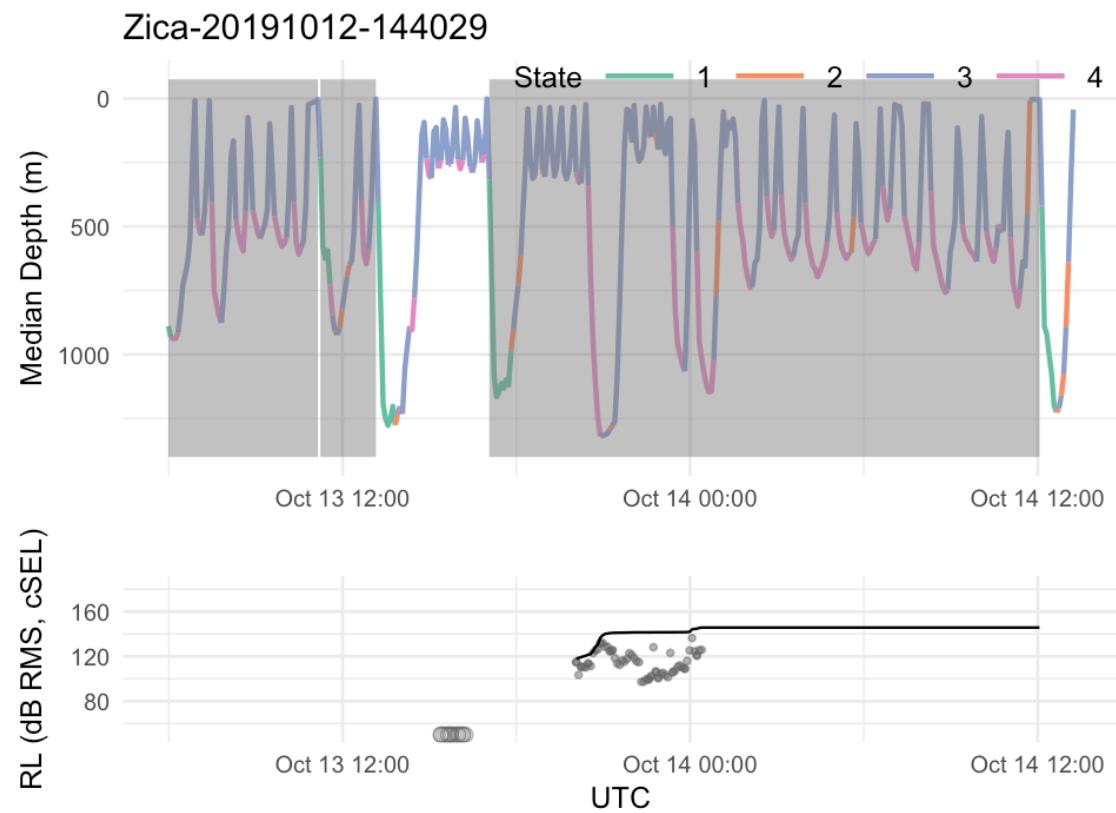


Figure S 16: Zoomed-in view of data from tag Zica-20191012-144029, from 10/13/2019 05:58 until 10/14/2019 13:14 UTC.

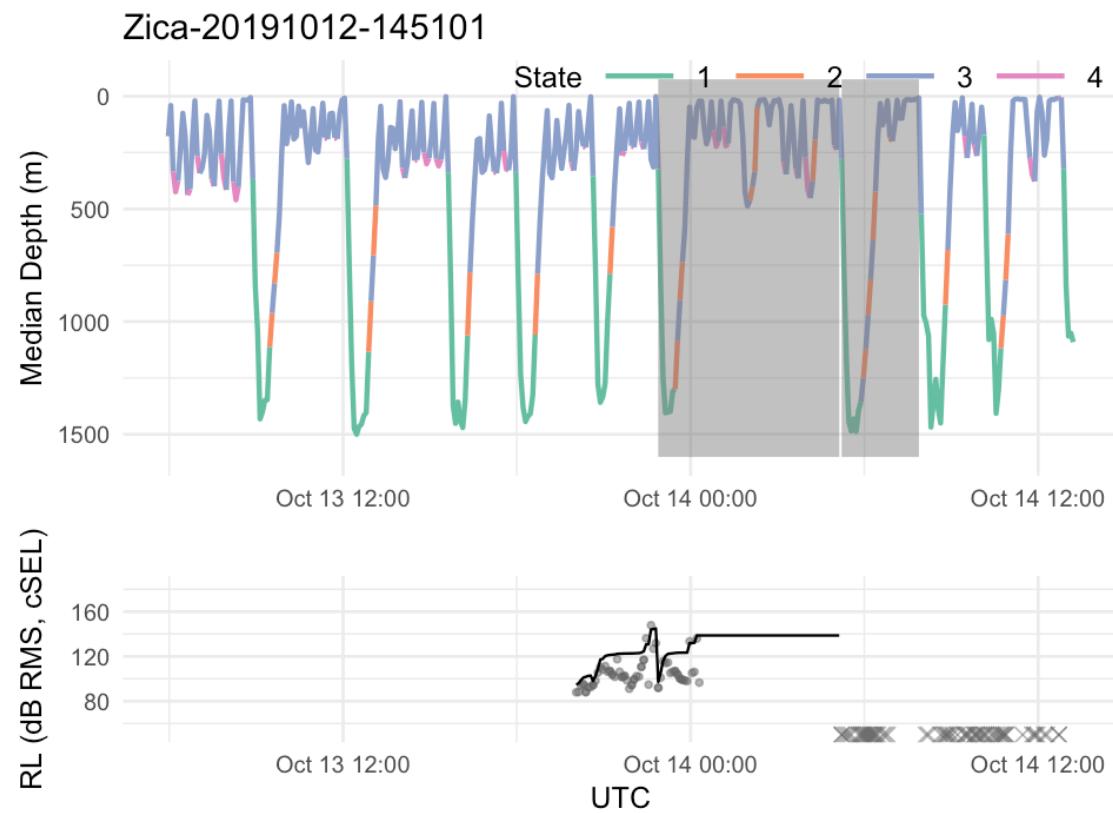


Figure S 17: Zoomed-in view of data from tag Zica-20191012-145101, from 10/13/2019 05:58 until 10/14/2019 13:14 UTC.

Dive Cycle Plots

Below are time-series plots for each whale, showing dive-cycle-scale observations (with “dive cycle number” on x axis). MFAS levels and coarse-scale state (decoded using the fitted HHMM and the Viterbi algorithm) are also indicated.

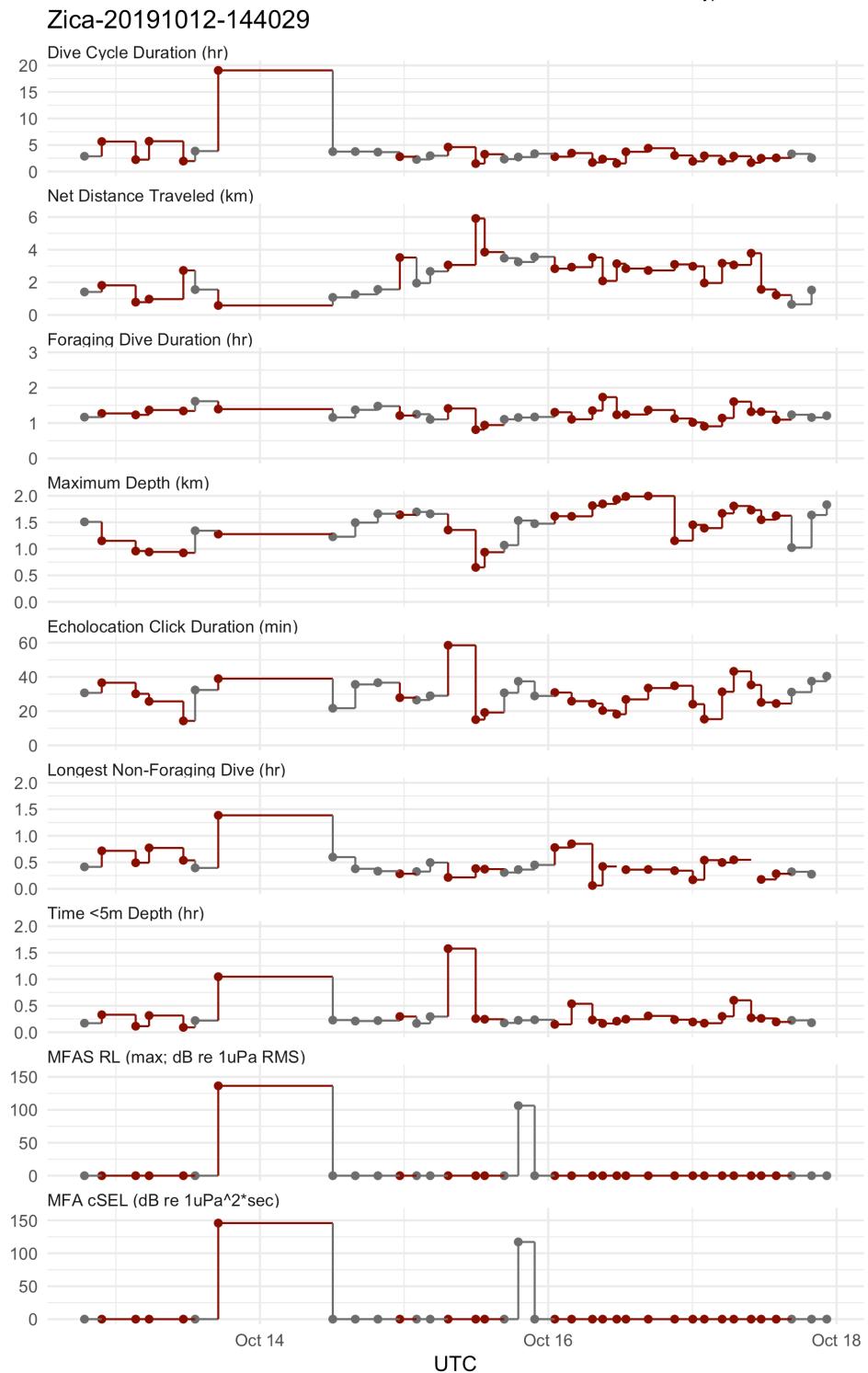


Figure S 18: HHMM input data streams for tag Zica-20191012-144029 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

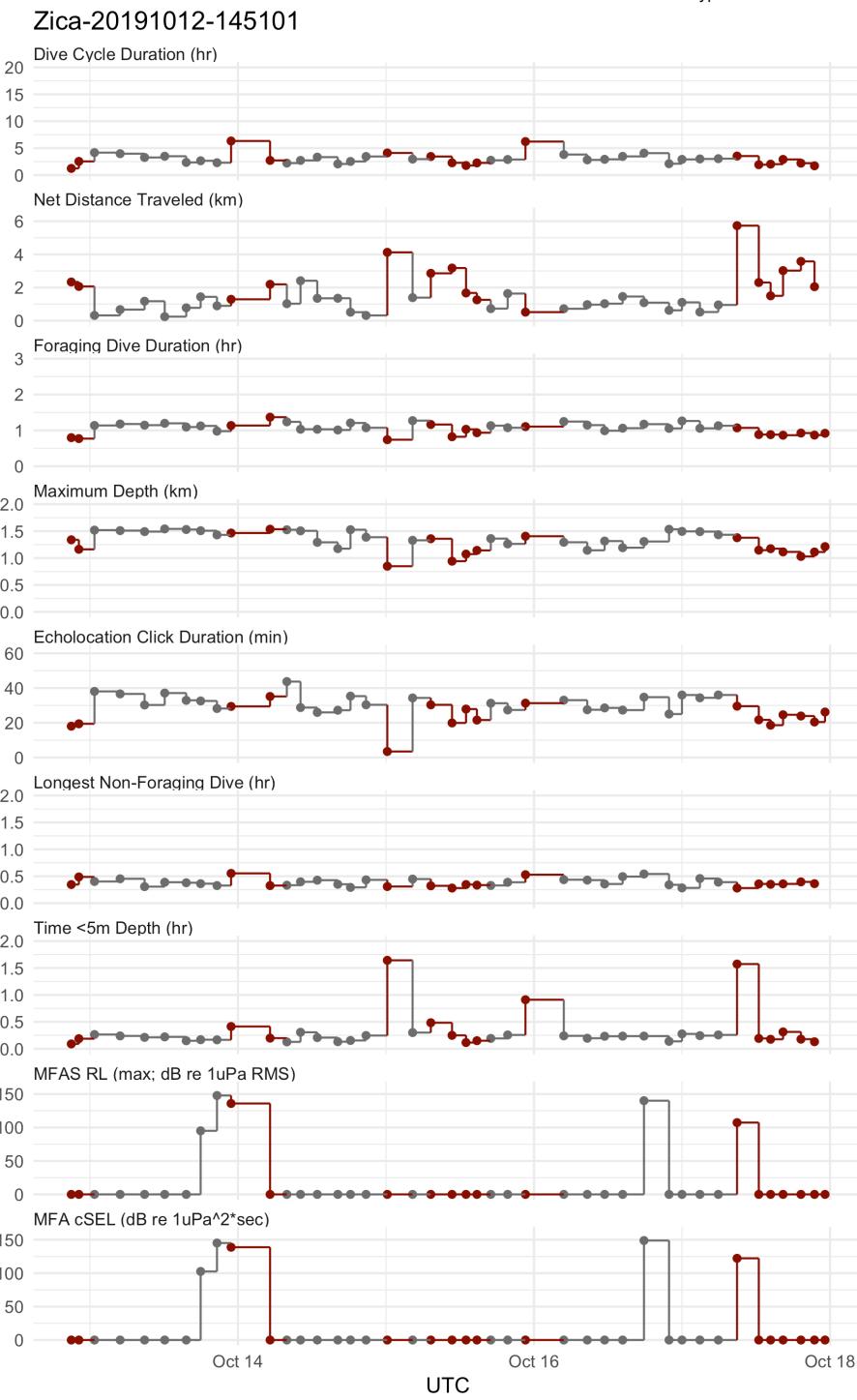


Figure S 19: HHMM input data streams for tag Zica-20191012-145101 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

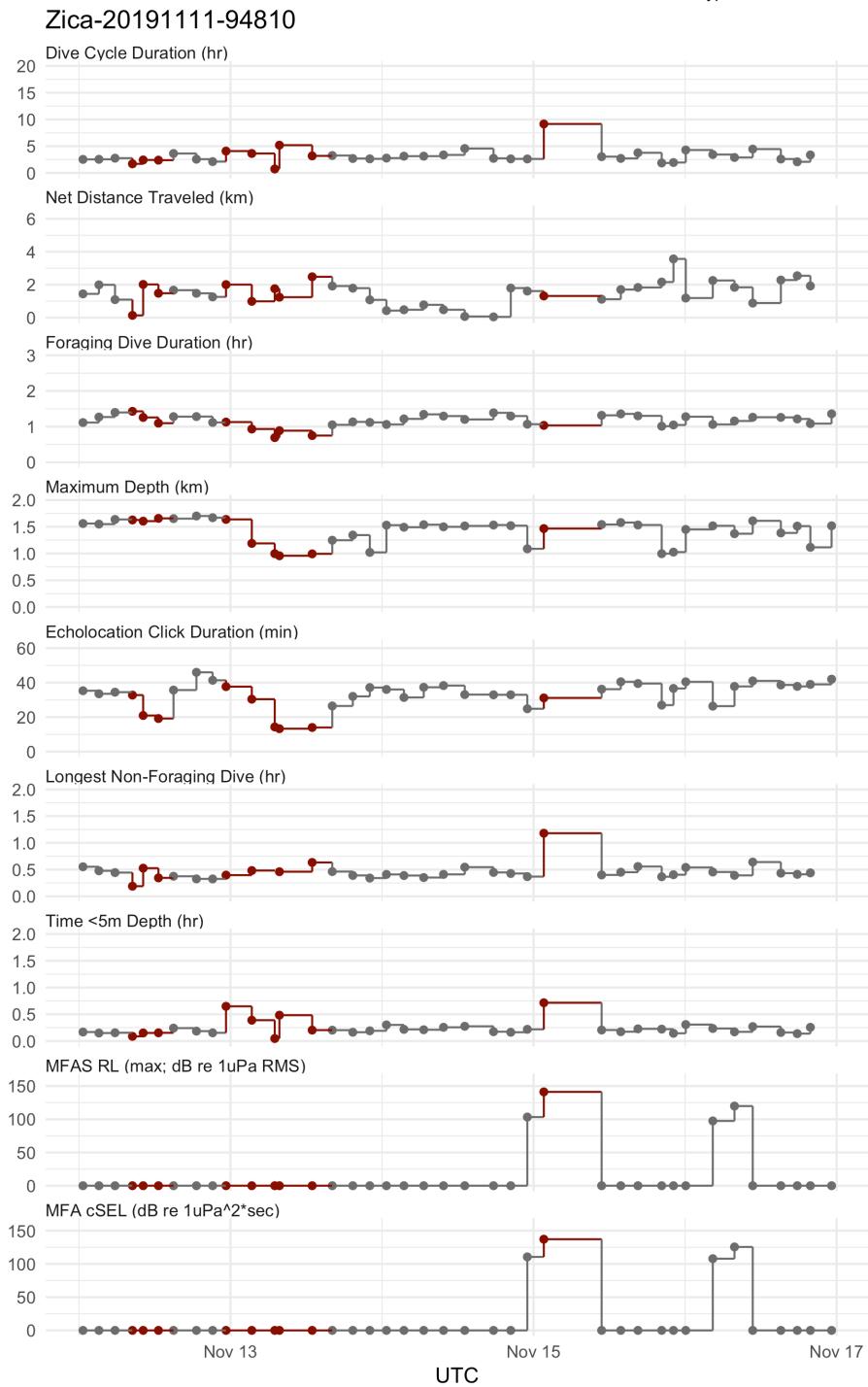


Figure S 20: HHMM input data streams for tag Zica-20191111-94810 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

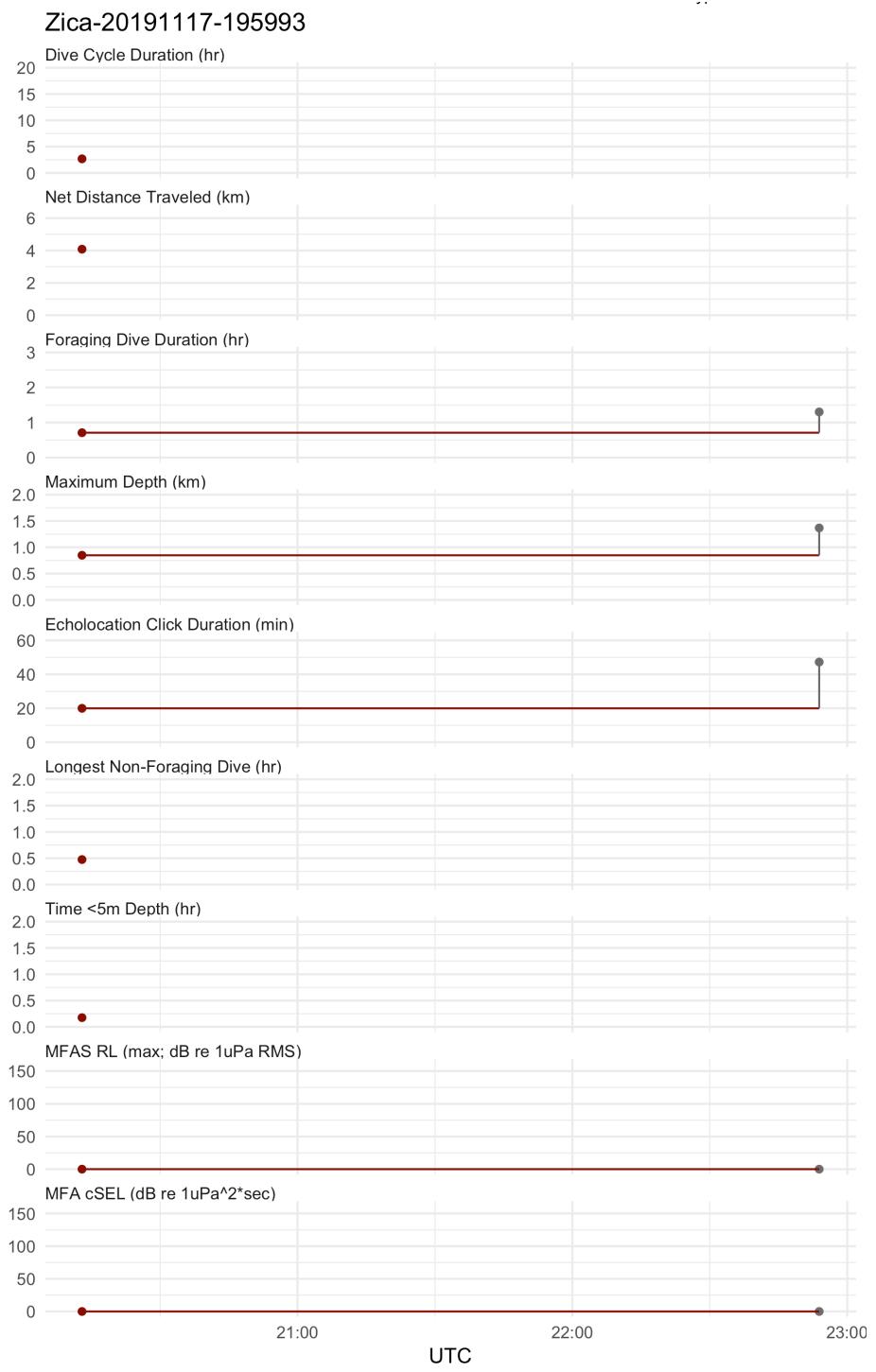


Figure S 21: HHMM input data streams for tag Zica-20191117-195993 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

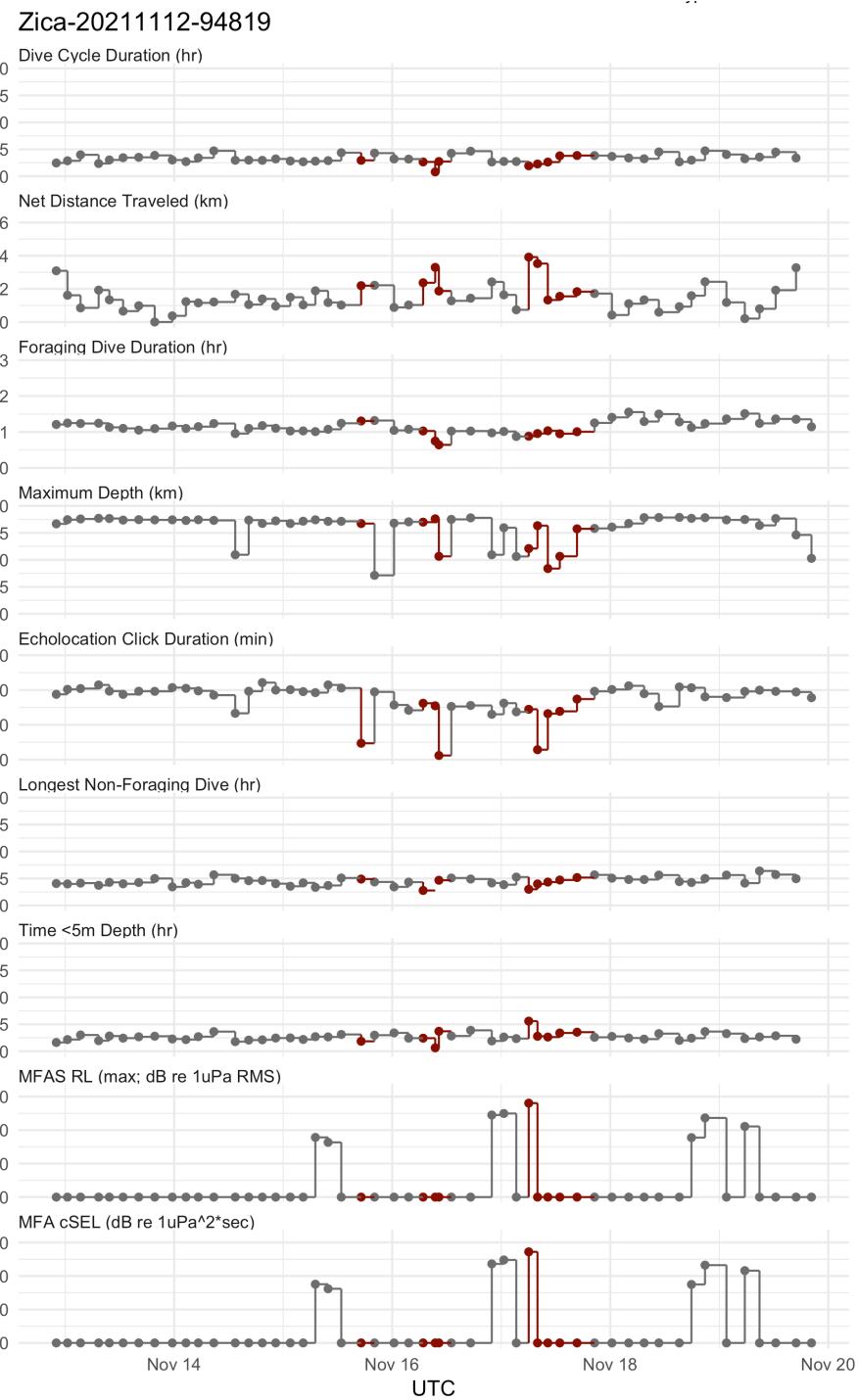


Figure S 22: HHMM input data streams for tag Zica-20211112-94819 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

Zica-20211113-195993

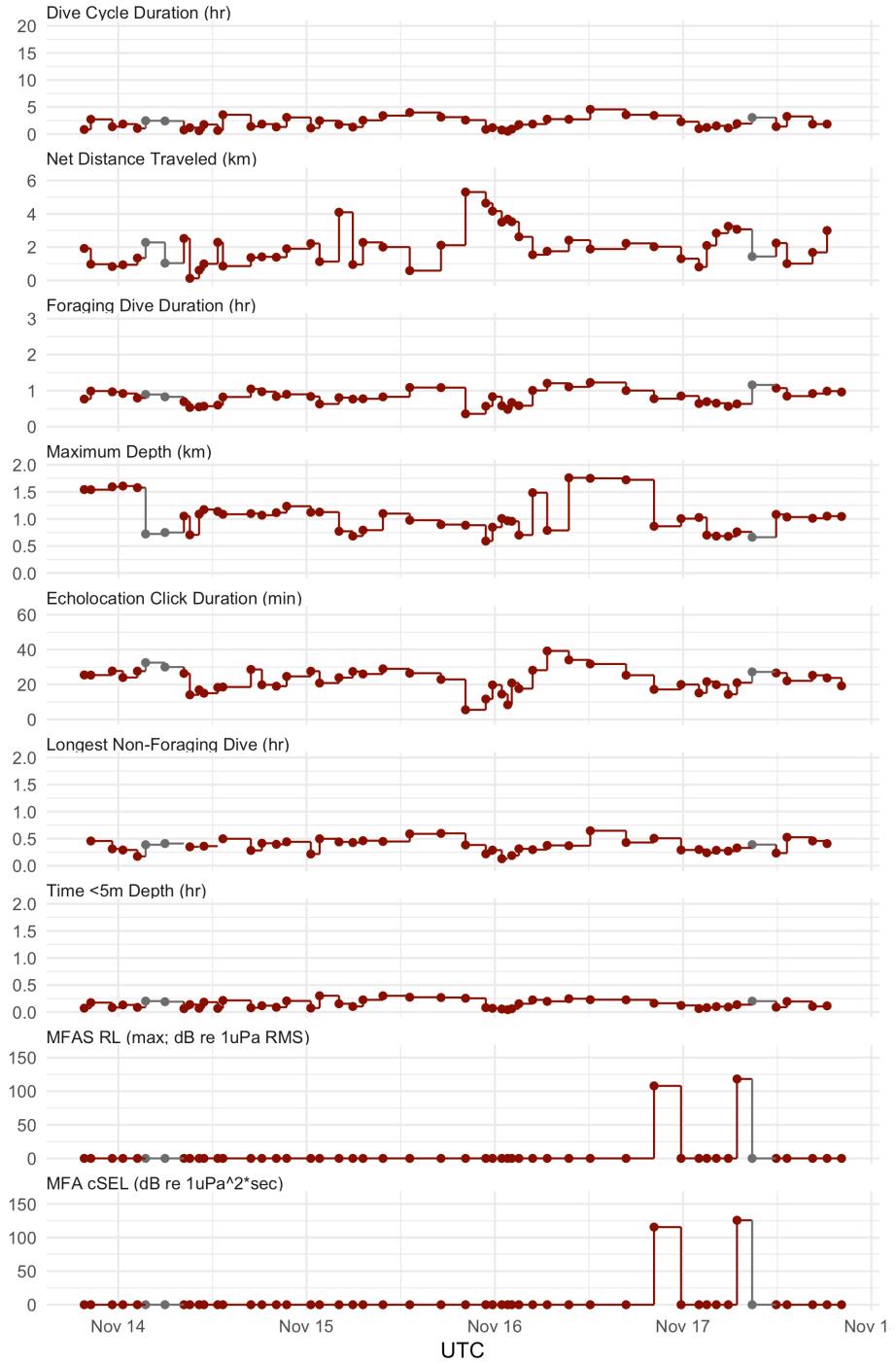


Figure S 23: HHMM input data streams for tag Zica-20211113-195993 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

Zica-20220112-195994

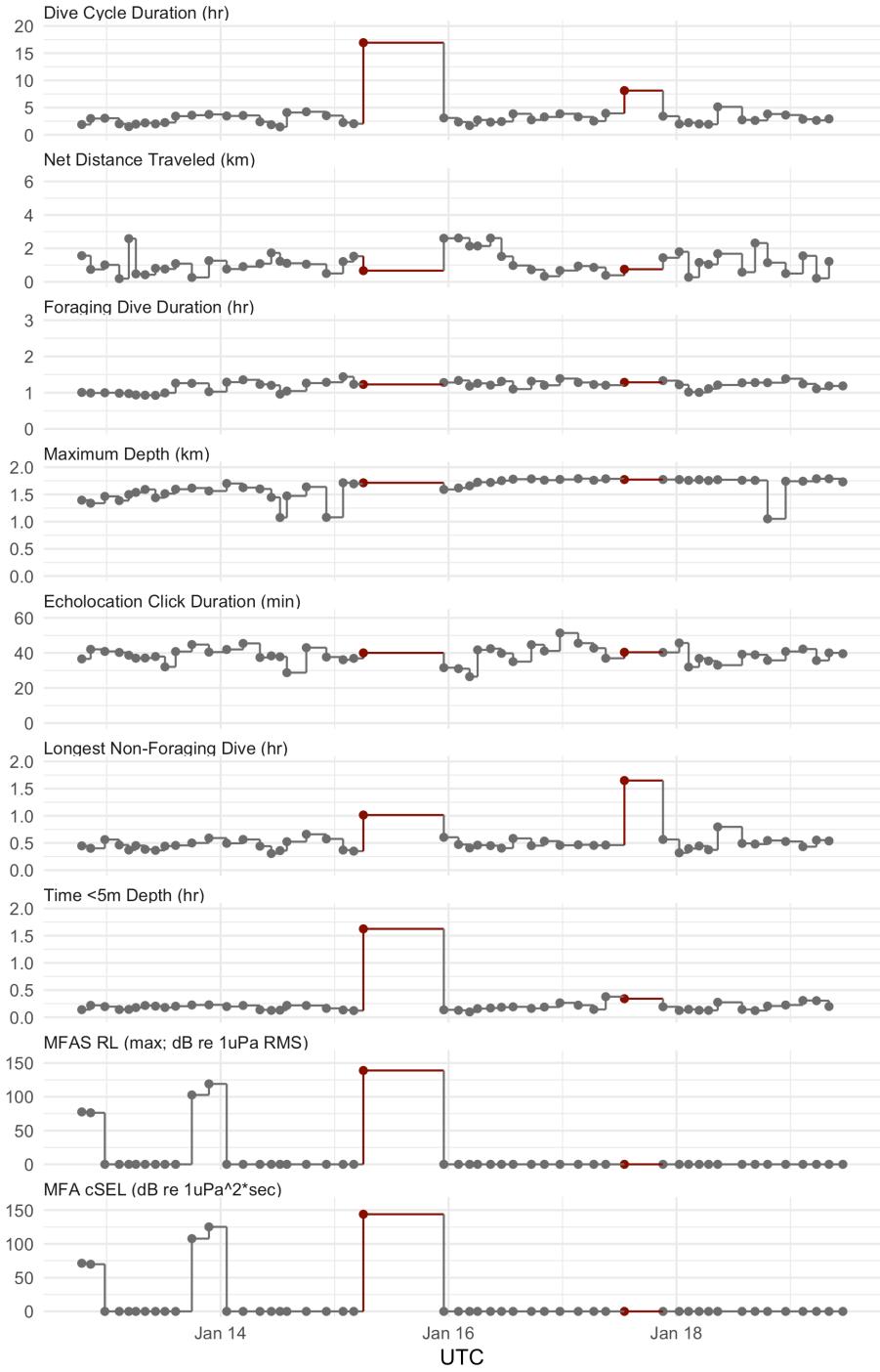


Figure S 24: HHMM input data streams for tag Zica-20220112-195994 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

Zica-20230518-233391

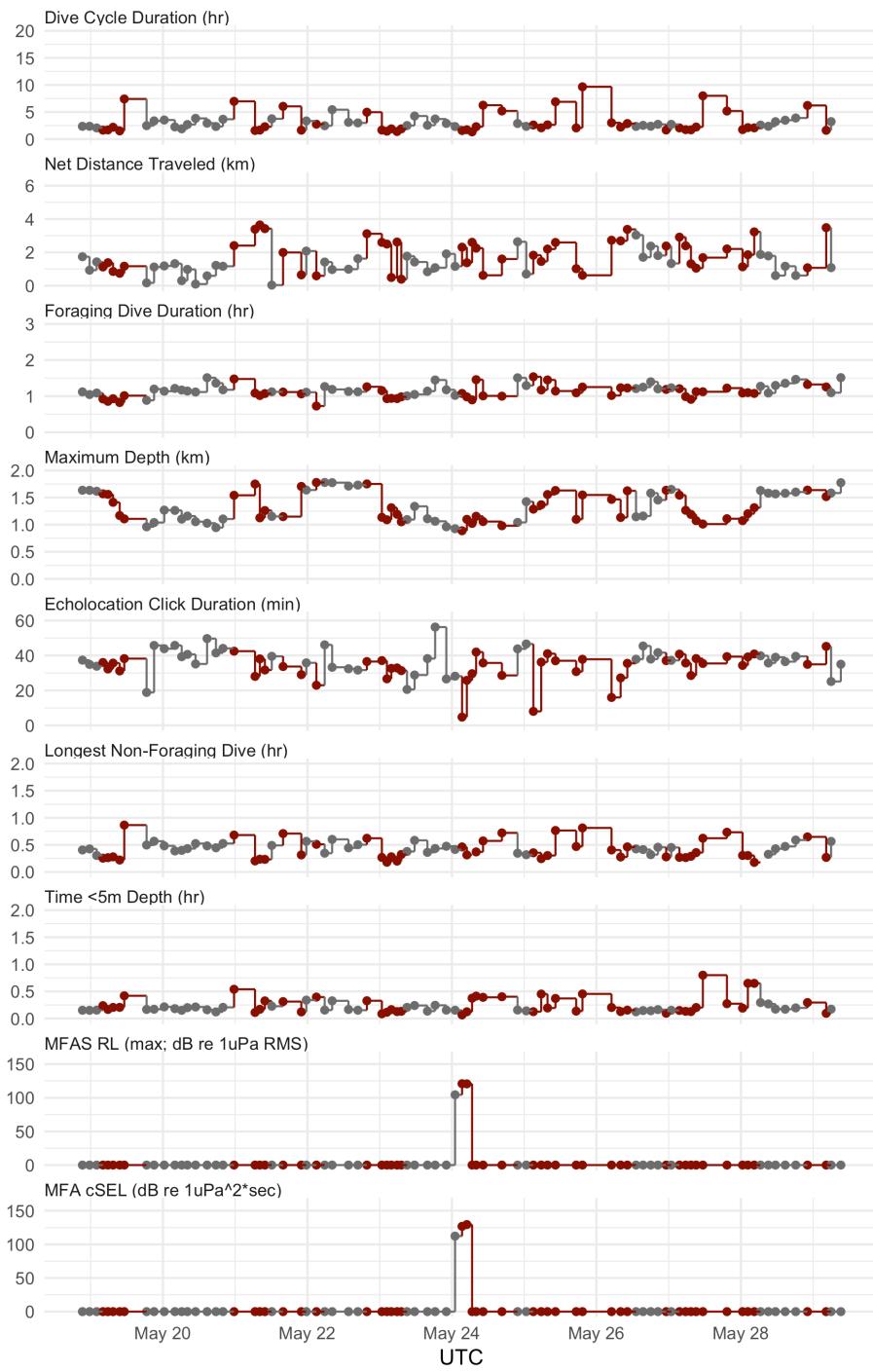


Figure S 25: HHMM input data streams for tag Zica-20230518-233391 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

Zica-20230519-232950

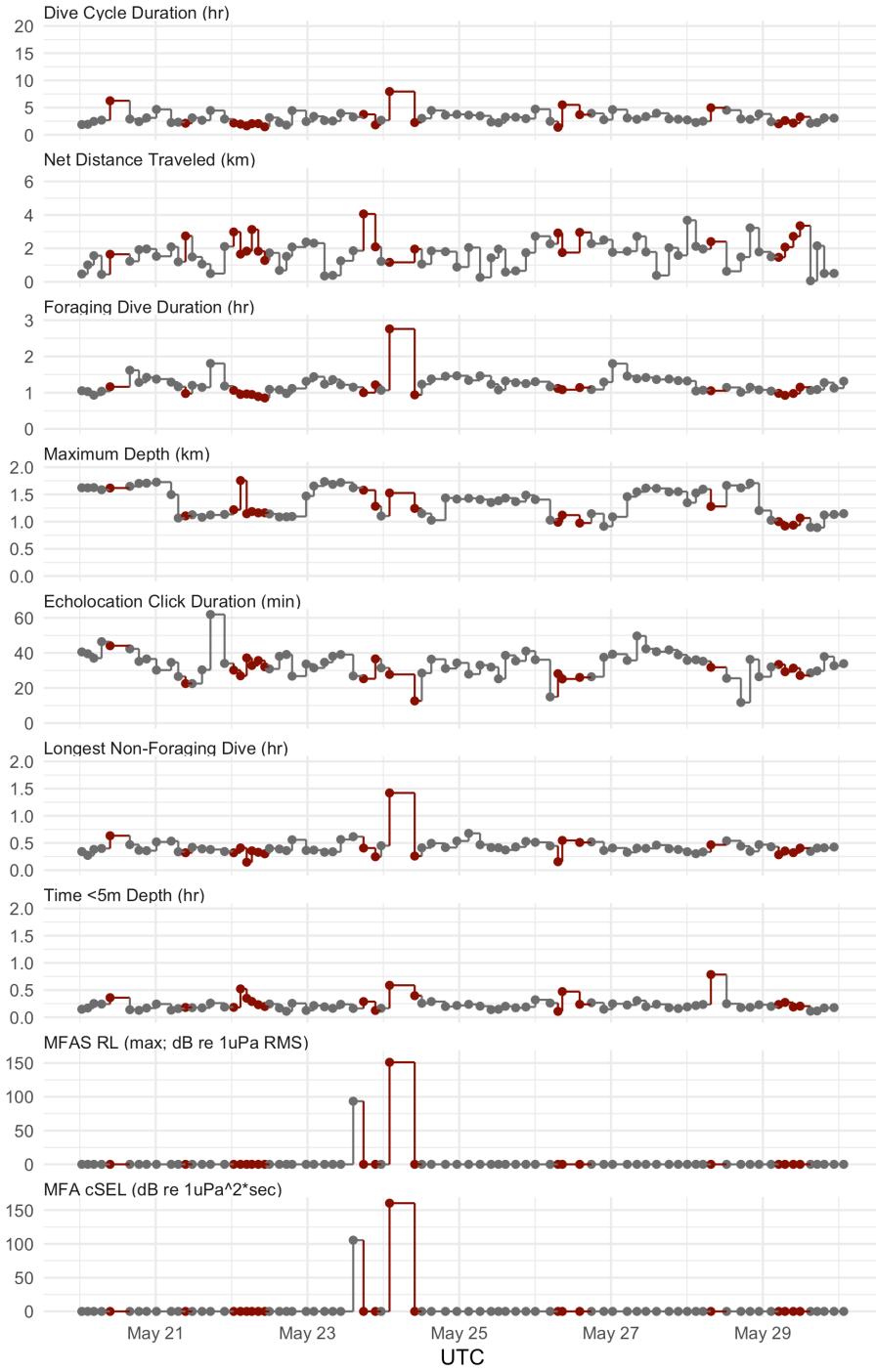


Figure S 26: HHMM input data streams for tag Zica-20230519-232950 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

Zica-20230723-233394

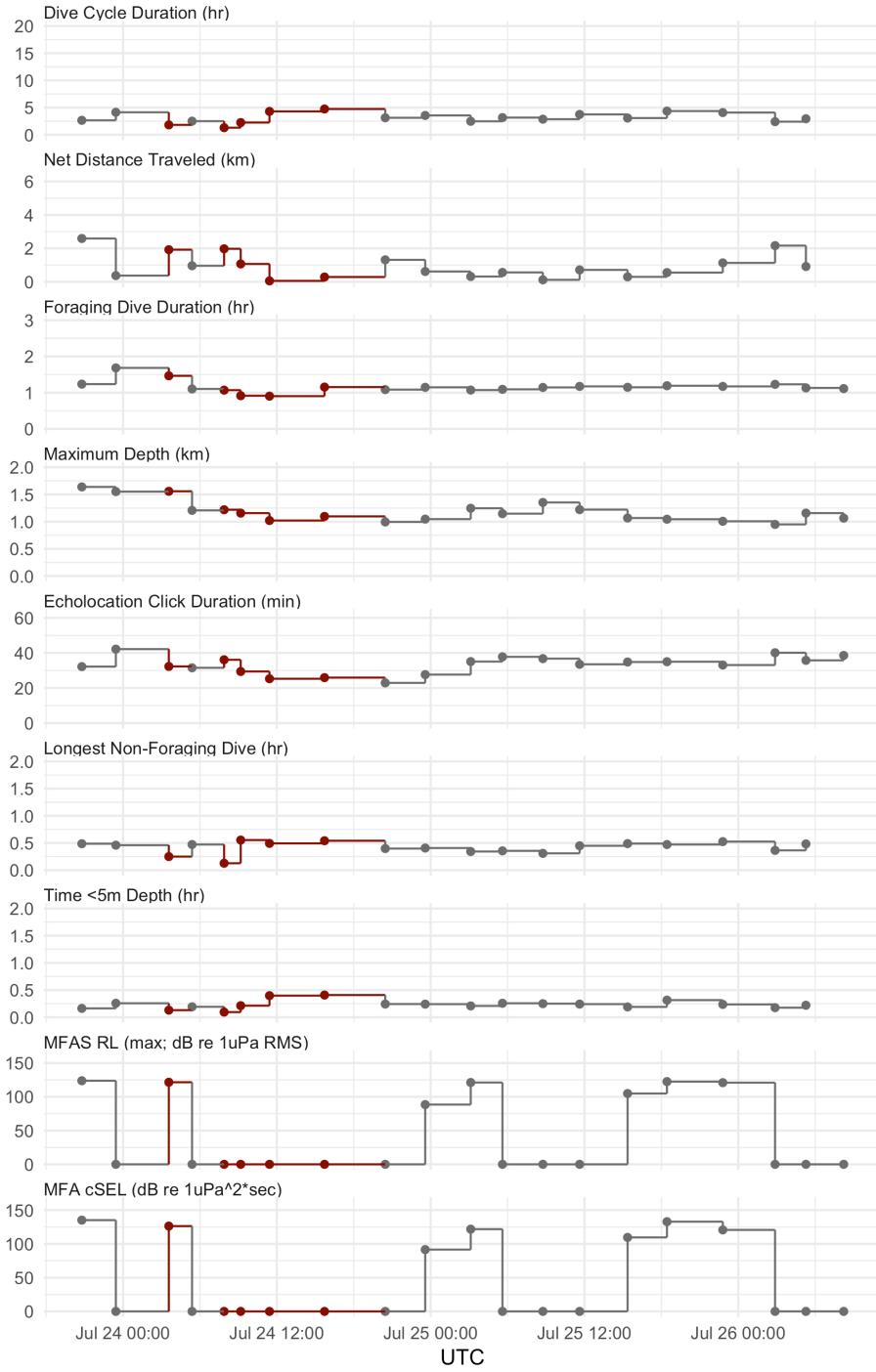


Figure S 27: HHMM input data streams for tag Zica-20230723-233394 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

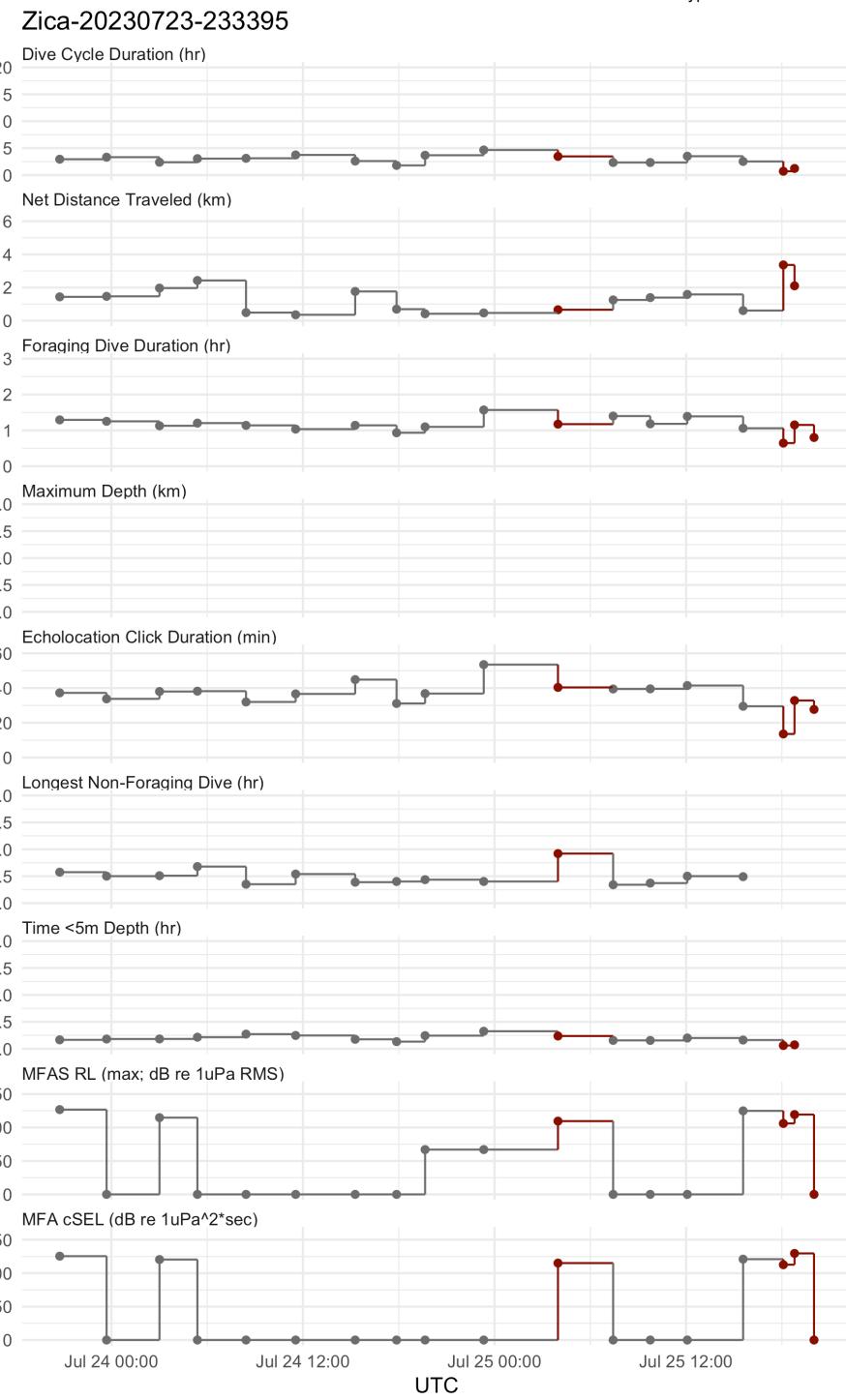


Figure S 28: HHMM input data streams for tag Zica-20230723-233395 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

Zica-20240227-233396

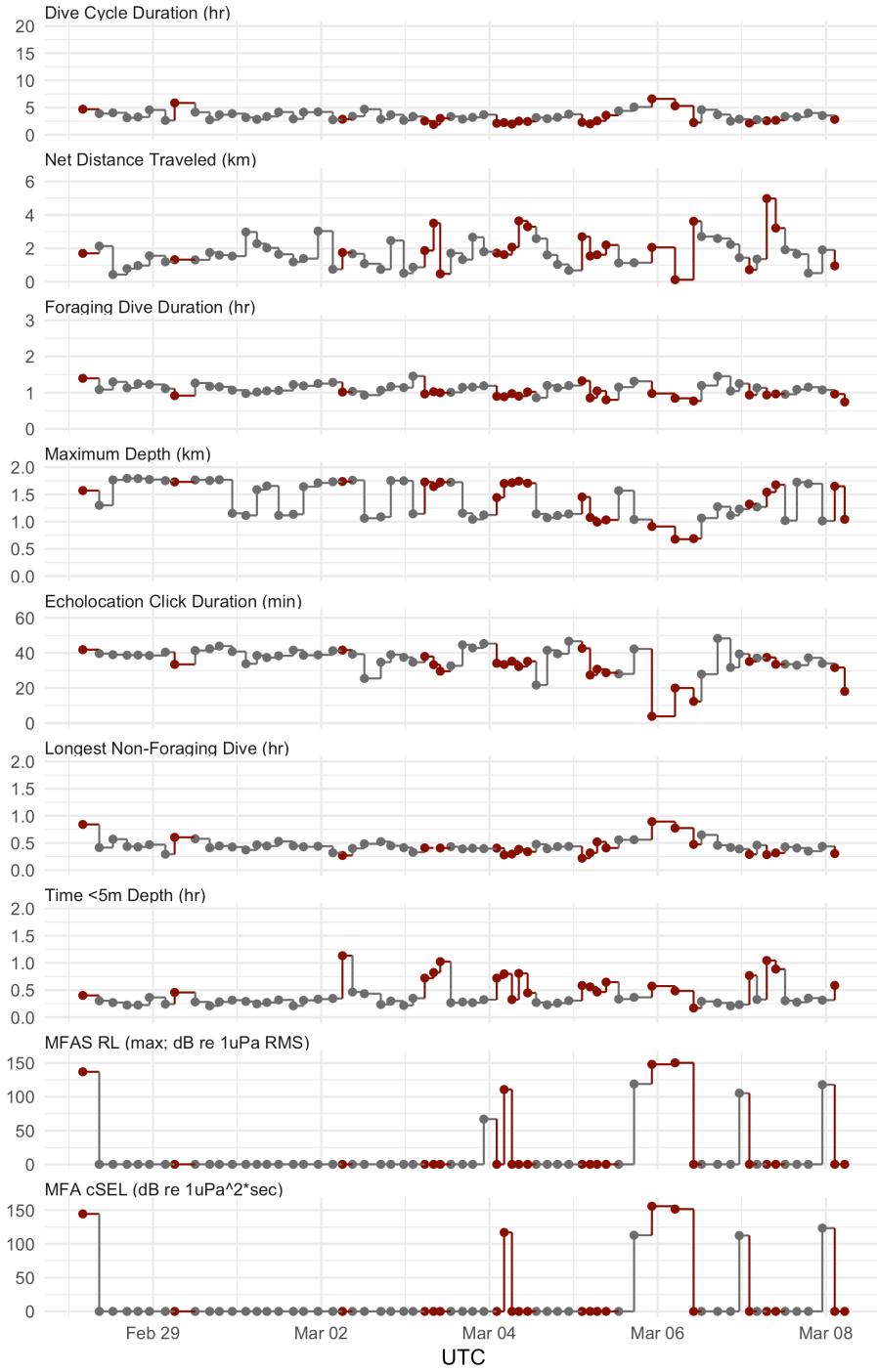


Figure S 29: HHMM input data streams for tag Zica-20240227-233396 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

Zica-20240227-240128

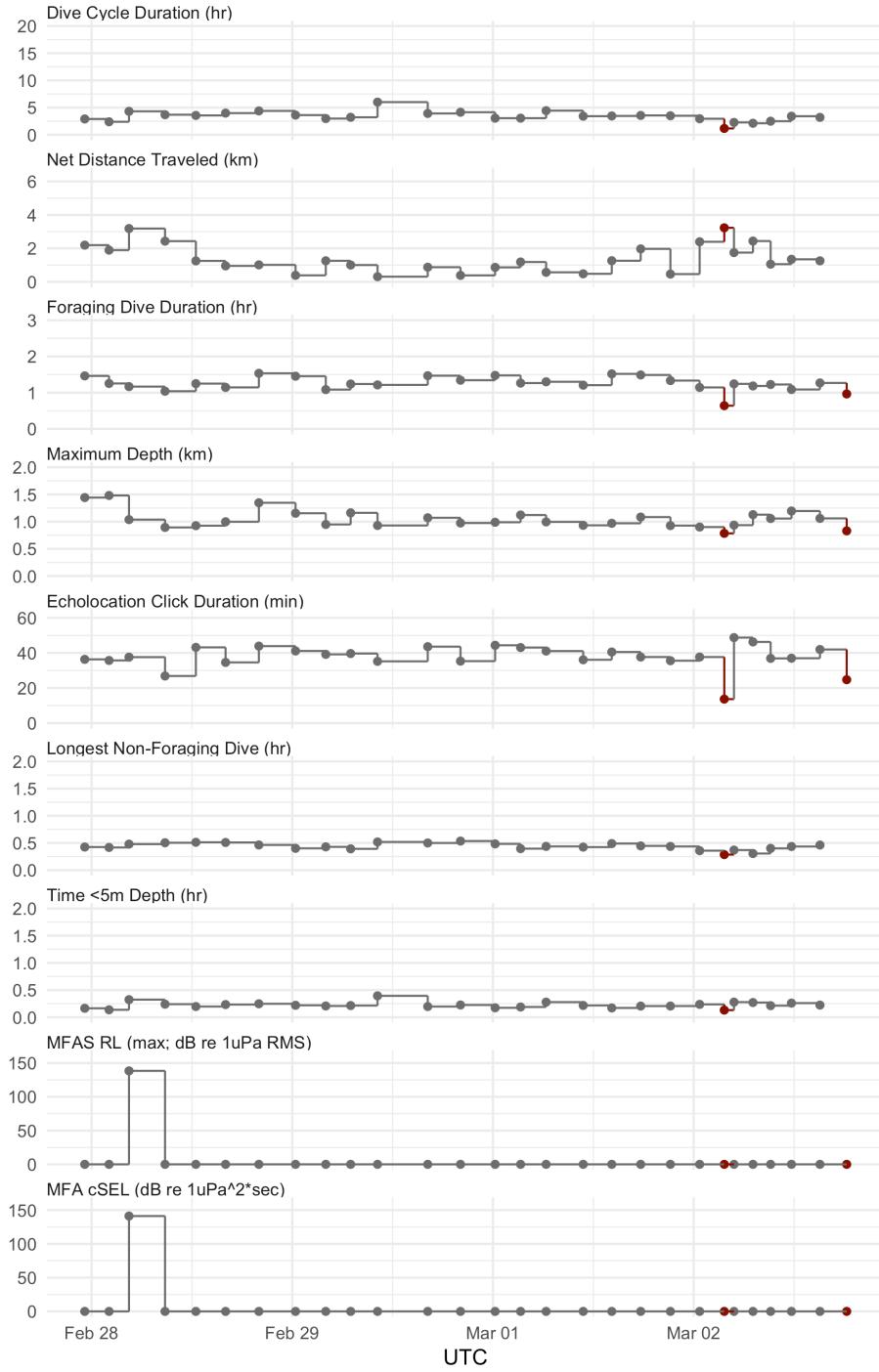


Figure S 30: HHMM input data streams for tag Zica-20240227-240128 at the dive-cycle timescale, with decoded states and MFAS exposure levels.

Variant Timecourse

We can also consider dive-cycle characteristics of *variant dive cycles* as a function of dive-cycle number *within the sequence of several variant dive cycles*. This could help investigate the question of whether there might be differences between “initial” and “later” variant behavior.

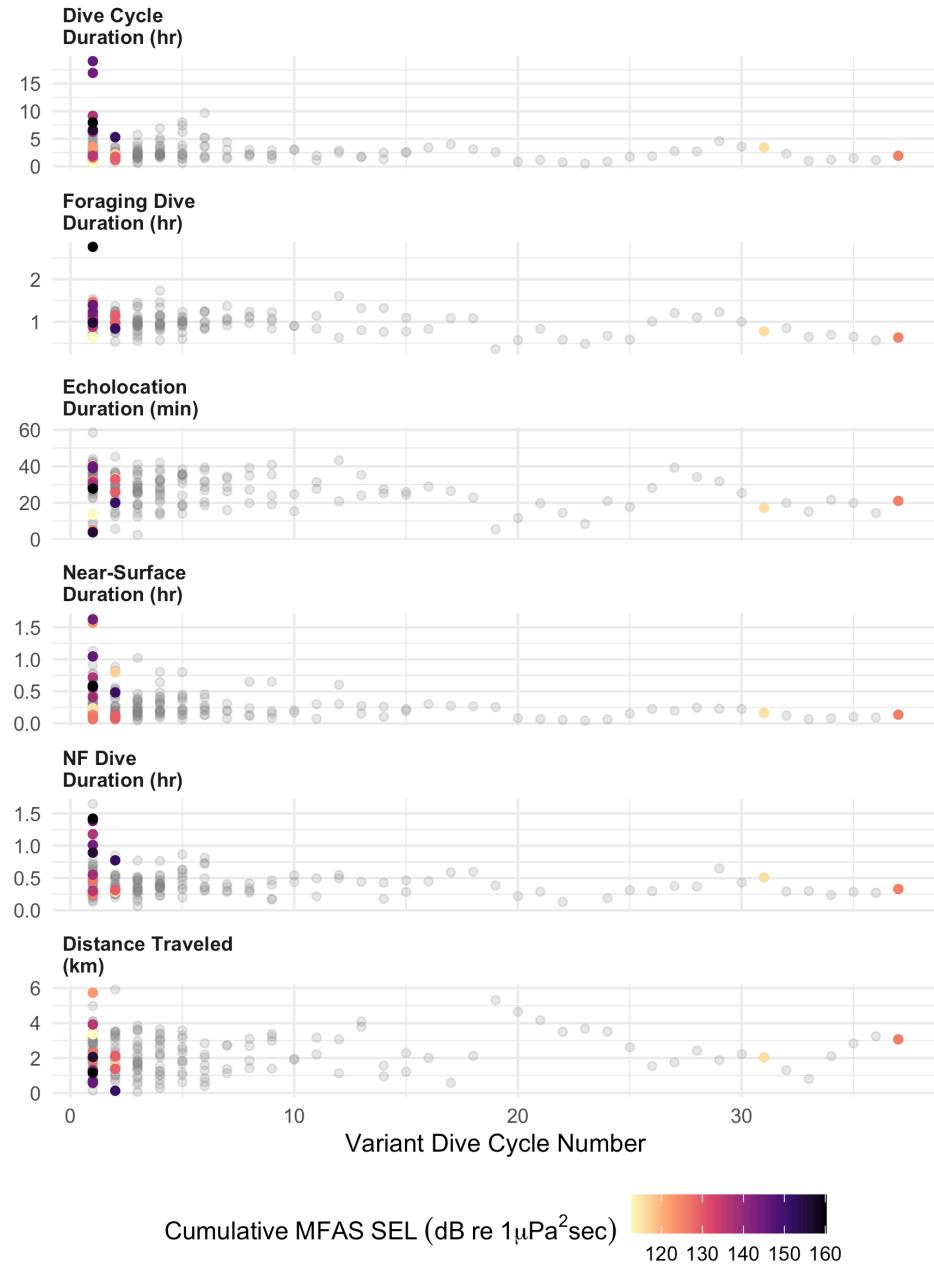


Figure S 31: Dive-cycle characteristics of variant dive cycles as a function of dive-cycle number, within the sequence of several variant dive cycles.

Depth Distribution of 5-minute States

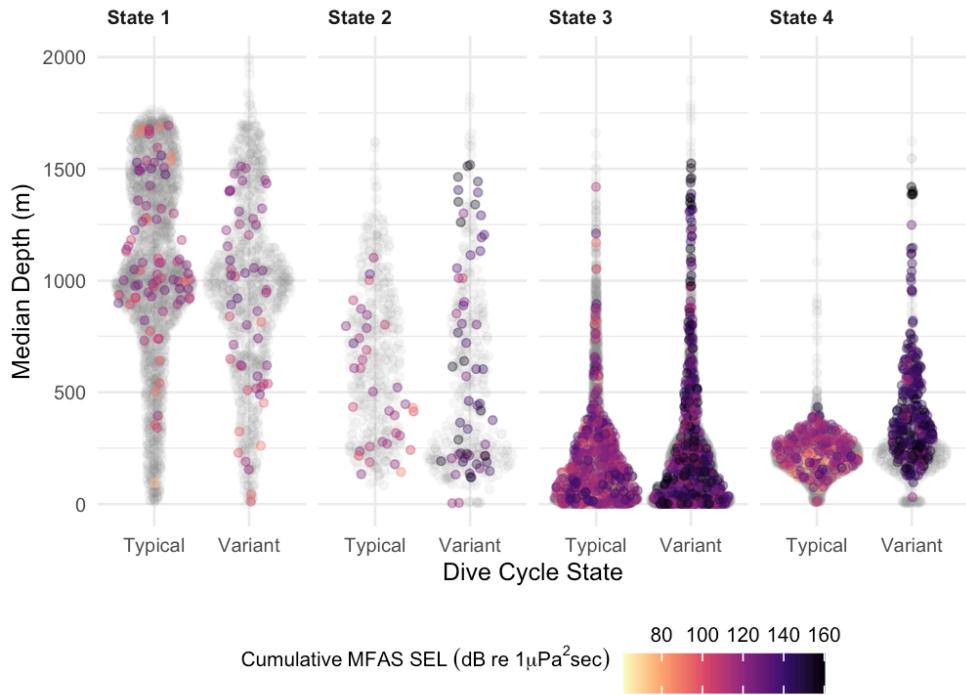


Figure S 32: Depth distribution of 5-minute intervals, by dive-cycle and 5-minute state. Color indicates MFAS cSEL.

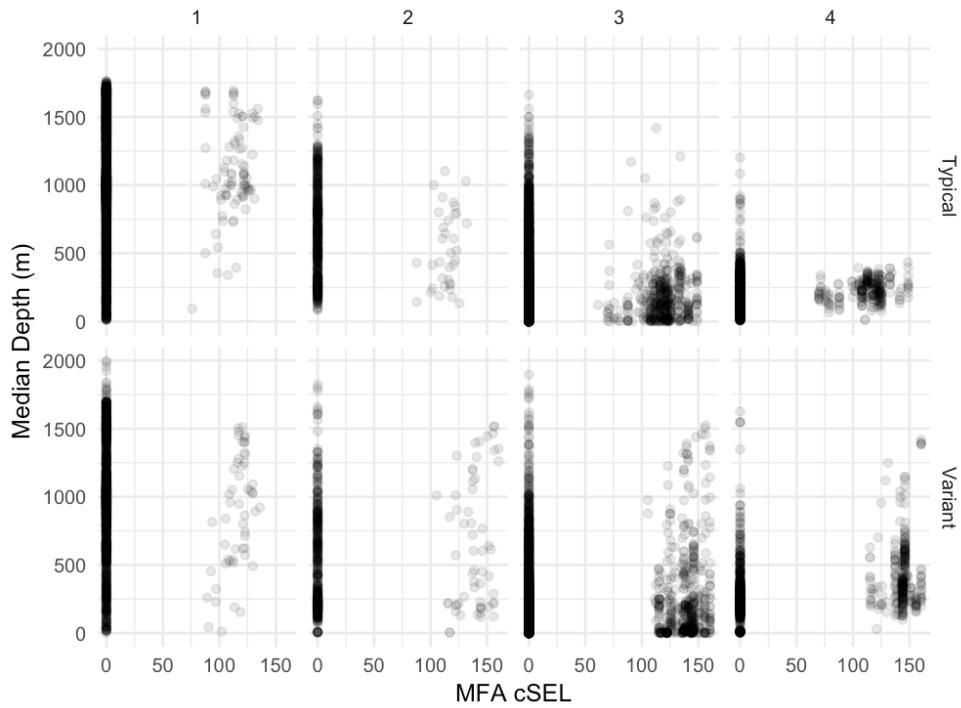


Figure S 33: Depth as a function of MFAS cSEL for 5-minute intervals, by dive-cycle and 5-minute state.

HHMM Model Validation & Interpretation

Stationary Distributions

Based on the transition probability matrices, we can compute stationary distributions based on the model, which present the proportion of “time” whales would be expected to spend in each state in the long run. (“Time” because it’s the proportion of time-steps, which for the coarse dive-cycle states is not exactly the same as the duration of dive cycles varies.)

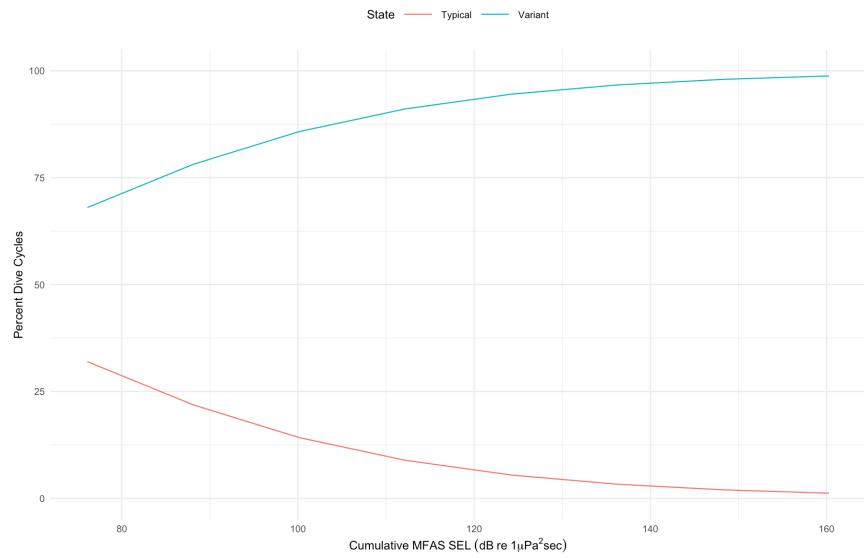


Figure S 34: Stationary state distribution at the dive-cycle scale. The values show the expected proportion of dive cycles spent in each state if the MFAS exposure level was perpetually at a certain value.

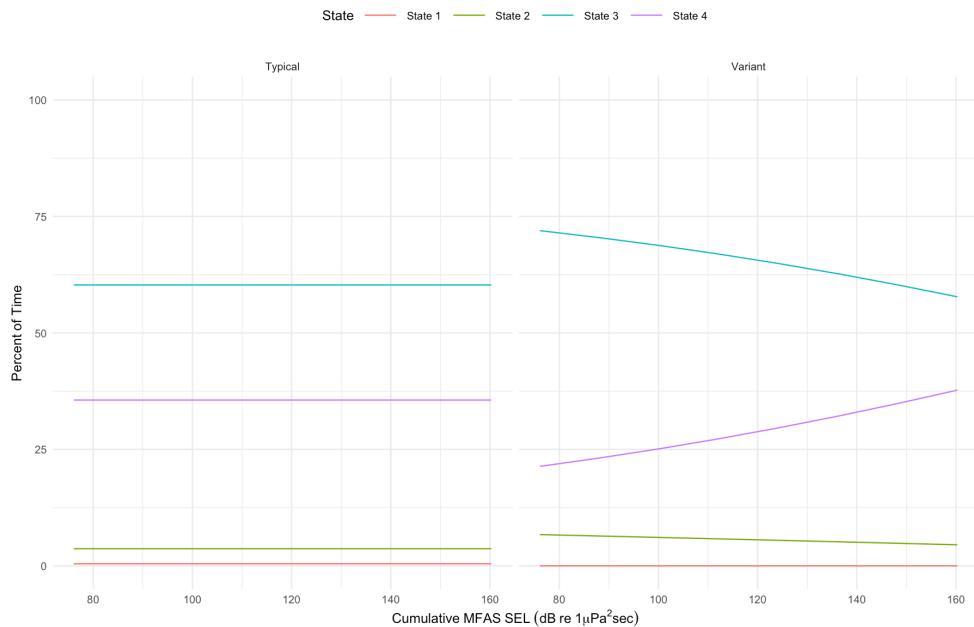


Figure S 35: Stationary state distribution at the dive-cycle scale. The values show the expected proportion of dive cycles spent in each state if the MFAS exposure level was perpetually at a certain value.

Lag plots

These plots may sometimes help verify the number of states in the data, as discussed in Lawler *et al.* 2019 and Sidrow *et al.* 2022

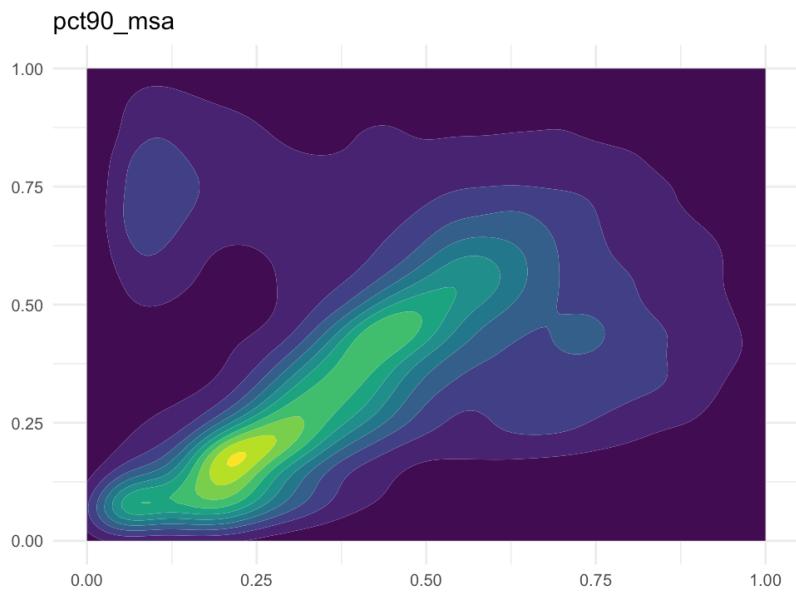


Figure S 36: Lag plot for 90th percentile of MSA.

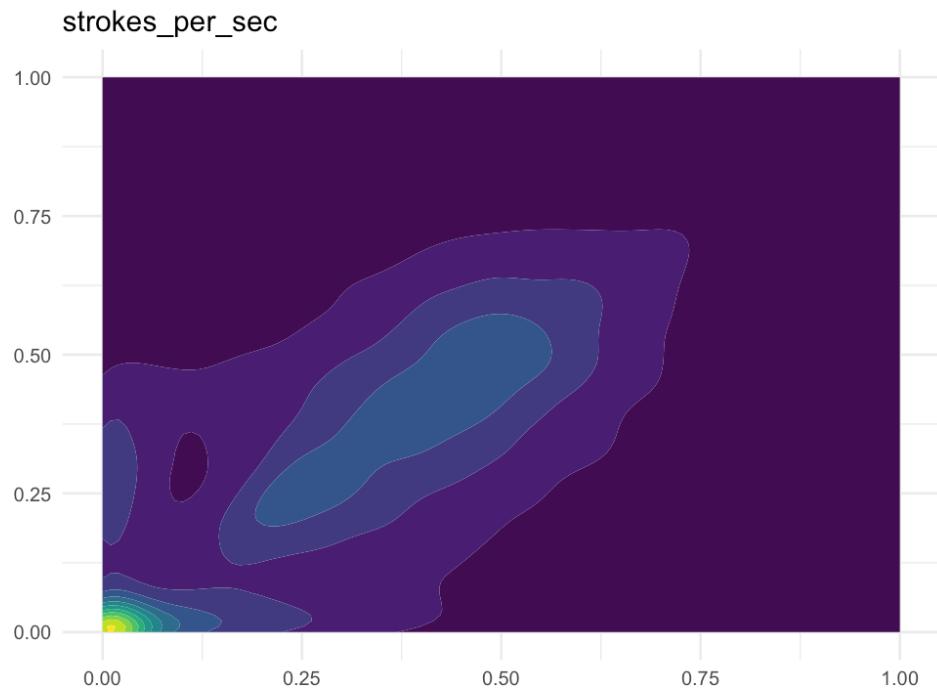


Figure S 37: Lag plot for fluke stroke rate.

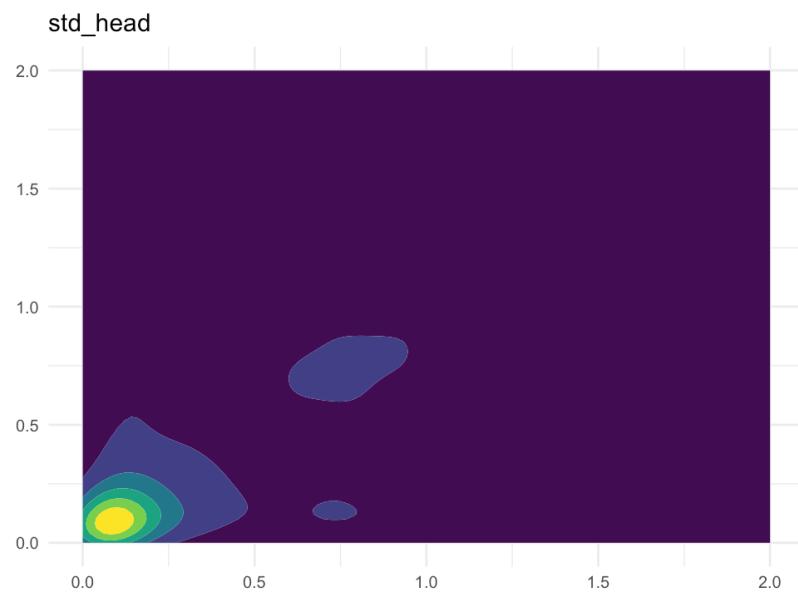


Figure S 38: Lag plot for circular standard deviation of heading.

Model Pseudoresiduals

Computing pseudo-residuals...

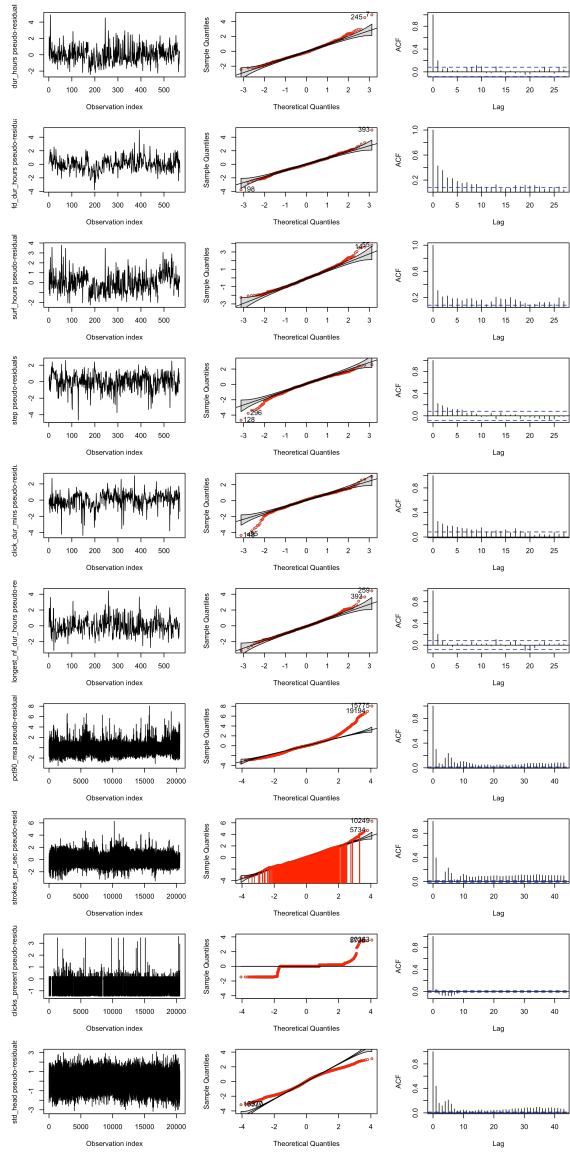


Figure S 39: HHMM pseudo-residuals.

Likelihood Weighting Simulation Results

Case 1: True Model Includes MFAS Effect

AIC and likelihood results

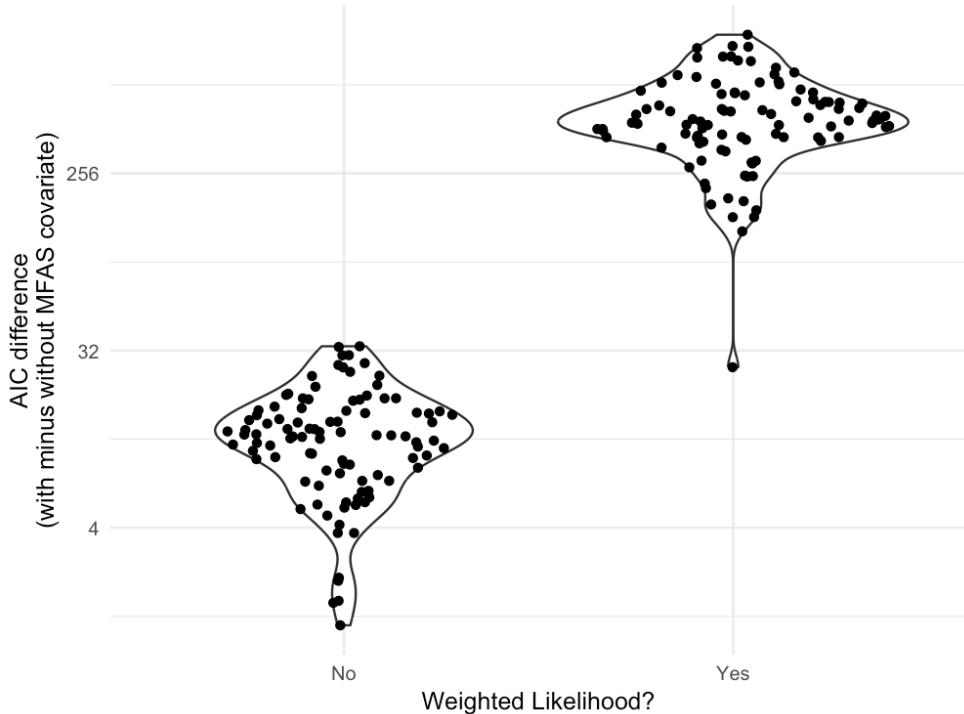


Figure S 40: By what margin would model selection using AIC select the true model (with MFAS effect), with and without duration-weighting applied to the likelihood?

Table S 7: Proportion of simulations where the difference in AIC (model with MFAS minus model without) exceeded 6, when the true model was one with MFAS effect.

| Weighting? | Proportion dAIC > 6 |
|------------|---------------------|
| No | 0.81 |
| Yes | 1.00 |

Confidence Interval Coverage

Table S 8: Confidence interval coverage in simulations, for simulations in which the true model included an effect of MFAS on the transition rates. “T->V” is the probability of transition from Typical to Variant state, and “V->T” is Variant to Typical.

| Model Name | N Simulations | CI Coverage (%; P(T->V)) | CI Coverage (%; P(V->T)) | Mean Absolute Error (%; P(T->V)) | Mean Absolute Error (%; P(V->T)) |
|--------------|---------------|--------------------------|--------------------------|----------------------------------|----------------------------------|
| rl_coarse | 101 | 96.0 | 43.10 | 30.6 | 290 |
| rl_coarse_wt | 101 | 26.7 | 8.54 | 32.1 | 421 |

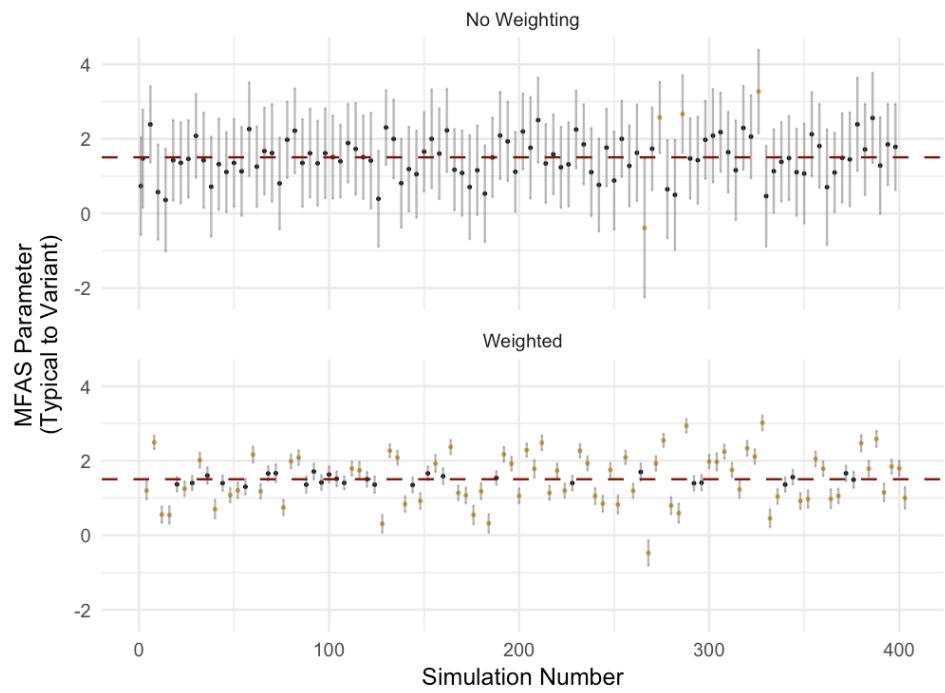


Figure S 41: Parameter estimates and 95% confidence intervals for the parameter measuring the effect of MFAS on transition from Typical to Variant state. Dotted horizontal line shown the true value of the parameter.

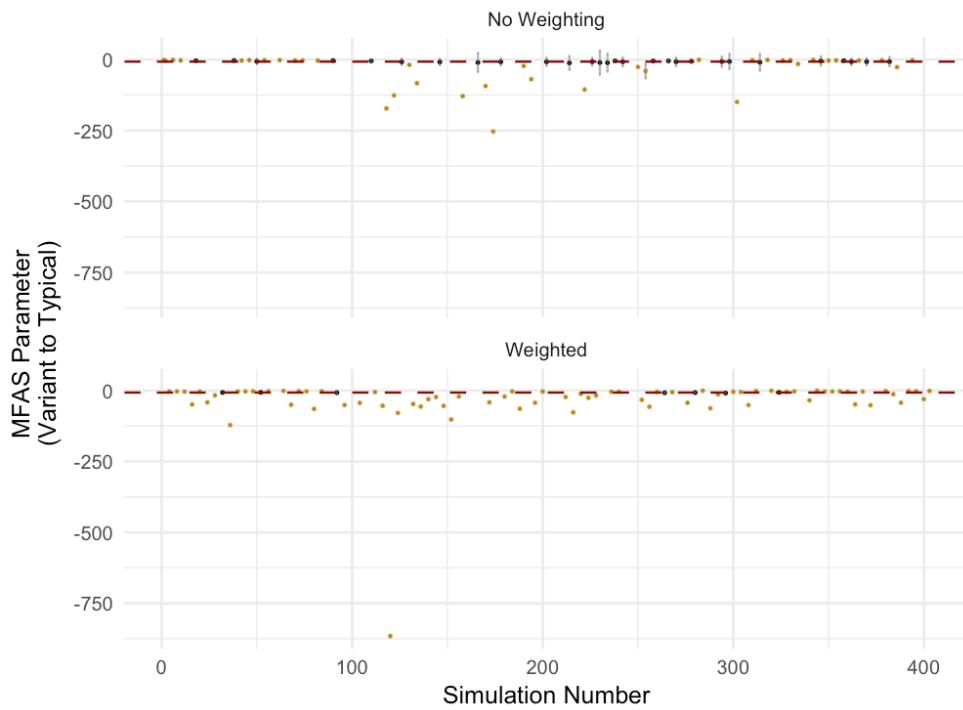


Figure S 42: Parameter estimates and 95% confidence intervals for the parameter measuring the effect of MFAS on transition from Variant to Typical state (note, this one is not estimated well because of the small size of the dataset). Dotted horizontal line shown the true value of the parameter.

Power

Based on CIs, how often would we conclude there IS an MFAS effect (when there really is)?

Table S 9: Power to detect MFAS effect when it is really present.

| Model Name | Power (% , P(T->V)) | Power (% , P(V->T)) |
|--------------|---------------------|---------------------|
| rl_coarse | 75.2 | 32.3 |
| rl_coarse_wt | 99.0 | 100.0 |

Case 2: True Model Excludes MFAS Effect

AIC and likelihood results

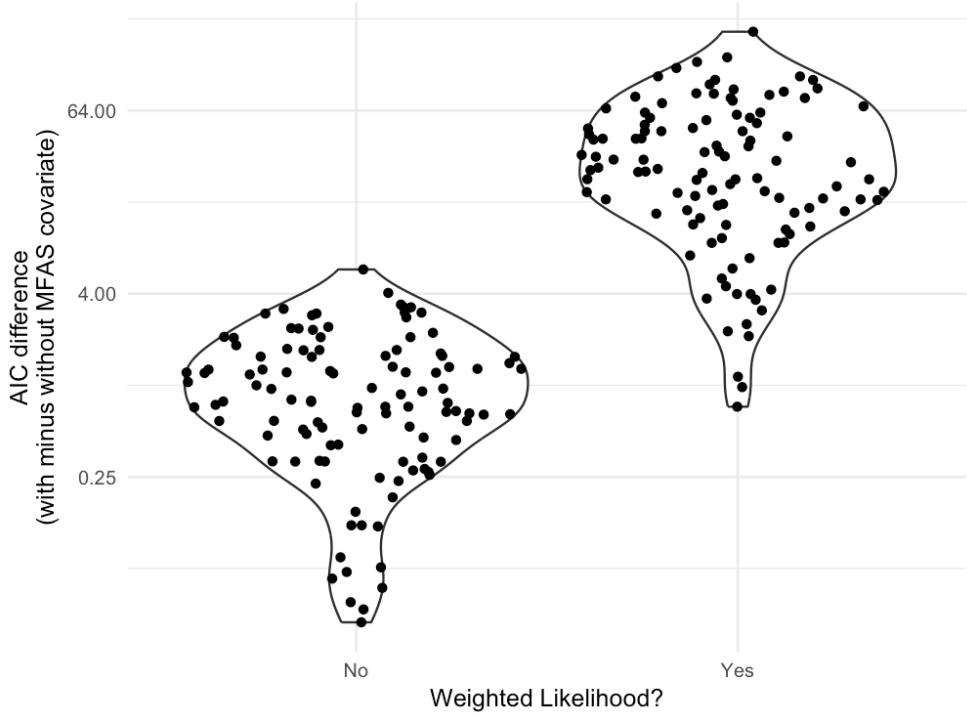


Figure S 43: By what margin would model selection using AIC select the true model (*without* MFAS effect – so a small AIC difference would be hoped for), with and without duration-weighting applied to the likelihood?

Table S 10: Proportion of simulations where the difference in AIC (model with MFAS minus model without) exceeded 6, when the true model was one *without* MFAS effect.

| Weighting? | Proportion dAIC > 6 |
|------------|---------------------|
| No | 0.008849558 |
| Yes | 0.882882883 |

Confidence Interval Coverage

Table S 11: Confidence interval coverage in simulations, for simulations in which the true model *did not include* an effect of MFAS on the transition rates. “T->V” is the probability of transition from Typical to Variant state, and “V->T” is Variant to Typical.

| Model Name | N Simulations | CI Coverage (%; P(T->V)) | CI Coverage (%; P(V->T)) |
|--------------|---------------|--------------------------|--------------------------|
| rl_coarse | 113 | 97.3 | 96.4 |
| rl_coarse_wt | 112 | 25.9 | 19.6 |