How to Read CONVERGE Penguin Track Data Primer
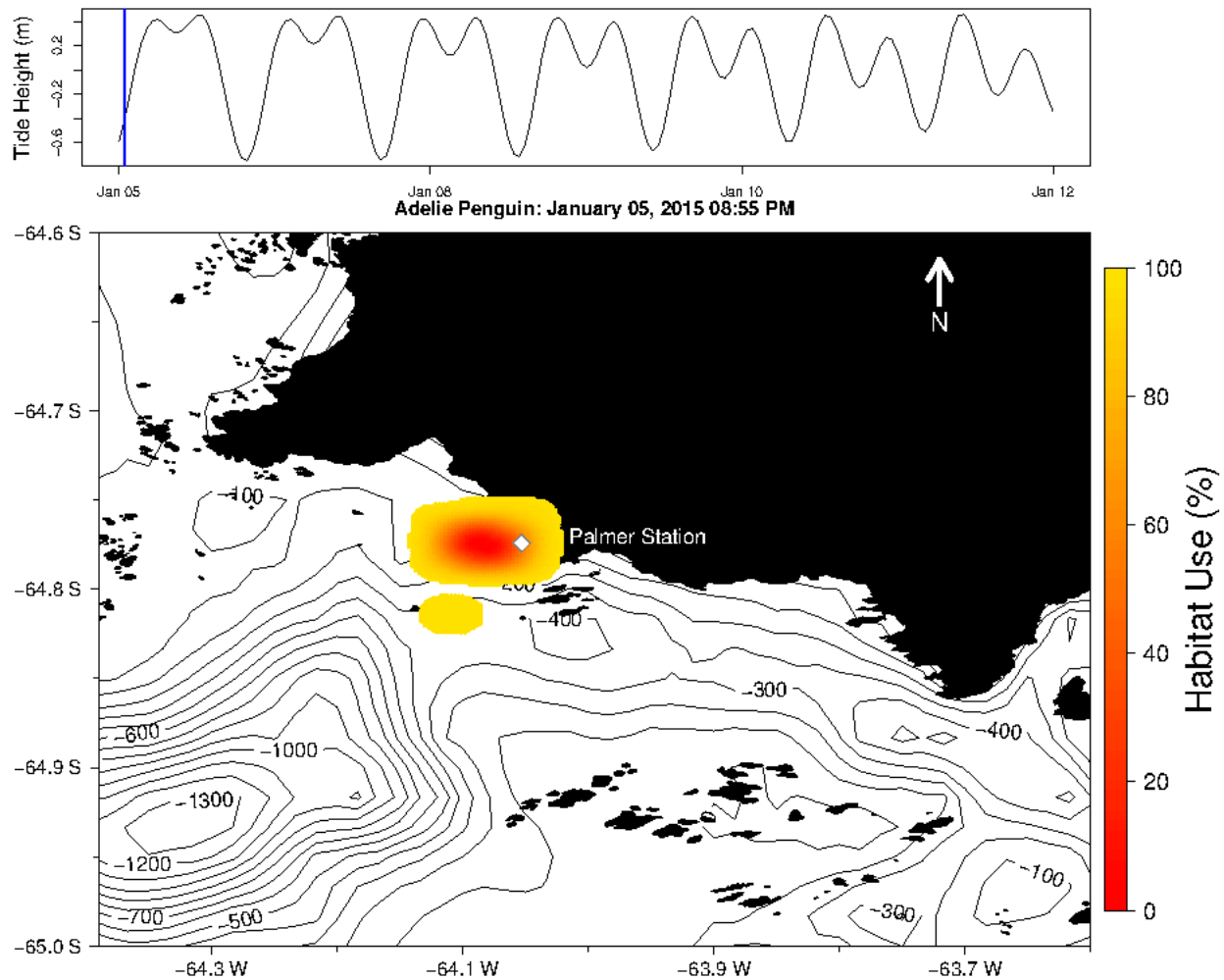
Overall Notes about the data:
- Everything is in Greenwich Mean Time (GMT), which is 5 hours ahead of the east cost.
- All time is presented in military time, which means it is from 0:00 (12:00am) to 23:59 (11:59pm).
- Wind measurements are in m/s and surface current measurements are in cm/s, check the units carefully when looking at arrowed maps to know which you are looking at.

5) Penguin Track Data
- *Penguin Kernel Density Movies* – This link will be an animation of the penguin kernel densities over time with the same color scheme included in the google earth layers (Penguin Tracks: Mean Kernel Density – Adelies & Mean Kernel Density – Gentoos).
  - ○ *Adelies* – This links to the mean kernel density (habitat use) of the tagged Adelie penguins over the season. Yellow colors indicate less habitat use over time by the penguins and red colors indicate more habitat use over time by the penguins. The date and time of the data are included in the figure title and indicated by the blue bar moving across the top. The top graph represents the tide height (m) throughout time.

Adelie Penguin: January 05, 2015 08:55 PM

- o *Gentoos* – This link will lead to the mean kernel density (habitat use) of the tagged Gentoo penguins over the season (once Gentoo penguins are tagged when the chicks get bigger). Yellow colors indicate less habitat use over time by the penguins and green colors indicate more habitat use over time by the penguins. The date and time of the data are included in the figure title and indicated by the blue bar moving across the top. The top graph represents the tide height (m) throughout time.

- *Data file of Tracks* – This links to a directory of penguin data hosted by the University of Delaware. Select the Palmer_Penguins.csv file in the list of files to download the data file of the penguin tracks (which can be used to import into ArcGIS Online to easily see the track data). For the time during which each penguin was tagged there will be data of where the penguin went. The columns of data include:
    - o PTT – Is an identifying number that combines the tag ID and the unique ID for each individual penguin tagged.
    - o Lat – Latitude

- o   Lon – Longitude
- o   Time – Date and time the data point is from.
- o   Qual – Is how the scientists quantify the quality of the location data point on a scale from high to low quality (highest - 3, 2, 1, 0, A, B, lowest - Z). *This is a category that you can ignore when interacting with the data, as the scientists in their complete penguin movement analyses use it.
- o   Spp – Species. ADPE = Adélie Penguin and GEPE = Gentoo Penguin.
- o   Sex – Gender of tagged penguin. M – Male, F – Female.
- o   Isl – Island colony in which the penguin was tagged. TOR – Torgesen Island, BIS – Biscoe Point.

	A	B	C	D	E	F	G	H	I
1		PTT	Lat	Lon	Time	Qual	Spp	Sex	Isl
2	1	134759.1	-64.775	-64.091	1/5/15 20:55	3	ADPE	M	TOR
3	2	134759.1	-64.773	-64.087	1/5/15 22:15	2	ADPE	M	TOR
4	3	134759.1	-64.777	-64.081	1/5/15 23:52	2	ADPE	M	TOR