# Monitoring of Chinese White Dolphins in Southwest Lantau Waters

*16th Monthly Progress Report (June 2016)*
*submitted to Environmental Project Office for the HZMB HKLR, HZMB HKBCF and TM-CLKL – Investigation*

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## 1. Introduction

1.1. In March 2015, Hong Kong Cetacean Research Project (HKCRP) was appointed by the Environmental Project Office for the HZMB Hong Kong Projects to undertake a monitoring study of Chinese White Dolphins in Southwest Lantau (SWL) waters.

1.2. The objectives of the monitoring study are to quantify the abundance and density of Chinese White Dolphins in SWL waters, to identify individuals during the monitoring surveys, and to analyze their range use and movement patterns in Hong Kong and the wider Pearl River Estuary waters.

1.3. The monitoring study will supplement the on-going EM&A monitoring results of the HZMB Hong Kong Projects in North and West Lantau waters, and provide a more complete picture of dolphin usage and movements between different survey areas in western Hong Kong waters.

1.4. The present report is the 16th monthly progress report under this dolphin monitoring study submitted to the Environmental Project Office, summarizing the survey findings during the month of June 2016.

## 2. Monitoring Methodology

*2.1. Vessel-based Line-transect Survey*

2.1.1. According to the requirement of the technical proposal submitted to the Environmental

Project Office, dolphin monitoring programme should cover all transect lines in SWL survey area (see Figure 1) once per month upon instruction. The co-ordinates of all transect lines conducted during the dolphin monitoring survey are shown in Table 1.

Table 1. Co-ordinates of transect lines in SWL survey area (corresponding to transect line layout as shown in Figure 1)

| Line # | | Northing | Easting | | Line # | | Northing | Easting |
|---|---|---|---|---|---|---|---|---|
| SWL001 | 1 | 806180 | 802510 | | SWL007 | 13 | 807380 | 808520 |
| | 2 | 804250 | 802510 | | | 14 | 805600 | 808520 |
| SWL002 | 3 | 806710 | 803480 | | | 15 | 804400 | 808520 |
| | 4 | 803450 | 803480 | | | 16 | 803000 | 808520 |
| SWL003 | 5 | 807270 | 804500 | | | 17 | 802100 | 808520 |
| | 6 | 802690 | 804500 | | | 18 | 800470 | 808520 |
| SWL004 | 7 | 807590 | 805450 | | SWL008 | 19 | 807380 | 809550 |
| | 8 | 802295 | 805450 | | | 20 | 805050 | 809550 |
| SWL005 | 9 | 808490 | 806500 | | | 21 | 804400 | 809550 |
| | 10 | 801410 | 806500 | | | 22 | 800470 | 809550 |
| SWL006 | 11 | 808500 | 807430 | | SWL009 | 23 | 807380 | 810550 |
| | 12 | 801250 | 807430 | | | 24 | 800470 | 810550 |
| | | | | | SWL010 | 25 | 809410 | 811510 |
| | | | | | | 26 | 801470 | 811510 |

2.1.2. The HKCRP survey team used standard line-transect methods (Buckland et al. 2001) to conduct the systematic vessel surveys, and followed the same technique of data collection that has been adopted over the last 18 years of marine mammal monitoring surveys in Hong Kong developed by HKCRP (see Hung 2014). For each monitoring vessel survey, a 15-m inboard vessel with an open upper deck (about 4.5 m above water surface) was used to make observations from the flying bridge area.

2.1.3. Two experienced observers from HKCRP (a data recorder and a primary observer) made up the on-effort survey team, and the survey vessel transited different transect lines at a

constant speed of 13-15 km per hour. The data recorder searched with unaided eyes and filled out the datasheets, while the primary observer searched for dolphins and porpoises continuously through 7 x 50 *Fujinon* marine binoculars. Both observers searched the sea ahead of the vessel, between 270° and 90° (in relation to the bow, which is defined as 0°). One to two additional experienced observer was available on the boat to work in shift (i.e. rotate every 30 minutes) in order to minimize fatigue of the survey team members. All observers were experienced in small cetacean survey techniques and identifying local cetacean species.

2.1.4. During on-effort survey periods, the survey team recorded effort data including time, position (latitude and longitude), weather conditions (Beaufort sea state and visibility), and distance traveled in each series (a continuous period of search effort) with the assistance of a handheld GPS (*Garmin eTrex Legend*).

2.1.5. Data including time, position and vessel speed were also automatically and continuously logged by handheld GPS throughout the entire survey for subsequent review.

2.1.6. When dolphins were sighted, the survey team would end the survey effort, and immediately record the initial sighting distance and angle of the dolphin group from the survey vessel, as well as the sighting time and position. Then the research vessel was diverted from its course to approach the animals for species identification, group size estimation, assessment of group composition, and behavioural observations. The perpendicular distance (PSD) of the dolphin group to the transect line was later calculated from the initial sighting distance and angle.

2.1.7. Survey effort being conducted along the parallel transect lines that were perpendicular to the coastlines (as indicated in Figure 1) was labeled as “primary” survey effort, while the survey effort conducted along the connecting lines between parallel lines as well as the section around the Soko Islands was labeled as “secondary” survey effort. Both primary and secondary survey effort were presented as on-effort survey effort in this report.

2.1.8. Encounter rates of Chinese White Dolphins (number of on-effort sightings per 100 km of survey effort and number of dolphins from all on-effort sightings per 100 km of survey effort) were calculated in SWL survey area in relation to the amount of survey effort conducted during each month of monitoring survey. Only data collected under Beaufort 3 or below condition would be used for encounter rate analysis. Dolphin encounter rates were calculated using the combined survey effort from both primary and secondary lines for comparison to the historical data collected by HKCRP in this survey area. For the historical data, the encounter rates were calculated by pooling all relevant survey effort

and dolphin sightings to calculate a single index.

*2.2. Photo-identification Work*

2.2.1. When a group of Chinese White Dolphins were sighted during the line-transect survey, the survey team would end effort and approach the group slowly from the side and behind to take photographs of them. Every attempt was made to photograph every dolphin in the group, and even photograph both sides of the dolphins, since the colouration and markings on both sides may not be symmetrical.

2.2.2. A professional digital camera (*Canon* EOS 7D model), equipped with long telephoto lenses (100-400 mm zoom), were available on board for researchers to take sharp, close-up photographs of dolphins as they surfaced. The images were shot at the highest available resolution and stored on Compact Flash memory cards for downloading onto a computer.

2.2.3. All digital images taken in the field were first examined, and those containing potentially identifiable individuals were sorted out. These photographs would then be examined in greater detail, and were carefully compared to the existing Chinese White Dolphin photo-identification catalogue maintained by HKCRP since 1995. For individual dolphins that are not readily identifiable from the catalogue but have distinct features on their bodies, they will be placed in a pool of "potential new individuals", with decision being made at the end of each year on whether any of them should be incorporated into the photo-ID catalogue.

2.2.4. Chinese White Dolphins can be identified by their natural markings, such as nicks, cuts, scars and deformities on their dorsal fin and body, and their unique spotting patterns were also used as secondary identifying features (Jefferson 2000).

2.2.5. All photographs of each individual were then compiled and arranged in chronological order, with data including the date and location first identified (initial sighting), re-sightings, associated dolphins, distinctive features, and age classes entered into a computer database.

## 3. Monitoring Results

*3.1. Vessel-based Line-transect Survey*

3.1.1. One set of systematic line-transect vessel survey was conducted under the present

monitoring study on June 7th to cover all transect lines in SWL survey area once. The route and track log of this survey are presented in Figure 2 and Appendix I respectively.

3.1.2. In addition, three line-transect surveys were also conducted under the AFCD long-term marine mammal monitoring programme in SWL survey area on June 3rd (with lines no. SWL001, SWL003, SWL005, SWL007 and SWL009 covered), June 14th (with lines no. SWL006, SWL008 and SWL010 covered) and June 20th (with lines no. SWL001, SWL003, SWL005 and SWL007 covered). Such monitoring data were also incorporated into the present study for various analyses.

3.1.3. For the present study alone, a total of 70.16 km of survey effort was collected from 11:12 to 16:58 (i.e. 5 hours and 46 minutes of survey time) on June 7th, with 98.2% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility) (Appendix II). The total survey effort conducted on primary and secondary lines were 53.46 km and 16.70 km respectively.

3.1.4. For the combined monitoring dataset from both the present study and AFCD monitoring study, a total of 153.27 km of survey effort was collected in SWL waters in June 2016.

3.1.5. During this monitoring month, 18 groups of 57 Chinese White Dolphins were sighted from the present study's survey and the other three AFCD monitoring surveys (Appendix III). Thirteen of the 18 dolphin groups were sighted during on-effort search, and one of them was associated with an operating purse-seiner.

3.1.6. Notably, one group of two finless porpoises was also sighted in SWL survey area during this monitoring month.

3.1.7. Distribution of the 18 dolphin sightings made in June 2016 is shown in Figure 3. The dolphin groups were mostly located between Shui Hau Peninsula and the Soko Islands, as well as between the Soko Islands and near Fan Lau (Figure 3). On the contrary, they appeared to avoid the offshore waters and eastern portion of the SWL survey area (Figure 3).

3.1.8. Encounter rates of Chinese White Dolphins deduced from the survey effort and on-effort sighting data made under favourable conditions (Beaufort 3 or below) in June 2016 are shown in Table 2. Comparison of encounter rates was also made to the one deduced in summer months (June-August) in the past decade (2005-14), as well as in June 2015 under the present study (Table 2).

Table 2. Overall dolphin encounter rates (sightings per 100 km of survey effort) from the present monitoring survey and combined database with AFCD monitoring survey conducted in June 2016 (primary lines only, as well as both primary lines and secondary lines were used) in SWL survey area in comparison to the ones deduced during summer months (June-August 2005-14) in the past decade

| | **Encounter rate (STG)** (no. of on-effort dolphin sightings per 100 km of survey effort) | | **Encounter rate (ANI)** (no. of dolphins from all on-effort sightings per 100 km of survey effort) | |
|---|---|---|---|---|
| | Primary Lines Only | Both Primary and Secondary Lines | Primary Lines Only | Both Primary and Secondary Lines |
| **HYD-HZMB data (June 2016)** | 5.61 | 4.35 | 13.09 | 10.15 |
| **Combined data (June 2016)** | 7.32 | 8.65 | 32.04 | 31.28 |
| **Combined data (June 2015)** | 8.86 | 12.45 | 31.36 | 41.66 |
| **Historical Data (Summer 2005-14)** | | 4.02 | | 11.78 |

3.1.9. From the combined data of HYD-HZMB and AFCD monitoring surveys, the overall encounter rates based on the number of dolphin sightings (ER(STG)) and the total number of dolphins (ER(ANI)) deduced in June 2016 in SWL waters were much higher than the ones deduced from the historical data during the summer months of 2005-14, but were slightly lower than the ones in June 2015 (Table 2).

*3.1.10.* The average group size of Chinese White Dolphin sighted during SWL monitoring surveys in June 2016 was 3.2 animals per group, which was slightly higher than the average group size in summer months of 2005-14 (2.9). Twelve of the 18 dolphin groups were composed of only 1-3 animals, while four other groups were medium in size with 4-5 animals (Appendix III). Two dolphin groups were fairly large with 8 and 12 animals respectively.

*3.2. Photo-identification Work*

3.2.1. Attempts were made to photograph the dolphins sighted during all SWL surveys conducted in June 2016.

3.2.2. Among the 57 dolphins sighted during this month's surveys, 33 individual dolphins were identified and re-sighted 36 times in total (Appendices IV and V). None of these individuals was accompanied by a young calf.

3.2.3. The locations where most individuals were re-sighted were well within their past home

ranges in Southwest and West Lantau waters. However, NL33, NL120, NL150 and NL226 were primarily sighted in North Lantau waters in the past, but have shown up in Southwest Lantau during this month's surveys. Moreover, WL166 and WL264 were sighted in Southwest Lantau waters for the first time during this month's surveys as well, while they were sighted in West Lantau waters in the past.

## 4. References

Buckland, S. T., Anderson, D. R., Burnham, K. P., Laake, J. L., Borchers, D. L., and Thomas, L. 2001. Introduction to distance sampling: estimating abundance of biological populations. Oxford University Press, London.

Hung, S. K. 2014. Monitoring of Marine Mammals in Hong Kong waters: final report (2013-14). An unpublished report submitted to the Agriculture, Fisheries and Conservation Department, 231 pp.

Jefferson, T. A. 2000. Population biology of the Indo-Pacific hump-backed dolphin in Hong Kong waters. Wildlife Monographs 144:1-65.

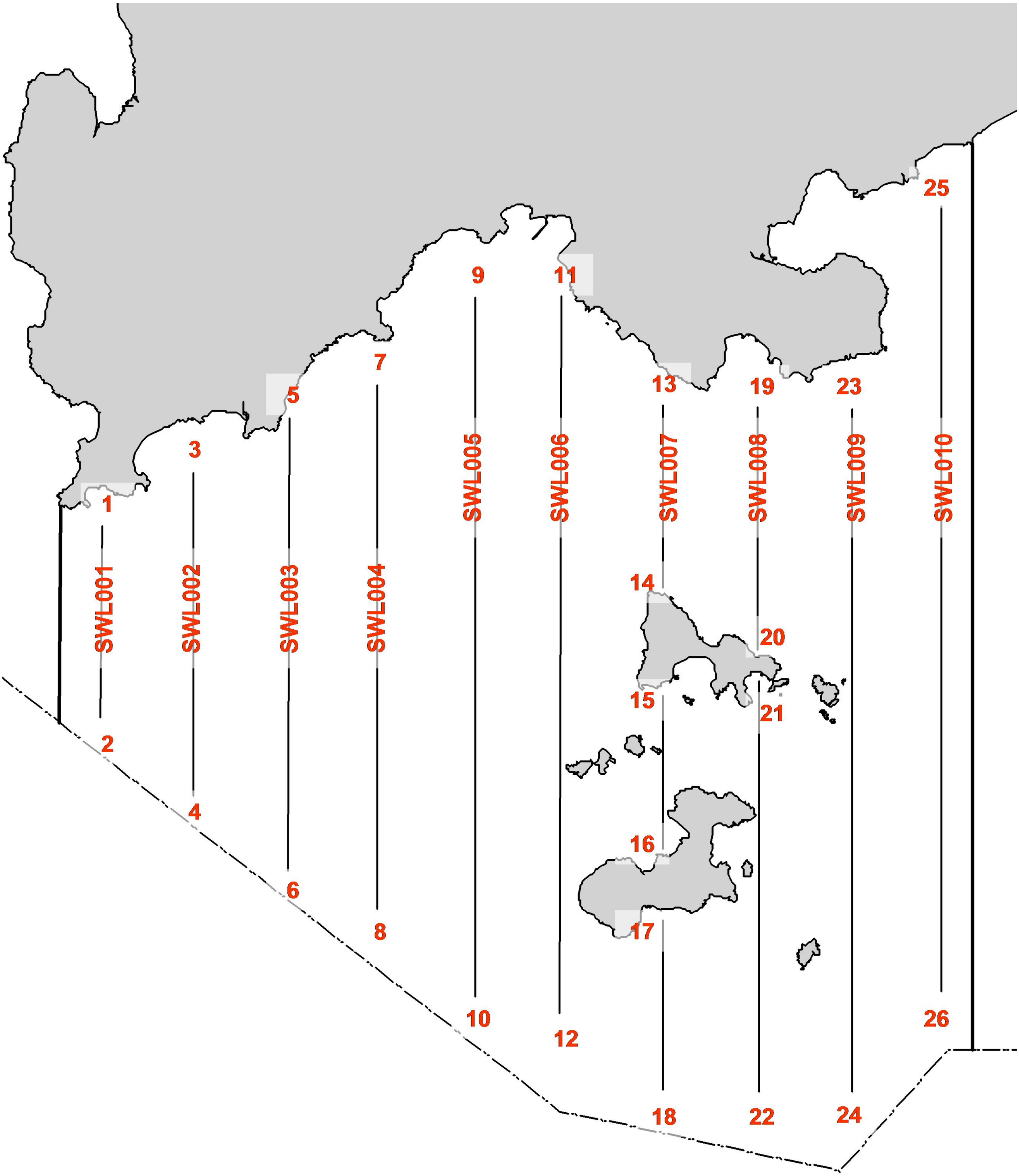


Figure 1. Survey Lines and associated coordinates in Southwest Lantau survey area

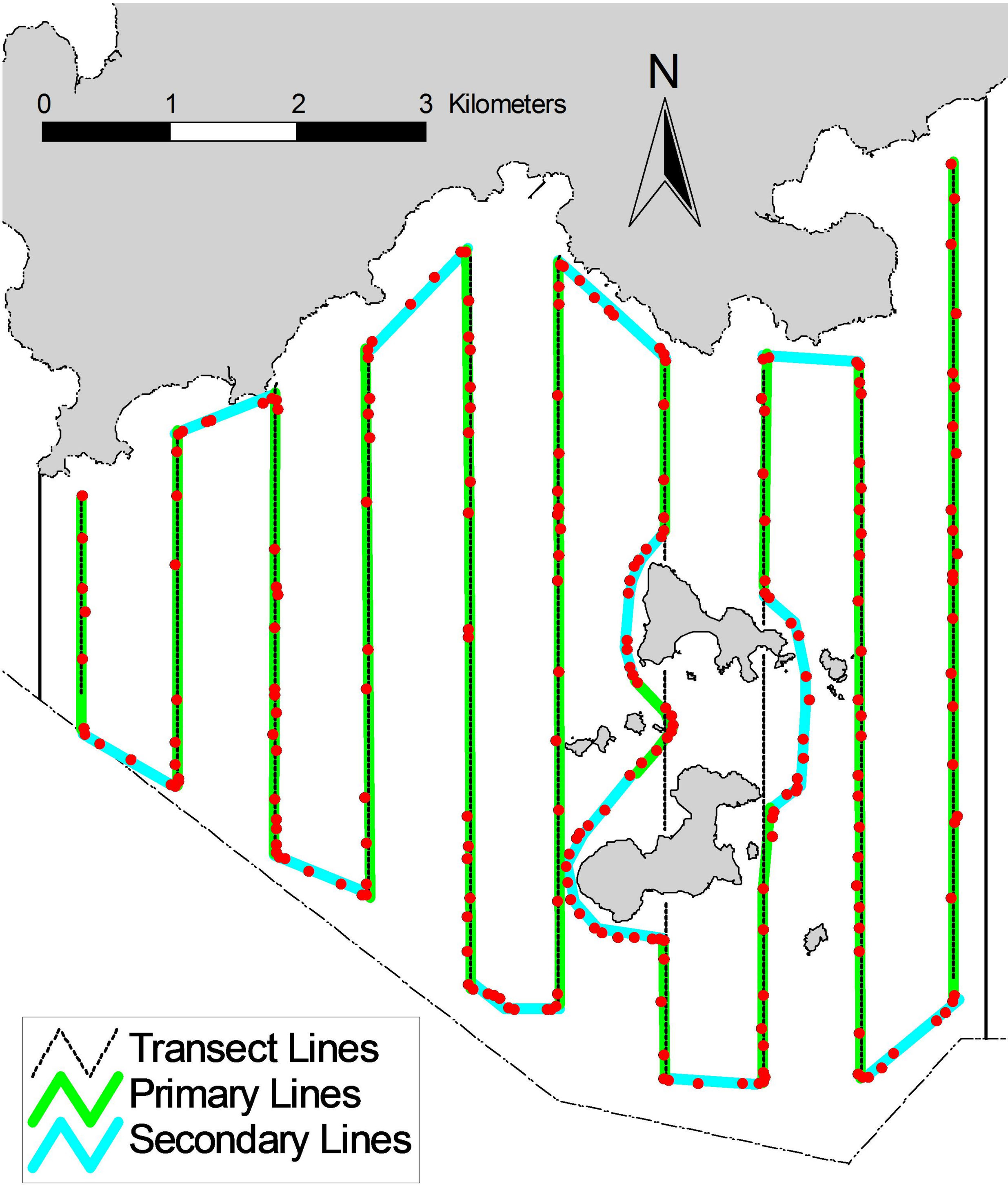


Figure 2. Survey Route on June 7th, 2016 (note: red dots represent the tracked positions of survey boat logged continuously by GPS throughout the course of the survey)

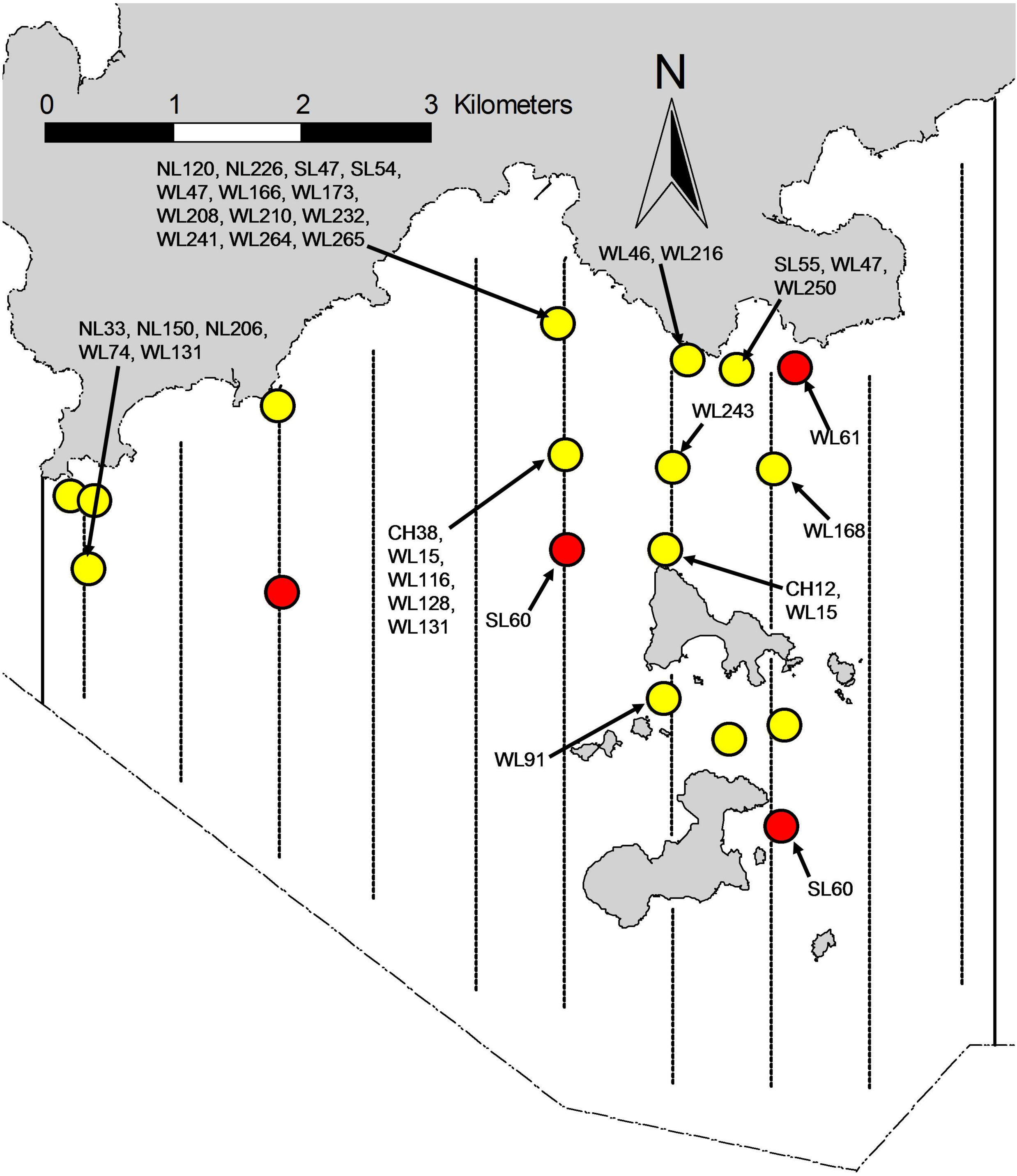


Figure 3. Distribution of Chinese White Dolphin sightings during June 2016 monitoring surveys in Southwest Lantau survey area, with identified individuals indicated for their corresponding sightings (red dot: HYD-HZMB sighting; yellow dot: AFCD sighting)

# Appendix I. Track Log of Southwest Lantau Survey on June 7th, 2016

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 11:12 | ON | N22.19369 E113.84939 | | | |
| 7/6/2016 11:12 | ON | N22.19331 E113.84940 | 42 m | 0:00:11 | 14 kph |
| 7/6/2016 11:13 | ON | N22.19272 E113.84945 | 66 m | 0:00:17 | 14 kph |
| 7/6/2016 11:13 | ON | N22.19194 E113.84951 | 88 m | 0:00:23 | 14 kph |
| 7/6/2016 11:13 | ON | N22.19130 E113.84949 | 71 m | 0:00:19 | 13 kph |
| 7/6/2016 11:14 | ON | N22.19065 E113.84954 | 72 m | 0:00:19 | 14 kph |
| 7/6/2016 11:14 | ON | N22.19001 E113.84954 | 71 m | 0:00:19 | 14 kph |
| 7/6/2016 11:14 | ON | N22.18936 E113.84949 | 72 m | 0:00:19 | 14 kph |
| 7/6/2016 11:15 | ON | N22.18865 E113.84945 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 11:15 | ON | N22.18794 E113.84946 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 11:15 | ON | N22.18719 E113.84951 | 84 m | 0:00:22 | 14 kph |
| 7/6/2016 11:16 | ON | N22.18641 E113.84950 | 86 m | 0:00:23 | 14 kph |
| 7/6/2016 11:16 | ON | N22.18559 E113.84949 | 91 m | 0:00:24 | 14 kph |
| 7/6/2016 11:17 | ON | N22.18485 E113.84958 | 84 m | 0:00:22 | 14 kph |
| 7/6/2016 11:17 | ON | N22.18411 E113.84961 | 82 m | 0:00:22 | 13 kph |
| 7/6/2016 11:17 | ON | N22.18345 E113.84965 | 73 m | 0:00:19 | 14 kph |
| 7/6/2016 11:17 | ON | N22.18288 E113.84963 | 64 m | 0:00:16 | 14 kph |
| 7/6/2016 11:18 | ON | N22.18212 E113.84960 | 84 m | 0:00:21 | 14 kph |
| 7/6/2016 11:18 | ON | N22.18132 E113.84953 | 89 m | 0:00:22 | 15 kph |
| 7/6/2016 11:18 | ON | N22.18072 E113.84950 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 11:19 | ON | N22.18010 E113.84951 | 69 m | 0:00:17 | 15 kph |
| 7/6/2016 11:19 | ON | N22.17944 E113.84951 | 74 m | 0:00:18 | 15 kph |
| 7/6/2016 11:19 | ON | N22.17874 E113.84949 | 77 m | 0:00:19 | 15 kph |
| 7/6/2016 11:20 | ON | N22.17807 E113.84949 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 11:20 | ON | N22.17732 E113.84951 | 83 m | 0:00:21 | 14 kph |
| 7/6/2016 11:20 | ON | N22.17656 E113.84952 | 85 m | 0:00:21 | 15 kph |
| 7/6/2016 11:21 | ON | N22.17597 E113.84955 | 65 m | 0:00:16 | 15 kph |
| 7/6/2016 11:21 | ON | N22.17540 E113.84954 | 64 m | 0:00:16 | 14 kph |
| 7/6/2016 11:21 | ON | N22.17471 E113.84954 | 76 m | 0:00:19 | 14 kph |
| 7/6/2016 11:22 | ON | N22.17400 E113.84951 | 80 m | 0:00:20 | 14 kph |
| 7/6/2016 11:22 | ON | N22.17324 E113.84955 | 85 m | 0:00:21 | 15 kph |
| 7/6/2016 11:22 | ON | N22.17270 E113.84983 | 66 m | 0:00:17 | 14 kph |
| 7/6/2016 11:23 | ON | N22.17231 E113.85043 | 76 m | 0:00:19 | 14 kph |
| 7/6/2016 11:23 | ON | N22.17183 E113.85115 | 91 m | 0:00:23 | 14 kph |
| 7/6/2016 11:23 | ON | N22.17150 E113.85184 | 81 m | 0:00:20 | 15 kph |
| 7/6/2016 11:24 | ON | N22.17125 E113.85250 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 11:24 | ON | N22.17103 E113.85313 | 69 m | 0:00:17 | 15 kph |
| 7/6/2016 11:24 | ON | N22.17076 E113.85379 | 74 m | 0:00:18 | 15 kph |
| 7/6/2016 11:24 | ON | N22.17046 E113.85443 | 74 m | 0:00:18 | 15 kph |
| 7/6/2016 11:25 | ON | N22.17003 E113.85522 | 94 m | 0:00:23 | 15 kph |
| 7/6/2016 11:25 | ON | N22.16967 E113.85591 | 82 m | 0:00:20 | 15 kph |
| 7/6/2016 11:25 | ON | N22.16937 E113.85647 | 67 m | 0:00:16 | 15 kph |
| 7/6/2016 11:26 | ON | N22.16902 E113.85709 | 75 m | 0:00:18 | 15 kph |
| 7/6/2016 11:26 | ON | N22.16864 E113.85774 | 79 m | 0:00:19 | 15 kph |
| 7/6/2016 11:26 | ON | N22.16827 E113.85835 | 75 m | 0:00:18 | 15 kph |
| 7/6/2016 11:27 | ON | N22.16813 E113.85884 | 53 m | 0:00:14 | 14 kph |
| 7/6/2016 11:27 | ON | N22.16845 E113.85908 | 43 m | 0:00:13 | 12 kph |
| 7/6/2016 11:27 | ON | N22.16891 E113.85914 | 52 m | 0:00:14 | 13 kph |
| 7/6/2016 11:27 | ON | N22.16955 E113.85902 | 71 m | 0:00:18 | 14 kph |
| 7/6/2016 11:28 | ON | N22.17010 E113.85889 | 63 m | 0:00:16 | 14 kph |
| 7/6/2016 11:28 | ON | N22.17068 E113.85889 | 65 m | 0:00:16 | 15 kph |
| 7/6/2016 11:28 | ON | N22.17129 E113.85884 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 11:28 | ON | N22.17195 E113.85880 | 74 m | 0:00:18 | 15 kph |
| 7/6/2016 11:29 | ON | N22.17275 E113.85879 | 89 m | 0:00:21 | 15 kph |
| 7/6/2016 11:29 | ON | N22.17346 E113.85884 | 79 m | 0:00:19 | 15 kph |
| 7/6/2016 11:29 | ON | N22.17413 E113.85891 | 75 m | 0:00:18 | 15 kph |
| 7/6/2016 11:30 | ON | N22.17486 E113.85891 | 81 m | 0:00:20 | 15 kph |
| 7/6/2016 11:30 | ON | N22.17574 E113.85895 | 99 m | 0:00:25 | 14 kph |
| 7/6/2016 11:30 | ON | N22.17642 E113.85894 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 11:31 | ON | N22.17721 E113.85894 | 89 m | 0:00:22 | 15 kph |
| 7/6/2016 11:31 | ON | N22.17801 E113.85893 | 88 m | 0:00:22 | 14 kph |
| 7/6/2016 11:31 | ON | N22.17868 E113.85891 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 11:32 | ON | N22.17939 E113.85892 | 79 m | 0:00:20 | 14 kph |
| 7/6/2016 11:32 | ON | N22.18014 E113.85893 | 84 m | 0:00:21 | 14 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 11:32 | ON | N22.18078 E113.85890 | 72 m | 0:00:18 | 14 kph |
| 7/6/2016 11:33 | ON | N22.18150 E113.85890 | 80 m | 0:00:20 | 14 kph |
| 7/6/2016 11:33 | ON | N22.18227 E113.85892 | 85 m | 0:00:21 | 15 kph |
| 7/6/2016 11:33 | ON | N22.18281 E113.85890 | 60 m | 0:00:15 | 14 kph |
| 7/6/2016 11:34 | ON | N22.18345 E113.85889 | 71 m | 0:00:18 | 14 kph |
| 7/6/2016 11:34 | ON | N22.18422 E113.85886 | 86 m | 0:00:22 | 14 kph |
| 7/6/2016 11:34 | ON | N22.18485 E113.85886 | 70 m | 0:00:18 | 14 kph |
| 7/6/2016 11:35 | ON | N22.18559 E113.85889 | 82 m | 0:00:21 | 14 kph |
| 7/6/2016 11:35 | ON | N22.18620 E113.85891 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 11:35 | ON | N22.18670 E113.85886 | 56 m | 0:00:14 | 15 kph |
| 7/6/2016 11:36 | ON | N22.18763 E113.85884 | 103 m | 0:00:25 | 15 kph |
| 7/6/2016 11:36 | ON | N22.18838 E113.85887 | 83 m | 0:00:20 | 15 kph |
| 7/6/2016 11:36 | ON | N22.18894 E113.85888 | 62 m | 0:00:15 | 15 kph |
| 7/6/2016 11:37 | ON | N22.18983 E113.85886 | 99 m | 0:00:24 | 15 kph |
| 7/6/2016 11:37 | ON | N22.19057 E113.85885 | 82 m | 0:00:20 | 15 kph |
| 7/6/2016 11:37 | ON | N22.19132 E113.85886 | 83 m | 0:00:20 | 15 kph |
| 7/6/2016 11:38 | ON | N22.19218 E113.85887 | 95 m | 0:00:23 | 15 kph |
| 7/6/2016 11:38 | ON | N22.19304 E113.85893 | 97 m | 0:00:23 | 15 kph |
| 7/6/2016 11:38 | ON | N22.19374 E113.85894 | 78 m | 0:00:19 | 15 kph |
| 7/6/2016 11:39 | ON | N22.19424 E113.85890 | 56 m | 0:00:14 | 14 kph |
| 7/6/2016 11:39 | ON | N22.19498 E113.85888 | 83 m | 0:00:20 | 15 kph |
| 7/6/2016 11:39 | ON | N22.19588 E113.85884 | 100 m | 0:00:24 | 15 kph |
| 7/6/2016 11:40 | ON | N22.19682 E113.85888 | 104 m | 0:00:25 | 15 kph |
| 7/6/2016 11:40 | ON | N22.19758 E113.85885 | 86 m | 0:00:20 | 15 kph |
| 7/6/2016 11:40 | ON | N22.19843 E113.85896 | 95 m | 0:00:22 | 16 kph |
| 7/6/2016 11:41 | ON | N22.19907 E113.85909 | 72 m | 0:00:17 | 15 kph |
| 7/6/2016 11:41 | ON | N22.19939 E113.85957 | 61 m | 0:00:15 | 15 kph |
| 7/6/2016 11:41 | ON | N22.19957 E113.86019 | 66 m | 0:00:15 | 16 kph |
| 7/6/2016 11:41 | ON | N22.19975 E113.86072 | 58 m | 0:00:13 | 16 kph |
| 7/6/2016 11:42 | ON | N22.19979 E113.86084 | 14 m | 0:00:03 | 16 kph |
| 7/6/2016 11:42 | ON | N22.19998 E113.86132 | 53 m | 0:00:12 | 16 kph |
| 7/6/2016 11:42 | ON | N22.20016 E113.86174 | 48 m | 0:00:11 | 16 kph |
| 7/6/2016 11:42 | ON | N22.20020 E113.86186 | 13 m | 0:00:03 | 16 kph |
| 7/6/2016 11:42 | ON | N22.20041 E113.86242 | 62 m | 0:00:14 | 16 kph |
| 7/6/2016 11:42 | ON | N22.20065 E113.86316 | 81 m | 0:00:18 | 16 kph |
| 7/6/2016 11:43 | ON | N22.20082 E113.86383 | 72 m | 0:00:16 | 16 kph |
| 7/6/2016 11:43 | ON | N22.20088 E113.86404 | 22 m | 0:00:05 | 16 kph |
| 7/6/2016 11:43 | ON | N22.20091 E113.86416 | 13 m | 0:00:03 | 16 kph |
| 7/6/2016 11:43 | ON | N22.20110 E113.86488 | 76 m | 0:00:17 | 16 kph |
| 7/6/2016 11:44 | ON | N22.20133 E113.86571 | 90 m | 0:00:20 | 16 kph |
| 7/6/2016 11:44 | ON | N22.20152 E113.86637 | 71 m | 0:00:16 | 16 kph |
| 7/6/2016 11:44 | ON | N22.20174 E113.86708 | 77 m | 0:00:17 | 16 kph |
| 7/6/2016 11:44 | ON | N22.20177 E113.86721 | 14 m | 0:00:03 | 16 kph |
| 7/6/2016 11:44 | ON | N22.20189 E113.86759 | 41 m | 0:00:09 | 16 kph |
| 7/6/2016 11:44 | ON | N22.20193 E113.86771 | 14 m | 0:00:03 | 16 kph |
| 7/6/2016 11:45 | ON | N22.20226 E113.86847 | 86 m | 0:00:19 | 16 kph |
| 7/6/2016 11:45 | ON | N22.20222 E113.86885 | 39 m | 0:00:12 | 12 kph |
| 7/6/2016 11:45 | ON | N22.20187 E113.86893 | 40 m | 0:00:14 | 10 kph |
| 7/6/2016 11:45 | ON | N22.20136 E113.86897 | 57 m | 0:00:16 | 13 kph |
| 7/6/2016 11:46 | ON | N22.20066 E113.86892 | 78 m | 0:00:22 | 13 kph |
| 7/6/2016 11:46 | ON | N22.19998 E113.86889 | 76 m | 0:00:21 | 13 kph |
| 7/6/2016 11:46 | ON | N22.19923 E113.86884 | 83 m | 0:00:23 | 13 kph |
| 7/6/2016 11:47 | ON | N22.19868 E113.86884 | 62 m | 0:00:17 | 13 kph |
| 7/6/2016 11:47 | ON | N22.19792 E113.86883 | 85 m | 0:00:23 | 13 kph |
| 7/6/2016 11:47 | ON | N22.19715 E113.86888 | 85 m | 0:00:23 | 13 kph |
| 7/6/2016 11:48 | ON | N22.19649 E113.86884 | 74 m | 0:00:20 | 13 kph |
| 7/6/2016 11:48 | ON | N22.19586 E113.86884 | 70 m | 0:00:19 | 13 kph |
| 7/6/2016 11:48 | ON | N22.19515 E113.86887 | 79 m | 0:00:21 | 13 kph |
| 7/6/2016 11:49 | ON | N22.19445 E113.86888 | 78 m | 0:00:21 | 13 kph |
| 7/6/2016 11:49 | ON | N22.19389 E113.86889 | 63 m | 0:00:17 | 13 kph |
| 7/6/2016 11:49 | ON | N22.19332 E113.86888 | 63 m | 0:00:17 | 13 kph |
| 7/6/2016 11:50 | ON | N22.19263 E113.86883 | 77 m | 0:00:21 | 13 kph |
| 7/6/2016 11:50 | ON | N22.19196 E113.86882 | 74 m | 0:00:20 | 13 kph |
| 7/6/2016 11:50 | ON | N22.19134 E113.86878 | 70 m | 0:00:19 | 13 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 11:51 | ON | N22.19073 E113.86879 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 11:51 | ON | N22.18992 E113.86881 | 90 m | 0:00:24 | 14 kph |
| 7/6/2016 11:51 | ON | N22.18911 E113.86880 | 90 m | 0:00:24 | 14 kph |
| 7/6/2016 11:52 | ON | N22.18846 E113.86883 | 73 m | 0:00:19 | 14 kph |
| 7/6/2016 11:52 | ON | N22.18777 E113.86888 | 77 m | 0:00:20 | 14 kph |
| 7/6/2016 11:52 | ON | N22.18705 E113.86888 | 80 m | 0:00:21 | 14 kph |
| 7/6/2016 11:53 | ON | N22.18626 E113.86889 | 88 m | 0:00:23 | 14 kph |
| 7/6/2016 11:53 | ON | N22.18570 E113.86891 | 62 m | 0:00:18 | 12 kph |
| 7/6/2016 11:53 | OFF | N22.18538 E113.86897 | 36 m | 0:00:18 | 7 kph |
| 7/6/2016 11:54 | OFF | N22.18521 E113.86903 | 21 m | 0:00:15 | 5 kph |
| 7/6/2016 11:54 | OFF | N22.18509 E113.86909 | 15 m | 0:00:15 | 4 kph |
| 7/6/2016 11:54 | OFF | N22.18497 E113.86918 | 15 m | 0:00:18 | 3 kph |
| 7/6/2016 11:55 | OFF | N22.18489 E113.86926 | 13 m | 0:00:20 | 2 kph |
| 7/6/2016 11:55 | OFF | N22.18484 E113.86934 | 10 m | 0:00:17 | 2 kph |
| 7/6/2016 11:55 | OFF | N22.18479 E113.86946 | 13 m | 0:00:24 | 2 kph |
| 7/6/2016 11:56 | OFF | N22.18477 E113.86954 | 9 m | 0:00:19 | 2 kph |
| 7/6/2016 11:56 | OFF | N22.18457 E113.86956 | 22 m | 0:00:15 | 5 kph |
| 7/6/2016 11:56 | OFF | N22.18405 E113.86934 | 63 m | 0:00:20 | 11 kph |
| 7/6/2016 11:56 | OFF | N22.18352 E113.86916 | 62 m | 0:00:17 | 13 kph |
| 7/6/2016 11:57 | ON | N22.18289 E113.86896 | 73 m | 0:00:20 | 13 kph |
| 7/6/2016 11:57 | ON | N22.18213 E113.86881 | 85 m | 0:00:23 | 13 kph |
| 7/6/2016 11:58 | ON | N22.18146 E113.86885 | 75 m | 0:00:20 | 14 kph |
| 7/6/2016 11:58 | ON | N22.18056 E113.86888 | 100 m | 0:00:26 | 14 kph |
| 7/6/2016 11:58 | ON | N22.17985 E113.86890 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 11:59 | ON | N22.17919 E113.86881 | 74 m | 0:00:20 | 13 kph |
| 7/6/2016 11:59 | ON | N22.17827 E113.86877 | 102 m | 0:00:27 | 14 kph |
| 7/6/2016 11:59 | ON | N22.17756 E113.86881 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 12:00 | ON | N22.17678 E113.86879 | 87 m | 0:00:23 | 14 kph |
| 7/6/2016 12:00 | ON | N22.17616 E113.86878 | 69 m | 0:00:18 | 14 kph |
| 7/6/2016 12:00 | ON | N22.17540 E113.86882 | 85 m | 0:00:22 | 14 kph |
| 7/6/2016 12:01 | ON | N22.17468 E113.86890 | 80 m | 0:00:21 | 14 kph |
| 7/6/2016 12:01 | ON | N22.17389 E113.86887 | 88 m | 0:00:23 | 14 kph |
| 7/6/2016 12:02 | ON | N22.17325 E113.86876 | 72 m | 0:00:19 | 14 kph |
| 7/6/2016 12:02 | ON | N22.17265 E113.86868 | 68 m | 0:00:18 | 14 kph |
| 7/6/2016 12:02 | ON | N22.17193 E113.86882 | 81 m | 0:00:21 | 14 kph |
| 7/6/2016 12:03 | ON | N22.17126 E113.86899 | 76 m | 0:00:20 | 14 kph |
| 7/6/2016 12:03 | ON | N22.17061 E113.86897 | 72 m | 0:00:19 | 14 kph |
| 7/6/2016 12:03 | ON | N22.16987 E113.86896 | 82 m | 0:00:21 | 14 kph |
| 7/6/2016 12:04 | ON | N22.16910 E113.86889 | 86 m | 0:00:22 | 14 kph |
| 7/6/2016 12:04 | ON | N22.16838 E113.86884 | 81 m | 0:00:20 | 15 kph |
| 7/6/2016 12:04 | ON | N22.16759 E113.86880 | 88 m | 0:00:22 | 14 kph |
| 7/6/2016 12:05 | ON | N22.16699 E113.86877 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 12:05 | ON | N22.16645 E113.86880 | 60 m | 0:00:15 | 14 kph |
| 7/6/2016 12:05 | ON | N22.16578 E113.86886 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 12:05 | ON | N22.16517 E113.86887 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 12:06 | ON | N22.16443 E113.86897 | 83 m | 0:00:21 | 14 kph |
| 7/6/2016 12:06 | ON | N22.16372 E113.86894 | 79 m | 0:00:20 | 14 kph |
| 7/6/2016 12:06 | ON | N22.16306 E113.86885 | 74 m | 0:00:19 | 14 kph |
| 7/6/2016 12:07 | ON | N22.16241 E113.86888 | 72 m | 0:00:18 | 14 kph |
| 7/6/2016 12:07 | ON | N22.16203 E113.86922 | 54 m | 0:00:14 | 14 kph |
| 7/6/2016 12:07 | ON | N22.16175 E113.86989 | 76 m | 0:00:18 | 15 kph |
| 7/6/2016 12:07 | ON | N22.16154 E113.87046 | 64 m | 0:00:15 | 15 kph |
| 7/6/2016 12:08 | ON | N22.16123 E113.87119 | 83 m | 0:00:19 | 16 kph |
| 7/6/2016 12:08 | ON | N22.16100 E113.87172 | 60 m | 0:00:14 | 15 kph |
| 7/6/2016 12:08 | ON | N22.16071 E113.87232 | 69 m | 0:00:16 | 16 kph |
| 7/6/2016 12:09 | ON | N22.16047 E113.87298 | 74 m | 0:00:17 | 16 kph |
| 7/6/2016 12:09 | ON | N22.16022 E113.87374 | 83 m | 0:00:19 | 16 kph |
| 7/6/2016 12:09 | ON | N22.16007 E113.87422 | 52 m | 0:00:12 | 16 kph |
| 7/6/2016 12:09 | ON | N22.15986 E113.87486 | 70 m | 0:00:16 | 16 kph |
| 7/6/2016 12:10 | ON | N22.15959 E113.87552 | 75 m | 0:00:17 | 16 kph |
| 7/6/2016 12:10 | ON | N22.15925 E113.87615 | 75 m | 0:00:17 | 16 kph |
| 7/6/2016 12:10 | ON | N22.15910 E113.87641 | 31 m | 0:00:07 | 16 kph |
| 7/6/2016 12:10 | ON | N22.15896 E113.87667 | 31 m | 0:00:07 | 16 kph |
| 7/6/2016 12:10 | ON | N22.15890 E113.87678 | 13 m | 0:00:03 | 16 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 12:10 | ON | N22.15881 E113.87698 | 22 m | 0:00:05 | 16 kph |
| 7/6/2016 12:10 | ON | N22.15878 E113.87706 | 9 m | 0:00:02 | 16 kph |
| 7/6/2016 12:11 | ON | N22.15856 E113.87761 | 62 m | 0:00:14 | 16 kph |
| 7/6/2016 12:11 | ON | N22.15867 E113.87798 | 40 m | 0:00:12 | 12 kph |
| 7/6/2016 12:11 | ON | N22.15913 E113.87808 | 52 m | 0:00:16 | 12 kph |
| 7/6/2016 12:11 | ON | N22.15962 E113.87811 | 55 m | 0:00:15 | 13 kph |
| 7/6/2016 12:12 | ON | N22.16014 E113.87804 | 57 m | 0:00:16 | 13 kph |
| 7/6/2016 12:12 | ON | N22.16065 E113.87802 | 58 m | 0:00:16 | 13 kph |
| 7/6/2016 12:12 | ON | N22.16136 E113.87805 | 79 m | 0:00:21 | 13 kph |
| 7/6/2016 12:12 | ON | N22.16189 E113.87805 | 59 m | 0:00:16 | 13 kph |
| 7/6/2016 12:13 | ON | N22.16263 E113.87808 | 83 m | 0:00:22 | 14 kph |
| 7/6/2016 12:13 | ON | N22.16322 E113.87808 | 65 m | 0:00:17 | 14 kph |
| 7/6/2016 12:13 | ON | N22.16401 E113.87802 | 88 m | 0:00:23 | 14 kph |
| 7/6/2016 12:14 | ON | N22.16459 E113.87797 | 65 m | 0:00:17 | 14 kph |
| 7/6/2016 12:14 | ON | N22.16529 E113.87795 | 78 m | 0:00:20 | 14 kph |
| 7/6/2016 12:14 | ON | N22.16589 E113.87798 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 12:15 | ON | N22.16652 E113.87796 | 70 m | 0:00:18 | 14 kph |
| 7/6/2016 12:15 | ON | N22.16722 E113.87792 | 78 m | 0:00:20 | 14 kph |
| 7/6/2016 12:15 | ON | N22.16781 E113.87794 | 66 m | 0:00:17 | 14 kph |
| 7/6/2016 12:16 | ON | N22.16834 E113.87798 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 12:16 | ON | N22.16890 E113.87799 | 62 m | 0:00:16 | 14 kph |
| 7/6/2016 12:16 | ON | N22.16956 E113.87798 | 73 m | 0:00:19 | 14 kph |
| 7/6/2016 12:16 | ON | N22.17026 E113.87798 | 78 m | 0:00:20 | 14 kph |
| 7/6/2016 12:17 | ON | N22.17098 E113.87798 | 80 m | 0:00:20 | 14 kph |
| 7/6/2016 12:17 | ON | N22.17166 E113.87798 | 76 m | 0:00:19 | 14 kph |
| 7/6/2016 12:17 | ON | N22.17238 E113.87802 | 80 m | 0:00:20 | 14 kph |
| 7/6/2016 12:18 | ON | N22.17303 E113.87802 | 72 m | 0:00:18 | 14 kph |
| 7/6/2016 12:18 | ON | N22.17363 E113.87802 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 12:18 | ON | N22.17437 E113.87805 | 83 m | 0:00:21 | 14 kph |
| 7/6/2016 12:19 | ON | N22.17490 E113.87805 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 12:19 | ON | N22.17553 E113.87800 | 70 m | 0:00:18 | 14 kph |
| 7/6/2016 12:19 | ON | N22.17606 E113.87798 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 12:19 | ON | N22.17677 E113.87797 | 79 m | 0:00:20 | 14 kph |
| 7/6/2016 12:20 | ON | N22.17744 E113.87798 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 12:20 | ON | N22.17802 E113.87804 | 64 m | 0:00:16 | 14 kph |
| 7/6/2016 12:20 | ON | N22.17873 E113.87808 | 80 m | 0:00:20 | 14 kph |
| 7/6/2016 12:21 | ON | N22.17952 E113.87812 | 87 m | 0:00:22 | 14 kph |
| 7/6/2016 12:21 | ON | N22.18019 E113.87817 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 12:21 | ON | N22.18087 E113.87810 | 77 m | 0:00:20 | 14 kph |
| 7/6/2016 12:22 | ON | N22.18151 E113.87806 | 70 m | 0:00:18 | 14 kph |
| 7/6/2016 12:22 | ON | N22.18211 E113.87806 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 12:22 | ON | N22.18279 E113.87805 | 76 m | 0:00:19 | 14 kph |
| 7/6/2016 12:23 | ON | N22.18341 E113.87806 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 12:23 | ON | N22.18407 E113.87809 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 12:23 | ON | N22.18478 E113.87807 | 80 m | 0:00:20 | 14 kph |
| 7/6/2016 12:24 | ON | N22.18551 E113.87806 | 81 m | 0:00:20 | 15 kph |
| 7/6/2016 12:24 | ON | N22.18620 E113.87808 | 77 m | 0:00:19 | 15 kph |
| 7/6/2016 12:24 | ON | N22.18678 E113.87807 | 64 m | 0:00:16 | 14 kph |
| 7/6/2016 12:24 | ON | N22.18729 E113.87806 | 56 m | 0:00:14 | 15 kph |
| 7/6/2016 12:25 | ON | N22.18790 E113.87806 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 12:25 | ON | N22.18856 E113.87806 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 12:25 | ON | N22.18921 E113.87808 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 12:26 | ON | N22.18979 E113.87810 | 64 m | 0:00:16 | 14 kph |
| 7/6/2016 12:26 | ON | N22.19052 E113.87811 | 82 m | 0:00:20 | 15 kph |
| 7/6/2016 12:26 | ON | N22.19113 E113.87804 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 12:27 | ON | N22.19188 E113.87799 | 84 m | 0:00:21 | 14 kph |
| 7/6/2016 12:27 | ON | N22.19253 E113.87798 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 12:27 | ON | N22.19323 E113.87802 | 78 m | 0:00:19 | 15 kph |
| 7/6/2016 12:27 | ON | N22.19397 E113.87810 | 82 m | 0:00:20 | 15 kph |
| 7/6/2016 12:28 | ON | N22.19473 E113.87809 | 85 m | 0:00:21 | 15 kph |
| 7/6/2016 12:28 | ON | N22.19542 E113.87813 | 77 m | 0:00:19 | 15 kph |
| 7/6/2016 12:28 | ON | N22.19616 E113.87815 | 82 m | 0:00:20 | 15 kph |
| 7/6/2016 12:29 | ON | N22.19691 E113.87803 | 84 m | 0:00:21 | 14 kph |
| 7/6/2016 12:29 | ON | N22.19749 E113.87804 | 65 m | 0:00:16 | 15 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 12:29 | ON | N22.19816 E113.87812 | 75 m | 0:00:18 | 15 kph |
| 7/6/2016 12:30 | ON | N22.19886 E113.87816 | 78 m | 0:00:19 | 15 kph |
| 7/6/2016 12:30 | ON | N22.19962 E113.87809 | 85 m | 0:00:21 | 15 kph |
| 7/6/2016 12:30 | ON | N22.20025 E113.87807 | 70 m | 0:00:17 | 15 kph |
| 7/6/2016 12:31 | ON | N22.20095 E113.87805 | 78 m | 0:00:19 | 15 kph |
| 7/6/2016 12:31 | ON | N22.20169 E113.87808 | 83 m | 0:00:20 | 15 kph |
| 7/6/2016 12:31 | ON | N22.20241 E113.87816 | 80 m | 0:00:19 | 15 kph |
| 7/6/2016 12:32 | ON | N22.20315 E113.87809 | 82 m | 0:00:20 | 15 kph |
| 7/6/2016 12:32 | ON | N22.20382 E113.87804 | 75 m | 0:00:18 | 15 kph |
| 7/6/2016 12:32 | ON | N22.20457 E113.87803 | 84 m | 0:00:20 | 15 kph |
| 7/6/2016 12:33 | ON | N22.20540 E113.87803 | 93 m | 0:00:22 | 15 kph |
| 7/6/2016 12:33 | ON | N22.20601 E113.87805 | 68 m | 0:00:16 | 15 kph |
| 7/6/2016 12:33 | ON | N22.20659 E113.87807 | 64 m | 0:00:15 | 15 kph |
| 7/6/2016 12:33 | ON | N22.20714 E113.87836 | 68 m | 0:00:16 | 15 kph |
| 7/6/2016 12:34 | ON | N22.20734 E113.87857 | 31 m | 0:00:07 | 16 kph |
| 7/6/2016 12:34 | ON | N22.20786 E113.87918 | 86 m | 0:00:19 | 16 kph |
| 7/6/2016 12:34 | ON | N22.20843 E113.87981 | 91 m | 0:00:20 | 16 kph |
| 7/6/2016 12:34 | ON | N22.20896 E113.88041 | 85 m | 0:00:19 | 16 kph |
| 7/6/2016 12:35 | ON | N22.20955 E113.88107 | 95 m | 0:00:21 | 16 kph |
| 7/6/2016 12:35 | ON | N22.21012 E113.88170 | 90 m | 0:00:20 | 16 kph |
| 7/6/2016 12:36 | ON | N22.21065 E113.88234 | 89 m | 0:00:20 | 16 kph |
| 7/6/2016 12:36 | ON | N22.21068 E113.88238 | 4 m | 0:00:01 | 16 kph |
| 7/6/2016 12:36 | ON | N22.21125 E113.88307 | 96 m | 0:00:22 | 16 kph |
| 7/6/2016 12:36 | ON | N22.21187 E113.88369 | 94 m | 0:00:22 | 15 kph |
| 7/6/2016 12:37 | ON | N22.21251 E113.88429 | 94 m | 0:00:22 | 15 kph |
| 7/6/2016 12:37 | ON | N22.21299 E113.88481 | 76 m | 0:00:18 | 15 kph |
| 7/6/2016 12:37 | ON | N22.21345 E113.88546 | 84 m | 0:00:20 | 15 kph |
| 7/6/2016 12:38 | ON | N22.21399 E113.88615 | 93 m | 0:00:22 | 15 kph |
| 7/6/2016 12:38 | ON | N22.21457 E113.88685 | 96 m | 0:00:23 | 15 kph |
| 7/6/2016 12:38 | ON | N22.21516 E113.88753 | 96 m | 0:00:23 | 15 kph |
| 7/6/2016 12:39 | ON | N22.21534 E113.88793 | 45 m | 0:00:14 | 12 kph |
| 7/6/2016 12:39 | ON | N22.21511 E113.88801 | 26 m | 0:00:13 | 7 kph |
| 7/6/2016 12:39 | ON | N22.21458 E113.88794 | 60 m | 0:00:18 | 12 kph |
| 7/6/2016 12:39 | ON | N22.21400 E113.88799 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 12:40 | ON | N22.21344 E113.88800 | 62 m | 0:00:17 | 13 kph |
| 7/6/2016 12:40 | ON | N22.21279 E113.88808 | 73 m | 0:00:20 | 13 kph |
| 7/6/2016 12:40 | ON | N22.21220 E113.88812 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 12:41 | ON | N22.21155 E113.88816 | 73 m | 0:00:20 | 13 kph |
| 7/6/2016 12:41 | ON | N22.21099 E113.88819 | 62 m | 0:00:17 | 13 kph |
| 7/6/2016 12:41 | ON | N22.21047 E113.88814 | 58 m | 0:00:16 | 13 kph |
| 7/6/2016 12:42 | ON | N22.20995 E113.88814 | 58 m | 0:00:16 | 13 kph |
| 7/6/2016 12:42 | ON | N22.20926 E113.88814 | 77 m | 0:00:21 | 13 kph |
| 7/6/2016 12:42 | ON | N22.20853 E113.88817 | 81 m | 0:00:22 | 13 kph |
| 7/6/2016 12:43 | ON | N22.20783 E113.88820 | 78 m | 0:00:21 | 13 kph |
| 7/6/2016 12:43 | ON | N22.20723 E113.88827 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 12:43 | ON | N22.20672 E113.88836 | 57 m | 0:00:16 | 13 kph |
| 7/6/2016 12:43 | ON | N22.20633 E113.88830 | 44 m | 0:00:13 | 12 kph |
| 7/6/2016 12:44 | ON | N22.20586 E113.88826 | 52 m | 0:00:15 | 13 kph |
| 7/6/2016 12:44 | ON | N22.20532 E113.88827 | 60 m | 0:00:17 | 13 kph |
| 7/6/2016 12:44 | ON | N22.20477 E113.88827 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 12:44 | ON | N22.20429 E113.88825 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 12:45 | ON | N22.20379 E113.88825 | 56 m | 0:00:16 | 13 kph |
| 7/6/2016 12:45 | ON | N22.20325 E113.88827 | 60 m | 0:00:17 | 13 kph |
| 7/6/2016 12:45 | ON | N22.20268 E113.88826 | 63 m | 0:00:18 | 13 kph |
| 7/6/2016 12:46 | ON | N22.20208 E113.88827 | 67 m | 0:00:19 | 13 kph |
| 7/6/2016 12:46 | ON | N22.20160 E113.88834 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 12:46 | ON | N22.20104 E113.88827 | 63 m | 0:00:18 | 13 kph |
| 7/6/2016 12:46 | ON | N22.20061 E113.88821 | 48 m | 0:00:14 | 12 kph |
| 7/6/2016 12:47 | ON | N22.19997 E113.88817 | 70 m | 0:00:20 | 13 kph |
| 7/6/2016 12:47 | ON | N22.19930 E113.88817 | 75 m | 0:00:21 | 13 kph |
| 7/6/2016 12:47 | ON | N22.19873 E113.88821 | 64 m | 0:00:18 | 13 kph |
| 7/6/2016 12:48 | ON | N22.19812 E113.88823 | 68 m | 0:00:19 | 13 kph |
| 7/6/2016 12:48 | ON | N22.19771 E113.88825 | 46 m | 0:00:13 | 13 kph |
| 7/6/2016 12:48 | ON | N22.19729 E113.88825 | 46 m | 0:00:13 | 13 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 12:48 | ON | N22.19668 E113.88825 | 68 m | 0:00:19 | 13 kph |
| 7/6/2016 12:49 | ON | N22.19621 E113.88828 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 12:49 | ON | N22.19581 E113.88832 | 44 m | 0:00:15 | 11 kph |
| 7/6/2016 12:49 | ON | N22.19536 E113.88837 | 51 m | 0:00:17 | 11 kph |
| 7/6/2016 12:49 | ON | N22.19509 E113.88840 | 30 m | 0:00:11 | 10 kph |
| 7/6/2016 12:50 | ON | N22.19452 E113.88839 | 63 m | 0:00:18 | 13 kph |
| 7/6/2016 12:50 | ON | N22.19402 E113.88829 | 57 m | 0:00:16 | 13 kph |
| 7/6/2016 12:50 | ON | N22.19344 E113.88825 | 64 m | 0:00:17 | 14 kph |
| 7/6/2016 12:51 | ON | N22.19293 E113.88823 | 57 m | 0:00:16 | 13 kph |
| 7/6/2016 12:51 | ON | N22.19226 E113.88819 | 74 m | 0:00:21 | 13 kph |
| 7/6/2016 12:51 | ON | N22.19169 E113.88820 | 64 m | 0:00:18 | 13 kph |
| 7/6/2016 12:51 | ON | N22.19111 E113.88822 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 12:52 | ON | N22.19048 E113.88821 | 71 m | 0:00:20 | 13 kph |
| 7/6/2016 12:52 | ON | N22.18996 E113.88820 | 57 m | 0:00:16 | 13 kph |
| 7/6/2016 12:52 | ON | N22.18942 E113.88816 | 60 m | 0:00:17 | 13 kph |
| 7/6/2016 12:53 | ON | N22.18879 E113.88814 | 71 m | 0:00:20 | 13 kph |
| 7/6/2016 12:53 | ON | N22.18824 E113.88824 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 12:53 | ON | N22.18760 E113.88827 | 72 m | 0:00:20 | 13 kph |
| 7/6/2016 12:54 | ON | N22.18697 E113.88821 | 70 m | 0:00:20 | 13 kph |
| 7/6/2016 12:54 | ON | N22.18633 E113.88822 | 71 m | 0:00:20 | 13 kph |
| 7/6/2016 12:54 | ON | N22.18579 E113.88821 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 12:55 | ON | N22.18512 E113.88821 | 74 m | 0:00:21 | 13 kph |
| 7/6/2016 12:55 | ON | N22.18452 E113.88818 | 67 m | 0:00:19 | 13 kph |
| 7/6/2016 12:55 | ON | N22.18396 E113.88814 | 63 m | 0:00:18 | 13 kph |
| 7/6/2016 12:56 | ON | N22.18339 E113.88811 | 63 m | 0:00:18 | 13 kph |
| 7/6/2016 12:56 | ON | N22.18278 E113.88813 | 68 m | 0:00:19 | 13 kph |
| 7/6/2016 12:56 | ON | N22.18214 E113.88819 | 72 m | 0:00:20 | 13 kph |
| 7/6/2016 12:57 | ON | N22.18142 E113.88823 | 80 m | 0:00:22 | 13 kph |
| 7/6/2016 12:57 | ON | N22.18084 E113.88831 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 12:57 | ON | N22.18031 E113.88826 | 60 m | 0:00:17 | 13 kph |
| 7/6/2016 12:57 | ON | N22.17970 E113.88823 | 67 m | 0:00:19 | 13 kph |
| 7/6/2016 12:58 | ON | N22.17909 E113.88828 | 69 m | 0:00:19 | 13 kph |
| 7/6/2016 12:58 | ON | N22.17851 E113.88825 | 64 m | 0:00:18 | 13 kph |
| 7/6/2016 12:58 | ON | N22.17799 E113.88825 | 59 m | 0:00:16 | 13 kph |
| 7/6/2016 12:59 | ON | N22.17739 E113.88825 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 12:59 | ON | N22.17681 E113.88827 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 12:59 | ON | N22.17622 E113.88828 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 13:00 | ON | N22.17562 E113.88828 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 13:00 | ON | N22.17506 E113.88828 | 63 m | 0:00:17 | 13 kph |
| 7/6/2016 13:00 | ON | N22.17449 E113.88824 | 63 m | 0:00:17 | 13 kph |
| 7/6/2016 13:00 | ON | N22.17399 E113.88822 | 56 m | 0:00:15 | 13 kph |
| 7/6/2016 13:01 | ON | N22.17346 E113.88818 | 60 m | 0:00:16 | 14 kph |
| 7/6/2016 13:01 | ON | N22.17273 E113.88815 | 81 m | 0:00:21 | 14 kph |
| 7/6/2016 13:01 | ON | N22.17207 E113.88816 | 73 m | 0:00:19 | 14 kph |
| 7/6/2016 13:02 | ON | N22.17137 E113.88814 | 78 m | 0:00:20 | 14 kph |
| 7/6/2016 13:02 | ON | N22.17063 E113.88825 | 84 m | 0:00:21 | 14 kph |
| 7/6/2016 13:02 | ON | N22.16999 E113.88830 | 72 m | 0:00:18 | 14 kph |
| 7/6/2016 13:03 | ON | N22.16939 E113.88831 | 66 m | 0:00:17 | 14 kph |
| 7/6/2016 13:03 | ON | N22.16869 E113.88825 | 78 m | 0:00:20 | 14 kph |
| 7/6/2016 13:03 | ON | N22.16808 E113.88826 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 13:03 | ON | N22.16748 E113.88826 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 13:04 | ON | N22.16672 E113.88826 | 84 m | 0:00:21 | 14 kph |
| 7/6/2016 13:04 | ON | N22.16618 E113.88824 | 60 m | 0:00:15 | 14 kph |
| 7/6/2016 13:04 | ON | N22.16564 E113.88823 | 61 m | 0:00:15 | 15 kph |
| 7/6/2016 13:05 | ON | N22.16495 E113.88822 | 77 m | 0:00:19 | 15 kph |
| 7/6/2016 13:05 | ON | N22.16429 E113.88823 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 13:05 | ON | N22.16358 E113.88828 | 79 m | 0:00:19 | 15 kph |
| 7/6/2016 13:05 | ON | N22.16300 E113.88832 | 65 m | 0:00:16 | 15 kph |
| 7/6/2016 13:06 | ON | N22.16243 E113.88825 | 63 m | 0:00:16 | 14 kph |
| 7/6/2016 13:06 | ON | N22.16192 E113.88813 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 13:06 | ON | N22.16144 E113.88815 | 53 m | 0:00:13 | 15 kph |
| 7/6/2016 13:07 | ON | N22.16074 E113.88824 | 79 m | 0:00:19 | 15 kph |
| 7/6/2016 13:07 | ON | N22.16018 E113.88828 | 63 m | 0:00:15 | 15 kph |
| 7/6/2016 13:07 | ON | N22.15962 E113.88833 | 62 m | 0:00:15 | 15 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 13:07 | ON | N22.15899 E113.88844 | 72 m | 0:00:17 | 15 kph |
| 7/6/2016 13:08 | ON | N22.15843 E113.88847 | 61 m | 0:00:15 | 15 kph |
| 7/6/2016 13:08 | ON | N22.15791 E113.88837 | 60 m | 0:00:15 | 14 kph |
| 7/6/2016 13:08 | ON | N22.15727 E113.88824 | 72 m | 0:00:18 | 14 kph |
| 7/6/2016 13:08 | ON | N22.15669 E113.88821 | 65 m | 0:00:16 | 15 kph |
| 7/6/2016 13:09 | ON | N22.15614 E113.88829 | 62 m | 0:00:15 | 15 kph |
| 7/6/2016 13:09 | ON | N22.15563 E113.88829 | 57 m | 0:00:14 | 15 kph |
| 7/6/2016 13:09 | ON | N22.15496 E113.88830 | 74 m | 0:00:18 | 15 kph |
| 7/6/2016 13:09 | ON | N22.15426 E113.88826 | 77 m | 0:00:19 | 15 kph |
| 7/6/2016 13:10 | ON | N22.15374 E113.88824 | 58 m | 0:00:14 | 15 kph |
| 7/6/2016 13:10 | ON | N22.15315 E113.88825 | 66 m | 0:00:16 | 15 kph |
| 7/6/2016 13:10 | ON | N22.15257 E113.88824 | 65 m | 0:00:16 | 15 kph |
| 7/6/2016 13:10 | ON | N22.15205 E113.88823 | 57 m | 0:00:14 | 15 kph |
| 7/6/2016 13:11 | ON | N22.15143 E113.88822 | 70 m | 0:00:17 | 15 kph |
| 7/6/2016 13:11 | ON | N22.15077 E113.88829 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 13:11 | ON | N22.15040 E113.88872 | 61 m | 0:00:15 | 15 kph |
| 7/6/2016 13:12 | ON | N22.15012 E113.88953 | 90 m | 0:00:21 | 15 kph |
| 7/6/2016 13:12 | ON | N22.15001 E113.89018 | 68 m | 0:00:16 | 15 kph |
| 7/6/2016 13:12 | ON | N22.14981 E113.89085 | 73 m | 0:00:17 | 15 kph |
| 7/6/2016 13:13 | ON | N22.14949 E113.89152 | 77 m | 0:00:18 | 15 kph |
| 7/6/2016 13:13 | ON | N22.14917 E113.89198 | 59 m | 0:00:14 | 15 kph |
| 7/6/2016 13:13 | ON | N22.14872 E113.89243 | 68 m | 0:00:16 | 15 kph |
| 7/6/2016 13:13 | ON | N22.14851 E113.89291 | 55 m | 0:00:14 | 14 kph |
| 7/6/2016 13:14 | ON | N22.14848 E113.89363 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 13:14 | ON | N22.14856 E113.89421 | 61 m | 0:00:15 | 15 kph |
| 7/6/2016 13:14 | ON | N22.14860 E113.89491 | 72 m | 0:00:18 | 14 kph |
| 7/6/2016 13:14 | ON | N22.14857 E113.89555 | 66 m | 0:00:16 | 15 kph |
| 7/6/2016 13:15 | ON | N22.14857 E113.89615 | 61 m | 0:00:15 | 15 kph |
| 7/6/2016 13:15 | ON | N22.14864 E113.89670 | 58 m | 0:00:14 | 15 kph |
| 7/6/2016 13:15 | ON | N22.14885 E113.89712 | 50 m | 0:00:14 | 13 kph |
| 7/6/2016 13:15 | ON | N22.14932 E113.89723 | 53 m | 0:00:16 | 12 kph |
| 7/6/2016 13:16 | ON | N22.14986 E113.89727 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 13:16 | ON | N22.15039 E113.89722 | 59 m | 0:00:17 | 13 kph |
| 7/6/2016 13:16 | ON | N22.15099 E113.89718 | 66 m | 0:00:19 | 13 kph |
| 7/6/2016 13:16 | ON | N22.15143 E113.89723 | 49 m | 0:00:14 | 13 kph |
| 7/6/2016 13:17 | ON | N22.15206 E113.89726 | 70 m | 0:00:20 | 13 kph |
| 7/6/2016 13:17 | ON | N22.15256 E113.89723 | 55 m | 0:00:16 | 12 kph |
| 7/6/2016 13:17 | ON | N22.15319 E113.89723 | 71 m | 0:00:20 | 13 kph |
| 7/6/2016 13:18 | ON | N22.15360 E113.89724 | 45 m | 0:00:13 | 13 kph |
| 7/6/2016 13:18 | ON | N22.15418 E113.89723 | 65 m | 0:00:19 | 12 kph |
| 7/6/2016 13:18 | ON | N22.15460 E113.89723 | 47 m | 0:00:14 | 12 kph |
| 7/6/2016 13:18 | ON | N22.15512 E113.89725 | 57 m | 0:00:17 | 12 kph |
| 7/6/2016 13:19 | ON | N22.15559 E113.89722 | 53 m | 0:00:16 | 12 kph |
| 7/6/2016 13:19 | ON | N22.15606 E113.89718 | 52 m | 0:00:16 | 12 kph |
| 7/6/2016 13:19 | ON | N22.15663 E113.89717 | 64 m | 0:00:19 | 12 kph |
| 7/6/2016 13:20 | ON | N22.15706 E113.89720 | 47 m | 0:00:14 | 12 kph |
| 7/6/2016 13:20 | ON | N22.15758 E113.89720 | 59 m | 0:00:18 | 12 kph |
| 7/6/2016 13:20 | ON | N22.15813 E113.89715 | 61 m | 0:00:19 | 12 kph |
| 7/6/2016 13:20 | ON | N22.15872 E113.89719 | 66 m | 0:00:20 | 12 kph |
| 7/6/2016 13:21 | ON | N22.15932 E113.89716 | 67 m | 0:00:21 | 12 kph |
| 7/6/2016 13:21 | ON | N22.15988 E113.89717 | 62 m | 0:00:19 | 12 kph |
| 7/6/2016 13:21 | ON | N22.16044 E113.89720 | 63 m | 0:00:19 | 12 kph |
| 7/6/2016 13:22 | ON | N22.16117 E113.89721 | 81 m | 0:00:24 | 12 kph |
| 7/6/2016 13:22 | ON | N22.16178 E113.89722 | 68 m | 0:00:20 | 12 kph |
| 7/6/2016 13:22 | ON | N22.16233 E113.89721 | 61 m | 0:00:18 | 12 kph |
| 7/6/2016 13:23 | ON | N22.16285 E113.89718 | 59 m | 0:00:17 | 12 kph |
| 7/6/2016 13:23 | ON | N22.16347 E113.89719 | 69 m | 0:00:20 | 12 kph |
| 7/6/2016 13:23 | ON | N22.16413 E113.89724 | 74 m | 0:00:21 | 13 kph |
| 7/6/2016 13:24 | ON | N22.16483 E113.89724 | 77 m | 0:00:22 | 13 kph |
| 7/6/2016 13:24 | ON | N22.16554 E113.89730 | 79 m | 0:00:22 | 13 kph |
| 7/6/2016 13:25 | ON | N22.16622 E113.89733 | 75 m | 0:00:21 | 13 kph |
| 7/6/2016 13:25 | ON | N22.16686 E113.89730 | 71 m | 0:00:20 | 13 kph |
| 7/6/2016 13:25 | ON | N22.16750 E113.89730 | 72 m | 0:00:20 | 13 kph |
| 7/6/2016 13:26 | ON | N22.16815 E113.89730 | 72 m | 0:00:20 | 13 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 13:26 | ON | N22.16882 E113.89724 | 75 m | 0:00:21 | 13 kph |
| 7/6/2016 13:26 | ON | N22.16937 E113.89722 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 13:27 | ON | N22.17015 E113.89720 | 87 m | 0:00:24 | 13 kph |
| 7/6/2016 13:27 | ON | N22.17092 E113.89718 | 86 m | 0:00:24 | 13 kph |
| 7/6/2016 13:27 | ON | N22.17169 E113.89715 | 85 m | 0:00:24 | 13 kph |
| 7/6/2016 13:28 | ON | N22.17229 E113.89713 | 68 m | 0:00:19 | 13 kph |
| 7/6/2016 13:28 | ON | N22.17295 E113.89719 | 73 m | 0:00:20 | 13 kph |
| 7/6/2016 13:28 | ON | N22.17369 E113.89721 | 83 m | 0:00:22 | 14 kph |
| 7/6/2016 13:29 | ON | N22.17433 E113.89721 | 72 m | 0:00:19 | 14 kph |
| 7/6/2016 13:29 | ON | N22.17489 E113.89726 | 62 m | 0:00:16 | 14 kph |
| 7/6/2016 13:29 | ON | N22.17560 E113.89729 | 79 m | 0:00:20 | 14 kph |
| 7/6/2016 13:30 | ON | N22.17627 E113.89725 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 13:30 | ON | N22.17697 E113.89726 | 78 m | 0:00:20 | 14 kph |
| 7/6/2016 13:30 | ON | N22.17771 E113.89728 | 82 m | 0:00:21 | 14 kph |
| 7/6/2016 13:31 | ON | N22.17834 E113.89727 | 70 m | 0:00:18 | 14 kph |
| 7/6/2016 13:31 | ON | N22.17903 E113.89727 | 77 m | 0:00:20 | 14 kph |
| 7/6/2016 13:31 | ON | N22.17964 E113.89724 | 68 m | 0:00:18 | 14 kph |
| 7/6/2016 13:32 | ON | N22.18044 E113.89724 | 89 m | 0:00:23 | 14 kph |
| 7/6/2016 13:32 | ON | N22.18115 E113.89721 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 13:32 | ON | N22.18186 E113.89721 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 13:33 | ON | N22.18264 E113.89722 | 87 m | 0:00:23 | 14 kph |
| 7/6/2016 13:33 | ON | N22.18342 E113.89720 | 87 m | 0:00:23 | 14 kph |
| 7/6/2016 13:33 | ON | N22.18410 E113.89719 | 75 m | 0:00:20 | 14 kph |
| 7/6/2016 13:34 | ON | N22.18485 E113.89720 | 84 m | 0:00:22 | 14 kph |
| 7/6/2016 13:34 | ON | N22.18564 E113.89720 | 88 m | 0:00:23 | 14 kph |
| 7/6/2016 13:34 | ON | N22.18630 E113.89716 | 73 m | 0:00:19 | 14 kph |
| 7/6/2016 13:35 | ON | N22.18686 E113.89718 | 63 m | 0:00:16 | 14 kph |
| 7/6/2016 13:35 | ON | N22.18743 E113.89722 | 64 m | 0:00:16 | 14 kph |
| 7/6/2016 13:35 | ON | N22.18796 E113.89724 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 13:36 | ON | N22.18863 E113.89727 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 13:36 | ON | N22.18911 E113.89730 | 53 m | 0:00:14 | 14 kph |
| 7/6/2016 13:36 | OFF | N22.18946 E113.89730 | 39 m | 0:00:14 | 10 kph |
| 7/6/2016 13:36 | OFF | N22.18977 E113.89731 | 35 m | 0:00:20 | 6 kph |
| 7/6/2016 13:37 | OFF | N22.18986 E113.89732 | 10 m | 0:00:08 | 5 kph |
| 7/6/2016 13:37 | OFF | N22.19001 E113.89737 | 17 m | 0:00:15 | 4 kph |
| 7/6/2016 13:37 | OFF | N22.19019 E113.89744 | 22 m | 0:00:21 | 4 kph |
| 7/6/2016 13:37 | OFF | N22.19032 E113.89751 | 16 m | 0:00:18 | 3 kph |
| 7/6/2016 13:38 | OFF | N22.19043 E113.89759 | 14 m | 0:00:16 | 3 kph |
| 7/6/2016 13:38 | OFF | N22.19052 E113.89765 | 12 m | 0:00:13 | 3 kph |
| 7/6/2016 13:38 | OFF | N22.19078 E113.89789 | 38 m | 0:00:16 | 8 kph |
| 7/6/2016 13:38 | OFF | N22.19086 E113.89834 | 48 m | 0:00:16 | 11 kph |
| 7/6/2016 13:39 | OFF | N22.19087 E113.89892 | 60 m | 0:00:19 | 11 kph |
| 7/6/2016 13:39 | OFF | N22.19083 E113.89958 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 13:39 | OFF | N22.19075 E113.90045 | 90 m | 0:00:21 | 15 kph |
| 7/6/2016 13:40 | OFF | N22.19066 E113.90139 | 98 m | 0:00:23 | 15 kph |
| 7/6/2016 13:40 | OFF | N22.19057 E113.90222 | 86 m | 0:00:20 | 16 kph |
| 7/6/2016 13:40 | OFF | N22.19050 E113.90306 | 87 m | 0:00:20 | 16 kph |
| 7/6/2016 13:41 | OFF | N22.19047 E113.90369 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 13:41 | OFF | N22.19048 E113.90418 | 50 m | 0:00:19 | 10 kph |
| 7/6/2016 13:41 | OFF | N22.19037 E113.90474 | 58 m | 0:00:21 | 10 kph |
| 7/6/2016 13:42 | OFF | N22.19015 E113.90540 | 73 m | 0:00:26 | 10 kph |
| 7/6/2016 13:42 | OFF | N22.18997 E113.90591 | 56 m | 0:00:18 | 11 kph |
| 7/6/2016 13:42 | OFF | N22.18983 E113.90646 | 59 m | 0:00:20 | 11 kph |
| 7/6/2016 13:43 | OFF | N22.18980 E113.90682 | 37 m | 0:00:19 | 7 kph |
| 7/6/2016 13:43 | OFF | N22.18981 E113.90712 | 31 m | 0:00:22 | 5 kph |
| 7/6/2016 13:43 | OFF | N22.18980 E113.90739 | 28 m | 0:00:19 | 5 kph |
| 7/6/2016 13:44 | OFF | N22.18971 E113.90789 | 52 m | 0:00:19 | 10 kph |
| 7/6/2016 13:44 | OFF | N22.18953 E113.90857 | 73 m | 0:00:22 | 12 kph |
| 7/6/2016 13:45 | OFF | N22.18928 E113.90911 | 62 m | 0:00:21 | 11 kph |
| 7/6/2016 13:45 | OFF | N22.18907 E113.90951 | 48 m | 0:00:25 | 7 kph |
| 7/6/2016 13:45 | OFF | N22.18894 E113.90973 | 26 m | 0:00:20 | 5 kph |
| 7/6/2016 13:46 | OFF | N22.18886 E113.90987 | 17 m | 0:00:16 | 4 kph |
| 7/6/2016 13:46 | OFF | N22.18878 E113.91000 | 17 m | 0:00:18 | 3 kph |
| 7/6/2016 13:46 | OFF | N22.18862 E113.91018 | 25 m | 0:00:14 | 7 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 13:46 | OFF | N22.18863 E113.91059 | 42 m | 0:00:14 | 11 kph |
| 7/6/2016 13:47 | OFF | N22.18891 E113.91068 | 34 m | 0:00:13 | 9 kph |
| 7/6/2016 13:47 | OFF | N22.18916 E113.91042 | 39 m | 0:00:15 | 9 kph |
| 7/6/2016 13:47 | OFF | N22.18936 E113.90986 | 62 m | 0:00:22 | 10 kph |
| 7/6/2016 13:47 | OFF | N22.18939 E113.90953 | 35 m | 0:00:12 | 10 kph |
| 7/6/2016 13:48 | OFF | N22.18943 E113.90895 | 60 m | 0:00:21 | 10 kph |
| 7/6/2016 13:48 | OFF | N22.18943 E113.90845 | 52 m | 0:00:18 | 10 kph |
| 7/6/2016 13:48 | OFF | N22.18940 E113.90793 | 53 m | 0:00:18 | 11 kph |
| 7/6/2016 13:49 | OFF | N22.18941 E113.90735 | 60 m | 0:00:20 | 11 kph |
| 7/6/2016 13:49 | OFF | N22.18948 E113.90668 | 69 m | 0:00:22 | 11 kph |
| 7/6/2016 13:49 | OFF | N22.18950 E113.90605 | 65 m | 0:00:20 | 12 kph |
| 7/6/2016 13:50 | OFF | N22.18955 E113.90535 | 72 m | 0:00:23 | 11 kph |
| 7/6/2016 13:50 | OFF | N22.18960 E113.90473 | 65 m | 0:00:21 | 11 kph |
| 7/6/2016 13:50 | OFF | N22.18963 E113.90410 | 65 m | 0:00:21 | 11 kph |
| 7/6/2016 13:51 | OFF | N22.18969 E113.90338 | 74 m | 0:00:24 | 11 kph |
| 7/6/2016 13:51 | OFF | N22.18969 E113.90287 | 53 m | 0:00:18 | 11 kph |
| 7/6/2016 13:51 | OFF | N22.18972 E113.90217 | 72 m | 0:00:23 | 11 kph |
| 7/6/2016 13:52 | OFF | N22.18971 E113.90145 | 74 m | 0:00:24 | 11 kph |
| 7/6/2016 13:52 | OFF | N22.18974 E113.90073 | 74 m | 0:00:24 | 11 kph |
| 7/6/2016 13:53 | OFF | N22.18978 E113.90018 | 57 m | 0:00:19 | 11 kph |
| 7/6/2016 13:53 | OFF | N22.18984 E113.89969 | 51 m | 0:00:17 | 11 kph |
| 7/6/2016 13:53 | OFF | N22.18988 E113.89913 | 58 m | 0:00:19 | 11 kph |
| 7/6/2016 13:53 | OFF | N22.18989 E113.89878 | 36 m | 0:00:12 | 11 kph |
| 7/6/2016 13:54 | OFF | N22.18994 E113.89829 | 51 m | 0:00:17 | 11 kph |
| 7/6/2016 13:54 | OFF | N22.18996 E113.89791 | 39 m | 0:00:13 | 11 kph |
| 7/6/2016 13:54 | ON | N22.19003 E113.89758 | 35 m | 0:00:12 | 10 kph |
| 7/6/2016 13:54 | ON | N22.19031 E113.89747 | 34 m | 0:00:12 | 10 kph |
| 7/6/2016 13:55 | ON | N22.19088 E113.89750 | 63 m | 0:00:17 | 13 kph |
| 7/6/2016 13:55 | ON | N22.19145 E113.89735 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 13:55 | ON | N22.19209 E113.89722 | 73 m | 0:00:20 | 13 kph |
| 7/6/2016 13:56 | ON | N22.19273 E113.89734 | 72 m | 0:00:18 | 14 kph |
| 7/6/2016 13:56 | ON | N22.19354 E113.89725 | 91 m | 0:00:24 | 14 kph |
| 7/6/2016 13:56 | ON | N22.19424 E113.89712 | 79 m | 0:00:21 | 13 kph |
| 7/6/2016 13:57 | ON | N22.19490 E113.89710 | 74 m | 0:00:19 | 14 kph |
| 7/6/2016 13:57 | ON | N22.19547 E113.89714 | 63 m | 0:00:16 | 14 kph |
| 7/6/2016 13:57 | ON | N22.19608 E113.89725 | 69 m | 0:00:17 | 15 kph |
| 7/6/2016 13:57 | ON | N22.19675 E113.89725 | 75 m | 0:00:20 | 13 kph |
| 7/6/2016 13:58 | ON | N22.19750 E113.89727 | 84 m | 0:00:22 | 14 kph |
| 7/6/2016 13:58 | ON | N22.19823 E113.89723 | 81 m | 0:00:22 | 13 kph |
| 7/6/2016 13:59 | ON | N22.19893 E113.89725 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 13:59 | ON | N22.19961 E113.89725 | 75 m | 0:00:20 | 14 kph |
| 7/6/2016 13:59 | ON | N22.20046 E113.89718 | 94 m | 0:00:25 | 14 kph |
| 7/6/2016 14:00 | ON | N22.20117 E113.89716 | 80 m | 0:00:21 | 14 kph |
| 7/6/2016 14:00 | ON | N22.20183 E113.89716 | 73 m | 0:00:19 | 14 kph |
| 7/6/2016 14:00 | ON | N22.20267 E113.89717 | 94 m | 0:00:24 | 14 kph |
| 7/6/2016 14:01 | ON | N22.20333 E113.89722 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 14:01 | ON | N22.20403 E113.89724 | 79 m | 0:00:20 | 14 kph |
| 7/6/2016 14:01 | ON | N22.20474 E113.89722 | 78 m | 0:00:20 | 14 kph |
| 7/6/2016 14:02 | ON | N22.20548 E113.89725 | 82 m | 0:00:21 | 14 kph |
| 7/6/2016 14:02 | ON | N22.20603 E113.89725 | 62 m | 0:00:16 | 14 kph |
| 7/6/2016 14:02 | ON | N22.20671 E113.89724 | 76 m | 0:00:20 | 14 kph |
| 7/6/2016 14:03 | ON | N22.20732 E113.89722 | 68 m | 0:00:18 | 14 kph |
| 7/6/2016 14:03 | ON | N22.20802 E113.89722 | 78 m | 0:00:21 | 13 kph |
| 7/6/2016 14:03 | ON | N22.20864 E113.89725 | 69 m | 0:00:18 | 14 kph |
| 7/6/2016 14:04 | ON | N22.20934 E113.89725 | 77 m | 0:00:20 | 14 kph |
| 7/6/2016 14:04 | ON | N22.20996 E113.89725 | 69 m | 0:00:18 | 14 kph |
| 7/6/2016 14:04 | ON | N22.21072 E113.89731 | 85 m | 0:00:22 | 14 kph |
| 7/6/2016 14:05 | ON | N22.21143 E113.89725 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 14:05 | ON | N22.21218 E113.89715 | 83 m | 0:00:22 | 14 kph |
| 7/6/2016 14:05 | ON | N22.21297 E113.89721 | 89 m | 0:00:23 | 14 kph |
| 7/6/2016 14:06 | ON | N22.21366 E113.89725 | 77 m | 0:00:20 | 14 kph |
| 7/6/2016 14:06 | ON | N22.21420 E113.89738 | 61 m | 0:00:19 | 12 kph |
| 7/6/2016 14:06 | ON | N22.21412 E113.89772 | 36 m | 0:00:13 | 10 kph |
| 7/6/2016 14:07 | ON | N22.21365 E113.89827 | 77 m | 0:00:20 | 14 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 14:07 | ON | N22.21317 E113.89880 | 77 m | 0:00:19 | 15 kph |
| 7/6/2016 14:07 | ON | N22.21278 E113.89927 | 65 m | 0:00:16 | 15 kph |
| 7/6/2016 14:07 | ON | N22.21220 E113.89980 | 85 m | 0:00:21 | 14 kph |
| 7/6/2016 14:08 | ON | N22.21172 E113.90030 | 74 m | 0:00:18 | 15 kph |
| 7/6/2016 14:08 | ON | N22.21126 E113.90082 | 74 m | 0:00:18 | 15 kph |
| 7/6/2016 14:08 | ON | N22.21082 E113.90137 | 75 m | 0:00:18 | 15 kph |
| 7/6/2016 14:09 | ON | N22.21045 E113.90182 | 62 m | 0:00:15 | 15 kph |
| 7/6/2016 14:09 | ON | N22.21005 E113.90230 | 66 m | 0:00:16 | 15 kph |
| 7/6/2016 14:09 | ON | N22.20967 E113.90277 | 64 m | 0:00:15 | 15 kph |
| 7/6/2016 14:09 | ON | N22.20925 E113.90346 | 85 m | 0:00:20 | 15 kph |
| 7/6/2016 14:10 | ON | N22.20894 E113.90396 | 63 m | 0:00:15 | 15 kph |
| 7/6/2016 14:10 | ON | N22.20859 E113.90446 | 65 m | 0:00:15 | 16 kph |
| 7/6/2016 14:10 | ON | N22.20818 E113.90512 | 81 m | 0:00:19 | 15 kph |
| 7/6/2016 14:11 | ON | N22.20788 E113.90567 | 66 m | 0:00:15 | 16 kph |
| 7/6/2016 14:11 | ON | N22.20758 E113.90610 | 56 m | 0:00:13 | 15 kph |
| 7/6/2016 14:11 | ON | N22.20712 E113.90673 | 83 m | 0:00:19 | 16 kph |
| 7/6/2016 14:11 | ON | N22.20676 E113.90735 | 75 m | 0:00:17 | 16 kph |
| 7/6/2016 14:12 | ON | N22.20626 E113.90783 | 75 m | 0:00:18 | 15 kph |
| 7/6/2016 14:12 | ON | N22.20569 E113.90800 | 65 m | 0:00:17 | 14 kph |
| 7/6/2016 14:12 | ON | N22.20509 E113.90800 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 14:13 | ON | N22.20455 E113.90792 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 14:13 | ON | N22.20414 E113.90789 | 46 m | 0:00:13 | 13 kph |
| 7/6/2016 14:13 | ON | N22.20357 E113.90791 | 63 m | 0:00:17 | 13 kph |
| 7/6/2016 14:13 | ON | N22.20304 E113.90789 | 60 m | 0:00:16 | 13 kph |
| 7/6/2016 14:14 | ON | N22.20245 E113.90782 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 14:14 | ON | N22.20192 E113.90780 | 59 m | 0:00:16 | 13 kph |
| 7/6/2016 14:14 | ON | N22.20146 E113.90780 | 51 m | 0:00:14 | 13 kph |
| 7/6/2016 14:14 | ON | N22.20086 E113.90783 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 14:15 | ON | N22.20036 E113.90784 | 56 m | 0:00:15 | 13 kph |
| 7/6/2016 14:15 | ON | N22.19976 E113.90786 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 14:15 | ON | N22.19924 E113.90783 | 58 m | 0:00:16 | 13 kph |
| 7/6/2016 14:15 | ON | N22.19870 E113.90782 | 60 m | 0:00:17 | 13 kph |
| 7/6/2016 14:16 | ON | N22.19819 E113.90781 | 56 m | 0:00:16 | 13 kph |
| 7/6/2016 14:16 | ON | N22.19775 E113.90781 | 49 m | 0:00:14 | 13 kph |
| 7/6/2016 14:16 | ON | N22.19718 E113.90784 | 64 m | 0:00:18 | 13 kph |
| 7/6/2016 14:17 | ON | N22.19670 E113.90787 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 14:17 | ON | N22.19621 E113.90787 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 14:17 | ON | N22.19580 E113.90786 | 46 m | 0:00:13 | 13 kph |
| 7/6/2016 14:17 | ON | N22.19521 E113.90785 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 14:17 | ON | N22.19483 E113.90783 | 43 m | 0:00:12 | 13 kph |
| 7/6/2016 14:18 | ON | N22.19445 E113.90783 | 43 m | 0:00:12 | 13 kph |
| 7/6/2016 14:18 | ON | N22.19370 E113.90786 | 83 m | 0:00:23 | 13 kph |
| 7/6/2016 14:18 | ON | N22.19312 E113.90784 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 14:19 | ON | N22.19256 E113.90783 | 62 m | 0:00:17 | 13 kph |
| 7/6/2016 14:19 | ON | N22.19185 E113.90781 | 80 m | 0:00:22 | 13 kph |
| 7/6/2016 14:19 | ON | N22.19136 E113.90782 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 14:20 | ON | N22.19080 E113.90777 | 63 m | 0:00:18 | 13 kph |
| 7/6/2016 14:20 | ON | N22.19033 E113.90747 | 61 m | 0:00:20 | 11 kph |
| 7/6/2016 14:20 | ON | N22.18986 E113.90694 | 75 m | 0:00:25 | 11 kph |
| 7/6/2016 14:21 | ON | N22.18948 E113.90652 | 60 m | 0:00:20 | 11 kph |
| 7/6/2016 14:21 | ON | N22.18911 E113.90613 | 57 m | 0:00:19 | 11 kph |
| 7/6/2016 14:21 | ON | N22.18858 E113.90572 | 73 m | 0:00:25 | 10 kph |
| 7/6/2016 14:22 | ON | N22.18808 E113.90527 | 72 m | 0:00:24 | 11 kph |
| 7/6/2016 14:22 | ON | N22.18759 E113.90491 | 66 m | 0:00:22 | 11 kph |
| 7/6/2016 14:23 | ON | N22.18708 E113.90466 | 62 m | 0:00:22 | 10 kph |
| 7/6/2016 14:23 | ON | N22.18639 E113.90447 | 80 m | 0:00:27 | 11 kph |
| 7/6/2016 14:23 | ON | N22.18571 E113.90436 | 76 m | 0:00:26 | 11 kph |
| 7/6/2016 14:24 | ON | N22.18515 E113.90428 | 63 m | 0:00:21 | 11 kph |
| 7/6/2016 14:24 | ON | N22.18452 E113.90424 | 70 m | 0:00:23 | 11 kph |
| 7/6/2016 14:25 | ON | N22.18378 E113.90426 | 83 m | 0:00:26 | 11 kph |
| 7/6/2016 14:25 | ON | N22.18313 E113.90422 | 72 m | 0:00:22 | 12 kph |
| 7/6/2016 14:25 | ON | N22.18248 E113.90413 | 73 m | 0:00:22 | 12 kph |
| 7/6/2016 14:26 | ON | N22.18181 E113.90408 | 76 m | 0:00:22 | 12 kph |
| 7/6/2016 14:26 | ON | N22.18111 E113.90406 | 77 m | 0:00:22 | 13 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 14:26 | ON | N22.18029 E113.90408 | 92 m | 0:00:25 | 13 kph |
| 7/6/2016 14:27 | ON | N22.17956 E113.90422 | 82 m | 0:00:21 | 14 kph |
| 7/6/2016 14:27 | ON | N22.17870 E113.90445 | 99 m | 0:00:25 | 14 kph |
| 7/6/2016 14:28 | ON | N22.17800 E113.90470 | 82 m | 0:00:21 | 14 kph |
| 7/6/2016 14:28 | ON | N22.17741 E113.90519 | 83 m | 0:00:21 | 14 kph |
| 7/6/2016 14:28 | ON | N22.17692 E113.90582 | 85 m | 0:00:21 | 15 kph |
| 7/6/2016 14:29 | ON | N22.17634 E113.90667 | 109 m | 0:00:26 | 15 kph |
| 7/6/2016 14:29 | ON | N22.17568 E113.90747 | 111 m | 0:00:26 | 15 kph |
| 7/6/2016 14:29 | ON | N22.17514 E113.90809 | 88 m | 0:00:21 | 15 kph |
| 7/6/2016 14:30 | ON | N22.17440 E113.90855 | 94 m | 0:00:25 | 14 kph |
| 7/6/2016 14:30 | ON | N22.17371 E113.90870 | 79 m | 0:00:22 | 13 kph |
| 7/6/2016 14:31 | ON | N22.17306 E113.90858 | 74 m | 0:00:23 | 12 kph |
| 7/6/2016 14:31 | ON | N22.17252 E113.90818 | 73 m | 0:00:23 | 11 kph |
| 7/6/2016 14:32 | ON | N22.17191 E113.90761 | 89 m | 0:00:28 | 11 kph |
| 7/6/2016 14:32 | ON | N22.17136 E113.90705 | 84 m | 0:00:26 | 12 kph |
| 7/6/2016 14:32 | ON | N22.17081 E113.90636 | 94 m | 0:00:28 | 12 kph |
| 7/6/2016 14:33 | ON | N22.17033 E113.90573 | 83 m | 0:00:25 | 12 kph |
| 7/6/2016 14:33 | ON | N22.16973 E113.90501 | 101 m | 0:00:30 | 12 kph |
| 7/6/2016 14:34 | ON | N22.16923 E113.90447 | 78 m | 0:00:24 | 12 kph |
| 7/6/2016 14:34 | ON | N22.16859 E113.90389 | 93 m | 0:00:28 | 12 kph |
| 7/6/2016 14:35 | ON | N22.16795 E113.90337 | 89 m | 0:00:26 | 12 kph |
| 7/6/2016 14:35 | ON | N22.16733 E113.90295 | 81 m | 0:00:24 | 12 kph |
| 7/6/2016 14:35 | ON | N22.16672 E113.90241 | 88 m | 0:00:27 | 12 kph |
| 7/6/2016 14:36 | ON | N22.16619 E113.90189 | 79 m | 0:00:24 | 12 kph |
| 7/6/2016 14:36 | ON | N22.16570 E113.90133 | 80 m | 0:00:24 | 12 kph |
| 7/6/2016 14:37 | ON | N22.16528 E113.90078 | 73 m | 0:00:22 | 12 kph |
| 7/6/2016 14:37 | ON | N22.16483 E113.90027 | 72 m | 0:00:21 | 12 kph |
| 7/6/2016 14:37 | ON | N22.16441 E113.89984 | 65 m | 0:00:19 | 12 kph |
| 7/6/2016 14:38 | ON | N22.16397 E113.89945 | 64 m | 0:00:18 | 13 kph |
| 7/6/2016 14:38 | ON | N22.16359 E113.89917 | 51 m | 0:00:14 | 13 kph |
| 7/6/2016 14:38 | ON | N22.16306 E113.89884 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 14:38 | ON | N22.16248 E113.89851 | 74 m | 0:00:19 | 14 kph |
| 7/6/2016 14:39 | ON | N22.16216 E113.89836 | 39 m | 0:00:10 | 14 kph |
| 7/6/2016 14:39 | ON | N22.16172 E113.89820 | 52 m | 0:00:13 | 14 kph |
| 7/6/2016 14:39 | ON | N22.16121 E113.89810 | 58 m | 0:00:14 | 15 kph |
| 7/6/2016 14:39 | ON | N22.16054 E113.89809 | 74 m | 0:00:17 | 16 kph |
| 7/6/2016 14:40 | ON | N22.15978 E113.89816 | 85 m | 0:00:19 | 16 kph |
| 7/6/2016 14:40 | ON | N22.15903 E113.89832 | 85 m | 0:00:19 | 16 kph |
| 7/6/2016 14:40 | ON | N22.15832 E113.89854 | 82 m | 0:00:18 | 16 kph |
| 7/6/2016 14:41 | ON | N22.15767 E113.89897 | 85 m | 0:00:18 | 17 kph |
| 7/6/2016 14:41 | ON | N22.15704 E113.89953 | 91 m | 0:00:19 | 17 kph |
| 7/6/2016 14:41 | ON | N22.15638 E113.90023 | 103 m | 0:00:21 | 18 kph |
| 7/6/2016 14:42 | ON | N22.15580 E113.90097 | 100 m | 0:00:21 | 17 kph |
| 7/6/2016 14:42 | ON | N22.15542 E113.90172 | 88 m | 0:00:19 | 17 kph |
| 7/6/2016 14:42 | ON | N22.15515 E113.90251 | 86 m | 0:00:18 | 17 kph |
| 7/6/2016 14:43 | ON | N22.15499 E113.90332 | 86 m | 0:00:18 | 17 kph |
| 7/6/2016 14:43 | ON | N22.15491 E113.90415 | 86 m | 0:00:18 | 17 kph |
| 7/6/2016 14:43 | ON | N22.15487 E113.90502 | 90 m | 0:00:19 | 17 kph |
| 7/6/2016 14:43 | ON | N22.15483 E113.90580 | 80 m | 0:00:17 | 17 kph |
| 7/6/2016 14:43 | ON | N22.15483 E113.90589 | 9 m | 0:00:02 | 17 kph |
| 7/6/2016 14:44 | ON | N22.15480 E113.90666 | 80 m | 0:00:17 | 17 kph |
| 7/6/2016 14:44 | ON | N22.15482 E113.90752 | 89 m | 0:00:19 | 17 kph |
| 7/6/2016 14:44 | ON | N22.15465 E113.90785 | 39 m | 0:00:12 | 12 kph |
| 7/6/2016 14:44 | ON | N22.15435 E113.90787 | 34 m | 0:00:12 | 10 kph |
| 7/6/2016 14:45 | ON | N22.15393 E113.90788 | 47 m | 0:00:14 | 12 kph |
| 7/6/2016 14:45 | ON | N22.15344 E113.90792 | 55 m | 0:00:15 | 13 kph |
| 7/6/2016 14:45 | ON | N22.15298 E113.90792 | 51 m | 0:00:14 | 13 kph |
| 7/6/2016 14:45 | ON | N22.15249 E113.90787 | 55 m | 0:00:15 | 13 kph |
| 7/6/2016 14:46 | ON | N22.15211 E113.90782 | 42 m | 0:00:11 | 14 kph |
| 7/6/2016 14:46 | ON | N22.15156 E113.90784 | 62 m | 0:00:16 | 14 kph |
| 7/6/2016 14:46 | ON | N22.15114 E113.90781 | 46 m | 0:00:12 | 14 kph |
| 7/6/2016 14:46 | ON | N22.15043 E113.90772 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 14:47 | ON | N22.14989 E113.90768 | 60 m | 0:00:16 | 14 kph |
| 7/6/2016 14:47 | ON | N22.14934 E113.90767 | 62 m | 0:00:16 | 14 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 14:47 | ON | N22.14872 E113.90771 | 69 m | 0:00:18 | 14 kph |
| 7/6/2016 14:48 | ON | N22.14808 E113.90775 | 72 m | 0:00:19 | 14 kph |
| 7/6/2016 14:48 | ON | N22.14755 E113.90778 | 59 m | 0:00:16 | 13 kph |
| 7/6/2016 14:48 | ON | N22.14706 E113.90780 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 14:48 | ON | N22.14658 E113.90782 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 14:49 | ON | N22.14605 E113.90780 | 59 m | 0:00:17 | 13 kph |
| 7/6/2016 14:49 | ON | N22.14550 E113.90781 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 14:49 | ON | N22.14505 E113.90783 | 51 m | 0:00:14 | 13 kph |
| 7/6/2016 14:49 | ON | N22.14457 E113.90785 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 14:50 | ON | N22.14402 E113.90787 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 14:50 | ON | N22.14340 E113.90785 | 68 m | 0:00:19 | 13 kph |
| 7/6/2016 14:50 | ON | N22.14292 E113.90783 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 14:50 | ON | N22.14249 E113.90792 | 50 m | 0:00:14 | 13 kph |
| 7/6/2016 14:51 | ON | N22.14225 E113.90837 | 53 m | 0:00:14 | 14 kph |
| 7/6/2016 14:51 | ON | N22.14218 E113.90915 | 81 m | 0:00:19 | 15 kph |
| 7/6/2016 14:51 | ON | N22.14217 E113.90990 | 76 m | 0:00:17 | 16 kph |
| 7/6/2016 14:52 | ON | N22.14215 E113.91067 | 80 m | 0:00:18 | 16 kph |
| 7/6/2016 14:52 | ON | N22.14211 E113.91140 | 75 m | 0:00:17 | 16 kph |
| 7/6/2016 14:52 | ON | N22.14206 E113.91217 | 80 m | 0:00:18 | 16 kph |
| 7/6/2016 14:52 | ON | N22.14203 E113.91287 | 72 m | 0:00:16 | 16 kph |
| 7/6/2016 14:53 | ON | N22.14203 E113.91351 | 67 m | 0:00:15 | 16 kph |
| 7/6/2016 14:53 | ON | N22.14207 E113.91425 | 76 m | 0:00:17 | 16 kph |
| 7/6/2016 14:53 | ON | N22.14210 E113.91489 | 66 m | 0:00:15 | 16 kph |
| 7/6/2016 14:54 | ON | N22.14211 E113.91579 | 93 m | 0:00:21 | 16 kph |
| 7/6/2016 14:54 | ON | N22.14211 E113.91641 | 64 m | 0:00:14 | 16 kph |
| 7/6/2016 14:54 | ON | N22.14212 E113.91697 | 58 m | 0:00:13 | 16 kph |
| 7/6/2016 14:54 | ON | N22.14211 E113.91741 | 46 m | 0:00:10 | 16 kph |
| 7/6/2016 14:54 | ON | N22.14225 E113.91788 | 50 m | 0:00:13 | 14 kph |
| 7/6/2016 14:55 | ON | N22.14268 E113.91797 | 48 m | 0:00:15 | 12 kph |
| 7/6/2016 14:55 | ON | N22.14304 E113.91789 | 42 m | 0:00:13 | 12 kph |
| 7/6/2016 14:55 | ON | N22.14350 E113.91784 | 51 m | 0:00:15 | 12 kph |
| 7/6/2016 14:55 | ON | N22.14408 E113.91790 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 14:56 | ON | N22.14446 E113.91787 | 42 m | 0:00:12 | 13 kph |
| 7/6/2016 14:56 | ON | N22.14488 E113.91791 | 47 m | 0:00:13 | 13 kph |
| 7/6/2016 14:56 | ON | N22.14535 E113.91793 | 52 m | 0:00:14 | 13 kph |
| 7/6/2016 14:56 | ON | N22.14583 E113.91789 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 14:57 | ON | N22.14644 E113.91778 | 69 m | 0:00:19 | 13 kph |
| 7/6/2016 14:57 | ON | N22.14698 E113.91773 | 61 m | 0:00:16 | 14 kph |
| 7/6/2016 14:57 | ON | N22.14754 E113.91776 | 62 m | 0:00:16 | 14 kph |
| 7/6/2016 14:57 | ON | N22.14808 E113.91779 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 14:58 | ON | N22.14871 E113.91777 | 70 m | 0:00:18 | 14 kph |
| 7/6/2016 14:58 | ON | N22.14931 E113.91784 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 14:58 | ON | N22.14994 E113.91790 | 69 m | 0:00:18 | 14 kph |
| 7/6/2016 14:59 | ON | N22.15046 E113.91790 | 58 m | 0:00:16 | 13 kph |
| 7/6/2016 14:59 | ON | N22.15094 E113.91788 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 14:59 | ON | N22.15145 E113.91784 | 57 m | 0:00:16 | 13 kph |
| 7/6/2016 14:59 | ON | N22.15192 E113.91782 | 52 m | 0:00:14 | 13 kph |
| 7/6/2016 15:00 | ON | N22.15252 E113.91784 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 15:00 | ON | N22.15299 E113.91786 | 53 m | 0:00:14 | 14 kph |
| 7/6/2016 15:00 | ON | N22.15369 E113.91787 | 78 m | 0:00:21 | 13 kph |
| 7/6/2016 15:01 | ON | N22.15434 E113.91784 | 72 m | 0:00:20 | 13 kph |
| 7/6/2016 15:01 | ON | N22.15493 E113.91779 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 15:01 | ON | N22.15561 E113.91775 | 77 m | 0:00:20 | 14 kph |
| 7/6/2016 15:02 | ON | N22.15630 E113.91780 | 77 m | 0:00:20 | 14 kph |
| 7/6/2016 15:02 | ON | N22.15709 E113.91780 | 88 m | 0:00:23 | 14 kph |
| 7/6/2016 15:02 | ON | N22.15787 E113.91780 | 87 m | 0:00:23 | 14 kph |
| 7/6/2016 15:03 | ON | N22.15857 E113.91785 | 78 m | 0:00:21 | 13 kph |
| 7/6/2016 15:03 | ON | N22.15917 E113.91790 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 15:03 | ON | N22.15994 E113.91799 | 86 m | 0:00:23 | 14 kph |
| 7/6/2016 15:04 | ON | N22.16068 E113.91809 | 83 m | 0:00:22 | 14 kph |
| 7/6/2016 15:04 | ON | N22.16123 E113.91821 | 62 m | 0:00:17 | 13 kph |
| 7/6/2016 15:04 | ON | N22.16184 E113.91832 | 68 m | 0:00:19 | 13 kph |
| 7/6/2016 15:05 | ON | N22.16248 E113.91844 | 73 m | 0:00:20 | 13 kph |
| 7/6/2016 15:05 | ON | N22.16314 E113.91857 | 74 m | 0:00:20 | 13 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 15:05 | ON | N22.16381 E113.91869 | 75 m | 0:00:20 | 14 kph |
| 7/6/2016 15:06 | ON | N22.16459 E113.91880 | 88 m | 0:00:23 | 14 kph |
| 7/6/2016 15:06 | OFF | N22.16519 E113.91882 | 66 m | 0:00:21 | 11 kph |
| 7/6/2016 15:06 | OFF | N22.16550 E113.91882 | 35 m | 0:00:19 | 7 kph |
| 7/6/2016 15:07 | OFF | N22.16573 E113.91881 | 26 m | 0:00:21 | 4 kph |
| 7/6/2016 15:07 | OFF | N22.16601 E113.91889 | 31 m | 0:00:17 | 7 kph |
| 7/6/2016 15:07 | OFF | N22.16630 E113.91911 | 40 m | 0:00:15 | 10 kph |
| 7/6/2016 15:08 | OFF | N22.16671 E113.91943 | 56 m | 0:00:19 | 11 kph |
| 7/6/2016 15:08 | OFF | N22.16699 E113.91969 | 41 m | 0:00:19 | 8 kph |
| 7/6/2016 15:08 | OFF | N22.16713 E113.91981 | 20 m | 0:00:12 | 6 kph |
| 7/6/2016 15:08 | OFF | N22.16722 E113.91988 | 12 m | 0:00:09 | 5 kph |
| 7/6/2016 15:08 | OFF | N22.16734 E113.91999 | 17 m | 0:00:17 | 4 kph |
| 7/6/2016 15:09 | OFF | N22.16743 E113.92008 | 13 m | 0:00:18 | 3 kph |
| 7/6/2016 15:09 | OFF | N22.16748 E113.92014 | 8 m | 0:00:15 | 2 kph |
| 7/6/2016 15:09 | OFF | N22.16752 E113.92020 | 8 m | 0:00:15 | 2 kph |
| 7/6/2016 15:10 | OFF | N22.16758 E113.92029 | 12 m | 0:00:14 | 3 kph |
| 7/6/2016 15:10 | OFF | N22.16759 E113.92031 | 2 m | 0:00:02 | 4 kph |
| 7/6/2016 15:10 | OFF | N22.16765 E113.92049 | 20 m | 0:00:16 | 5 kph |
| 7/6/2016 15:10 | OFF | N22.16769 E113.92072 | 24 m | 0:00:16 | 5 kph |
| 7/6/2016 15:10 | OFF | N22.16778 E113.92106 | 37 m | 0:00:15 | 9 kph |
| 7/6/2016 15:11 | OFF | N22.16810 E113.92124 | 39 m | 0:00:14 | 10 kph |
| 7/6/2016 15:11 | OFF | N22.16856 E113.92128 | 52 m | 0:00:16 | 12 kph |
| 7/6/2016 15:11 | ON | N22.16903 E113.92132 | 53 m | 0:00:16 | 12 kph |
| 7/6/2016 15:11 | ON | N22.16953 E113.92147 | 58 m | 0:00:17 | 12 kph |
| 7/6/2016 15:12 | ON | N22.17012 E113.92165 | 67 m | 0:00:19 | 13 kph |
| 7/6/2016 15:12 | ON | N22.17072 E113.92181 | 69 m | 0:00:19 | 13 kph |
| 7/6/2016 15:12 | ON | N22.17140 E113.92184 | 76 m | 0:00:21 | 13 kph |
| 7/6/2016 15:13 | ON | N22.17200 E113.92185 | 66 m | 0:00:19 | 13 kph |
| 7/6/2016 15:13 | ON | N22.17241 E113.92194 | 47 m | 0:00:14 | 12 kph |
| 7/6/2016 15:13 | ON | N22.17288 E113.92203 | 52 m | 0:00:15 | 13 kph |
| 7/6/2016 15:13 | ON | N22.17328 E113.92210 | 45 m | 0:00:13 | 13 kph |
| 7/6/2016 15:14 | ON | N22.17377 E113.92220 | 56 m | 0:00:16 | 13 kph |
| 7/6/2016 15:14 | ON | N22.17425 E113.92227 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 15:14 | ON | N22.17472 E113.92235 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 15:14 | ON | N22.17520 E113.92240 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 15:15 | ON | N22.17590 E113.92243 | 78 m | 0:00:22 | 13 kph |
| 7/6/2016 15:15 | ON | N22.17657 E113.92239 | 75 m | 0:00:21 | 13 kph |
| 7/6/2016 15:15 | ON | N22.17730 E113.92231 | 81 m | 0:00:22 | 13 kph |
| 7/6/2016 15:16 | ON | N22.17802 E113.92221 | 81 m | 0:00:21 | 14 kph |
| 7/6/2016 15:16 | ON | N22.17868 E113.92206 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 15:17 | ON | N22.17945 E113.92193 | 86 m | 0:00:21 | 15 kph |
| 7/6/2016 15:17 | ON | N22.18023 E113.92179 | 88 m | 0:00:21 | 15 kph |
| 7/6/2016 15:17 | ON | N22.18096 E113.92161 | 84 m | 0:00:20 | 15 kph |
| 7/6/2016 15:17 | ON | N22.18160 E113.92141 | 74 m | 0:00:18 | 15 kph |
| 7/6/2016 15:18 | ON | N22.18221 E113.92108 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 15:18 | ON | N22.18259 E113.92074 | 55 m | 0:00:14 | 14 kph |
| 7/6/2016 15:18 | ON | N22.18310 E113.92024 | 77 m | 0:00:19 | 15 kph |
| 7/6/2016 15:19 | ON | N22.18357 E113.91974 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 15:19 | ON | N22.18416 E113.91909 | 95 m | 0:00:23 | 15 kph |
| 7/6/2016 15:19 | ON | N22.18476 E113.91840 | 97 m | 0:00:23 | 15 kph |
| 7/6/2016 15:20 | ON | N22.18528 E113.91802 | 70 m | 0:00:18 | 14 kph |
| 7/6/2016 15:20 | ON | N22.18580 E113.91795 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 15:20 | ON | N22.18641 E113.91785 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 15:21 | ON | N22.18702 E113.91786 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 15:21 | ON | N22.18768 E113.91786 | 73 m | 0:00:18 | 15 kph |
| 7/6/2016 15:21 | ON | N22.18818 E113.91786 | 56 m | 0:00:14 | 14 kph |
| 7/6/2016 15:21 | ON | N22.18872 E113.91790 | 60 m | 0:00:15 | 14 kph |
| 7/6/2016 15:22 | ON | N22.18932 E113.91794 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 15:22 | ON | N22.18981 E113.91793 | 54 m | 0:00:14 | 14 kph |
| 7/6/2016 15:22 | ON | N22.19038 E113.91792 | 64 m | 0:00:17 | 14 kph |
| 7/6/2016 15:22 | ON | N22.19076 E113.91792 | 42 m | 0:00:11 | 14 kph |
| 7/6/2016 15:23 | ON | N22.19121 E113.91794 | 50 m | 0:00:13 | 14 kph |
| 7/6/2016 15:23 | ON | N22.19157 E113.91798 | 41 m | 0:00:11 | 13 kph |
| 7/6/2016 15:23 | ON | N22.19215 E113.91796 | 65 m | 0:00:18 | 13 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 15:23 | ON | N22.19273 E113.91785 | 65 m | 0:00:19 | 12 kph |
| 7/6/2016 15:24 | ON | N22.19310 E113.91785 | 42 m | 0:00:12 | 13 kph |
| 7/6/2016 15:24 | ON | N22.19359 E113.91787 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 15:24 | ON | N22.19408 E113.91790 | 56 m | 0:00:15 | 13 kph |
| 7/6/2016 15:24 | ON | N22.19455 E113.91791 | 52 m | 0:00:14 | 13 kph |
| 7/6/2016 15:24 | ON | N22.19496 E113.91786 | 46 m | 0:00:13 | 13 kph |
| 7/6/2016 15:25 | ON | N22.19541 E113.91784 | 50 m | 0:00:14 | 13 kph |
| 7/6/2016 15:25 | ON | N22.19580 E113.91782 | 43 m | 0:00:12 | 13 kph |
| 7/6/2016 15:25 | ON | N22.19632 E113.91784 | 58 m | 0:00:16 | 13 kph |
| 7/6/2016 15:25 | ON | N22.19691 E113.91785 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 15:26 | ON | N22.19744 E113.91787 | 60 m | 0:00:16 | 13 kph |
| 7/6/2016 15:26 | ON | N22.19785 E113.91790 | 46 m | 0:00:12 | 14 kph |
| 7/6/2016 15:26 | ON | N22.19829 E113.91793 | 49 m | 0:00:13 | 14 kph |
| 7/6/2016 15:26 | ON | N22.19881 E113.91792 | 58 m | 0:00:16 | 13 kph |
| 7/6/2016 15:27 | ON | N22.19924 E113.91790 | 47 m | 0:00:13 | 13 kph |
| 7/6/2016 15:27 | ON | N22.19987 E113.91788 | 70 m | 0:00:19 | 13 kph |
| 7/6/2016 15:27 | ON | N22.20036 E113.91794 | 56 m | 0:00:15 | 13 kph |
| 7/6/2016 15:27 | ON | N22.20074 E113.91795 | 42 m | 0:00:12 | 13 kph |
| 7/6/2016 15:28 | ON | N22.20136 E113.91795 | 69 m | 0:00:20 | 12 kph |
| 7/6/2016 15:28 | ON | N22.20198 E113.91782 | 70 m | 0:00:21 | 12 kph |
| 7/6/2016 15:28 | ON | N22.20245 E113.91774 | 53 m | 0:00:16 | 12 kph |
| 7/6/2016 15:29 | ON | N22.20305 E113.91773 | 66 m | 0:00:19 | 13 kph |
| 7/6/2016 15:29 | ON | N22.20352 E113.91777 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 15:29 | ON | N22.20400 E113.91775 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 15:29 | ON | N22.20461 E113.91783 | 68 m | 0:00:19 | 13 kph |
| 7/6/2016 15:30 | ON | N22.20503 E113.91800 | 51 m | 0:00:14 | 13 kph |
| 7/6/2016 15:30 | ON | N22.20524 E113.91841 | 48 m | 0:00:13 | 13 kph |
| 7/6/2016 15:30 | ON | N22.20534 E113.91910 | 72 m | 0:00:18 | 14 kph |
| 7/6/2016 15:30 | ON | N22.20538 E113.91966 | 58 m | 0:00:15 | 14 kph |
| 7/6/2016 15:31 | ON | N22.20541 E113.91997 | 32 m | 0:00:13 | 9 kph |
| 7/6/2016 15:31 | OFF | N22.20545 E113.92019 | 23 m | 0:00:13 | 6 kph |
| 7/6/2016 15:31 | OFF | N22.20548 E113.92032 | 14 m | 0:00:10 | 5 kph |
| 7/6/2016 15:31 | OFF | N22.20549 E113.92037 | 5 m | 0:00:04 | 4 kph |
| 7/6/2016 15:31 | OFF | N22.20553 E113.92049 | 14 m | 0:00:13 | 4 kph |
| 7/6/2016 15:32 | OFF | N22.20557 E113.92060 | 12 m | 0:00:15 | 3 kph |
| 7/6/2016 15:32 | OFF | N22.20560 E113.92069 | 9 m | 0:00:15 | 2 kph |
| 7/6/2016 15:32 | OFF | N22.20577 E113.92080 | 22 m | 0:00:13 | 6 kph |
| 7/6/2016 15:32 | OFF | N22.20593 E113.92066 | 23 m | 0:00:14 | 6 kph |
| 7/6/2016 15:33 | OFF | N22.20590 E113.92036 | 32 m | 0:00:13 | 9 kph |
| 7/6/2016 15:33 | OFF | N22.20572 E113.91996 | 46 m | 0:00:16 | 10 kph |
| 7/6/2016 15:33 | OFF | N22.20553 E113.91965 | 38 m | 0:00:13 | 11 kph |
| 7/6/2016 15:33 | OFF | N22.20538 E113.91938 | 32 m | 0:00:11 | 11 kph |
| 7/6/2016 15:33 | OFF | N22.20519 E113.91908 | 37 m | 0:00:14 | 10 kph |
| 7/6/2016 15:34 | OFF | N22.20500 E113.91875 | 40 m | 0:00:17 | 9 kph |
| 7/6/2016 15:34 | OFF | N22.20503 E113.91837 | 38 m | 0:00:19 | 7 kph |
| 7/6/2016 15:34 | OFF | N22.20513 E113.91802 | 38 m | 0:00:21 | 7 kph |
| 7/6/2016 15:35 | OFF | N22.20517 E113.91783 | 21 m | 0:00:17 | 4 kph |
| 7/6/2016 15:35 | OFF | N22.20525 E113.91770 | 15 m | 0:00:21 | 3 kph |
| 7/6/2016 15:35 | OFF | N22.20533 E113.91768 | 10 m | 0:00:19 | 2 kph |
| 7/6/2016 15:36 | OFF | N22.20542 E113.91764 | 11 m | 0:00:15 | 3 kph |
| 7/6/2016 15:36 | OFF | N22.20550 E113.91760 | 10 m | 0:00:17 | 2 kph |
| 7/6/2016 15:36 | OFF | N22.20556 E113.91757 | 7 m | 0:00:13 | 2 kph |
| 7/6/2016 15:36 | OFF | N22.20560 E113.91755 | 6 m | 0:00:14 | 1.4 kph |
| 7/6/2016 15:37 | OFF | N22.20563 E113.91754 | 3 m | 0:00:15 | 0.8 kph |
| 7/6/2016 15:37 | OFF | N22.20565 E113.91753 | 3 m | 0:00:17 | 0.6 kph |
| 7/6/2016 15:37 | OFF | N22.20567 E113.91753 | 2 m | 0:00:14 | 0.4 kph |
| 7/6/2016 15:37 | OFF | N22.20568 E113.91753 | 2 m | 0:00:13 | 0.4 kph |
| 7/6/2016 15:38 | OFF | N22.20570 E113.91753 | 2 m | 0:00:15 | 0.4 kph |
| 7/6/2016 15:38 | OFF | N22.20570 E113.91754 | 1 m | 0:00:11 | 0.3 kph |
| 7/6/2016 15:38 | OFF | N22.20592 E113.91780 | 36 m | 0:00:16 | 8 kph |
| 7/6/2016 15:38 | OFF | N22.20595 E113.91834 | 56 m | 0:00:16 | 13 kph |
| 7/6/2016 15:39 | OFF | N22.20592 E113.91930 | 99 m | 0:00:25 | 14 kph |
| 7/6/2016 15:39 | OFF | N22.20592 E113.91999 | 71 m | 0:00:18 | 14 kph |
| 7/6/2016 15:39 | ON | N22.20590 E113.92085 | 89 m | 0:00:22 | 15 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 15:40 | ON | N22.20587 E113.92159 | 77 m | 0:00:19 | 15 kph |
| 7/6/2016 15:40 | ON | N22.20583 E113.92234 | 77 m | 0:00:19 | 15 kph |
| 7/6/2016 15:40 | ON | N22.20580 E113.92317 | 86 m | 0:00:21 | 15 kph |
| 7/6/2016 15:41 | ON | N22.20578 E113.92382 | 67 m | 0:00:16 | 15 kph |
| 7/6/2016 15:41 | ON | N22.20577 E113.92459 | 79 m | 0:00:19 | 15 kph |
| 7/6/2016 15:41 | ON | N22.20580 E113.92527 | 70 m | 0:00:17 | 15 kph |
| 7/6/2016 15:41 | ON | N22.20579 E113.92585 | 60 m | 0:00:14 | 15 kph |
| 7/6/2016 15:42 | ON | N22.20575 E113.92655 | 72 m | 0:00:17 | 15 kph |
| 7/6/2016 15:42 | ON | N22.20566 E113.92723 | 71 m | 0:00:17 | 15 kph |
| 7/6/2016 15:42 | ON | N22.20538 E113.92747 | 40 m | 0:00:12 | 12 kph |
| 7/6/2016 15:42 | ON | N22.20493 E113.92754 | 51 m | 0:00:14 | 13 kph |
| 7/6/2016 15:43 | ON | N22.20445 E113.92755 | 53 m | 0:00:14 | 14 kph |
| 7/6/2016 15:43 | ON | N22.20392 E113.92754 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 15:43 | ON | N22.20342 E113.92754 | 56 m | 0:00:14 | 15 kph |
| 7/6/2016 15:43 | ON | N22.20291 E113.92757 | 56 m | 0:00:14 | 14 kph |
| 7/6/2016 15:44 | ON | N22.20235 E113.92755 | 63 m | 0:00:16 | 14 kph |
| 7/6/2016 15:44 | ON | N22.20182 E113.92753 | 60 m | 0:00:15 | 14 kph |
| 7/6/2016 15:44 | ON | N22.20125 E113.92751 | 63 m | 0:00:16 | 14 kph |
| 7/6/2016 15:44 | ON | N22.20082 E113.92753 | 48 m | 0:00:12 | 14 kph |
| 7/6/2016 15:45 | ON | N22.20031 E113.92758 | 57 m | 0:00:14 | 15 kph |
| 7/6/2016 15:45 | ON | N22.19969 E113.92758 | 69 m | 0:00:17 | 15 kph |
| 7/6/2016 15:45 | ON | N22.19891 E113.92754 | 87 m | 0:00:22 | 14 kph |
| 7/6/2016 15:46 | ON | N22.19839 E113.92759 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 15:46 | ON | N22.19789 E113.92759 | 55 m | 0:00:14 | 14 kph |
| 7/6/2016 15:46 | ON | N22.19740 E113.92755 | 55 m | 0:00:14 | 14 kph |
| 7/6/2016 15:46 | ON | N22.19683 E113.92751 | 64 m | 0:00:16 | 14 kph |
| 7/6/2016 15:46 | ON | N22.19629 E113.92755 | 60 m | 0:00:15 | 14 kph |
| 7/6/2016 15:47 | ON | N22.19554 E113.92760 | 83 m | 0:00:21 | 14 kph |
| 7/6/2016 15:47 | ON | N22.19499 E113.92762 | 61 m | 0:00:16 | 14 kph |
| 7/6/2016 15:47 | ON | N22.19453 E113.92763 | 51 m | 0:00:14 | 13 kph |
| 7/6/2016 15:47 | ON | N22.19425 E113.92762 | 32 m | 0:00:09 | 13 kph |
| 7/6/2016 15:48 | ON | N22.19386 E113.92760 | 43 m | 0:00:12 | 13 kph |
| 7/6/2016 15:48 | ON | N22.19345 E113.92754 | 47 m | 0:00:13 | 13 kph |
| 7/6/2016 15:48 | ON | N22.19303 E113.92746 | 47 m | 0:00:13 | 13 kph |
| 7/6/2016 15:48 | ON | N22.19262 E113.92746 | 46 m | 0:00:12 | 14 kph |
| 7/6/2016 15:49 | ON | N22.19212 E113.92752 | 55 m | 0:00:14 | 14 kph |
| 7/6/2016 15:49 | ON | N22.19151 E113.92761 | 69 m | 0:00:17 | 15 kph |
| 7/6/2016 15:49 | ON | N22.19101 E113.92766 | 56 m | 0:00:14 | 14 kph |
| 7/6/2016 15:49 | ON | N22.19059 E113.92762 | 46 m | 0:00:12 | 14 kph |
| 7/6/2016 15:50 | ON | N22.19014 E113.92750 | 52 m | 0:00:14 | 13 kph |
| 7/6/2016 15:50 | ON | N22.18968 E113.92741 | 52 m | 0:00:14 | 13 kph |
| 7/6/2016 15:50 | ON | N22.18914 E113.92736 | 60 m | 0:00:16 | 14 kph |
| 7/6/2016 15:50 | ON | N22.18857 E113.92736 | 63 m | 0:00:17 | 13 kph |
| 7/6/2016 15:51 | ON | N22.18798 E113.92736 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 15:51 | ON | N22.18745 E113.92738 | 59 m | 0:00:16 | 13 kph |
| 7/6/2016 15:51 | ON | N22.18695 E113.92739 | 55 m | 0:00:15 | 13 kph |
| 7/6/2016 15:51 | ON | N22.18636 E113.92738 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 15:52 | ON | N22.18574 E113.92734 | 69 m | 0:00:19 | 13 kph |
| 7/6/2016 15:52 | ON | N22.18515 E113.92731 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 15:52 | ON | N22.18457 E113.92729 | 64 m | 0:00:17 | 14 kph |
| 7/6/2016 15:53 | ON | N22.18404 E113.92730 | 59 m | 0:00:16 | 13 kph |
| 7/6/2016 15:53 | ON | N22.18356 E113.92733 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 15:53 | ON | N22.18300 E113.92735 | 62 m | 0:00:17 | 13 kph |
| 7/6/2016 15:53 | ON | N22.18242 E113.92738 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 15:54 | ON | N22.18173 E113.92739 | 76 m | 0:00:21 | 13 kph |
| 7/6/2016 15:54 | ON | N22.18115 E113.92742 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 15:54 | ON | N22.18064 E113.92748 | 57 m | 0:00:16 | 13 kph |
| 7/6/2016 15:55 | ON | N22.18017 E113.92755 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 15:55 | ON | N22.17958 E113.92753 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 15:55 | ON | N22.17898 E113.92752 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 15:55 | ON | N22.17841 E113.92751 | 64 m | 0:00:17 | 13 kph |
| 7/6/2016 15:56 | ON | N22.17779 E113.92749 | 69 m | 0:00:18 | 14 kph |
| 7/6/2016 15:56 | ON | N22.17707 E113.92749 | 80 m | 0:00:21 | 14 kph |
| 7/6/2016 15:56 | ON | N22.17659 E113.92747 | 54 m | 0:00:14 | 14 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 15:57 | ON | N22.17591 E113.92744 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 15:57 | ON | N22.17547 E113.92756 | 50 m | 0:00:13 | 14 kph |
| 7/6/2016 15:57 | ON | N22.17504 E113.92761 | 49 m | 0:00:13 | 14 kph |
| 7/6/2016 15:57 | ON | N22.17452 E113.92764 | 57 m | 0:00:15 | 14 kph |
| 7/6/2016 15:58 | ON | N22.17406 E113.92763 | 52 m | 0:00:14 | 13 kph |
| 7/6/2016 15:58 | ON | N22.17358 E113.92761 | 53 m | 0:00:14 | 14 kph |
| 7/6/2016 15:58 | ON | N22.17312 E113.92765 | 51 m | 0:00:13 | 14 kph |
| 7/6/2016 15:58 | ON | N22.17266 E113.92765 | 51 m | 0:00:13 | 14 kph |
| 7/6/2016 15:58 | ON | N22.17214 E113.92759 | 58 m | 0:00:15 | 14 kph |
| 7/6/2016 15:59 | ON | N22.17171 E113.92751 | 49 m | 0:00:13 | 14 kph |
| 7/6/2016 15:59 | ON | N22.17126 E113.92745 | 50 m | 0:00:13 | 14 kph |
| 7/6/2016 15:59 | ON | N22.17080 E113.92745 | 51 m | 0:00:13 | 14 kph |
| 7/6/2016 15:59 | ON | N22.17030 E113.92740 | 55 m | 0:00:14 | 14 kph |
| 7/6/2016 16:00 | ON | N22.16970 E113.92734 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 16:00 | ON | N22.16916 E113.92731 | 61 m | 0:00:15 | 15 kph |
| 7/6/2016 16:00 | ON | N22.16850 E113.92735 | 74 m | 0:00:18 | 15 kph |
| 7/6/2016 16:00 | ON | N22.16798 E113.92739 | 58 m | 0:00:14 | 15 kph |
| 7/6/2016 16:01 | ON | N22.16749 E113.92743 | 54 m | 0:00:13 | 15 kph |
| 7/6/2016 16:01 | ON | N22.16688 E113.92745 | 68 m | 0:00:16 | 15 kph |
| 7/6/2016 16:01 | ON | N22.16639 E113.92743 | 55 m | 0:00:13 | 15 kph |
| 7/6/2016 16:01 | ON | N22.16578 E113.92746 | 68 m | 0:00:16 | 15 kph |
| 7/6/2016 16:02 | ON | N22.16524 E113.92750 | 60 m | 0:00:14 | 15 kph |
| 7/6/2016 16:02 | ON | N22.16473 E113.92749 | 57 m | 0:00:14 | 15 kph |
| 7/6/2016 16:02 | ON | N22.16413 E113.92745 | 66 m | 0:00:16 | 15 kph |
| 7/6/2016 16:02 | ON | N22.16342 E113.92735 | 80 m | 0:00:20 | 14 kph |
| 7/6/2016 16:03 | ON | N22.16273 E113.92728 | 77 m | 0:00:20 | 14 kph |
| 7/6/2016 16:03 | ON | N22.16211 E113.92725 | 69 m | 0:00:18 | 14 kph |
| 7/6/2016 16:03 | ON | N22.16137 E113.92732 | 82 m | 0:00:22 | 13 kph |
| 7/6/2016 16:04 | ON | N22.16073 E113.92737 | 71 m | 0:00:19 | 13 kph |
| 7/6/2016 16:04 | ON | N22.16013 E113.92737 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 16:04 | ON | N22.15963 E113.92734 | 56 m | 0:00:15 | 13 kph |
| 7/6/2016 16:05 | ON | N22.15894 E113.92743 | 78 m | 0:00:21 | 13 kph |
| 7/6/2016 16:05 | ON | N22.15828 E113.92757 | 75 m | 0:00:20 | 13 kph |
| 7/6/2016 16:05 | ON | N22.15759 E113.92760 | 76 m | 0:00:20 | 14 kph |
| 7/6/2016 16:06 | ON | N22.15690 E113.92759 | 78 m | 0:00:20 | 14 kph |
| 7/6/2016 16:06 | ON | N22.15629 E113.92759 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 16:06 | ON | N22.15579 E113.92760 | 56 m | 0:00:14 | 14 kph |
| 7/6/2016 16:06 | ON | N22.15523 E113.92756 | 62 m | 0:00:15 | 15 kph |
| 7/6/2016 16:07 | ON | N22.15455 E113.92751 | 77 m | 0:00:18 | 15 kph |
| 7/6/2016 16:07 | ON | N22.15370 E113.92748 | 94 m | 0:00:23 | 15 kph |
| 7/6/2016 16:07 | ON | N22.15301 E113.92751 | 77 m | 0:00:19 | 15 kph |
| 7/6/2016 16:08 | ON | N22.15239 E113.92749 | 69 m | 0:00:17 | 15 kph |
| 7/6/2016 16:08 | ON | N22.15188 E113.92752 | 57 m | 0:00:14 | 15 kph |
| 7/6/2016 16:08 | ON | N22.15129 E113.92753 | 65 m | 0:00:16 | 15 kph |
| 7/6/2016 16:09 | ON | N22.15070 E113.92753 | 65 m | 0:00:16 | 15 kph |
| 7/6/2016 16:09 | ON | N22.15019 E113.92756 | 57 m | 0:00:14 | 15 kph |
| 7/6/2016 16:09 | ON | N22.14969 E113.92758 | 56 m | 0:00:14 | 14 kph |
| 7/6/2016 16:09 | ON | N22.14912 E113.92750 | 65 m | 0:00:17 | 14 kph |
| 7/6/2016 16:10 | ON | N22.14854 E113.92747 | 65 m | 0:00:17 | 14 kph |
| 7/6/2016 16:10 | ON | N22.14804 E113.92752 | 55 m | 0:00:14 | 14 kph |
| 7/6/2016 16:10 | ON | N22.14759 E113.92757 | 51 m | 0:00:13 | 14 kph |
| 7/6/2016 16:10 | ON | N22.14710 E113.92758 | 54 m | 0:00:14 | 14 kph |
| 7/6/2016 16:10 | ON | N22.14657 E113.92753 | 60 m | 0:00:16 | 14 kph |
| 7/6/2016 16:11 | ON | N22.14610 E113.92746 | 52 m | 0:00:14 | 13 kph |
| 7/6/2016 16:11 | ON | N22.14572 E113.92743 | 42 m | 0:00:11 | 14 kph |
| 7/6/2016 16:11 | ON | N22.14524 E113.92741 | 53 m | 0:00:14 | 14 kph |
| 7/6/2016 16:11 | ON | N22.14480 E113.92741 | 49 m | 0:00:13 | 14 kph |
| 7/6/2016 16:12 | ON | N22.14426 E113.92741 | 60 m | 0:00:16 | 14 kph |
| 7/6/2016 16:12 | ON | N22.14385 E113.92744 | 45 m | 0:00:12 | 13 kph |
| 7/6/2016 16:12 | ON | N22.14340 E113.92749 | 51 m | 0:00:14 | 13 kph |
| 7/6/2016 16:12 | ON | N22.14296 E113.92742 | 49 m | 0:00:15 | 12 kph |
| 7/6/2016 16:12 | ON | N22.14267 E113.92768 | 42 m | 0:00:11 | 14 kph |
| 7/6/2016 16:13 | ON | N22.14261 E113.92784 | 18 m | 0:00:04 | 16 kph |
| 7/6/2016 16:13 | ON | N22.14265 E113.92842 | 60 m | 0:00:13 | 17 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 16:13 | ON | N22.14268 E113.92851 | 10 m | 0:00:02 | 17 kph |
| 7/6/2016 16:13 | ON | N22.14275 E113.92868 | 19 m | 0:00:04 | 17 kph |
| 7/6/2016 16:13 | ON | N22.14293 E113.92898 | 37 m | 0:00:08 | 17 kph |
| 7/6/2016 16:13 | ON | N22.14301 E113.92909 | 14 m | 0:00:03 | 17 kph |
| 7/6/2016 16:13 | ON | N22.14319 E113.92934 | 33 m | 0:00:07 | 17 kph |
| 7/6/2016 16:13 | ON | N22.14324 E113.92942 | 10 m | 0:00:02 | 17 kph |
| 7/6/2016 16:13 | ON | N22.14330 E113.92948 | 9 m | 0:00:02 | 17 kph |
| 7/6/2016 16:13 | ON | N22.14353 E113.92975 | 38 m | 0:00:08 | 17 kph |
| 7/6/2016 16:14 | ON | N22.14411 E113.93027 | 84 m | 0:00:18 | 17 kph |
| 7/6/2016 16:14 | ON | N22.14447 E113.93055 | 49 m | 0:00:11 | 16 kph |
| 7/6/2016 16:14 | ON | N22.14460 E113.93067 | 18 m | 0:00:04 | 16 kph |
| 7/6/2016 16:14 | ON | N22.14468 E113.93076 | 14 m | 0:00:03 | 16 kph |
| 7/6/2016 16:14 | ON | N22.14477 E113.93085 | 14 m | 0:00:03 | 17 kph |
| 7/6/2016 16:14 | ON | N22.14520 E113.93148 | 80 m | 0:00:17 | 17 kph |
| 7/6/2016 16:14 | ON | N22.14528 E113.93159 | 14 m | 0:00:03 | 17 kph |
| 7/6/2016 16:15 | ON | N22.14551 E113.93198 | 48 m | 0:00:10 | 17 kph |
| 7/6/2016 16:15 | ON | N22.14558 E113.93210 | 14 m | 0:00:03 | 17 kph |
| 7/6/2016 16:15 | ON | N22.14568 E113.93226 | 19 m | 0:00:04 | 17 kph |
| 7/6/2016 16:15 | ON | N22.14579 E113.93245 | 24 m | 0:00:05 | 17 kph |
| 7/6/2016 16:15 | ON | N22.14584 E113.93253 | 10 m | 0:00:02 | 18 kph |
| 7/6/2016 16:15 | ON | N22.14595 E113.93273 | 24 m | 0:00:05 | 17 kph |
| 7/6/2016 16:15 | ON | N22.14633 E113.93334 | 76 m | 0:00:16 | 17 kph |
| 7/6/2016 16:15 | ON | N22.14649 E113.93360 | 33 m | 0:00:07 | 17 kph |
| 7/6/2016 16:16 | ON | N22.14692 E113.93424 | 81 m | 0:00:17 | 17 kph |
| 7/6/2016 16:16 | ON | N22.14698 E113.93431 | 9 m | 0:00:02 | 17 kph |
| 7/6/2016 16:16 | ON | N22.14705 E113.93442 | 14 m | 0:00:03 | 17 kph |
| 7/6/2016 16:16 | ON | N22.14713 E113.93454 | 15 m | 0:00:03 | 18 kph |
| 7/6/2016 16:16 | ON | N22.14758 E113.93517 | 82 m | 0:00:17 | 17 kph |
| 7/6/2016 16:16 | ON | N22.14772 E113.93535 | 24 m | 0:00:05 | 17 kph |
| 7/6/2016 16:16 | ON | N22.14821 E113.93601 | 87 m | 0:00:18 | 17 kph |
| 7/6/2016 16:16 | ON | N22.14830 E113.93611 | 14 m | 0:00:03 | 17 kph |
| 7/6/2016 16:16 | ON | N22.14839 E113.93621 | 15 m | 0:00:03 | 17 kph |
| 7/6/2016 16:16 | ON | N22.14848 E113.93631 | 14 m | 0:00:03 | 17 kph |
| 7/6/2016 16:17 | ON | N22.14867 E113.93649 | 28 m | 0:00:06 | 17 kph |
| 7/6/2016 16:17 | ON | N22.14927 E113.93691 | 79 m | 0:00:17 | 17 kph |
| 7/6/2016 16:17 | ON | N22.14978 E113.93710 | 60 m | 0:00:14 | 16 kph |
| 7/6/2016 16:17 | ON | N22.15033 E113.93713 | 62 m | 0:00:15 | 15 kph |
| 7/6/2016 16:18 | ON | N22.15090 E113.93713 | 63 m | 0:00:15 | 15 kph |
| 7/6/2016 16:18 | ON | N22.15141 E113.93710 | 57 m | 0:00:14 | 15 kph |
| 7/6/2016 16:18 | ON | N22.15214 E113.93706 | 82 m | 0:00:20 | 15 kph |
| 7/6/2016 16:18 | ON | N22.15265 E113.93703 | 57 m | 0:00:14 | 15 kph |
| 7/6/2016 16:19 | ON | N22.15313 E113.93699 | 53 m | 0:00:13 | 15 kph |
| 7/6/2016 16:19 | ON | N22.15370 E113.93693 | 65 m | 0:00:16 | 15 kph |
| 7/6/2016 16:19 | ON | N22.15428 E113.93690 | 65 m | 0:00:16 | 15 kph |
| 7/6/2016 16:19 | ON | N22.15496 E113.93684 | 76 m | 0:00:19 | 14 kph |
| 7/6/2016 16:20 | ON | N22.15560 E113.93678 | 71 m | 0:00:18 | 14 kph |
| 7/6/2016 16:20 | ON | N22.15618 E113.93676 | 64 m | 0:00:16 | 14 kph |
| 7/6/2016 16:20 | ON | N22.15686 E113.93673 | 76 m | 0:00:19 | 14 kph |
| 7/6/2016 16:21 | ON | N22.15740 E113.93671 | 60 m | 0:00:15 | 14 kph |
| 7/6/2016 16:21 | ON | N22.15786 E113.93670 | 52 m | 0:00:13 | 14 kph |
| 7/6/2016 16:21 | ON | N22.15840 E113.93669 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 16:21 | ON | N22.15904 E113.93672 | 71 m | 0:00:18 | 14 kph |
| 7/6/2016 16:22 | ON | N22.15978 E113.93671 | 83 m | 0:00:21 | 14 kph |
| 7/6/2016 16:22 | ON | N22.16046 E113.93676 | 75 m | 0:00:19 | 14 kph |
| 7/6/2016 16:22 | ON | N22.16102 E113.93685 | 63 m | 0:00:16 | 14 kph |
| 7/6/2016 16:23 | ON | N22.16170 E113.93688 | 76 m | 0:00:19 | 14 kph |
| 7/6/2016 16:23 | ON | N22.16242 E113.93690 | 80 m | 0:00:20 | 14 kph |
| 7/6/2016 16:23 | ON | N22.16318 E113.93698 | 85 m | 0:00:21 | 15 kph |
| 7/6/2016 16:24 | ON | N22.16379 E113.93703 | 68 m | 0:00:17 | 14 kph |
| 7/6/2016 16:24 | ON | N22.16426 E113.93703 | 52 m | 0:00:13 | 15 kph |
| 7/6/2016 16:24 | ON | N22.16469 E113.93701 | 47 m | 0:00:15 | 11 kph |
| 7/6/2016 16:24 | OFF | N22.16495 E113.93701 | 29 m | 0:00:15 | 7 kph |
| 7/6/2016 16:24 | OFF | N22.16509 E113.93701 | 16 m | 0:00:11 | 5 kph |
| 7/6/2016 16:25 | OFF | N22.16521 E113.93703 | 14 m | 0:00:13 | 4 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 16:25 | OFF | N22.16534 E113.93706 | 14 m | 0:00:17 | 3 kph |
| 7/6/2016 16:25 | OFF | N22.16542 E113.93708 | 9 m | 0:00:15 | 2 kph |
| 7/6/2016 16:25 | OFF | N22.16547 E113.93710 | 7 m | 0:00:13 | 2 kph |
| 7/6/2016 16:26 | OFF | N22.16550 E113.93712 | 4 m | 0:00:20 | 0.6 kph |
| 7/6/2016 16:26 | OFF | N22.16552 E113.93713 | 3 m | 0:00:13 | 0.8 kph |
| 7/6/2016 16:26 | OFF | N22.16555 E113.93714 | 3 m | 0:00:15 | 0.7 kph |
| 7/6/2016 16:26 | OFF | N22.16557 E113.93716 | 3 m | 0:00:15 | 0.8 kph |
| 7/6/2016 16:27 | OFF | N22.16559 E113.93718 | 2 m | 0:00:11 | 0.8 kph |
| 7/6/2016 16:27 | OFF | N22.16560 E113.93719 | 3 m | 0:00:12 | 0.8 kph |
| 7/6/2016 16:27 | OFF | N22.16561 E113.93720 | 2 m | 0:00:12 | 0.5 kph |
| 7/6/2016 16:27 | OFF | N22.16562 E113.93721 | 1 m | 0:00:11 | 0.4 kph |
| 7/6/2016 16:28 | OFF | N22.16563 E113.93723 | 2 m | 0:00:19 | 0.3 kph |
| 7/6/2016 16:28 | OFF | N22.16564 E113.93723 | 1 m | 0:00:09 | 0.3 kph |
| 7/6/2016 16:28 | OFF | N22.16564 E113.93724 | 1 m | 0:00:16 | 0.2 kph |
| 7/6/2016 16:28 | OFF | N22.16565 E113.93724 | 1 m | 0:00:11 | 0.2 kph |
| 7/6/2016 16:28 | OFF | N22.16565 E113.93724 | 1 m | 0:00:12 | 0.2 kph |
| 7/6/2016 16:29 | OFF | N22.16566 E113.93724 | 0 m | 0:00:15 | 0.1 kph |
| 7/6/2016 16:29 | OFF | N22.16568 E113.93725 | 3 m | 0:00:08 | 1.4 kph |
| 7/6/2016 16:29 | OFF | N22.16600 E113.93723 | 36 m | 0:00:17 | 8 kph |
| 7/6/2016 16:29 | OFF | N22.16630 E113.93713 | 34 m | 0:00:12 | 10 kph |
| 7/6/2016 16:29 | OFF | N22.16679 E113.93715 | 54 m | 0:00:16 | 12 kph |
| 7/6/2016 16:30 | OFF | N22.16727 E113.93720 | 54 m | 0:00:15 | 13 kph |
| 7/6/2016 16:30 | ON | N22.16774 E113.93717 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 16:30 | ON | N22.16827 E113.93714 | 59 m | 0:00:17 | 13 kph |
| 7/6/2016 16:31 | ON | N22.16873 E113.93709 | 51 m | 0:00:15 | 12 kph |
| 7/6/2016 16:31 | ON | N22.16917 E113.93701 | 50 m | 0:00:15 | 12 kph |
| 7/6/2016 16:31 | ON | N22.16961 E113.93694 | 49 m | 0:00:15 | 12 kph |
| 7/6/2016 16:31 | ON | N22.17016 E113.93689 | 61 m | 0:00:18 | 12 kph |
| 7/6/2016 16:32 | ON | N22.17075 E113.93690 | 66 m | 0:00:19 | 13 kph |
| 7/6/2016 16:32 | ON | N22.17125 E113.93687 | 55 m | 0:00:16 | 12 kph |
| 7/6/2016 16:32 | ON | N22.17177 E113.93684 | 59 m | 0:00:17 | 12 kph |
| 7/6/2016 16:32 | ON | N22.17221 E113.93683 | 48 m | 0:00:14 | 12 kph |
| 7/6/2016 16:33 | ON | N22.17268 E113.93685 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 16:33 | ON | N22.17316 E113.93686 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 16:33 | ON | N22.17370 E113.93686 | 60 m | 0:00:17 | 13 kph |
| 7/6/2016 16:34 | ON | N22.17428 E113.93689 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 16:34 | ON | N22.17483 E113.93689 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 16:34 | ON | N22.17544 E113.93691 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 16:34 | ON | N22.17599 E113.93687 | 61 m | 0:00:16 | 14 kph |
| 7/6/2016 16:35 | ON | N22.17662 E113.93682 | 71 m | 0:00:18 | 14 kph |
| 7/6/2016 16:35 | ON | N22.17712 E113.93679 | 56 m | 0:00:14 | 14 kph |
| 7/6/2016 16:35 | ON | N22.17766 E113.93672 | 61 m | 0:00:15 | 15 kph |
| 7/6/2016 16:35 | ON | N22.17829 E113.93668 | 70 m | 0:00:17 | 15 kph |
| 7/6/2016 16:36 | ON | N22.17891 E113.93672 | 70 m | 0:00:17 | 15 kph |
| 7/6/2016 16:36 | ON | N22.17942 E113.93675 | 56 m | 0:00:14 | 14 kph |
| 7/6/2016 16:36 | ON | N22.18002 E113.93680 | 67 m | 0:00:17 | 14 kph |
| 7/6/2016 16:37 | ON | N22.18066 E113.93685 | 72 m | 0:00:18 | 14 kph |
| 7/6/2016 16:37 | ON | N22.18119 E113.93682 | 59 m | 0:00:15 | 14 kph |
| 7/6/2016 16:37 | ON | N22.18187 E113.93684 | 76 m | 0:00:19 | 14 kph |
| 7/6/2016 16:37 | ON | N22.18246 E113.93685 | 66 m | 0:00:17 | 14 kph |
| 7/6/2016 16:38 | ON | N22.18309 E113.93684 | 70 m | 0:00:18 | 14 kph |
| 7/6/2016 16:38 | ON | N22.18364 E113.93687 | 61 m | 0:00:16 | 14 kph |
| 7/6/2016 16:38 | ON | N22.18424 E113.93687 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 16:39 | ON | N22.18479 E113.93688 | 62 m | 0:00:17 | 13 kph |
| 7/6/2016 16:39 | ON | N22.18538 E113.93692 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 16:39 | ON | N22.18590 E113.93694 | 57 m | 0:00:16 | 13 kph |
| 7/6/2016 16:39 | ON | N22.18636 E113.93693 | 51 m | 0:00:14 | 13 kph |
| 7/6/2016 16:40 | ON | N22.18685 E113.93694 | 55 m | 0:00:15 | 13 kph |
| 7/6/2016 16:40 | ON | N22.18739 E113.93705 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 16:40 | ON | N22.18785 E113.93719 | 53 m | 0:00:15 | 13 kph |
| 7/6/2016 16:40 | ON | N22.18821 E113.93725 | 41 m | 0:00:12 | 12 kph |
| 7/6/2016 16:41 | ON | N22.18869 E113.93725 | 54 m | 0:00:16 | 12 kph |
| 7/6/2016 16:41 | ON | N22.18925 E113.93714 | 63 m | 0:00:19 | 12 kph |
| 7/6/2016 16:41 | ON | N22.18978 E113.93701 | 60 m | 0:00:18 | 12 kph |

## Appendix I. (cont'd)

| Date & Time | EFFORT | Position | Leg Length | Leg Time | Leg Speed |
|---|---|---|---|---|---|
| 7/6/2016 16:41 | ON | N22.19028 E113.93689 | 57 m | 0:00:17 | 12 kph |
| 7/6/2016 16:42 | ON | N22.19077 E113.93681 | 55 m | 0:00:16 | 12 kph |
| 7/6/2016 16:42 | ON | N22.19117 E113.93678 | 45 m | 0:00:13 | 12 kph |
| 7/6/2016 16:42 | ON | N22.19160 E113.93675 | 48 m | 0:00:14 | 12 kph |
| 7/6/2016 16:42 | ON | N22.19202 E113.93673 | 48 m | 0:00:14 | 12 kph |
| 7/6/2016 16:43 | ON | N22.19261 E113.93673 | 65 m | 0:00:19 | 12 kph |
| 7/6/2016 16:43 | ON | N22.19305 E113.93673 | 49 m | 0:00:14 | 13 kph |
| 7/6/2016 16:43 | ON | N22.19354 E113.93681 | 55 m | 0:00:15 | 13 kph |
| 7/6/2016 16:44 | ON | N22.19409 E113.93691 | 62 m | 0:00:17 | 13 kph |
| 7/6/2016 16:44 | ON | N22.19455 E113.93694 | 51 m | 0:00:14 | 13 kph |
| 7/6/2016 16:44 | ON | N22.19499 E113.93696 | 49 m | 0:00:13 | 13 kph |
| 7/6/2016 16:44 | ON | N22.19555 E113.93699 | 62 m | 0:00:16 | 14 kph |
| 7/6/2016 16:44 | ON | N22.19605 E113.93699 | 56 m | 0:00:15 | 13 kph |
| 7/6/2016 16:45 | ON | N22.19653 E113.93698 | 53 m | 0:00:14 | 14 kph |
| 7/6/2016 16:45 | ON | N22.19708 E113.93703 | 62 m | 0:00:16 | 14 kph |
| 7/6/2016 16:45 | ON | N22.19757 E113.93705 | 54 m | 0:00:14 | 14 kph |
| 7/6/2016 16:45 | ON | N22.19805 E113.93704 | 54 m | 0:00:14 | 14 kph |
| 7/6/2016 16:46 | ON | N22.19857 E113.93700 | 58 m | 0:00:15 | 14 kph |
| 7/6/2016 16:46 | ON | N22.19902 E113.93695 | 49 m | 0:00:13 | 14 kph |
| 7/6/2016 16:46 | ON | N22.19948 E113.93692 | 51 m | 0:00:13 | 14 kph |
| 7/6/2016 16:46 | ON | N22.19999 E113.93684 | 58 m | 0:00:15 | 14 kph |
| 7/6/2016 16:47 | ON | N22.20063 E113.93685 | 71 m | 0:00:18 | 14 kph |
| 7/6/2016 16:47 | ON | N22.20122 E113.93687 | 66 m | 0:00:17 | 14 kph |
| 7/6/2016 16:47 | ON | N22.20182 E113.93690 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 16:48 | ON | N22.20242 E113.93687 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 16:48 | ON | N22.20294 E113.93684 | 58 m | 0:00:16 | 13 kph |
| 7/6/2016 16:48 | ON | N22.20353 E113.93685 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 16:48 | ON | N22.20409 E113.93684 | 63 m | 0:00:17 | 13 kph |
| 7/6/2016 16:49 | ON | N22.20471 E113.93680 | 69 m | 0:00:19 | 13 kph |
| 7/6/2016 16:49 | ON | N22.20530 E113.93681 | 66 m | 0:00:18 | 13 kph |
| 7/6/2016 16:49 | ON | N22.20572 E113.93682 | 47 m | 0:00:13 | 13 kph |
| 7/6/2016 16:50 | ON | N22.20627 E113.93687 | 61 m | 0:00:17 | 13 kph |
| 7/6/2016 16:50 | ON | N22.20688 E113.93694 | 68 m | 0:00:19 | 13 kph |
| 7/6/2016 16:50 | ON | N22.20746 E113.93696 | 64 m | 0:00:18 | 13 kph |
| 7/6/2016 16:50 | ON | N22.20813 E113.93699 | 75 m | 0:00:21 | 13 kph |
| 7/6/2016 16:51 | ON | N22.20872 E113.93699 | 65 m | 0:00:18 | 13 kph |
| 7/6/2016 16:51 | ON | N22.20937 E113.93703 | 73 m | 0:00:20 | 13 kph |
| 7/6/2016 16:51 | ON | N22.20997 E113.93706 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 16:52 | ON | N22.21054 E113.93702 | 63 m | 0:00:17 | 13 kph |
| 7/6/2016 16:52 | ON | N22.21107 E113.93696 | 59 m | 0:00:16 | 13 kph |
| 7/6/2016 16:52 | ON | N22.21155 E113.93693 | 53 m | 0:00:14 | 14 kph |
| 7/6/2016 16:52 | ON | N22.21211 E113.93689 | 63 m | 0:00:17 | 13 kph |
| 7/6/2016 16:53 | ON | N22.21271 E113.93687 | 67 m | 0:00:18 | 13 kph |
| 7/6/2016 16:53 | ON | N22.21321 E113.93687 | 55 m | 0:00:15 | 13 kph |
| 7/6/2016 16:53 | ON | N22.21392 E113.93686 | 79 m | 0:00:21 | 13 kph |
| 7/6/2016 16:54 | ON | N22.21462 E113.93681 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 16:54 | ON | N22.21527 E113.93680 | 72 m | 0:00:19 | 14 kph |
| 7/6/2016 16:54 | ON | N22.21605 E113.93674 | 88 m | 0:00:23 | 14 kph |
| 7/6/2016 16:55 | ON | N22.21680 E113.93676 | 83 m | 0:00:22 | 14 kph |
| 7/6/2016 16:55 | ON | N22.21762 E113.93681 | 92 m | 0:00:24 | 14 kph |
| 7/6/2016 16:56 | ON | N22.21847 E113.93684 | 94 m | 0:00:25 | 14 kph |
| 7/6/2016 16:56 | ON | N22.21929 E113.93696 | 92 m | 0:00:24 | 14 kph |
| 7/6/2016 16:56 | ON | N22.22013 E113.93703 | 95 m | 0:00:25 | 14 kph |
| 7/6/2016 16:57 | ON | N22.22084 E113.93697 | 79 m | 0:00:21 | 14 kph |
| 7/6/2016 16:57 | ON | N22.22163 E113.93690 | 88 m | 0:00:23 | 14 kph |
| 7/6/2016 16:58 | ON | N22.22234 E113.93683 | 80 m | 0:00:21 | 14 kph |
| 7/6/2016 16:58 | ON | N22.22307 E113.93673 | 82 m | 0:00:22 | 13 kph |

## Appendix II. Survey Effort Database in SWL (June 2016)

(Abbreviations: BEAU = Beaufort Sea State; P = Primary Line Effort; S = Secondary Line Effort)

| DATE | AREA | BEAU | EFFORT | SEASON | VESSEL | TYPE | P/S |
|---|---|---|---|---|---|---|---|
| 3-Jun-16 | SW LANTAU | 2 | 10.81 | SUMMER | STANDARD31516 | HKCRP | P |
| 3-Jun-16 | SW LANTAU | 3 | 11.09 | SUMMER | STANDARD31516 | HKCRP | P |
| 3-Jun-16 | SW LANTAU | 2 | 2.60 | SUMMER | STANDARD31516 | HKCRP | S |
| 3-Jun-16 | SW LANTAU | 3 | 11.32 | SUMMER | STANDARD31516 | HKCRP | S |
| 7-Jun-16 | SW LANTAU | 2 | 42.07 | SUMMER | STANDARD31516 | HYD-HZMB | P |
| 7-Jun-16 | SW LANTAU | 3 | 11.39 | SUMMER | STANDARD31516 | HYD-HZMB | P |
| 7-Jun-16 | SW LANTAU | 2 | 11.93 | SUMMER | STANDARD31516 | HYD-HZMB | S |
| 7-Jun-16 | SW LANTAU | 3 | 3.57 | SUMMER | STANDARD31516 | HYD-HZMB | S |
| 7-Jun-16 | SW LANTAU | 4 | 1.20 | SUMMER | STANDARD31516 | HYD-HZMB | S |
| 14-Jun-16 | SW LANTAU | 2 | 6.20 | SUMMER | STANDARD31516 | HKCRP | P |
| 14-Jun-16 | SW LANTAU | 3 | 12.92 | SUMMER | STANDARD31516 | HKCRP | P |
| 14-Jun-16 | SW LANTAU | 4 | 1.30 | SUMMER | STANDARD31516 | HKCRP | P |
| 14-Jun-16 | SW LANTAU | 2 | 2.72 | SUMMER | STANDARD31516 | HKCRP | S |
| 14-Jun-16 | SW LANTAU | 3 | 4.48 | SUMMER | STANDARD31516 | HKCRP | S |
| 14-Jun-16 | SW LANTAU | 4 | 0.53 | SUMMER | STANDARD31516 | HKCRP | S |
| 20-Jun-16 | SW LANTAU | 2 | 12.93 | SUMMER | STANDARD31516 | HKCRP | P |
| 20-Jun-16 | SW LANTAU | 3 | 1.84 | SUMMER | STANDARD31516 | HKCRP | P |
| 20-Jun-16 | SW LANTAU | 2 | 4.37 | SUMMER | STANDARD31516 | HKCRP | S |

## Appendix III. Chinese White Dolphin Sighting Database in SWL (June 2016)

(Abberviations: STG# = Sighting Number; HRD SZ = Dolphin Herd Size; BEAU = Beaufort Sea State; PSD = Perpendicular Distance; ND = Not Determined; BOAT ASSOC. = Fishing Boat Association; P/S: Sighting Made on Primary/Secondary Lines)

| DATE | STG # | TIME | HRD SZ | AREA | BEAU | PSD | EFFORT | TYPE | NORTHING | EASTING | SEASON | BOAT ASSOC. | P/S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3-Jun-16 | 2 | 1123 | 3 | SW LANTAU | 2 | ND | OFF | HKCRP | 806195 | 802332 | SUMMER | NONE | |
| 3-Jun-16 | 3 | 1403 | 1 | SW LANTAU | 3 | 54 | ON | HKCRP | 805684 | 808436 | SUMMER | NONE | S |
| 7-Jun-16 | 1 | 1154 | 5 | SW LANTAU | 2 | 765 | ON | HYD-HZMB | 805260 | 804506 | SUMMER | NONE | P |
| 7-Jun-16 | 2 | 1336 | 1 | SW LANTAU | 2 | 27 | ON | HYD-HZMB | 805675 | 807426 | SUMMER | NONE | P |
| 7-Jun-16 | 3 | 1506 | 1 | SW LANTAU | 2 | 106 | ON | HYD-HZMB | 803002 | 809638 | SUMMER | NONE | P |
| 7-Jun-16 | 4 | 1531 | 1 | SW LANTAU | 2 | ND | OFF | HYD-HZMB | 807442 | 809780 | SUMMER | NONE | |
| 14-Jun-16 | 1 | 1310 | 4 | SW LANTAU | 3 | ND | OFF | HKCRP | 806457 | 809562 | SUMMER | NONE | |
| 14-Jun-16 | 2 | 1338 | 4 | SW LANTAU | 3 | 218 | ON | HKCRP | 807421 | 809172 | SUMMER | NONE | S |
| 14-Jun-16 | 3 | 1400 | 2 | SW LANTAU | 3 | 88 | ON | HKCRP | 807511 | 808667 | SUMMER | NONE | S |
| 14-Jun-16 | 4 | 1428 | 5 | SW LANTAU | 3 | 665 | ON | HKCRP | 806594 | 807417 | SUMMER | NONE | P |
| 14-Jun-16 | 5 | 1537 | 1 | SW LANTAU | 2 | ND | OFF | HKCRP | 803834 | 809103 | SUMMER | NONE | |
| 20-Jun-16 | 1 | 1349 | 1 | SW LANTAU | 3 | 635 | ON | HKCRP | 805497 | 802506 | SUMMER | NONE | P |
| 20-Jun-16 | 2 | 1353 | 8 | SW LANTAU | 2 | 14 | ON | HKCRP | 806150 | 802569 | SUMMER | NONE | P |
| 20-Jun-16 | 3 | 1414 | 2 | SW LANTAU | 2 | 889 | ON | HKCRP | 807065 | 804458 | SUMMER | NONE | S |
| 20-Jun-16 | 4 | 1503 | 12 | SW LANTAU | 2 | 462 | ON | HKCRP | 807868 | 807337 | SUMMER | PURSE-SEINE | P |
| 20-Jun-16 | 5 | 1542 | 2 | SW LANTAU | 2 | 155 | ON | HKCRP | 806481 | 808520 | SUMMER | NONE | P |
| 20-Jun-16 | 6 | 1600 | 3 | SW LANTAU | 2 | 158 | ON | HKCRP | 804245 | 808423 | SUMMER | NONE | S |
| 20-Jun-16 | 7 | 1613 | 1 | SW LANTAU | 2 | ND | OFF | HKCRP | 803977 | 809671 | SUMMER | NONE | |

## Appendix IV. Individual dolphins identified during HYD-HZMB and AFCD monitoring surveys in SWL waters in June 2016

| ID# | DATE | STG# | TYPE | AREA |
|---|---|---|---|---|
| CH12 | 03/06/16 | 2 | HKCRP | SW LANTAU |
| CH38 | 14/06/16 | 4 | HKCRP | SW LANTAU |
| NL33 | 20/06/16 | 2 | HKCRP | SW LANTAU |
| NL120 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| NL150 | 20/06/16 | 2 | HKCRP | SW LANTAU |
| NL206 | 20/06/16 | 2 | HKCRP | SW LANTAU |
| NL226 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| SL47 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| SL54 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| SL55 | 14/06/16 | 2 | HKCRP | SW LANTAU |
| SL60 | 07/06/16 | 2 | HYD-HZMB | SW LANTAU |
| | 07/06/16 | 3 | HYD-HZMB | SW LANTAU |
| WL15 | 14/06/16 | 4 | HKCRP | SW LANTAU |
| WL46 | 14/06/16 | 3 | HKCRP | SW LANTAU |
| WL47 | 14/06/16 | 2 | HKCRP | SW LANTAU |
| | 20/06/16 | 4 | HKCRP | SW LANTAU |
| WL61 | 07/06/16 | 4 | HYD-HZMB | SW LANTAU |
| WL74 | 20/06/16 | 2 | HKCRP | SW LANTAU |
| WL91 | 20/06/16 | 6 | HKCRP | SW LANTAU |
| WL116 | 14/06/16 | 4 | HKCRP | SW LANTAU |
| WL128 | 14/06/16 | 4 | HKCRP | SW LANTAU |
| WL131 | 14/06/16 | 4 | HKCRP | SW LANTAU |
| | 20/06/16 | 2 | HKCRP | SW LANTAU |
| WL152 | 03/06/16 | 2 | HKCRP | SW LANTAU |
| WL166 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| WL168 | 14/06/16 | 1 | HKCRP | SW LANTAU |
| WL173 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| WL208 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| WL210 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| WL216 | 14/06/16 | 3 | HKCRP | SW LANTAU |
| WL232 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| WL241 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| WL243 | 20/06/16 | 5 | HKCRP | SW LANTAU |
| WL250 | 14/06/16 | 2 | HKCRP | SW LANTAU |
| WL264 | 20/06/16 | 4 | HKCRP | SW LANTAU |
| WL265 | 20/06/16 | 4 | HKCRP | SW LANTAU |










Appendix V. Photographs of Identified Individual Dolphins in June 2016 in SWL waters










Appendix V (cont'd).










Appendix V (cont'd).


Appendix V (cont'd).