

Hydrosphere, Atmosphere, and Geosphere – Finding Patterns in Data

Overview

This lesson plan was created by after being a part of the Arctic Glacial Lakes PolarTREC Expedition. I was inspired by the massive amount of data collected over the course of the research project and the complexity of hydrology in glaciated and non-glaciated basins in the Brooks Range of Alaska. Students will work together to make hypotheses about patterns in an actual data set and will attempt to understand the variables that influence discharge and sediment load of an Arctic creek.

Objectives

- Students practice manipulating and searching for patterns in large data sets
- Students understand that sediment load is determined by the discharge of a stream
- Students understand that discharge is influenced by temperature and precipitation, and those influences are affected by whether a basin is glaciated or not
- Students understand that Arctic hydrology is complex and that sediments are important to fluvial systems and ecosystems

Lesson Preparation

- Teacher should use the graphs on the original spreadsheet to familiarize themselves with the graphs that students will produce and the patterns they will see.
- Teacher should familiarize themselves with the location using the photos provided
- Students should have access to computers (at least one per group) and graphing software: either google sheets or excel.

Details

- Lesson
- Arctic
- Less than a week
- Download, Share, and Remix
- High school and Up

Materials

One computer per student or student group
Internet access
Data set (provided)
Photos and maps of field site (provided)

Standards

NGSS Standards

HS ESS2-5, ESS2C

Utah Earth Science Standards

4.1, 5.1a

Background information

It will benefit students and teachers to read the journal posts from the Arctic Glacial Lakes expedition that detail the science of the expedition. These posts are labeled “The Science.” The following journals will be the most helpful for this lesson.

1. The Science: Arctic Glacial Lakes details the data collection, models, and goals of the Arctic Glacial Lakes project.
2. The Science: Why Study Mud? discusses the importance of studying sediments, which will help students understand the purpose of this activity.
3. The Science: Glaciers will help students understand the importance of glaciers on hydrology and sedimentology.

Students should also have a good understanding of discharge, suspended sediment, and turbidity.

Discharge is the volume of water traveling in a waterway in a given amount of time.

Suspended sediment concentration is the amount of sediment of all grain sizes carried in the water, as measured by a certain mass of sediments in a certain volume of water. Generally, the higher the discharge, the greater the energy in the water, and thus more and larger sediments will be carried.

Turbidity is cloudiness of the water, and is determined by the amount of fine sediments, like fine silt, clay, and organic matter, that is in the water.

Students should also understand that Julian date is a count of days in the year, which allows us to easily graph a continuous passage of time. Decimals in the Julian data give the time of the day.

Procedure

1. Find Lake Peters on Google Earth, then find Carnivore Creek, Chamberlin Creek, NG1 and Chamberlin glacier. It may be helpful to have students trace the drainage basins for each of the creeks and look for key features (glaciers, multiple tributaries, etc). Pictures have been included in this lesson to help identify these locations.
2. As a class, make predictions about how Carnivore Creek and NG-1 may differ. What variables (glaciers, size, precipitation, temperature, etc) may impact their discharge the most?
3. Divide students into small groups. Each group should graph one of the variables on the dataset over time. They should answer the following questions:
 - a. *What patterns do you see in the data?*
 - b. *What might explain these patterns?*
 - c. *Make several hypotheses about how your variable might interact with the other variables.*
 - d. *Predict what trends you might see in the other groups' graphs.*
4. When students are ready, they should share their graph with the class and give a short informal presentation on their data. As students present, the other groups should check their predictions against the new data provided for them. This part could also be done as a

- jigsaw, creating new groups made of one student expert from each of the other groups.
5. The lesson should end with a whole group discussion where students test their hypotheses against the new data, and look for trends across the data.

Notes:

- Pressure is a very rough proxy for discharge. More pressure = more discharge. For better analyses, this measure would need to be calibrated with measurements from the field.
- NG 1 is not glaciated and has a small watershed, Carnivore Creek has many glaciated tributaries.
- Discharge of glaciated tributaries are likely to be more influence by temperature than non-glaciated
- Look for time lags in the larger tributary.
- Trends will be coarse. The intention of this exercise is to provoke thought and searching for patterns, NOT to come to conclusions based on statistically significant trends.

Resources

Data Set: Carnivore Creek and NG1 Data 2017

Photos from Google Earth

Journal Entries

Assessment

Students should be assessed in their presentations and in the final class discussion. Students may be formally assessed by a written paragraph, in which they make a claim about Arctic hydrological systems or sediments, and back that claim up with specific evidence from the data they saw in class or from the journal entries.

Author/Credits

Rebecca Harris created this lesson. Please email her at the.rebecca.harris@gmail.com if you have any questions, comments, or feedback. I would love to hear from you! Data was organized by PolarTREC researcher Ellie Broadman, and provided by the Arctic Glacial Lakes Project. All data is preliminary, and some may have been adapted slightly to be more clear and concise for students, but to maintain the general trends. Special thanks Darrell Kaufman, Nicholas McKay, Lorna Thurston, David Fortin, Erik Schiefer, and the many other students and field assistants who generously provided the data.

Carnivore Creek Data				NG1 Data		Environmental Variables		
DateTime	Year	JulianDay	Q	SSC	Air Temp [°C]	Pressure	Rain mm/hr	Accumulated summer precip
5/26/17 18:00	2017	146.75	1.59	21.00	0.273	92.316	0	0
5/26/17 19:00	2017	146.79	1.49	21.00	0.163	92.436	0	0
5/26/17 20:00	2017	146.83	1.34	21.00	-0.507	92.433	0	0
5/26/17 21:00	2017	146.88	1.32	21.00	-0.62	92.531	0	0
5/26/17 22:00	2017	146.92	1.23	21.00	-1.157	92.608	0	0
5/26/17 23:00	2017	146.96	1.22	21.00	-1.185	92.671	0	0
5/27/17 0:00	2017	147.00	1.18	21.00	-1.699	92.719	0	0
5/27/17 1:00	2017	147.04	1.13	21.00	-2.392	92.771	0	0
5/27/17 2:00	2017	147.08	1.10	21.00	-2.683	92.781	0	0
5/27/17 3:00	2017	147.13	1.11	21.00	-3.006	92.805	0	0
5/27/17 4:00	2017	147.17	0.93	21.00	-2.8	92.848	0	0
5/27/17 5:00	2017	147.21	0.83	21.00	-3.449	92.913	0	0
5/27/17 6:00	2017	147.25	0.88	21.00	-3.777	93.031	0	0
5/27/17 7:00	2017	147.29	0.94	21.00	-3.212	93.172	0	0
5/27/17 8:00	2017	147.33	1.02	21.00	-2.508	93.276	0	0
5/27/17 9:00	2017	147.38	1.07	21.00	-2.334	93.342	0	0
5/27/17 10:00	2017	147.42	0.53	21.00	-1.157	93.427	0	0
5/27/17 11:00	2017	147.46	0.84	21.00	-0.032	93.455	0	0
5/27/17 12:00	2017	147.50	0.60	21.00	-0.789	93.455	0	0
5/27/17 13:00	2017	147.54	1.10	21.00	1.044	92.997	0	0
5/27/17 14:00	2017	147.58	0.98	21.00	1.371	92.862	0	0
5/27/17 15:00	2017	147.63	0.91	21.00	1.67	92.829	0	0
5/27/17 16:00	2017	147.67	0.92	21.00	1.561	92.864	0	0
5/27/17 17:00	2017	147.71	1.18	21.00	0.989	92.923	0	0
5/27/17 18:00	2017	147.75	1.12	21.00	0.66	92.984	0	0
5/27/17 19:00	2017	147.79	1.02	21.00	0.024	92.97	0	0
5/27/17 20:00	2017	147.83	0.97	21.00	0.246	92.921	0	0
5/27/17 21:00	2017	147.88	0.94	21.00	-0.62	92.922	0	0
5/27/17 22:00	2017	147.92	0.92	21.00	-0.535	92.971	0	0
5/27/17 23:00	2017	147.96	0.99	21.00	-0.227	92.986	0	0
5/28/17 0:00	2017	148.00	0.95	21.00	-0.507	93.001	0	0
5/28/17 1:00	2017	148.04	0.94	21.00	-0.171	93.035	0	0
5/28/17 2:00	2017	148.08	0.91	21.00	-0.76	93.054	0	0

5/28/17 3:00	2017	148.13	0.84	21.00	-0.507	93.031	0	0
5/28/17 4:00	2017	148.17	0.71	21.00	-0.676	93.012	0	0
5/28/17 5:00	2017	148.21	0.55	21.00	0.742	92.96	0	0
5/28/17 6:00	2017	148.25	0.47	21.00	0.522	92.913	0	0
5/28/17 7:00	2017	148.29	0.48	21.00	1.099	92.894	0	0
5/28/17 8:00	2017	148.33	0.49	21.00	0.825	92.847	0	0
5/28/17 9:00	2017	148.38	0.53	21.00	0.962	92.823	0	0
5/28/17 10:00	2017	148.42	0.83	21.00	1.235	92.837	0	0
5/28/17 11:00	2017	148.46	0.89	21.00	1.697	92.861	0	0
5/28/17 12:00	2017	148.50	0.89	21.00	2.45	92.828	0	0
5/28/17 13:00	2017	148.54	0.80	21.00	2.717	92.765	0	0
5/28/17 14:00	2017	148.58	0.76	21.00	2.85	92.763	0	0
5/28/17 15:00	2017	148.63	0.73	21.00	3.722	92.734	0	0
5/28/17 16:00	2017	148.67	0.67	21.00	3.142	92.732	0	0
5/28/17 17:00	2017	148.71	0.71	21.00	4.141	92.721	0	0
5/28/17 18:00	2017	148.75	0.71	21.00	3.485	92.739	0	0
5/28/17 19:00	2017	148.79	0.72	21.00	3.116	92.751	0	0
5/28/17 20:00	2017	148.83	0.75	21.00	2.69	92.718	0	0
5/28/17 21:00	2017	148.88	0.69	21.00	2.236	92.723	0	0
5/28/17 22:00	2017	148.92	0.72	21.00	2.823	92.709	0	0
5/28/17 23:00	2017	148.96	0.74	21.00	2.503	92.702	0	0
5/29/17 0:00	2017	149.00	0.82	21.00	1.94	92.688	0	0
5/29/17 1:00	2017	149.04	0.80	21.00	2.45	92.67	0	0
5/29/17 2:00	2017	149.08	0.81	21.00	4.402	92.643	0	0
5/29/17 3:00	2017	149.13	0.85	21.00	4.454	92.601	0	0
5/29/17 4:00	2017	149.17	0.81	21.00	3.827	92.568	0	0
5/29/17 5:00	2017	149.21	0.82	21.00	3.301	92.511	0	0
5/29/17 6:00	2017	149.25	0.78	21.00	3.985	92.436	0	0
5/29/17 7:00	2017	149.29	0.74	21.00	3.248	92.389	0	0
5/29/17 8:00	2017	149.33	0.71	21.00	7.268	92.276	0	0
5/29/17 9:00	2017	149.38	0.70	21.00	6.026	92.162	0	0
5/29/17 10:00	2017	149.42	0.65	21.00	5.385	92.09	0	0
5/29/17 11:00	2017	149.46	0.59	21.00	5.668	92.033	0	0
5/29/17 12:00	2017	149.50	0.61	21.00	5.975	91.985	0.2	0.2
5/29/17 13:00	2017	149.54	0.59	21.00	6.306	91.956	0	0.2

5/29/17 14:00	2017	149.58	0.56	21.00	7.142	91.922	0	0.2
5/29/17 15:00	2017	149.63	0.57	21.00	7.519	91.878	0	0.2
5/29/17 16:00	2017	149.67	0.57	21.00	7.293	91.854	0	0.2
5/29/17 17:00	2017	149.71	0.59	21.00	7.569	91.855	0	0.2
5/29/17 18:00	2017	149.75	0.63	21.00	7.343	91.818	0	0.2
5/29/17 19:00	2017	149.79	0.65	21.00	6.331	91.813	0	0.2
5/29/17 20:00	2017	149.83	0.73	21.00	5.719	91.847	0	0.2
5/29/17 21:00	2017	149.88	0.75	21.00	5.154	91.852	0	0.2
5/29/17 22:00	2017	149.92	0.89	21.00	4.74	91.891	0	0.2
5/29/17 23:00	2017	149.96	1.04	21.00	5.205	91.91	0	0.2
5/30/17 0:00	2017	150.00	1.13	21.00	5.076	91.915	0	0.2
5/30/17 1:00	2017	150.04	1.30	21.00	5.693	91.944	0	0.2
5/30/17 2:00	2017	150.08	1.49	21.00	5.282	91.982	0	0.2
5/30/17 3:00	2017	150.13	1.54	21.00	4.558	92.025	0	0.2
5/30/17 4:00	2017	150.17	1.64	21.00	4.61	91.997	0	0.2
5/30/17 5:00	2017	150.21	1.68	21.00	4.22	92.012	0	0.2
5/30/17 6:00	2017	150.25	1.67	21.00	4.011	91.965	0	0.2
5/30/17 7:00	2017	150.29	1.65	21.00	4.35	91.955	0	0.2
5/30/17 8:00	2017	150.33	1.57	21.00	5.179	91.941	0	0.2
5/30/17 9:00	2017	150.38	1.52	21.00	5.745	91.913	0	0.2
5/30/17 10:00	2017	150.42	1.36	21.00	6.204	91.875	0	0.2
5/30/17 11:00	2017	150.46	1.38	21.00	6.611	91.813	0	0.2
5/30/17 12:00	2017	150.50	1.46	21.00	5.975	91.83	0	0.2
5/30/17 13:00	2017	150.54	1.48	21.00	4.766	91.89	0	0.2
5/30/17 14:00	2017	150.58	1.55	21.00	4.194	91.921	0	0.2
5/30/17 15:00	2017	150.63	1.68	21.00	2.956	91.997	0.4	0.6
5/30/17 16:00	2017	150.67	1.73	21.00	2.477	92.053	0.2	0.8
5/30/17 17:00	2017	150.71	1.87	21.00	2.155	92.073	0	0.8
5/30/17 18:00	2017	150.75	2.13	21.00	1.588	92.14	0	0.8
5/30/17 19:00	2017	150.79	2.46	21.00	1.371	92.178	0	0.8
5/30/17 20:00	2017	150.83	2.68	21.00	0.495	92.221	0.2	1
5/30/17 21:00	2017	150.88	2.87	21.00	-0.171	92.278	0	1
5/30/17 22:00	2017	150.92	2.86	21.00	-0.958	92.341	0.2	1.2
5/30/17 23:00	2017	150.96	2.84	21.00	-2.189	92.432	0	1.2
5/31/17 0:00	2017	151.00	2.81	21.00	-2.102	92.465	0	1.2

5/31/17 1:00	2017	151.04	2.61	21.00	-1.9	92.499	0	1.2
5/31/17 2:00	2017	151.08	2.40	21.00	-1.756	92.494	0	1.2
5/31/17 3:00	2017	151.13	2.01	21.00	-1.756	92.452	0	1.2
5/31/17 4:00	2017	151.17	1.72	21.00	-1.929	92.442	0	1.2
5/31/17 5:00	2017	151.21	1.58	21.00	-2.015	92.414	0	1.2
5/31/17 6:00	2017	151.25	1.53	21.00	-2.16	92.4	0	1.2
5/31/17 7:00	2017	151.29	1.52	21.00	-1.814	92.376	0	1.2
5/31/17 8:00	2017	151.33	1.61	21.00	-1.356	92.375	0	1.2
5/31/17 9:00	2017	151.38	1.74	21.00	-0.339	92.365	0	1.2
5/31/17 10:00	2017	151.42	1.86	21.00	-0.339	92.398	0	1.2
5/31/17 11:00	2017	151.46	1.82	21.00	-0.227	92.413	7	8.2
5/31/17 12:00	2017	151.50	1.69	21.00	0.77	92.413	2.2	10.4
5/31/17 13:00	2017	151.54	1.63	21.00	0.825	92.326	0	10.4
5/31/17 14:00	2017	151.58	1.56	21.00	0.163	92.318	0	10.4
5/31/17 15:00	2017	151.63	1.57	21.00	1.044	92.326	0	10.4
5/31/17 16:00	2017	151.67	1.51	21.00	0.962	92.313	0	10.4
5/31/17 17:00	2017	151.71	1.53	21.00	1.507	92.342	0	10.4
5/31/17 18:00	2017	151.75	1.54	21.00	0.715	92.385	0	10.4
5/31/17 19:00	2017	151.79	1.54	21.00	0.329	92.419	0	10.4
5/31/17 20:00	2017	151.83	1.57	21.00	-0.283	92.45	0	10.4
5/31/17 21:00	2017	151.88	1.65	21.00	-0.563	92.456	0	10.4
5/31/17 22:00	2017	151.92	1.61	21.00	-0.283	92.457	0	10.4
5/31/17 23:00	2017	151.96	1.62	21.00	-0.06	92.486	0	10.4
6/1/17 0:00	2017	152.00	1.58	21.00	-1.071	92.543	0	10.4
6/1/17 1:00	2017	152.04	1.54	21.00	-1.441	92.568	0	10.4
6/1/17 2:00	2017	152.08	1.51	21.00	-1.641	92.597	0	10.4
6/1/17 3:00	2017	152.13	1.47	21.00	-1.842	92.616	0	10.4
6/1/17 4:00	2017	152.17	1.38	21.00	-1.842	92.593	0	10.4
6/1/17 5:00	2017	152.21	1.25	21.00	-1.842	92.583	0	10.4
6/1/17 6:00	2017	152.25	1.15	21.00	-0.817	92.551	0	10.4
6/1/17 7:00	2017	152.29	1.04	21.00	-1.213	92.56	0	10.4
6/1/17 8:00	2017	152.33	0.89	21.00	-0.116	92.541	0	10.4
6/1/17 9:00	2017	152.38	0.74	21.00	-0.283	92.504	0	10.4
6/1/17 10:00	2017	152.42	0.74	21.00	0.632	92.494	0	10.4
6/1/17 11:00	2017	152.46	0.73	21.00	1.588	92.485	0	10.4

6/1/17 12:00	2017	152.50	1.06	21.00	1.317	92.504	0	10.4
6/1/17 13:00	2017	152.54	1.08	21.00	1.18	92.403	0	10.4
6/1/17 14:00	2017	152.58	0.91	21.00	1.534	92.37	0	10.4
6/1/17 15:00	2017	152.63	0.91	21.00	1.507	92.362	0	10.4
6/1/17 16:00	2017	152.67	1.17	21.00	1.398	92.393	0	10.4
6/1/17 17:00	2017	152.71	1.21	21.00	1.044	92.437	0	10.4
6/1/17 18:00	2017	152.75	1.15	21.00	1.371	92.426	0	10.4
6/1/17 19:00	2017	152.79	1.16	21.00	0.825	92.444	0	10.4
6/1/17 20:00	2017	152.83	1.26	21.00	0.273	92.461	0	10.4
6/1/17 21:00	2017	152.88	1.38	21.00	0.024	92.501	0	10.4
6/1/17 22:00	2017	152.92	1.48	21.00	-0.704	92.503	0	10.4
6/1/17 23:00	2017	152.96	1.58	21.00	-0.283	92.509	0	10.4
6/2/17 0:00	2017	153.00	1.69	21.00	-0.423	92.553	0	10.4
6/2/17 1:00	2017	153.04	1.69	21.00	-0.563	92.549	0	10.4
6/2/17 2:00	2017	153.08	1.63	21.00	0.715	92.554	0	10.4
6/2/17 3:00	2017	153.13	1.65	21.00	0.77	92.545	0	10.4
6/2/17 4:00	2017	153.17	1.56	21.00	0.989	92.531	0	10.4
6/2/17 5:00	2017	153.21	1.49	21.00	1.615	92.513	0	10.4
6/2/17 6:00	2017	153.25	1.42	21.00	1.886	92.46	0	10.4
6/2/17 7:00	2017	153.29	1.30	21.00	2.074	92.427	0	10.4
6/2/17 8:00	2017	153.33	1.24	21.00	2.477	92.413	0	10.4
6/2/17 9:00	2017	153.38	1.19	21.00	3.301	92.395	0	10.4
6/2/17 10:00	2017	153.42	1.24	21.00	3.459	92.371	0	10.4
6/2/17 11:00	2017	153.46	1.31	21.00	3.406	92.38	0	10.4
6/2/17 12:00	2017	153.50	1.23	21.00	3.749	92.352	0	10.4
6/2/17 13:00	2017	153.54	1.14	21.00	3.722	92.302	0	10.4
6/2/17 14:00	2017	153.58	1.14	21.00	3.985	92.299	0	10.4
6/2/17 15:00	2017	153.63	1.13	21.00	3.406	92.351	0	10.4
6/2/17 16:00	2017	153.67	1.11	21.00	3.538	92.367	0	10.4
6/2/17 17:00	2017	153.71	1.15	21.00	2.77	92.377	0	10.4
6/2/17 18:00	2017	153.75	1.19	21.00	3.67	92.427	0	10.4
6/2/17 19:00	2017	153.79	1.25	21.00	3.88	92.489	0	10.4
6/2/17 20:00	2017	153.83	1.47	21.00	4.037	92.542	0	10.4
6/2/17 21:00	2017	153.88	1.70	21.00	2.877	92.602	0	10.4
6/2/17 22:00	2017	153.92	1.89	21.00	2.503	92.634	0	10.4

6/2/17 23:00	2017	153.96	2.18	21.00	2.53	92.66	0	10.4
6/3/17 0:00	2017	154.00	2.27	21.00	3.67	92.68	0	10.4
6/3/17 1:00	2017	154.04	2.30	21.00	3.301	92.671	0	10.4
6/3/17 2:00	2017	154.08	2.29	21.00	3.142	92.653	0	10.4
6/3/17 3:00	2017	154.13	2.29	21.00	3.248	92.629	0	10.4
6/3/17 4:00	2017	154.17	2.15	21.00	2.903	92.606	0	10.4
6/3/17 5:00	2017	154.21	2.04	21.00	2.85	92.569	0	10.4
6/3/17 6:00	2017	154.25	1.83	21.00	2.956	92.564	0	10.4
6/3/17 7:00	2017	154.29	1.63	21.00	3.617	92.555	0	10.4
6/3/17 8:00	2017	154.33	1.50	21.00	4.584	92.536	0	10.4
6/3/17 9:00	2017	154.38	1.60	21.00	5.179	92.536	0	10.4
6/3/17 10:00	2017	154.42	1.57	21.00	5.668	92.517	0	10.4
6/3/17 11:00	2017	154.46	1.80	21.00	5.745	92.489	0	10.4
6/3/17 12:00	2017	154.50	1.99	21.00	6.255	92.441	0	10.4
6/3/17 13:00	2017	154.54	1.60	21.00	6.23	92.415	0	10.4
6/3/17 14:00	2017	154.58	1.83	21.00	7.167	92.418	0	10.4
6/3/17 15:00	2017	154.63	2.02	21.00	6.051	92.434	0	10.4
6/3/17 16:00	2017	154.67	1.86	21.00	5.949	92.463	0	10.4
6/3/17 17:00	2017	154.71	1.88	21.00	5.668	92.496	0	10.4
6/3/17 18:00	2017	154.75	2.16	21.00	5.616	92.527	0	10.4
6/3/17 19:00	2017	154.79	2.52	21.00	5.898	92.578	0	10.4
6/3/17 20:00	2017	154.83	3.13	21.00	5.847	92.663	0	10.4
6/3/17 21:00	2017	154.88	3.77	21.00	4.454	92.732	0	10.4
6/3/17 22:00	2017	154.92	4.10	21.00	4.766	92.719	0	10.4
6/3/17 23:00	2017	154.96	3.96	21.00	4.61	92.71	0	10.4
6/4/17 0:00	2017	155.00	4.14	21.00	4.402	92.697	0	10.4
6/4/17 1:00	2017	155.04	3.90	21.00	4.089	92.703	0	10.4
6/4/17 2:00	2017	155.08	4.09	21.00	3.775	92.689	0	10.4
6/4/17 3:00	2017	155.13	3.96	21.00	3.564	92.666	0	10.4
6/4/17 4:00	2017	155.17	3.81	21.00	3.538	92.647	0	10.4
6/4/17 5:00	2017	155.21	3.45	21.00	3.485	92.633	0	10.4
6/4/17 6:00	2017	155.25	3.22	21.00	3.089	92.629	0	10.4
6/4/17 7:00	2017	155.29	2.98	21.00	3.775	92.61	0	10.4
6/4/17 8:00	2017	155.33	2.91	21.00	4.584	92.615	0	10.4
6/4/17 9:00	2017	155.38	2.61	21.00	4.844	92.615	0	10.4

6/4/17 10:00	2017	155.42	2.32	21.00	5.205	92.606	0	10.4
6/4/17 11:00	2017	155.46	2.16	21.00	5.642	92.596	0	10.4
6/4/17 12:00	2017	155.50	2.01	21.00	5.102	92.549	0	10.4
6/4/17 13:00	2017	155.54	1.89	21.00	4.999	92.531	0	10.4
6/4/17 14:00	2017	155.58	2.00	21.00	5.334	92.559	0	10.4
6/4/17 15:00	2017	155.63	2.12	21.00	5.334	92.603	0	10.4
6/4/17 16:00	2017	155.67	2.21	21.00	4.947	92.639	0	10.4
6/4/17 17:00	2017	155.71	2.47	21.00	4.869	92.666	0	10.4
6/4/17 18:00	2017	155.75	2.95	21.00	5.154	92.722	0	10.4
6/4/17 19:00	2017	155.79	3.70	21.00	4.792	92.78	0	10.4
6/4/17 20:00	2017	155.83	4.17	21.00	4.246	92.835	0	10.4
6/4/17 21:00	2017	155.88	4.51	21.00	3.168	92.866	0	10.4
6/4/17 22:00	2017	155.92	4.92	21.00	2.823	92.907	0	10.4
6/4/17 23:00	2017	155.96	5.00	21.00	2.823	92.914	0	10.4
6/5/17 0:00	2017	156.00	4.84	21.00	2.182	92.906	0	10.4
6/5/17 1:00	2017	156.04	4.95	21.00	1.805	92.897	0	10.4
6/5/17 2:00	2017	156.08	4.75	21.00	2.423	92.907	0	10.4
6/5/17 3:00	2017	156.13	4.59	21.00	1.371	92.898	0	10.4
6/5/17 4:00	2017	156.17	4.12	21.00	2.074	92.846	0	10.4
6/5/17 5:00	2017	156.21	3.80	21.00	1.398	92.842	0	10.4
6/5/17 6:00	2017	156.25	3.35	21.00	1.153	92.842	0	10.4
6/5/17 7:00	2017	156.29	2.85	21.00	1.534	92.847	0	10.4
6/5/17 8:00	2017	156.33	2.61	21.00	2.262	92.828	0	10.4
6/5/17 9:00	2017	156.38	2.58	21.00	3.142	92.818	0	10.4
6/5/17 10:00	2017	156.42	2.46	21.00	2.664	92.823	0	10.4
6/5/17 11:00	2017	156.46	3.21	21.00	2.343	92.804	0	10.4
6/5/17 12:00	2017	156.50	2.74	21.00	2.316	92.781	0	10.4
6/5/17 13:00	2017	156.54	2.56	21.00	2.128	92.722	0	10.4
6/5/17 14:00	2017	156.58	3.16	21.00	1.886	92.703	0	10.4
6/5/17 15:00	2017	156.63	2.78	21.00	2.45	92.729	0	10.4
6/5/17 16:00	2017	156.67	2.44	21.00	2.074	92.746	0	10.4
6/5/17 17:00	2017	156.71	2.57	21.00	1.67	92.773	0	10.4
6/5/17 18:00	2017	156.75	2.72	21.00	1.398	92.792	0	10.4
6/5/17 19:00	2017	156.79	3.05	21.00	0.742	92.845	0	10.4
6/5/17 20:00	2017	156.83	3.37	21.00	0.412	92.895	0	10.4

6/5/17 21:00	2017	156.88	3.74	21.00	-0.311	92.901	0	10.4
6/5/17 22:00	2017	156.92	3.98	21.00	0.107	92.912	0	10.4
6/5/17 23:00	2017	156.96	4.23	21.00	0.329	92.914	0	10.4
6/6/17 0:00	2017	157.00	4.41	21.00	0.218	92.929	0	10.4
6/6/17 1:00	2017	157.04	4.49	21.00	0.246	92.958	0	10.4
6/6/17 2:00	2017	157.08	4.38	21.00	0.495	92.996	0	10.4
6/6/17 3:00	2017	157.13	4.28	21.00	0.329	93.016	0	10.4
6/6/17 4:00	2017	157.17	4.10	21.00	0.632	93.002	0	10.4
6/6/17 5:00	2017	157.21	3.77	21.00	1.48	93.026	0	10.4
6/6/17 6:00	2017	157.25	3.55	21.00	1.099	93.007	0	10.4
6/6/17 7:00	2017	157.29	3.47	21.00	1.561	92.988	0	10.4
6/6/17 8:00	2017	157.33	3.16	21.00	1.994	92.997	0	10.4
6/6/17 9:00	2017	157.38	3.08	21.00	1.697	92.974	0	10.4
6/6/17 10:00	2017	157.42	2.95	21.00	1.832	92.945	0	10.4
6/6/17 11:00	2017	157.46	2.72	21.00	0.522	92.945	0	10.4
6/6/17 12:00	2017	157.50	2.42	21.00	1.615	92.93	0	10.4
6/6/17 13:00	2017	157.54	2.37	21.00	2.021	92.942	0	10.4
6/6/17 14:00	2017	157.58	2.24	21.00	2.209	92.945	0	10.4
6/6/17 15:00	2017	157.63	2.14	21.00	2.209	92.982	0	10.4
6/6/17 16:00	2017	157.67	2.18	21.00	1.67	93.008	0	10.4
6/6/17 17:00	2017	157.71	2.21	21.00	1.778	93.024	0	10.4
6/6/17 18:00	2017	157.75	2.27	21.00	2.744	93.043	0	10.4
6/6/17 19:00	2017	157.79	2.49	21.00	2.584	93.095	0	10.4
6/6/17 20:00	2017	157.83	2.68	21.00	2.047	93.173	0	10.4
6/6/17 21:00	2017	157.88	2.90	21.00	2.074	93.222	0	10.4
6/6/17 22:00	2017	157.92	3.13	21.00	2.69	93.253	0	10.4
6/6/17 23:00	2017	157.96	3.36	21.00	2.85	93.277	0	10.4
6/7/17 0:00	2017	158.00	3.56	21.00	3.932	93.302	0	10.4
6/7/17 1:00	2017	158.04	3.71	21.00	3.67	93.321	0	10.4
6/7/17 2:00	2017	158.08	3.69	21.00	4.766	93.35	0	10.4
6/7/17 3:00	2017	158.13	3.56	21.00	4.895	93.36	0	10.4
6/7/17 4:00	2017	158.17	3.58	21.00	4.947	93.374	0	10.4
6/7/17 5:00	2017	158.21	3.49	21.00	4.766	93.308	0	10.4
6/7/17 6:00	2017	158.25	3.45	21.00	4.662	93.37	0	10.4
6/7/17 7:00	2017	158.29	3.18	21.00	5.77	93.351	0	10.4

6/7/17 8:00	2017	158.33	3.08	21.00	5.462	93.346	0	10.4
6/7/17 9:00	2017	158.38	2.97	21.00	6.357	93.365	0	10.4
6/7/17 10:00	2017	158.42	2.82	21.00	6.281	93.341	0	10.4
6/7/17 11:00	2017	158.46	2.59	21.00	5.179	93.276	0	10.4
6/7/17 12:00	2017	158.50	2.39	21.00	5.821	93.237	0	10.4
6/7/17 13:00	2017	158.54	2.49	21.00	6	93.226	0	10.4
6/7/17 14:00	2017	158.58	2.48	21.00	5.539	93.231	0	10.4
6/7/17 15:00	2017	158.63	2.62	21.00	5.642	93.267	0	10.4
6/7/17 16:00	2017	158.67	2.64	21.00	6.306	93.272	0	10.4
6/7/17 17:00	2017	158.71	3.19	21.00	6.331	93.289	0	10.4
6/7/17 18:00	2017	158.75	3.68	21.00	5.719	93.324	0	10.4
6/7/17 19:00	2017	158.79	4.26	21.00	6	93.382	0	10.4
6/7/17 20:00	2017	158.83	5.05	21.00	6.026	93.399	0	10.4
6/7/17 21:00	2017	158.88	5.52	21.00	5.591	93.429	0	10.4
6/7/17 22:00	2017	158.92	6.24	21.00	6.051	93.454	0	10.4
6/7/17 23:00	2017	158.96	6.64	21.00	6.788	93.46	0	10.4
6/8/17 0:00	2017	159.00	6.68	21.00	6.408	93.475	0	10.4
6/8/17 1:00	2017	159.04	6.74	21.00	7.419	93.495	0	10.4
6/8/17 2:00	2017	159.08	7.07	21.00	7.116	93.491	0	10.4
6/8/17 3:00	2017	159.13	6.90	21.00	6.914	93.467	0	10.4
6/8/17 4:00	2017	159.17	6.53	21.00	6.306	93.42	0	10.4
6/8/17 5:00	2017	159.21	6.24	21.00	6.611	93.388	0	10.4
6/8/17 6:00	2017	159.25	5.80	21.00	6.102	93.359	0	10.4
6/8/17 7:00	2017	159.29	5.32	21.00	6.763	93.331	0	10.4
6/8/17 8:00	2017	159.33	4.92	21.00	7.192	93.303	0	10.4
6/8/17 9:00	2017	159.38	4.55	21.00	8.17	93.251	0	10.4
6/8/17 10:00	2017	159.42	4.03	21.00	8.891	93.222	0	10.4
6/8/17 11:00	2017	159.46	3.70	21.00	8.27	93.18	0	10.4
6/8/17 12:00	2017	159.50	3.48	21.00	8.568	93.108	0	10.4
6/8/17 13:00	2017	159.54	3.29	21.00	8.419	93.072	0	10.4
6/8/17 14:00	2017	159.58	3.27	21.00	8.245	93.044	0	10.4
6/8/17 15:00	2017	159.63	3.50	21.00	9.361	93.055	0	10.4
6/8/17 16:00	2017	159.67	3.77	21.00	9.485	93.038	0	10.4
6/8/17 17:00	2017	159.71	4.67	21.00	8.643	93.073	0	10.4
6/8/17 18:00	2017	159.75	5.37	21.00	8.618	93.111	0	10.4

6/8/17 19:00	2017	159.79	6.52	21.00	8.543	93.159	0	10.4
6/8/17 20:00	2017	159.83	7.26	21.00	7.97	93.205	0	10.4
6/8/17 21:00	2017	159.88	7.73	21.00	7.419	93.237	0	10.4
6/8/17 22:00	2017	159.92	7.88	21.00	7.293	93.273	0	10.4
6/8/17 23:00	2017	159.96	8.63	21.00	6.889	93.275	0	10.4
6/9/17 0:00	2017	160.00	8.69	21.00	6.102	93.3	0	10.4
6/9/17 1:00	2017	160.04	8.96	21.00	6.051	93.296	0	10.4
6/9/17 2:00	2017	160.08	8.54	21.00	7.041	93.259	0	10.4
6/9/17 3:00	2017	160.13	8.35	21.00	6.965	93.226	0	10.4
6/9/17 4:00	2017	160.17	8.41	21.00	6.458	93.236	0	10.4
6/9/17 5:00	2017	160.21	6.94	21.00	5.024	93.18	0	10.4
6/9/17 6:00	2017	160.25	6.81	21.00	5.076	93.185	0	10.4
6/9/17 7:00	2017	160.29	6.44	21.00	6.026	93.138	0	10.4
6/9/17 8:00	2017	160.33	5.81	21.00	4.714	93.072	0	10.4
6/9/17 9:00	2017	160.38	5.38	21.00	4.194	93.057	0	10.4
6/9/17 10:00	2017	160.42	4.99	21.00	2.85	93.028	0	10.4
6/9/17 11:00	2017	160.46	4.90	21.00	1.208	93.004	0	10.4
6/9/17 12:00	2017	160.50	4.42	21.00	1.044	93.013	0	10.4
6/9/17 13:00	2017	160.54	4.28	21.00	1.317	92.989	0	10.4
6/9/17 14:00	2017	160.58	4.27	21.00	0.742	93.04	0	10.4
6/9/17 15:00	2017	160.63	4.53	21.00	0.88	93.055	0	10.4
6/9/17 16:00	2017	160.67	4.81	21.00	0.467	93.079	0	10.4
6/9/17 17:00	2017	160.71	5.51	21.00	-0.845	93.089	0	10.4
6/9/17 18:00	2017	160.75	6.35	21.00	-1.727	93.099	0	10.4
6/9/17 19:00	2017	160.79	6.38	21.00	-1.556	93.104	0	10.4
6/9/17 20:00	2017	160.83	7.21	21.00	-2.392	93.123	0	10.4
6/9/17 21:00	2017	160.88	7.70	21.00	-2.305	93.133	0	10.4
6/9/17 22:00	2017	160.92	7.83	21.00	-1.929	93.157	0	10.4
6/9/17 23:00	2017	160.96	8.43	21.00	-1.556	93.148	0	10.4
6/10/17 0:00	2017	161.00	8.57	21.00	-1.727	93.144	0	10.4
6/10/17 1:00	2017	161.04	8.52	21.00	-1.327	93.125	0	10.4
6/10/17 2:00	2017	161.08	8.34	21.00	-1.384	93.116	0	10.4
6/10/17 3:00	2017	161.13	7.59	21.00	-0.591	93.088	0	10.4
6/10/17 4:00	2017	161.17	7.39	21.00	-0.507	93.059	0	10.4
6/10/17 5:00	2017	161.21	6.98	21.00	-0.004	93.003	0	10.4

6/10/17 6:00	2017	161.25	6.37	21.00	1.208	93.003	0	10.4
6/10/17 7:00	2017	161.29	6.08	21.00	2.155	92.984	0	10.4
6/10/17 8:00	2017	161.33	5.51	21.00	3.036	92.974	0	10.4
6/10/17 9:00	2017	161.38	5.27	21.00	2.77	92.937	0	10.4
6/10/17 10:00	2017	161.42	4.79	21.00	3.459	92.88	0	10.4
6/10/17 11:00	2017	161.46	4.26	21.00	3.564	92.824	0	10.4
6/10/17 12:00	2017	161.50	3.99	21.00	4.011	92.796	0	10.4
6/10/17 13:00	2017	161.54	4.52	21.00	3.512	92.724	0	10.4
6/10/17 14:00	2017	161.58	4.27	21.00	3.406	92.66	0	10.4
6/10/17 15:00	2017	161.63	4.19	21.00	3.854	92.639	0	10.4
6/10/17 16:00	2017	161.67	4.03	21.00	3.775	92.626	0	10.4
6/10/17 17:00	2017	161.71	4.12	21.00	3.485	92.597	0	10.4
6/10/17 18:00	2017	161.75	4.70	21.00	2.956	92.597	0	10.4
6/10/17 19:00	2017	161.79	4.92	21.00	3.195	92.564	0	10.4
6/10/17 20:00	2017	161.83	5.84	21.00	2.236	92.565	0	10.4
6/10/17 21:00	2017	161.88	6.20	21.00	1.561	92.558	0	10.4
6/10/17 22:00	2017	161.92	6.15	21.00	1.099	92.527	0	10.4
6/10/17 23:00	2017	161.96	6.33	21.00	1.262	92.504	0	10.4
6/11/17 0:00	2017	162.00	6.71	21.00	1.534	92.505	0	10.4
6/11/17 1:00	2017	162.04	6.87	21.00	1.534	92.492	0	10.4
6/11/17 2:00	2017	162.08	6.60	21.00	2.717	92.478	0	10.4
6/11/17 3:00	2017	162.13	6.67	21.00	2.584	92.474	0	10.4
6/11/17 4:00	2017	162.17	6.23	21.00	2.584	92.46	0	10.4
6/11/17 5:00	2017	162.21	5.79	21.00	2.85	92.403	0	10.4
6/11/17 6:00	2017	162.25	5.49	21.00	2.77	92.399	0	10.4
6/11/17 7:00	2017	162.29	5.17	21.00	3.617	92.418	0	10.4
6/11/17 8:00	2017	162.33	4.89	21.00	3.459	92.366	0	10.4
6/11/17 9:00	2017	162.38	4.63	21.00	4.011	92.357	0	10.4
6/11/17 10:00	2017	162.42	4.10	21.00	2.45	92.357	0	10.4
6/11/17 11:00	2017	162.46	4.10	21.00	3.009	92.329	0	10.4
6/11/17 12:00	2017	162.50	3.65	21.00	3.854	92.272	0	10.4
6/11/17 13:00	2017	162.54	3.66	21.00	4.428	92.212	0	10.4
6/11/17 14:00	2017	162.58	3.52	21.00	4.141	92.204	0	10.4
6/11/17 15:00	2017	162.63	3.80	21.00	4.714	92.229	0	10.4
6/11/17 16:00	2017	162.67	3.95	21.00	4.766	92.213	0	10.4

6/11/17 17:00	2017	162.71	4.25	21.00	4.844	92.206	0	10.4
6/11/17 18:00	2017	162.75	4.70	21.00	4.194	92.201	0	10.4
6/11/17 19:00	2017	162.79	5.28	21.00	3.274	92.225	0	10.4
6/11/17 20:00	2017	162.83	5.81	21.00	3.063	92.25	0	10.4
6/11/17 21:00	2017	162.88	5.78	21.00	1.697	92.252	0	10.4
6/11/17 22:00	2017	162.92	6.05	21.00	0.522	92.275	0	10.4
6/11/17 23:00	2017	162.96	6.28	21.00	0.329	92.291	0	10.4
6/12/17 0:00	2017	163.00	6.03	21.00	0.051	92.316	0	10.4
6/12/17 1:00	2017	163.04	6.08	21.00	0.163	92.336	0	10.4
6/12/17 2:00	2017	163.08	5.91	21.00	-0.004	92.37	0	10.4
6/12/17 3:00	2017	163.13	6.03	21.00	-0.676	92.403	0	10.4
6/12/17 4:00	2017	163.17	6.01	21.00	-1.498	92.451	0	10.4
6/12/17 5:00	2017	163.21	5.51	21.00	-3.006	92.498	0	10.4
6/12/17 6:00	2017	163.25	5.24	21.00	-2.918	92.536	0	10.4
6/12/17 7:00	2017	163.29	5.07	21.00	-2.479	92.579	0	10.4
6/12/17 8:00	2017	163.33	4.42	21.00	-3.449	92.635	0	10.4
6/12/17 9:00	2017	163.38	3.69	21.00	-4.834	92.612	0	10.4
6/12/17 10:00	2017	163.42	3.45	21.00	-5.48	92.626	0	10.4
6/12/17 11:00	2017	163.46	3.85	21.00	-4.712	92.654	0	10.4
6/12/17 12:00	2017	163.50	4.58	21.00	-2.654	92.629	0	10.4
6/12/17 13:00	2017	163.54	4.25	21.00	-1.584	92.623	0	10.4
6/12/17 14:00	2017	163.58	3.87	21.00	-0.93	92.587	0	10.4
6/12/17 15:00	2017	163.63	3.56	21.00	-0.311	92.594	0	10.4
6/12/17 16:00	2017	163.67	3.29	21.00	-0.004	92.62	0	10.4
6/12/17 17:00	2017	163.71	3.07	21.00	-0.032	92.633	0	10.4
6/12/17 18:00	2017	163.75	3.05	21.00	-0.311	92.637	0	10.4
6/12/17 19:00	2017	163.79	3.08	21.00	-0.116	92.661	0	10.4
6/12/17 20:00	2017	163.83	3.23	21.00	-0.116	92.7	0	10.4
6/12/17 21:00	2017	163.88	3.31	21.00	-1.213	92.72	0	10.4
6/12/17 22:00	2017	163.92	3.45	21.00	-2.16	92.743	0	10.4
6/12/17 23:00	2017	163.96	3.53	21.00	-2.305	92.768	0	10.4
6/13/17 0:00	2017	164.00	3.49	21.00	-0.311	92.76	0	10.4
6/13/17 1:00	2017	164.04	3.52	21.00	1.153	92.77	0	10.4
6/13/17 2:00	2017	164.08	3.66	21.00	1.805	92.808	0	10.4
6/13/17 3:00	2017	164.13	3.58	21.00	1.724	92.822	0	10.4

6/13/17 4:00	2017	164.17	3.56	21.00	2.37	92.827	0	10.4
6/13/17 5:00	2017	164.21	3.41	21.00	2.182	92.832	0	10.4
6/13/17 6:00	2017	164.25	3.31	21.00	1.507	92.828	0	10.4
6/13/17 7:00	2017	164.29	3.38	21.00	2.262	92.837	0	10.4
6/13/17 8:00	2017	164.33	3.23	21.00	1.453	92.865	0	10.4
6/13/17 9:00	2017	164.38	2.90	21.00	2.182	92.884	0	10.4
6/13/17 10:00	2017	164.42	2.60	21.00	2.021	92.884	0	10.4
6/13/17 11:00	2017	164.46	2.57	21.00	2.396	92.884	0	10.4
6/13/17 12:00	2017	164.50	2.43	21.00	2.956	92.851	0	10.4
6/13/17 13:00	2017	164.54	2.53	21.00	3.749	92.783	0	10.4
6/13/17 14:00	2017	164.58	2.91	21.00	3.564	92.784	0	10.4
6/13/17 15:00	2017	164.63	2.71	21.00	3.696	92.791	0	10.4
6/13/17 16:00	2017	164.67	2.51	21.00	4.194	92.793	0	10.4
6/13/17 17:00	2017	164.71	2.48	21.00	3.775	92.796	0	10.4
6/13/17 18:00	2017	164.75	2.49	21.00	3.932	92.767	0	10.4
6/13/17 19:00	2017	164.79	2.60	21.00	3.564	92.791	0	10.4
6/13/17 20:00	2017	164.83	2.82	21.00	3.617	92.777	0	10.4
6/13/17 21:00	2017	164.88	2.97	21.00	2.744	92.783	0	10.4
6/13/17 22:00	2017	164.92	3.01	21.00	2.262	92.782	0	10.4
6/13/17 23:00	2017	164.96	3.16	21.00	2.343	92.742	0	10.4
6/14/17 0:00	2017	165.00	3.35	6.88	2.877	92.72	0	10.4
6/14/17 1:00	2017	165.04	3.49	7.45	3.643	92.72	0	10.4
6/14/17 2:00	2017	165.08	3.40	7.57	4.35	92.712	0	10.4
6/14/17 3:00	2017	165.13	3.34	7.65	4.011	92.688	0	10.4
6/14/17 4:00	2017	165.17	3.44	7.93	4.089	92.684	0	10.4
6/14/17 5:00	2017	165.21	3.38	7.82	4.454	92.651	0	10.4
6/14/17 6:00	2017	165.25	3.28	7.55	4.141	92.6	0	10.4
6/14/17 7:00	2017	165.29	3.25	7.36	5.385	92.581	0	10.4
6/14/17 8:00	2017	165.33	3.04	6.80	5.591	92.534	0	10.4
6/14/17 9:00	2017	165.38	2.89	6.31	6.153	92.501	0	10.4
6/14/17 10:00	2017	165.42	2.71	5.79	6.788	92.473	0	10.4
6/14/17 11:00	2017	165.46	2.58	5.41	8.22	92.44	0	10.4
6/14/17 12:00	2017	165.50	2.42	5.00	8.419	92.354	0	10.4
6/14/17 13:00	2017	165.54	2.33	4.75	9.213	92.313	0	10.4
6/14/17 14:00	2017	165.58	2.26	4.58	9.238	92.266	0	10.4

6/14/17 15:00	2017	165.63	2.27	4.59	8.717	92.229	0	10.4
6/14/17 16:00	2017	165.67	2.39	4.83	7.92	92.214	0	10.4
6/14/17 17:00	2017	165.71	2.60	5.29	7.745	92.205	0	10.4
6/14/17 18:00	2017	165.75	2.67	5.59	7.67	92.154	0	10.4
6/14/17 19:00	2017	165.79	3.01	6.45	7.594	92.116	0	10.4
6/14/17 20:00	2017	165.83	3.34	7.39	6.687	92.112	0	10.4
6/14/17 21:00	2017	165.88	3.53	8.23	7.67	92.045	0	10.4
6/14/17 22:00	2017	165.92	3.75	9.22	6.56	92.037	0	10.4
6/14/17 23:00	2017	165.96	4.07	10.68	4.895	92.047	0	10.4
6/15/17 0:00	2017	166.00	3.99	11.03	4.662	92.067	0	10.4
6/15/17 1:00	2017	166.04	3.95	11.38	4.168	92.053	0	10.4
6/15/17 2:00	2017	166.08	3.66	10.98	4.844	92.012	0	10.4
6/15/17 3:00	2017	166.13	3.84	11.70	5.128	92.013	0	10.4
6/15/17 4:00	2017	166.17	3.79	11.67	5.154	92.014	0	10.4
6/15/17 5:00	2017	166.21	3.65	11.26	4.973	91.957	0	10.4
6/15/17 6:00	2017	166.25	3.47	10.61	4.818	91.906	0	10.4
6/15/17 7:00	2017	166.29	3.45	10.23	4.532	91.868	0	10.4
6/15/17 8:00	2017	166.33	3.17	9.15	4.895	91.812	0	10.4
6/15/17 9:00	2017	166.38	3.09	8.55	5.385	91.769	0	10.4
6/15/17 10:00	2017	166.42	2.94	7.78	5.796	91.765	0	10.4
6/15/17 11:00	2017	166.46	2.81	7.09	5.693	91.721	0	10.4
6/15/17 12:00	2017	166.50	2.66	6.43	6.255	91.678	0	10.4
6/15/17 13:00	2017	166.54	2.62	6.05	6.687	91.616	0	10.4
6/15/17 14:00	2017	166.58	2.42	5.46	7.268	91.612	0	10.4
6/15/17 15:00	2017	166.63	2.33	5.16	6.914	91.602	0	10.4
6/15/17 16:00	2017	166.67	2.26	4.98	6.687	91.601	0	10.4
6/15/17 17:00	2017	166.71	2.30	5.06	6.026	91.59	0	10.4
6/15/17 18:00	2017	166.75	2.32	5.15	5.872	91.58	0	10.4
6/15/17 19:00	2017	166.79	2.35	5.32	5.539	91.557	0	10.4
6/15/17 20:00	2017	166.83	2.53	5.84	4.428	91.56	0	10.4
6/15/17 21:00	2017	166.88	2.64	6.23	3.168	91.553	0	10.4
6/15/17 22:00	2017	166.92	2.79	6.76	2.637	91.547	0	10.4
6/15/17 23:00	2017	166.96	2.92	7.13	2.262	91.539	0	10.4
6/16/17 0:00	2017	167.00	3.00	7.54	1.615	91.521	0	10.4
6/16/17 1:00	2017	167.04	2.89	7.51	1.48	91.504	0	10.4

6/16/17 2:00	2017	167.08	3.02	7.92	1.289	91.486	0	10.4
6/16/17 3:00	2017	167.13	2.89	7.67	1.317	91.444	0	10.4
6/16/17 4:00	2017	167.17	2.80	7.42	1.425	91.43	0	10.4
6/16/17 5:00	2017	167.21	2.87	7.44	1.697	91.421	0	10.4
6/16/17 6:00	2017	167.25	2.70	6.84	1.099	91.392	0	10.4
6/16/17 7:00	2017	167.29	2.69	6.57	2.021	91.321	0	10.4
6/16/17 8:00	2017	167.33	2.71	6.29	1.262	91.316	0	10.4
6/16/17 9:00	2017	167.38	2.49	5.53	1.724	91.307	0	10.4
6/16/17 10:00	2017	167.42	2.35	4.94	1.153	91.32	0	10.4
6/16/17 11:00	2017	167.46	2.45	5.36	0.19	91.396	0	10.4
6/16/17 12:00	2017	167.50	2.27	4.76	3.354	91.344	2.6	13
6/16/17 13:00	2017	167.54	2.37	4.79	2.37	91.337	0.4	13.4
6/16/17 14:00	2017	167.58	2.37	4.58	2.93	91.384	0	13.4
6/16/17 15:00	2017	167.63	2.27	4.29	3.643	91.371	0	13.4
6/16/17 16:00	2017	167.67	2.39	4.40	2.983	91.389	0.2	13.6
6/16/17 17:00	2017	167.71	2.38	4.61	2.744	91.43	1.6	15.2
6/16/17 18:00	2017	167.75	2.49	5.26	1.371	91.515	1	16.2
6/16/17 19:00	2017	167.79	2.38	5.15	2.717	91.496	0	16.2
6/16/17 20:00	2017	167.83	2.61	5.78	3.932	91.487	0	16.2
6/16/17 21:00	2017	167.88	2.98	6.78	4.246	91.506	0	16.2
6/16/17 22:00	2017	167.92	3.33	7.87	4.688	91.516	0	16.2
6/16/17 23:00	2017	167.96	3.66	9.00	4.402	91.517	0	16.2
6/17/17 0:00	2017	168.00	3.69	9.53	3.854	91.569	0.2	16.4
6/17/17 1:00	2017	168.04	3.41	9.35	4.532	91.522	0	16.4
6/17/17 2:00	2017	168.08	3.34	9.58	5.36	91.522	0	16.4
6/17/17 3:00	2017	168.13	3.39	9.99	4.714	91.518	0	16.4
6/17/17 4:00	2017	168.17	3.39	10.14	3.985	91.608	0	16.4
6/17/17 5:00	2017	168.21	3.21	9.68	3.459	91.655	0	16.4
6/17/17 6:00	2017	168.25	3.14	9.40	3.617	91.698	0	16.4
6/17/17 7:00	2017	168.29	2.91	8.65	4.818	91.684	0	16.4
6/17/17 8:00	2017	168.33	3.03	8.73	4.869	91.702	0	16.4
6/17/17 9:00	2017	168.38	2.84	8.00	5.437	91.73	0	16.4
6/17/17 10:00	2017	168.42	2.69	7.43	7.041	91.768	0	16.4
6/17/17 11:00	2017	168.46	2.61	6.33	7.318	91.806	0	16.4
6/17/17 12:00	2017	168.50	2.40	5.72	7.419	91.796	0	16.4

6/17/17 13:00	2017	168.54	2.45	5.59	8.07	91.819	0	16.4
6/17/17 14:00	2017	168.58	2.37	5.38	7.97	91.864	0	16.4
6/17/17 15:00	2017	168.63	2.50	5.60	7.77	91.936	0	16.4
6/17/17 16:00	2017	168.67	2.41	5.49	7.945	91.987	0	16.4
6/17/17 17:00	2017	168.71	2.64	5.72	6.864	92.03	0	16.4
6/17/17 18:00	2017	168.75	3.00	6.03	5.693	92.117	0	16.4
6/17/17 19:00	2017	168.79	3.20	6.61	5.488	92.198	0	16.4
6/17/17 20:00	2017	168.83	3.48	7.41	5.282	92.254	0	16.4
6/17/17 21:00	2017	168.88	3.99	8.74	5.565	92.317	0.8	17.2
6/17/17 22:00	2017	168.92	4.39	9.94	4.662	92.347	0	17.2
6/17/17 23:00	2017	168.96	4.34	10.36	5.898	92.352	0	17.2
6/18/17 0:00	2017	169.00	4.61	11.46	5.847	92.372	0	17.2
6/18/17 1:00	2017	169.04	4.67	12.09	6	92.401	0	17.2
6/18/17 2:00	2017	169.08	4.60	12.32	6.281	92.406	0	17.2
6/18/17 3:00	2017	169.13	4.61	12.66	6.889	92.421	0	17.2
6/18/17 4:00	2017	169.17	4.64	12.90	6.306	92.416	0	17.2
6/18/17 5:00	2017	169.21	4.55	12.76	6.864	92.426	0	17.2
6/18/17 6:00	2017	169.25	4.48	12.50	7.293	92.454	0	17.2
6/18/17 7:00	2017	169.29	4.28	11.80	7.519	92.459	0	17.2
6/18/17 8:00	2017	169.33	4.16	11.23	8.618	92.459	0	17.2
6/18/17 9:00	2017	169.38	3.92	10.30	8.07	92.474	0	17.2
6/18/17 10:00	2017	169.42	3.85	9.75	9.336	92.525	0	17.2
6/18/17 11:00	2017	169.46	3.47	8.60	10.198	92.511	0	17.2
6/18/17 12:00	2017	169.50	3.46	8.28	9.854	92.527	0	17.2
6/18/17 13:00	2017	169.54	3.53	8.17	10.198	92.581	0	17.2
6/18/17 14:00	2017	169.58	3.51	7.94	9.46	92.598	0	17.2
6/18/17 15:00	2017	169.63	3.81	8.43	10.345	92.632	0	17.2
6/18/17 16:00	2017	169.67	4.01	8.83	10.394	92.629	0	17.2
6/18/17 17:00	2017	169.71	4.55	10.13	10.516	92.638	0	17.2
6/18/17 18:00	2017	169.75	4.96	11.26	9.361	92.663	0	17.2
6/18/17 19:00	2017	169.79	5.75	13.24	8.095	92.715	0	17.2
6/18/17 20:00	2017	169.83	6.07	14.52	7.92	92.759	0	17.2
6/18/17 21:00	2017	169.88	6.58	17.15	8.22	92.755	0.4	17.6
6/18/17 22:00	2017	169.92	6.74	19.16	7.544	92.873	0	17.6
6/18/17 23:00	2017	169.96	6.80	20.32	7.419	92.875	0	17.6

6/19/17 0:00	2017	170.00	6.87	21.49	6.99	92.928	0	17.6
6/19/17 1:00	2017	170.04	7.52	24.06	5.693	92.98	0	17.6
6/19/17 2:00	2017	170.08	7.44	24.43	5.076	93	0	17.6
6/19/17 3:00	2017	170.13	7.00	23.51	5.488	92.986	0	17.6
6/19/17 4:00	2017	170.17	6.76	22.94	6.204	92.93	0	17.6
6/19/17 5:00	2017	170.21	6.73	22.69	6.687	92.878	0	17.6
6/19/17 6:00	2017	170.25	6.44	21.49	7.82	92.836	0	17.6
6/19/17 7:00	2017	170.29	6.17	20.21	8.643	92.78	0	17.6
6/19/17 8:00	2017	170.33	5.73	18.29	8.767	92.742	0	17.6
6/19/17 9:00	2017	170.38	5.64	17.26	8.02	92.667	0	17.6
6/19/17 10:00	2017	170.42	4.98	14.78	8.742	92.624	0	17.6
6/19/17 11:00	2017	170.46	4.58	13.12	9.854	92.585	0	17.6
6/19/17 12:00	2017	170.50	4.59	12.66	11.37	92.542	0	17.6
6/19/17 13:00	2017	170.54	4.58	12.20	11.029	92.515	0	17.6
6/19/17 14:00	2017	170.58	4.78	12.33	10.345	92.491	0	17.6
6/19/17 15:00	2017	170.63	5.18	12.94	10.001	92.48	0	17.6
6/19/17 16:00	2017	170.67	5.63	13.78	9.854	92.445	0	17.6
6/19/17 17:00	2017	170.71	5.92	14.29	10.198	92.425	0	17.6
6/19/17 18:00	2017	170.75	6.50	15.82	10.394	92.391	0	17.6
6/19/17 19:00	2017	170.79	6.70	16.83	10.516	92.362	0	17.6
6/19/17 20:00	2017	170.83	6.94	18.17	10.492	92.387	0	17.6
6/19/17 21:00	2017	170.88	6.98	18.35	10.198	92.431	0	17.6
6/19/17 22:00	2017	170.92	7.06	18.94	9.903	92.484	0	17.6
6/19/17 23:00	2017	170.96	7.10	20.11	10.124	92.552	0	17.6
6/20/17 0:00	2017	171.00	7.26	21.65	10.247	92.582	0	17.6
6/20/17 1:00	2017	171.04	7.32	22.95	9.682	92.605	0	17.6
6/20/17 2:00	2017	171.08	7.13	23.45	9.731	92.62	0	17.6
6/20/17 3:00	2017	171.13	7.02	23.85	9.139	92.612	0	17.6
6/20/17 4:00	2017	171.17	7.00	24.10	8.369	92.645	0	17.6
6/20/17 5:00	2017	171.21	6.61	23.00	8.916	92.613	0	17.6
6/20/17 6:00	2017	171.25	6.44	22.10	8.369	92.589	0	17.6
6/20/17 7:00	2017	171.29	6.43	21.53	9.509	92.571	0	17.6
6/20/17 8:00	2017	171.33	6.20	20.21	10.443	92.575	0	17.6
6/20/17 9:00	2017	171.38	5.72	18.22	10.687	92.537	0	17.6
6/20/17 10:00	2017	171.42	5.60	17.23	11.662	92.505	0	17.6

6/20/17 11:00	2017	171.46	5.45	16.27	13.329	92.49	0	17.6
6/20/17 12:00	2017	171.50	5.22	15.13	13.618	92.474	0	17.6
6/20/17 13:00	2017	171.54	5.17	14.61	14.266	92.48	0	17.6
6/20/17 14:00	2017	171.58	5.54	15.28	14.553	92.469	0	17.6
6/20/17 15:00	2017	171.63	6.15	16.64	14.266	92.472	0	17.6
6/20/17 16:00	2017	171.67	6.55	22.78	12.389	92.499	0.4	18
6/20/17 17:00	2017	171.71	7.97	28.28	9.583	92.814	0.8	18.8
6/20/17 18:00	2017	171.75	8.20	30.46	9.558	92.859	0.4	19.2
6/20/17 19:00	2017	171.79	8.96	33.67	9.583	92.851	0	19.2
6/20/17 20:00	2017	171.83	9.92	37.99	9.583	92.99	0	19.2
6/20/17 21:00	2017	171.88	10.35	41.05	9.608	93.048	0	19.2
6/20/17 22:00	2017	171.92	10.86	44.83	9.903	93.067	0	19.2
6/20/17 23:00	2017	171.96	11.13	48.21	8.295	93.125	0	19.2
6/21/17 0:00	2017	172.00	11.58	52.17	7.67	93.182	0.2	19.4
6/21/17 1:00	2017	172.04	11.59	58.16	7.268	93.224	1	20.4
6/21/17 2:00	2017	172.08	11.39	59.64	6.737	93.262	0	20.4
6/21/17 3:00	2017	172.13	10.87	57.93	6.889	93.3	0.4	20.8
6/21/17 4:00	2017	172.17	10.25	54.92	5.975	93.38	0	20.8
6/21/17 5:00	2017	172.21	10.06	53.74	5.821	93.442	0	20.8
6/21/17 6:00	2017	172.25	9.81	54.00	5.076	93.499	0.4	21.2
6/21/17 7:00	2017	172.29	9.63	54.93	4.688	93.589	0	21.2
6/21/17 8:00	2017	172.33	9.07	49.30	4.454	93.603	0.2	21.4
6/21/17 9:00	2017	172.38	9.28	47.04	4.454	93.631	0	21.4
6/21/17 10:00	2017	172.42	8.46	40.59	5.385	93.626	0	21.4
6/21/17 11:00	2017	172.46	8.61	38.24	5.128	93.676	0	21.4
6/21/17 12:00	2017	172.50	8.03	33.61	6	93.68	0	21.4
6/21/17 13:00	2017	172.54	7.76	30.58	6.535	93.705	0	21.4
6/21/17 14:00	2017	172.58	7.38	27.79	7.268	93.703	0	21.4
6/21/17 15:00	2017	172.63	7.43	27.14	7.77	93.777	0	21.4
6/21/17 16:00	2017	172.67	7.67	21.18	9.287	93.783	0	21.4
6/21/17 17:00	2017	172.71	7.68	20.38	9.361	93.813	0	21.4
6/21/17 18:00	2017	172.75	7.86	20.85	8.494	93.93	0.4	21.8
6/21/17 19:00	2017	172.79	8.79	23.46	7.845	93.997	0	21.8
6/21/17 20:00	2017	172.83	8.74	24.17	8.792	94.006	0	21.8
6/21/17 21:00	2017	172.88	9.01	25.76	7.795	94.06	0.2	22

6/21/17 22:00	2017	172.92	9.10	27.29	7.268	94.127	0.4	22.4
6/21/17 23:00	2017	172.96	9.68	29.65	6.636	94.194	0.2	22.6
6/22/17 0:00	2017	173.00	9.61	30.69	7.015	94.171	0	22.6
6/22/17 1:00	2017	173.04	10.25	31.10	7.041	94.172	0	22.6
6/22/17 2:00	2017	173.08	9.24	28.70	7.293	94.201	0	22.6
6/22/17 3:00	2017	173.13	9.62	30.22	6.636	94.235	0	22.6
6/22/17 4:00	2017	173.17	9.31	29.63	6.661	94.183	0	22.6
6/22/17 5:00	2017	173.21	9.59	30.03	7.419	94.155	0	22.6
6/22/17 6:00	2017	173.25	8.93	26.47	7.97	94.117	0	22.6
6/22/17 7:00	2017	173.29	8.39	22.87	8.742	94.113	0	22.6
6/22/17 8:00	2017	173.33	8.12	21.74	8.941	94.051	0	22.6
6/22/17 9:00	2017	173.38	7.82	20.44	8.767	94.055	0	22.6
6/22/17 10:00	2017	173.42	7.28	18.57	9.089	94.031	0	22.6
6/22/17 11:00	2017	173.46	6.58	16.46	8.767	94.012	0	22.6
6/22/17 12:00	2017	173.50	6.59	15.95	8.99	93.999	0	22.6
6/22/17 13:00	2017	173.54	6.64	15.53	8.07	94.04	0	22.6
6/22/17 14:00	2017	173.58	6.56	15.02	8.866	94.075	0	22.6
6/22/17 15:00	2017	173.63	6.60	17.55	7.995	94.128	1.8	24.4
6/22/17 16:00	2017	173.67	6.95	20.02	7.091	94.234	4.8	29.2
6/22/17 17:00	2017	173.71	7.52	26.12	6.788	94.297	2.6	31.8
6/22/17 18:00	2017	173.75	8.24	35.74	6.255	94.52	3.6	35.4
6/22/17 19:00	2017	173.79	8.80	38.69	6.509	94.739	0	35.4
6/22/17 20:00	2017	173.83	11.43	50.98	7.015	94.812	0.8	36.2
6/22/17 21:00	2017	173.88	14.10	63.49	6.737	94.794	0	36.2
6/22/17 22:00	2017	173.92	14.73	68.25	7.167	94.804	0	36.2
6/22/17 23:00	2017	173.96	15.96	76.79	7.419	94.787	0	36.2
6/23/17 0:00	2017	174.00	16.30	80.78	7.393	94.621	0	36.2
6/23/17 1:00	2017	174.04	15.88	82.10	7.293	94.512	0	36.2
6/23/17 2:00	2017	174.08	15.33	82.15	8.02	94.423	0	36.2
6/23/17 3:00	2017	174.13	15.41	84.01	6.712	94.399	0	36.2
6/23/17 4:00	2017	174.17	15.13	83.26	6.712	94.37	0	36.2
6/23/17 5:00	2017	174.21	13.73	75.91	6.458	94.356	0	36.2
6/23/17 6:00	2017	174.25	13.10	71.08	6.102	94.262	0	36.2
6/23/17 7:00	2017	174.29	12.34	65.34	7.217	94.158	0	36.2
6/23/17 8:00	2017	174.33	11.69	59.80	7.544	94.101	0	36.2

6/23/17 9:00	2017	174.38	10.70	52.92	8.045	94.021	0	36.2
6/23/17 10:00	2017	174.42	9.83	46.95	9.064	93.964	0	36.2
6/23/17 11:00	2017	174.46	9.48	43.62	10.001	93.917	0	36.2
6/23/17 12:00	2017	174.50	8.70	39.01	10.467	93.889	0	36.2
6/23/17 13:00	2017	174.54	8.20	36.09	10.98	93.855	0	36.2
6/23/17 14:00	2017	174.58	8.43	36.06	10.247	93.836	0	36.2
6/23/17 15:00	2017	174.63	8.13	28.85	9.534	93.816	0	36.2
6/23/17 16:00	2017	174.67	8.38	26.79	9.41	93.797	0	36.2
6/23/17 17:00	2017	174.71	7.62	20.51	9.558	93.741	0	36.2
6/23/17 18:00	2017	174.75	8.75	18.52	8.693	93.825	0	36.2
6/23/17 19:00	2017	174.79	8.59	18.78	7.091	93.873	0	36.2
6/23/17 20:00	2017	174.83	8.88	19.51	5.693	93.891	0	36.2
6/23/17 21:00	2017	174.88	8.93	20.56	4.402	93.892	0	36.2
6/23/17 22:00	2017	174.92	9.28	22.76	3.958	93.897	0.6	36.8
6/23/17 23:00	2017	174.96	9.56	24.41	3.485	93.855	0.4	37.2
6/24/17 0:00	2017	175.00	9.77	25.70	4.558	93.794	0	37.2
6/24/17 1:00	2017	175.04	9.54	25.92	4.662	93.719	0	37.2
6/24/17 2:00	2017	175.08	9.45	26.19	5.076	93.649	0	37.2
6/24/17 3:00	2017	175.13	9.75	27.49	4.688	93.592	0	37.2
6/24/17 4:00	2017	175.17	9.41	26.60	4.246	93.583	1	38.2
6/24/17 5:00	2017	175.21	9.95	27.50	4.089	93.545	0	38.2
6/24/17 6:00	2017	175.25	9.75	26.38	4.558	93.488	0	38.2
6/24/17 7:00	2017	175.29	9.00	23.72	4.428	93.417	0	38.2
6/24/17 8:00	2017	175.33	9.34	23.35	4.688	93.408	0	38.2
6/24/17 9:00	2017	175.38	8.63	20.69	5.205	93.342	0	38.2
6/24/17 10:00	2017	175.42	8.27	18.88	6.611	93.28	0	38.2
6/24/17 11:00	2017	175.46	8.49	18.24	7.192	93.224	0	38.2
6/24/17 12:00	2017	175.50	8.50	17.27	7.015	93.223	0	38.2
6/24/17 13:00	2017	175.54	7.89	15.45	7.92	93.184	0	38.2
6/24/17 14:00	2017	175.58	7.70	14.56	7.594	93.146	0	38.2
6/24/17 15:00	2017	175.63	7.58	14.04	7.87	93.14	0	38.2
6/24/17 16:00	2017	175.67	7.51	13.75	7.619	93.144	0	38.2
6/24/17 17:00	2017	175.71	7.65	13.96	7.67	93.152	0	38.2
6/24/17 18:00	2017	175.75	7.48	13.93	7.995	93.191	0	38.2
6/24/17 19:00	2017	175.79	7.60	14.54	7.494	93.239	0	38.2

6/24/17 20:00	2017	175.83	7.71	15.36	7.015	93.254	0	38.2
6/24/17 21:00	2017	175.88	8.12	16.72	6.965	93.264	0	38.2
6/24/17 22:00	2017	175.92	8.66	18.07	6.813	93.231	0	38.2
6/24/17 23:00	2017	175.96	8.64	18.90	6.839	93.199	0	38.2
6/25/17 0:00	2017	176.00	8.73	20.25	6.204	93.157	1.4	39.6
6/25/17 1:00	2017	176.04	8.50	20.68	6.636	93.11	0	39.6
6/25/17 2:00	2017	176.08	8.56	21.51	6.408	93.081	0	39.6
6/25/17 3:00	2017	176.13	8.11	20.83	6.94	93.044	0	39.6
6/25/17 4:00	2017	176.17	8.06	20.98	6.255	93.011	0	39.6
6/25/17 5:00	2017	176.21	7.98	20.76	5.282	93.068	0	39.6
6/25/17 6:00	2017	176.25	8.16	20.75	4.584	93.03	0	39.6
6/25/17 7:00	2017	176.29	7.64	19.09	4.61	93.03	0	39.6
6/25/17 8:00	2017	176.33	7.04	17.17	5.205	92.973	0	39.6
6/25/17 9:00	2017	176.38	7.14	16.60	4.61	92.94	0	39.6
6/25/17 10:00	2017	176.42	6.68	14.85	4.584	92.935	0	39.6
6/25/17 11:00	2017	176.46	6.57	13.86	4.895	92.916	0	39.6
6/25/17 12:00	2017	176.50	6.16	12.47	4.869	92.915	0	39.6
6/25/17 13:00	2017	176.54	5.82	11.32	4.921	92.882	0.2	39.8
6/25/17 14:00	2017	176.58	5.79	10.85	4.61	92.886	0.4	40.2
6/25/17 15:00	2017	176.63	5.96	11.01	3.906	92.886	0.6	40.8
6/25/17 16:00	2017	176.67	5.85	10.97	3.38	92.91	0.2	41
6/25/17 17:00	2017	176.71	6.10	11.53	3.301	92.906	0	41
6/25/17 18:00	2017	176.75	6.30	11.88	3.38	92.92	0.2	41.2
6/25/17 19:00	2017	176.79	6.24	11.96	3.643	92.911	0	41.2
6/25/17 20:00	2017	176.83	6.42	12.59	4.089	92.906	0	41.2
6/25/17 21:00	2017	176.88	6.67	13.43	3.67	92.892	0	41.2
6/25/17 22:00	2017	176.92	6.70	13.99	3.67	92.897	0	41.2
6/25/17 23:00	2017	176.96	6.64	14.37	3.354	92.883	0	41.2
6/26/17 0:00	2017	177.00	6.24	13.92	3.274	92.893	0	41.2
6/26/17 1:00	2017	177.04	6.28	14.38	3.301	92.87	0	41.2
6/26/17 2:00	2017	177.08	6.08	14.24	3.274	92.87	0	41.2
6/26/17 3:00	2017	177.13	5.99	14.15	3.617	92.828	0	41.2
6/26/17 4:00	2017	177.17	5.74	13.57	2.93	92.809	0	41.2
6/26/17 5:00	2017	177.21	5.57	13.04	3.142	92.79	0	41.2
6/26/17 6:00	2017	177.25	5.40	12.40	3.063	92.762	0	41.2

6/26/17 7:00	2017	177.29	5.24	11.75	4.947	92.71	0	41.2
6/26/17 8:00	2017	177.33	5.01	10.92	5.847	92.691	0	41.2
6/26/17 9:00	2017	177.38	4.94	10.41	7.242	92.644	0	41.2
6/26/17 10:00	2017	177.42	4.75	9.75	8.99	92.574	0	41.2
6/26/17 11:00	2017	177.46	4.61	9.20	9.064	92.559	0	41.2
6/26/17 12:00	2017	177.50	4.39	8.56	8.543	92.531	0	41.2
6/26/17 13:00	2017	177.54	4.35	8.27	8.668	92.516	0	41.2
6/26/17 14:00	2017	177.58	4.30	8.09	9.163	92.491	0	41.2
6/26/17 15:00	2017	177.63	4.49	8.18	8.494	92.466	0	41.2
6/26/17 16:00	2017	177.67	4.75	8.41	9.213	92.47	0	41.2
6/26/17 17:00	2017	177.71	4.86	8.65	10.638	92.427	0	41.2
6/26/17 18:00	2017	177.75	5.22	9.57	9.706	92.39	0	41.2
6/26/17 19:00	2017	177.79	5.50	10.50	9.262	92.403	0	41.2
6/26/17 20:00	2017	177.83	5.59	11.27	10.149	92.421	0	41.2
6/26/17 21:00	2017	177.88	5.81	12.41	9.534	92.492	0	41.2
6/26/17 22:00	2017	177.92	6.08	13.78	9.015	92.62	0	41.2
6/26/17 23:00	2017	177.96	6.03	14.62	9.089	92.702	0	41.2
6/27/17 0:00	2017	178.00	6.04	15.60	9.336	92.75	0	41.2
6/27/17 1:00	2017	178.04	6.28	17.08	9.114	92.788	0	41.2
6/27/17 2:00	2017	178.08	6.45	18.33	9.015	92.784	0	41.2
6/27/17 3:00	2017	178.13	6.30	18.66	9.238	92.77	0	41.2
6/27/17 4:00	2017	178.17	6.49	19.63	8.767	92.761	0	41.2
6/27/17 5:00	2017	178.21	6.40	19.64	8.668	92.761	0	41.2
6/27/17 6:00	2017	178.25	6.21	19.20	9.509	92.742	0	41.2
6/27/17 7:00	2017	178.29	6.04	18.51	9.262	92.727	0	41.2
6/27/17 8:00	2017	178.33	5.74	17.32	10.026	92.69	0	41.2
6/27/17 9:00	2017	178.38	5.31	15.71	11.127	92.68	0	41.2
6/27/17 10:00	2017	178.42	5.09	14.59	11.613	92.656	0	41.2
6/27/17 11:00	2017	178.46	4.90	13.58	11.297	92.619	0	41.2
6/27/17 12:00	2017	178.50	4.79	12.94	12.823	92.656	0	41.2
6/27/17 13:00	2017	178.54	4.56	12.12	12.968	92.627	0	41.2
6/27/17 14:00	2017	178.58	4.63	12.11	13.425	92.626	0	41.2
6/27/17 15:00	2017	178.63	4.68	12.22	13.786	92.62	0	41.2
6/27/17 16:00	2017	178.67	4.64	12.23	13.594	92.646	0	41.2
6/27/17 17:00	2017	178.71	4.91	13.04	13.522	92.645	0	41.2

6/27/17 18:00	2017	178.75	5.20	14.14	13.353	92.663	0	41.2
6/27/17 19:00	2017	178.79	5.47	15.37	12.871	92.682	0	41.2
6/27/17 20:00	2017	178.83	6.07	17.53	11.856	92.715	0	41.2
6/27/17 21:00	2017	178.88	6.51	19.52	10.541	92.774	0	41.2
6/27/17 22:00	2017	178.92	7.00	21.82	9.903	92.813	0	41.2
6/27/17 23:00	2017	178.96	7.08	23.09	9.312	92.87	0	41.2
6/28/17 0:00	2017	179.00	7.42	25.09	9.435	92.838	0	41.2
6/28/17 1:00	2017	179.04	7.37	25.95	9.632	92.843	0	41.2
6/28/17 2:00	2017	179.08	7.53	27.27	9.829	92.805	0	41.2
6/28/17 3:00	2017	179.13	7.13	26.59	10.394	92.801	0	41.2
6/28/17 4:00	2017	179.17	7.12	26.82	9.879	92.782	0	41.2
6/28/17 5:00	2017	179.21	7.13	26.84	10.222	92.782	0	41.2
6/28/17 6:00	2017	179.25	6.83	25.40	9.805	92.773	0	41.2
6/28/17 7:00	2017	179.29	6.73	24.48	10.541	92.801	0	41.2
6/28/17 8:00	2017	179.33	6.24	22.15	10.663	92.801	0	41.2
6/28/17 9:00	2017	179.38	5.70	19.65	11.419	92.773	0	41.2
6/28/17 10:00	2017	179.42	5.48	18.18	12.534	92.744	0	41.2
6/28/17 11:00	2017	179.46	5.29	16.97	13.762	92.73	0	41.2
6/28/17 12:00	2017	179.50	5.18	16.03	14.146	92.749	0	41.2
6/28/17 13:00	2017	179.54	5.06	15.20	14.385	92.758	0	41.2
6/28/17 14:00	2017	179.58	5.40	15.68	14.385	92.78	0	41.2
6/28/17 15:00	2017	179.63	5.41	15.49	15.318	92.816	0	41.2
6/28/17 16:00	2017	179.67	5.65	16.03	14.577	92.83	0	41.2
6/28/17 17:00	2017	179.71	6.23	17.66	12.485	92.878	5.6	46.8
6/28/17 18:00	2017	179.75	6.97	19.85	10.932	92.963	0.6	47.4
6/28/17 19:00	2017	179.79	7.29	21.26	13.57	93.024	0	47.4
6/28/17 20:00	2017	179.83	7.71	23.37	14.673	93.221	0	47.4
6/28/17 21:00	2017	179.88	8.45	26.75	14.218	93.377	0	47.4
6/28/17 22:00	2017	179.92	8.46	28.41	13.546	93.448	0	47.4
6/28/17 23:00	2017	179.96	8.72	30.99	13.473	93.41	0	47.4
6/29/17 0:00	2017	180.00	9.00	33.65	13.233	93.397	0	47.4
6/29/17 1:00	2017	180.04	9.16	35.73	11.613	93.431	0	47.4
6/29/17 2:00	2017	180.08	9.77	39.02	11.248	93.403	0	47.4
6/29/17 3:00	2017	180.13	9.46	38.81	11.54	93.417	0	47.4
6/29/17 4:00	2017	180.17	9.43	39.09	11.224	93.38	0	47.4

6/29/17 5:00	2017	180.21	9.43	38.90	10.638	93.351	0	47.4
6/29/17 6:00	2017	180.25	9.42	38.26	10.712	93.351	0	47.4
6/29/17 7:00	2017	180.29	8.70	34.81	10.932	93.342	0	47.4
6/29/17 8:00	2017	180.33	8.32	32.35	11.565	93.342	0	47.4
6/29/17 9:00	2017	180.38	8.04	30.06	11.467	93.295	0	47.4
6/29/17 10:00	2017	180.42	7.42	26.73	11.929	93.304	0	47.4
6/29/17 11:00	2017	180.46	6.61	23.10	13.425	93.299	0	47.4
6/29/17 12:00	2017	180.50	6.86	22.79	13.642	93.294	0	47.4
6/29/17 13:00	2017	180.54	6.61	21.22	13.954	93.251	0	47.4
6/29/17 14:00	2017	180.58	6.65	20.69	14.026	93.246	0	47.4
6/29/17 15:00	2017	180.63	6.90	22.29	13.522	93.273	0.2	47.6
6/29/17 16:00	2017	180.67	7.67	24.30	11.953	93.377	0	47.6
6/29/17 17:00	2017	180.71	7.49	23.77	13.401	93.372	0	47.6
6/29/17 18:00	2017	180.75	8.14	25.92	13.425	93.353	0	47.6
6/29/17 19:00	2017	180.79	8.05	26.38	13.377	93.366	0	47.6
6/29/17 20:00	2017	180.83	8.21	27.75	13.834	93.362	0	47.6
6/29/17 21:00	2017	180.88	10.02	34.25	13.209	93.348	0.2	47.8
6/29/17 22:00	2017	180.92	10.45	37.11	12.799	93.311	0	47.8
6/29/17 23:00	2017	180.96	10.96	40.38	12.944	93.288	0	47.8
6/30/17 0:00	2017	181.00	11.15	42.92	14.098	93.283	0	47.8
6/30/17 1:00	2017	181.04	11.54	45.97	12.268	93.256	0	47.8
6/30/17 2:00	2017	181.08	11.52	47.33	11.904	93.233	0	47.8
6/30/17 3:00	2017	181.13	11.88	49.47	11.37	93.214	0	47.8
6/30/17 4:00	2017	181.17	10.74	45.69	11.467	93.167	0	47.8
6/30/17 5:00	2017	181.21	10.92	46.13	11.248	93.106	0	47.8
6/30/17 6:00	2017	181.25	10.05	42.23	11.102	93.035	0	47.8
6/30/17 7:00	2017	181.29	9.73	40.00	11.467	92.978	0	47.8
6/30/17 8:00	2017	181.33	8.71	35.17	12.461	92.931	0	47.8
6/30/17 9:00	2017	181.38	8.85	34.28	13.064	92.884	0	47.8
6/30/17 10:00	2017	181.42	8.17	30.66	13.04	92.856	0	47.8
6/30/17 11:00	2017	181.46	7.70	27.84	13.738	92.832	0	47.8
6/30/17 12:00	2017	181.50	7.46	26.18	16.201	92.803	0	47.8
6/30/17 13:00	2017	181.54	7.17	24.51	15.485	92.784	0	47.8
6/30/17 14:00	2017	181.58	7.26	24.27	16.296	92.769	0	47.8
6/30/17 15:00	2017	181.63	7.65	23.56	16.868	92.744	0	47.8

6/30/17 16:00	2017	181.67	8.05	24.56	16.701	92.709	0	47.8
6/30/17 17:00	2017	181.71	8.49	25.98	14.673	92.712	0	47.8
6/30/17 18:00	2017	181.75	8.76	27.16	13.473	92.77	0	47.8
6/30/17 19:00	2017	181.79	9.60	30.25	13.786	92.828	0	47.8
6/30/17 20:00	2017	181.83	10.03	32.73	14.984	92.777	0	47.8
6/30/17 21:00	2017	181.88	10.46	35.55	14.074	92.734	0	47.8
6/30/17 22:00	2017	181.92	10.48	37.51	14.266	92.715	0	47.8
6/30/17 23:00	2017	181.96	10.83	40.73	15.27	92.696	0	47.8
7/1/17 0:00	2017	182.00	11.38	44.43	14.697	92.683	0	47.8
7/1/17 1:00	2017	182.04	11.11	45.50	14.218	92.679	0	47.8
7/1/17 2:00	2017	182.08	11.32	47.79	13.257	92.674	0	47.8
7/1/17 3:00	2017	182.13	11.40	49.11	12.437	92.646	0	47.8
7/1/17 4:00	2017	182.17	11.10	48.44	12.413	92.627	0	47.8
7/1/17 5:00	2017	182.21	10.82	47.25	12.122	92.608	0	47.8
7/1/17 6:00	2017	182.25	10.58	45.63	12.098	92.552	0	47.8
7/1/17 7:00	2017	182.29	9.81	41.76	12.654	92.547	0	47.8
7/1/17 8:00	2017	182.33	9.21	38.17	12.775	92.5	0	47.8
7/1/17 9:00	2017	182.38	9.20	36.46	13.016	92.471	0	47.8
7/1/17 10:00	2017	182.42	8.79	33.42	12.823	92.457	0	47.8
7/1/17 11:00	2017	182.46	8.05	29.56	13.449	92.405	0	47.8
7/1/17 12:00	2017	182.50	7.88	27.57	13.93	92.391	0	47.8
7/1/17 13:00	2017	182.54	7.74	26.03	14.314	92.366	0	47.8
7/1/17 14:00	2017	182.58	7.50	24.55	15.223	92.341	0	47.8
7/1/17 15:00	2017	182.63	7.83	24.94	16.129	92.325	0	47.8
7/1/17 16:00	2017	182.67	7.92	25.03	16.749	92.29	0	47.8
7/1/17 17:00	2017	182.71	7.74	25.07	15.796	92.28	0	47.8
7/1/17 18:00	2017	182.75	8.43	27.56	14.266	92.347	0	47.8
7/1/17 19:00	2017	182.79	9.02	30.12	14.816	92.477	0	47.8
7/1/17 20:00	2017	182.83	9.58	32.80	14.05	92.496	0	47.8
7/1/17 21:00	2017	182.88	10.65	37.35	12.871	92.543	0	47.8
7/1/17 22:00	2017	182.92	10.38	38.02	12.195	92.563	3.4	51.2
7/1/17 23:00	2017	182.96	10.97	42.07	10.98	92.625	0.6	51.8
7/2/17 0:00	2017	183.00	10.85	42.94	10.907	92.583	0	51.8
7/2/17 1:00	2017	183.04	10.63	43.25	10.32	92.602	0	51.8
7/2/17 2:00	2017	183.08	10.77	44.50	10.1	92.583	0	51.8

7/2/17 3:00	2017	183.13	10.29	43.23	9.977	92.574	0	51.8
7/2/17 4:00	2017	183.17	10.18	42.66	9.558	92.564	0	51.8
7/2/17 5:00	2017	183.21	10.10	41.69	9.287	92.546	0	51.8
7/2/17 6:00	2017	183.25	9.91	39.89	9.361	92.555	0	51.8
7/2/17 7:00	2017	183.29	9.10	35.70	9.756	92.546	0	51.8
7/2/17 8:00	2017	183.33	8.79	33.11	10.565	92.546	0	51.8
7/2/17 9:00	2017	183.38	8.48	30.52	11.151	92.527	0	51.8
7/2/17 10:00	2017	183.42	7.81	26.98	11.297	92.508	0	51.8
7/2/17 11:00	2017	183.46	7.61	25.00	11.467	92.517	0	51.8
7/2/17 12:00	2017	183.50	7.41	23.23	11.662	92.512	0	51.8
7/2/17 13:00	2017	183.54	7.29	21.91	12.316	92.52	0	51.8
7/2/17 14:00	2017	183.58	7.67	22.02	12.34	92.529	0	51.8
7/2/17 15:00	2017	183.63	7.51	20.92	11.856	92.608	0	51.8
7/2/17 16:00	2017	183.67	7.53	20.43	11.151	92.665	0	51.8
7/2/17 17:00	2017	183.71	8.07	21.17	10.418	92.693	0	51.8
7/2/17 18:00	2017	183.75	8.45	22.14	10.418	92.759	0	51.8
7/2/17 19:00	2017	183.79	8.62	22.80	10.271	92.773	0	51.8
7/2/17 20:00	2017	183.83	8.93	24.01	9.41	92.801	0	51.8
7/2/17 21:00	2017	183.88	9.59	26.33	9.213	92.81	0	51.8
7/2/17 22:00	2017	183.92	9.91	27.99	8.22	92.825	0	51.8
7/2/17 23:00	2017	183.96	9.99	28.54	7.72	92.872	0	51.8
7/3/17 0:00	2017	184.00	9.77	28.92	7.594	92.868	0	51.8
7/3/17 1:00	2017	184.04	10.53	31.73	7.795	92.906	0	51.8
7/3/17 2:00	2017	184.08	9.55	29.83	8.045	92.902	0	51.8
7/3/17 3:00	2017	184.13	10.13	31.68	7.67	92.921	0	51.8
7/3/17 4:00	2017	184.17	8.67	27.69	7.519	92.921	0	51.8
7/3/17 5:00	2017	184.21	8.48	26.85	7.594	92.916	0	51.8
7/3/17 6:00	2017	184.25	8.30	25.72	7.569	92.898	0	51.8
7/3/17 7:00	2017	184.29	8.18	24.61	8.767	92.902	0	51.8
7/3/17 8:00	2017	184.33	7.44	21.72	8.568	92.93	0	51.8
7/3/17 9:00	2017	184.38	7.55	20.92	9.312	92.939	0	51.8
7/3/17 10:00	2017	184.42	7.17	18.95	9.04	92.949	0	51.8
7/3/17 11:00	2017	184.46	7.00	17.63	9.952	92.958	0	51.8
7/3/17 12:00	2017	184.50	6.44	15.63	10.051	92.968	0	51.8
7/3/17 13:00	2017	184.54	6.65	15.39	10.834	92.958	0	51.8

7/3/17 14:00	2017	184.58	6.12	13.87	10.956	92.981	0	51.8
7/3/17 15:00	2017	184.63	6.31	13.95	11.273	92.994	0	51.8
7/3/17 16:00	2017	184.67	6.53	14.25	10.687	93.044	0	51.8
7/3/17 17:00	2017	184.71	7.00	15.17	9.829	93.067	0	51.8
7/3/17 18:00	2017	184.75	7.11	15.62	9.41	93.034	0	51.8
7/3/17 19:00	2017	184.79	7.37	16.49	9.064	93.03	0	51.8
7/3/17 20:00	2017	184.83	8.11	18.48	7.845	93.073	0	51.8
7/3/17 21:00	2017	184.88	8.23	19.42	7.419	93.06	0	51.8
7/3/17 22:00	2017	184.92	8.48	20.81	7.217	93.074	0	51.8
7/3/17 23:00	2017	184.96	8.42	21.62	7.041	93.074	0	51.8
7/4/17 0:00	2017	185.00	7.85	21.22	7.167	93.099	0	51.8
7/4/17 1:00	2017	185.04	8.41	23.33	7.116	93.117	0	51.8
7/4/17 2:00	2017	185.08	7.65	22.06	7.167	93.136	0.2	52
7/4/17 3:00	2017	185.13	7.65	22.43	7.066	93.174	0	52
7/4/17 4:00	2017	185.17	7.33	21.70	6.965	93.174	0	52
7/4/17 5:00	2017	185.21	7.00	20.70	7.015	93.165	0	52
7/4/17 6:00	2017	185.25	6.70	19.53	7.041	93.161	0	52
7/4/17 7:00	2017	185.29	6.31	17.93	7.268	93.189	0	52
7/4/17 8:00	2017	185.33	6.40	17.44	8.02	93.198	0	52
7/4/17 9:00	2017	185.38	6.10	15.99	8.866	93.204	0	52
7/4/17 10:00	2017	185.42	5.81	14.64	9.312	93.162	0	52
7/4/17 11:00	2017	185.46	5.61	13.55	9.78	93.176	0	52
7/4/17 12:00	2017	185.50	5.74	13.25	10.394	93.167	0	52
7/4/17 13:00	2017	185.54	5.42	12.16	11.078	93.176	0	52
7/4/17 14:00	2017	185.58	5.10	11.25	11.904	93.137	0	52
7/4/17 15:00	2017	185.63	5.29	11.44	12.509	93.097	0	52
7/4/17 16:00	2017	185.67	5.36	11.58	12.437	93.086	0	52
7/4/17 17:00	2017	185.71	5.38	11.75	11.637	93.079	0	52
7/4/17 18:00	2017	185.75	5.81	12.89	11.734	93.079	0	52
7/4/17 19:00	2017	185.79	6.33	14.35	11.005	93.059	0	52
7/4/17 20:00	2017	185.83	6.53	15.45	10.907	93.059	0	52
7/4/17 21:00	2017	185.88	7.21	17.79	11.224	93.063	0	52
7/4/17 22:00	2017	185.92	7.54	19.55	9.879	93.068	0	52
7/4/17 23:00	2017	185.96	7.40	20.38	10.541	93.056	0	52
7/5/17 0:00	2017	186.00	7.84	22.56	9.731	93.044	0	52

7/5/17 1:00	2017	186.04	7.33	22.32	9.706	93.035	0	52
7/5/17 2:00	2017	186.08	7.26	22.94	9.435	93.022	0	52
7/5/17 3:00	2017	186.13	7.49	24.14	9.015	92.999	0	52
7/5/17 4:00	2017	186.17	7.21	23.64	8.543	92.981	0	52
7/5/17 5:00	2017	186.21	7.21	23.59	8.394	93	0	52
7/5/17 6:00	2017	186.25	6.37	20.89	7.895	93.015	0	52
7/5/17 7:00	2017	186.29	6.45	20.54	7.519	93.024	0	52
7/5/17 8:00	2017	186.33	6.28	19.29	7.268	93.071	0.2	52.2
7/5/17 9:00	2017	186.38	5.83	17.43	7.419	93.053	0	52.2
7/5/17 10:00	2017	186.42	5.69	16.18	7.343	93.071	0	52.2
7/5/17 11:00	2017	186.46	5.66	15.23	7.167	93.076	0	52.2
7/5/17 12:00	2017	186.50	5.34	13.78	8.245	93.094	0	52.2
7/5/17 13:00	2017	186.54	5.22	12.93	9.361	93.061	0	52.2
7/5/17 14:00	2017	186.58	5.42	12.86	9.312	93.079	0	52.2
7/5/17 15:00	2017	186.63	5.46	12.57	9.509	93.068	0	52.2
7/5/17 16:00	2017	186.67	5.57	12.58	9.509	93.072	0	52.2
7/5/17 17:00	2017	186.71	6.05	13.47	9.213	93.09	0	52.2
7/5/17 18:00	2017	186.75	6.09	13.68	9.064	93.052	0	52.2
7/5/17 19:00	2017	186.79	6.23	14.29	10.026	93.024	0	52.2
7/5/17 20:00	2017	186.83	6.20	14.70	9.435	92.994	0	52.2
7/5/17 21:00	2017	186.88	6.51	15.93	9.928	93.003	0	52.2
7/5/17 22:00	2017	186.92	6.92	17.64	10.516	93.005	0	52.2
7/5/17 23:00	2017	186.96	6.50	17.48	10.149	92.964	0	52.2
7/6/17 0:00	2017	187.00	6.56	18.46	10.492	92.99	0	52.2
7/6/17 1:00	2017	187.04	6.73	19.62	10.345	92.996	0	52.2
7/6/17 2:00	2017	187.08	6.57	19.87	10.98	92.959	0	52.2
7/6/17 3:00	2017	187.13	6.94	21.34	10.932	92.942	0	52.2
7/6/17 4:00	2017	187.17	6.85	21.40	10.81	92.947	0	52.2
7/6/17 5:00	2017	187.21	6.61	20.81	10.907	92.914	0	52.2
7/6/17 6:00	2017	187.25	6.43	20.14	10.907	92.924	0	52.2
7/6/17 7:00	2017	187.29	6.04	18.77	10.834	92.919	0	52.2
7/6/17 8:00	2017	187.33	6.14	18.58	11.127	92.928	0	52.2
7/6/17 9:00	2017	187.38	5.97	17.43	11.856	92.928	0	52.2
7/6/17 10:00	2017	187.42	5.56	15.89	11.953	92.89	0	52.2
7/6/17 11:00	2017	187.46	5.41	15.11	12.823	92.876	0	52.2

7/6/17 12:00	2017	187.50	5.15	14.17	14.529	92.866	0	52.2
7/6/17 13:00	2017	187.54	4.99	13.58	15.891	92.827	0	52.2
7/6/17 14:00	2017	187.58	5.07	13.73	16.725	92.823	0	52.2
7/6/17 15:00	2017	187.63	5.25	14.26	17.439	92.784	0	52.2
7/6/17 16:00	2017	187.67	5.46	15.06	17.439	92.755	0	52.2
7/6/17 17:00	2017	187.71	5.92	16.74	18.176	92.739	0	52.2
7/6/17 18:00	2017	187.75	6.57	19.14	16.701	92.726	0	52.2
7/6/17 19:00	2017	187.79	7.10	21.50	16.558	92.749	0	52.2
7/6/17 20:00	2017	187.83	7.66	24.38	16.296	92.73	0	52.2
7/6/17 21:00	2017	187.88	7.85	26.50	15.461	92.754	0	52.2
7/6/17 22:00	2017	187.92	8.90	31.32	14.457	92.795	0	52.2
7/6/17 23:00	2017	187.96	9.23	34.20	13.281	92.819	0	52.2
7/7/17 0:00	2017	188.00	9.41	36.57	12.485	92.836	0	52.2
7/7/17 1:00	2017	188.04	9.26	37.73	12.389	92.886	0	52.2
7/7/17 2:00	2017	188.08	8.90	37.70	12.461	92.879	0	52.2
7/7/17 3:00	2017	188.13	8.08	35.53	12.292	92.886	0	52.2
7/7/17 4:00	2017	188.17	8.16	36.24	12.509	92.887	0	52.2
7/7/17 5:00	2017	188.21	7.70	34.41	12.098	92.935	0	52.2
7/7/17 6:00	2017	188.25	7.63	33.37	9.977	92.997	0	52.2
7/7/17 7:00	2017	188.29	6.98	30.01	10.149	93.031	0	52.2
7/7/17 8:00	2017	188.33	6.86	28.46	11.053	93.027	0	52.2
7/7/17 9:00	2017	188.38	6.54	26.08	11.224	93.06	0	52.2
7/7/17 10:00	2017	188.42	6.32	24.15	11.977	93.098	0	52.2
7/7/17 11:00	2017	188.46	6.05	22.23	12.944	93.065	0	52.2
7/7/17 12:00	2017	188.50	5.77	20.37	13.546	93.06	0	52.2
7/7/17 13:00	2017	188.54	5.61	19.04	14.314	93.03	0	52.2
7/7/17 14:00	2017	188.58	5.83	18.99	14.697	93.019	0	52.2
7/7/17 15:00	2017	188.63	5.95	18.80	15.031	92.999	0	52.2
7/7/17 16:00	2017	188.67	6.24	19.28	14.792	92.99	0	52.2
7/7/17 17:00	2017	188.71	6.96	21.03	14.625	92.972	0	52.2
7/7/17 18:00	2017	188.75	7.37	22.32	14.194	92.983	0	52.2
7/7/17 19:00	2017	188.79	7.84	23.96	13.786	92.983	0	52.2
7/7/17 20:00	2017	188.83	8.28	25.77	13.04	92.989	0	52.2
7/7/17 21:00	2017	188.88	8.92	28.38	12.437	92.977	0	52.2
7/7/17 22:00	2017	188.92	9.32	30.58	11.54	93	0	52.2

7/7/17 23:00	2017	188.96	9.21	31.53	11.662	92.991	0	52.2
7/8/17 0:00	2017	189.00	9.49	33.65	11.394	92.967	0	52.2
7/8/17 1:00	2017	189.04	8.85	32.87	11.929	92.971	0	52.2
7/8/17 2:00	2017	189.08	8.76	33.44	11.88	92.958	0	52.2
7/8/17 3:00	2017	189.13	8.08	31.75	11.856	92.931	0	52.2
7/8/17 4:00	2017	189.17	8.10	31.87	11.589	92.951	0	52.2
7/8/17 5:00	2017	189.21	7.84	30.80	11.953	92.956	0	52.2
7/8/17 6:00	2017	189.25	7.88	30.50	11.419	92.985	0	52.2
7/8/17 7:00	2017	189.29	7.55	28.63	10.663	93.032	0	52.2
7/8/17 8:00	2017	189.33	7.08	26.08	10.541	93.032	0	52.2
7/8/17 9:00	2017	189.38	6.34	22.69	11.005	93.051	0	52.2
7/8/17 10:00	2017	189.42	6.35	21.64	11.321	93.045	0	52.2
7/8/17 11:00	2017	189.46	6.38	20.67	12.001	93.063	0	52.2
7/8/17 12:00	2017	189.50	6.09	18.94	12.534	93.048	0	52.2
7/8/17 13:00	2017	189.54	5.86	17.66	14.337	93.047	0	52.2
7/8/17 14:00	2017	189.58	5.84	17.11	14.745	93.042	0	52.2
7/8/17 15:00	2017	189.63	6.08	17.34	14.266	93.051	0	52.2
7/8/17 16:00	2017	189.67	6.47	18.11	14.002	93.05	0	52.2
7/8/17 17:00	2017	189.71	7.12	19.62	12.389	93.04	0	52.2
7/8/17 18:00	2017	189.75	7.19	19.96	11.467	93.05	0	52.2
7/8/17 19:00	2017	189.79	7.52	21.09	10.345	93.086	0	52.2
7/8/17 20:00	2017	189.83	7.92	22.67	10.345	93.079	0	52.2
7/8/17 21:00	2017	189.88	7.53	22.46	9.435	93.059	0	52.2
7/8/17 22:00	2017	189.92	8.53	26.04	9.928	93.033	0	52.2
7/8/17 23:00	2017	189.96	8.83	28.02	10.883	93.045	0	52.2
7/9/17 0:00	2017	190.00	9.32	30.55	10.712	93.047	0	52.2
7/9/17 1:00	2017	190.04	9.74	32.78	10.394	92.988	0	52.2
7/9/17 2:00	2017	190.08	8.53	29.99	10.736	92.989	0	52.2
7/9/17 3:00	2017	190.13	8.01	28.84	11.005	92.956	0	52.2
7/9/17 4:00	2017	190.17	8.32	29.87	10.614	92.98	0	52.2
7/9/17 5:00	2017	190.21	7.90	28.21	10.001	92.939	0	52.2
7/9/17 6:00	2017	190.25	7.90	27.47	9.361	92.925	0	52.2
7/9/17 7:00	2017	190.29	7.41	25.39	12.001	92.91	0	52.2
7/9/17 8:00	2017	190.33	7.01	23.50	12.727	92.854	0	52.2
7/9/17 9:00	2017	190.38	7.00	22.51	11.807	92.839	0	52.2

7/9/17 10:00	2017	190.42	7.05	21.68	12.678	92.839	0	52.2
7/9/17 11:00	2017	190.46	6.70	19.88	12.968	92.824	0	52.2
7/9/17 12:00	2017	190.50	6.45	18.56	14.84	92.772	0	52.2
7/9/17 13:00	2017	190.54	6.48	18.00	15.27	92.756	0	52.2
7/9/17 14:00	2017	190.58	6.70	18.07	16.058	92.74	0	52.2
7/9/17 15:00	2017	190.63	6.68	17.84	16.796	92.705	0	52.2
7/9/17 16:00	2017	190.67	7.06	18.79	17.082	92.656	0	52.2
7/9/17 17:00	2017	190.71	7.37	19.88	16.368	92.602	0	52.2
7/9/17 18:00	2017	190.75	7.69	21.37	16.487	92.573	0	52.2
7/9/17 19:00	2017	190.79	8.36	24.06	16.129	92.545	0	52.2
7/9/17 20:00	2017	190.83	9.06	27.21	15.414	92.556	0	52.2
7/9/17 21:00	2017	190.88	9.28	29.57	14.888	92.544	0	52.2
7/9/17 22:00	2017	190.92	9.52	32.19	14.768	92.522	0	52.2
7/9/17 23:00	2017	190.96	9.19	33.15	14.792	92.508	0	52.2
7/10/17 0:00	2017	191.00	8.94	34.25	14.625	92.5	0	52.2
7/10/17 1:00	2017	191.04	9.21	36.96	14.122	92.515	0	52.2
7/10/17 2:00	2017	191.08	9.01	37.68	13.738	92.515	0	52.2
7/10/17 3:00	2017	191.13	8.71	37.67	13.93	92.511	0	52.2
7/10/17 4:00	2017	191.17	8.23	36.49	13.81	92.507	0	52.2
7/10/17 5:00	2017	191.21	8.19	36.62	14.05	92.493	0	52.2
7/10/17 6:00	2017	191.25	7.85	35.28	14.266	92.493	0	52.2
7/10/17 7:00	2017	191.29	7.85	34.54	14.361	92.512	0	52.2
7/10/17 8:00	2017	191.33	7.84	33.51	15.079	92.512	0	52.2
7/10/17 9:00	2017	191.38	7.08	29.88	16.368	92.526	0	52.2
7/10/17 10:00	2017	191.42	7.15	29.13	16.463	92.535	0	52.2
7/10/17 11:00	2017	191.46	6.56	26.29	18.105	92.544	0	52.2
7/10/17 12:00	2017	191.50	6.54	25.27	16.844	92.549	0	52.2
7/10/17 13:00	2017	191.54	6.71	24.92	16.058	92.602	0	52.2
7/10/17 14:00	2017	191.58	6.70	24.19	15.986	92.626	0	52.2
7/10/17 15:00	2017	191.63	7.35	25.61	15.891	92.66	0	52.2
7/10/17 16:00	2017	191.67	7.56	25.99	16.368	92.672	0	52.2
7/10/17 17:00	2017	191.71	8.08	27.58	15.366	92.699	0	52.2
7/10/17 18:00	2017	191.75	8.42	28.94	14.625	92.734	0	52.2
7/10/17 19:00	2017	191.79	9.11	31.49	13.233	92.75	0	52.2
7/10/17 20:00	2017	191.83	10.13	35.60	13.882	92.805	0	52.2

7/10/17 21:00	2017	191.88	10.96	39.48	12.654	92.86	0	52.2
7/10/17 22:00	2017	191.92	11.14	41.99	15.008	92.878	0	52.2
7/10/17 23:00	2017	191.96	10.59	41.99	13.642	92.905	0	52.2
7/11/17 0:00	2017	192.00	10.63	43.40	10.98	92.972	0	52.2
7/11/17 1:00	2017	192.04	10.42	44.09	12.558	92.982	0	52.2
7/11/17 2:00	2017	192.08	9.47	41.77	13.546	92.998	0	52.2
7/11/17 3:00	2017	192.13	9.14	41.19	13.401	93.041	0	52.2
7/11/17 4:00	2017	192.17	9.24	41.71	13.112	93.033	0	52.2
7/11/17 5:00	2017	192.21	9.08	40.80	13.786	93.104	0	52.2
7/11/17 6:00	2017	192.25	8.75	38.66	13.401	93.151	0	52.2
7/11/17 7:00	2017	192.29	8.69	37.27	13.473	93.161	0	52.2
7/11/17 8:00	2017	192.33	8.51	35.14	14.17	93.18	0	52.2
7/11/17 9:00	2017	192.38	8.31	32.81	15.127	93.227	0	52.2
7/11/17 10:00	2017	192.42	8.05	30.41	16.082	93.24	0	52.2
7/11/17 11:00	2017	192.46	7.63	27.43	15.175	93.288	0	52.2
7/11/17 12:00	2017	192.50	7.21	24.80	14.122	93.301	0	52.2
7/11/17 13:00	2017	192.54	7.31	23.90	13.137	93.356	0	52.2
7/11/17 14:00	2017	192.58	7.00	22.24	13.906	93.367	0	52.2
7/11/17 15:00	2017	192.63	7.53	23.08	13.906	93.382	0	52.2
7/11/17 16:00	2017	192.67	7.66	23.03	13.209	93.411	0	52.2
7/11/17 17:00	2017	192.71	7.92	23.60	12.437	93.417	0	52.2
7/11/17 18:00	2017	192.75	8.72	25.89	12.461	93.416	0	52.2
7/11/17 19:00	2017	192.79	8.83	26.96	13.522	93.412	0	52.2
7/11/17 20:00	2017	192.83	9.15	28.65	12.074	93.443	0	52.2
7/11/17 21:00	2017	192.88	9.68	31.25	11.321	93.45	0	52.2
7/11/17 22:00	2017	192.92	10.51	34.73	11.565	93.491	0	52.2
7/11/17 23:00	2017	192.96	9.72	33.67	10.712	93.504	0	52.2
7/12/17 0:00	2017	193.00	9.99	35.99	10.98	93.516	0	52.2
7/12/17 1:00	2017	193.04	9.87	36.77	10.712	93.541	0	52.2
7/12/17 2:00	2017	193.08	9.78	37.13	10.565	93.575	0.2	52.4
7/12/17 3:00	2017	193.13	9.51	37.90	11.346	93.637	0.6	53
7/12/17 4:00	2017	193.17	8.47	38.38	11.175	93.542	2.2	55.2
7/12/17 5:00	2017	193.21	8.61	40.08	11.127	93.575	0.8	56
7/12/17 6:00	2017	193.25	9.00	41.83	10.492	93.551	0.6	56.6
7/12/17 7:00	2017	193.29	8.89	39.77	10.345	93.555	0	56.6

7/12/17 8:00	2017	193.33	8.74	37.08	8.866	93.602	0	56.6
7/12/17 9:00	2017	193.38	8.37	33.47	9.015	93.611	0	56.6
7/12/17 10:00	2017	193.42	8.56	31.88	10.051	93.593	0	56.6
7/12/17 11:00	2017	193.46	9.48	32.60	9.854	93.616	0	56.6
7/12/17 12:00	2017	193.50	9.68	31.30	9.731	93.605	0	56.6
7/12/17 13:00	2017	193.54	9.33	28.94	10.443	93.633	0	56.6
7/12/17 14:00	2017	193.58	9.14	27.21	9.361	93.643	0	56.6
7/12/17 15:00	2017	193.63	9.02	25.96	8.817	93.661	0	56.6
7/12/17 16:00	2017	193.67	8.74	24.75	8.767	93.683	0	56.6
7/12/17 17:00	2017	193.71	8.99	25.21	9.312	93.649	0	56.6
7/12/17 18:00	2017	193.75	9.28	26.18	10.051	93.634	0	56.6
7/12/17 19:00	2017	193.79	8.35	24.30	9.903	93.61	0	56.6
7/12/17 20:00	2017	193.83	8.95	26.50	9.188	93.622	0	56.6
7/12/17 21:00	2017	193.88	8.69	26.80	9.188	93.628	0	56.6
7/12/17 22:00	2017	193.92	8.10	26.24	9.213	93.634	0	56.6
7/12/17 23:00	2017	193.96	8.45	28.47	10.492	93.623	0	56.6
7/13/17 0:00	2017	194.00	8.37	29.41	10.198	93.621	0	56.6
7/13/17 1:00	2017	194.04	8.59	31.17	10.247	93.618	0	56.6
7/13/17 2:00	2017	194.08	8.40	31.40	10.051	93.652	0	56.6
7/13/17 3:00	2017	194.13	7.97	29.41	9.952	93.62	0	56.6
7/13/17 4:00	2017	194.17	8.01	26.40	9.534	93.597	0	56.6
7/13/17 5:00	2017	194.21	7.79	24.40	9.78	93.601	0	56.6
7/13/17 6:00	2017	194.25	7.70	22.84	9.682	93.582	0	56.6
7/13/17 7:00	2017	194.29	7.18	20.90	9.805	93.554	0	56.6
7/13/17 8:00	2017	194.33	7.01	19.87	10.98	93.539	0	56.6
7/13/17 9:00	2017	194.38	7.07	19.32	11.904	93.539	0	56.6
7/13/17 10:00	2017	194.42	6.15	16.54	13.016	93.505	0	56.6
7/13/17 11:00	2017	194.46	6.12	15.92	13.834	93.472	0	56.6
7/13/17 12:00	2017	194.50	5.80	14.78	14.002	93.444	0	56.6
7/13/17 13:00	2017	194.54	5.39	13.56	14.601	93.409	0	56.6
7/13/17 14:00	2017	194.58	5.54	13.77	15.247	93.362	0	56.6
7/13/17 15:00	2017	194.63	5.67	14.12	15.796	93.331	0	56.6
7/13/17 16:00	2017	194.67	5.96	15.01	16.034	93.297	0	56.6
7/13/17 17:00	2017	194.71	6.44	16.49	15.676	93.259	0	56.6
7/13/17 18:00	2017	194.75	7.11	18.63	15.533	93.248	0	56.6

7/13/17 19:00	2017	194.79	7.53	20.47	14.936	93.212	0	56.6
7/13/17 20:00	2017	194.83	8.29	23.52	14.792	93.189	0	56.6
7/13/17 21:00	2017	194.88	9.26	27.42	13.93	93.158	0	56.6
7/13/17 22:00	2017	194.92	9.14	28.87	13.738	93.152	0	56.6
7/13/17 23:00	2017	194.96	9.59	31.84	13.522	93.109	0	56.6
7/14/17 0:00	2017	195.00	9.31	32.76	13.425	93.094	0	56.6
7/14/17 1:00	2017	195.04	9.13	33.81	13.305	93.058	0	56.6
7/14/17 2:00	2017	195.08	9.25	35.54	13.257	93.05	0	56.6
7/14/17 3:00	2017	195.13	8.25	33.15	12.896	93.014	0	56.6
7/14/17 4:00	2017	195.17	8.61	35.03	13.305	92.991	0	56.6
7/14/17 5:00	2017	195.21	8.15	33.66	13.666	92.958	0	56.6
7/14/17 6:00	2017	195.25	8.40	34.33	13.401	92.921	0	56.6
7/14/17 7:00	2017	195.29	7.67	31.16	12.437	92.876	0	56.6
7/14/17 8:00	2017	195.33	7.62	30.07	13.233	92.872	0	56.6
7/14/17 9:00	2017	195.38	7.21	27.67	14.361	92.853	0	56.6
7/14/17 10:00	2017	195.42	7.24	26.70	15.318	92.81	0	56.6
7/14/17 11:00	2017	195.46	6.69	24.03	16.344	92.796	0	56.6
7/14/17 12:00	2017	195.50	6.53	22.75	16.701	92.762	0	56.6
7/14/17 13:00	2017	195.54	6.56	22.13	16.582	92.726	0	56.6
7/14/17 14:00	2017	195.58	6.49	21.52	17.986	92.708	0	56.6
7/14/17 15:00	2017	195.63	7.02	22.81	18.604	92.7	0	56.6
7/14/17 16:00	2017	195.67	7.62	24.53	18.771	92.649	0	56.6
7/14/17 17:00	2017	195.71	7.69	25.05	17.748	92.592	0	56.6
7/14/17 18:00	2017	195.75	9.11	29.69	17.439	92.558	0	56.6
7/14/17 19:00	2017	195.79	10.10	33.56	16.892	92.541	0	56.6
7/14/17 20:00	2017	195.83	10.09	35.00	16.439	92.513	0	56.6
7/14/17 21:00	2017	195.88	11.32	40.59	15.915	92.513	0	56.6
7/14/17 22:00	2017	195.92	10.89	41.37	15.079	92.507	0	56.6
7/14/17 23:00	2017	195.96	10.80	43.27	15.151	92.488	0	56.6
7/15/17 0:00	2017	196.00	10.77	45.29	14.816	92.479	0	56.6
7/15/17 1:00	2017	196.04	10.46	45.95	13.714	92.463	0	56.6
7/15/17 2:00	2017	196.08	10.74	48.30	13.137	92.432	0	56.6
7/15/17 3:00	2017	196.13	9.92	45.92	12.678	92.437	0	56.6
7/15/17 4:00	2017	196.17	9.59	44.98	13.81	92.395	0	56.6
7/15/17 5:00	2017	196.21	9.25	43.34	13.762	92.367	0	56.6

7/15/17 6:00	2017	196.25	8.61	40.03	13.546	92.371	0	56.6
7/15/17 7:00	2017	196.29	10.18	46.02	13.185	92.333	0.6	57.2
7/15/17 8:00	2017	196.33	10.34	46.38	12.871	92.356	0.4	57.6
7/15/17 9:00	2017	196.38	9.82	42.22	12.582	92.364	0	57.6
7/15/17 10:00	2017	196.42	9.05	37.19	12.461	92.397	0	57.6
7/15/17 11:00	2017	196.46	8.46	33.13	12.871	92.358	0	57.6
7/15/17 12:00	2017	196.50	8.43	31.08	11.88	92.366	1.4	59
7/15/17 13:00	2017	196.54	8.72	30.37	12.389	92.375	0	59
7/15/17 14:00	2017	196.58	8.79	29.16	12.703	92.374	0	59
7/15/17 15:00	2017	196.63	9.47	29.84	12.122	92.417	0	59
7/15/17 16:00	2017	196.67	9.71	29.58	11.88	92.395	0	59
7/15/17 17:00	2017	196.71	10.14	30.33	12.509	92.383	0	59
7/15/17 18:00	2017	196.75	11.23	33.00	11.273	92.397	0	59
7/15/17 19:00	2017	196.79	10.84	32.21	10.369	92.363	0	59
7/15/17 20:00	2017	196.83	11.39	34.19	10.761	92.39	0	59
7/15/17 21:00	2017	196.88	10.80	33.41	9.805	92.391	0	59
7/15/17 22:00	2017	196.92	10.88	34.73	10.565	92.379	0	59
7/15/17 23:00	2017	196.96	10.49	34.66	10.173	92.369	0	59
7/16/17 0:00	2017	197.00	10.87	36.75	10.492	92.386	0	59
7/16/17 1:00	2017	197.04	10.05	35.31	10.541	92.402	0	59
7/16/17 2:00	2017	197.08	9.52	34.37	10.59	92.407	0	59
7/16/17 3:00	2017	197.13	9.59	34.96	10.565	92.431	0	59
7/16/17 4:00	2017	197.17	9.07	33.14	10.345	92.441	0	59
7/16/17 5:00	2017	197.21	8.48	30.77	10.712	92.431	0	59
7/16/17 6:00	2017	197.25	8.24	29.17	10.736	92.412	0	59
7/16/17 7:00	2017	197.29	8.06	26.96	10.541	92.407	0	59
7/16/17 8:00	2017	197.33	8.00	24.77	10.712	92.417	0	59
7/16/17 9:00	2017	197.38	7.88	23.24	10.736	92.417	0	59
7/16/17 10:00	2017	197.42	7.57	21.31	11.151	92.43	0	59
7/16/17 11:00	2017	197.46	7.74	20.61	11.151	92.468	0	59
7/16/17 12:00	2017	197.50	7.57	19.30	11.005	92.481	0	59
7/16/17 13:00	2017	197.54	7.70	18.79	11.419	92.511	0	59
7/16/17 14:00	2017	197.58	7.03	16.84	11.686	92.533	0	59
7/16/17 15:00	2017	197.63	7.25	16.99	12.292	92.569	0	59
7/16/17 16:00	2017	197.67	7.62	17.60	11.807	92.576	0	59

7/16/17 17:00	2017	197.71	7.47	17.41	12.437	92.599	0	59
7/16/17 18:00	2017	197.75	7.87	18.65	12.847	92.575	0	59
7/16/17 19:00	2017	197.79	8.02	19.62	12.292	92.589	0	59
7/16/17 20:00	2017	197.83	8.71	21.93	11.904	92.596	0	59
7/16/17 21:00	2017	197.88	8.90	23.41	10.638	92.623	0	59
7/16/17 22:00	2017	197.92	9.12	25.04	10.541	92.641	0	59
7/16/17 23:00	2017	197.96	9.21	26.49	10.638	92.65	0	59
7/17/17 0:00	2017	198.00	8.91	26.86	10.271	92.654	0	59
7/17/17 1:00	2017	198.04	9.04	28.17	9.682	92.679	0	59
7/17/17 2:00	2017	198.08	8.76	28.12	9.706	92.69	0	59
7/17/17 3:00	2017	198.13	8.41	27.54	9.312	92.682	0	59
7/17/17 4:00	2017	198.17	8.31	27.32	9.46	92.696	0	59
7/17/17 5:00	2017	198.21	7.68	25.28	9.509	92.692	0	59
7/17/17 6:00	2017	198.25	7.54	24.30	9.312	92.673	0	59
7/17/17 7:00	2017	198.29	7.13	22.44	9.485	92.655	0	59
7/17/17 8:00	2017	198.33	7.06	21.47	11.053	92.617	0	59
7/17/17 9:00	2017	198.38	6.79	19.92	11.37	92.606	0	59
7/17/17 10:00	2017	198.42	6.24	17.71	11.71	92.586	0	59
7/17/17 11:00	2017	198.46	5.90	16.20	12.847	92.57	0	59
7/17/17 12:00	2017	198.50	5.77	15.36	13.522	92.537	0	59
7/17/17 13:00	2017	198.54	5.86	15.11	13.906	92.526	0	59
7/17/17 14:00	2017	198.58	5.66	14.38	14.266	92.494	0	59
7/17/17 15:00	2017	198.63	6.02	14.95	13.786	92.475	0	59
7/17/17 16:00	2017	198.67	6.42	15.80	13.714	92.455	0	59
7/17/17 17:00	2017	198.71	6.80	16.75	13.257	92.423	0	59
7/17/17 18:00	2017	198.75	7.87	19.36	13.449	92.399	0	59
7/17/17 19:00	2017	198.79	8.42	21.13	12.823	92.353	0	59
7/17/17 20:00	2017	198.83	8.95	23.17	12.751	92.324	0	59
7/17/17 21:00	2017	198.88	8.98	24.44	12.606	92.32	0	59
7/17/17 22:00	2017	198.92	8.73	32.11	11.394	92.325	0.2	59.2
7/17/17 23:00	2017	198.96	8.89	37.75	10.492	92.422	0.2	59.4
7/18/17 0:00	2017	199.00	8.13	36.58	10.687	92.316	0	59.4
7/18/17 1:00	2017	199.04	8.16	38.20	10.418	92.313	0	59.4
7/18/17 2:00	2017	199.08	8.16	41.59	9.928	92.296	0.2	59.6
7/18/17 3:00	2017	199.13	8.25	44.82	9.879	92.301	0.8	60.4

7/18/17 4:00	2017	199.17	8.26	46.67	9.583	92.32	0.4	60.8
7/18/17 5:00	2017	199.21	7.74	43.87	9.682	92.287	0	60.8
7/18/17 6:00	2017	199.25	7.53	42.11	9.78	92.25	0	60.8
7/18/17 7:00	2017	199.29	7.23	39.64	10.198	92.212	0	60.8
7/18/17 8:00	2017	199.33	6.92	36.78	11.078	92.216	0	60.8
7/18/17 9:00	2017	199.38	6.56	33.62	11.37	92.188	0	60.8
7/18/17 10:00	2017	199.42	6.97	33.76	11.613	92.182	0	60.8
7/18/17 11:00	2017	199.46	6.94	32.02	12.098	92.168	0	60.8
7/18/17 12:00	2017	199.50	6.80	30.03	12.534	92.185	0	60.8
7/18/17 13:00	2017	199.54	6.73	28.57	13.161	92.152	0	60.8
7/18/17 14:00	2017	199.58	6.55	27.15	14.385	92.161	0	60.8
7/18/17 15:00	2017	199.63	6.72	27.28	14.314	92.154	0	60.8
7/18/17 16:00	2017	199.67	6.71	27.10	13.882	92.129	0	60.8
7/18/17 17:00	2017	199.71	7.22	29.14	14.457	92.117	0	60.8
7/18/17 18:00	2017	199.75	7.47	30.57	13.497	92.124	0	60.8
7/18/17 19:00	2017	199.79	8.22	34.16	13.233	92.135	0	60.8
7/18/17 20:00	2017	199.83	8.79	37.57	12.968	92.161	0	60.8
7/18/17 21:00	2017	199.88	8.88	39.56	12.437	92.153	0	60.8
7/18/17 22:00	2017	199.92	8.61	31.68	12.509	92.179	0	60.8
7/18/17 23:00	2017	199.96	8.98	31.27	12.05	92.189	0	60.8
7/19/17 0:00	2017	200.00	9.12	33.19	11.662	92.204	0	60.8
7/19/17 1:00	2017	200.04	9.10	34.51	11.516	92.209	0	60.8
7/19/17 2:00	2017	200.08	8.84	32.90	11.419	92.253	0	60.8
7/19/17 3:00	2017	200.13	8.69	31.72	11.224	92.267	0	60.8
7/19/17 4:00	2017	200.17	7.85	28.45	11.248	92.277	0	60.8
7/19/17 5:00	2017	200.21	7.75	28.13	11.346	92.286	0	60.8
7/19/17 6:00	2017	200.25	7.45	26.86	11.565	92.273	0	60.8
7/19/17 7:00	2017	200.29	7.12	25.22	11.37	92.32	0	60.8
7/19/17 8:00	2017	200.33	7.12	24.33	11.565	92.32	0	60.8
7/19/17 9:00	2017	200.38	7.06	23.22	12.727	92.339	0	60.8
7/19/17 10:00	2017	200.42	6.91	21.80	12.485	92.319	0	60.8
7/19/17 11:00	2017	200.46	6.69	20.30	13.137	92.321	0	60.8
7/19/17 12:00	2017	200.50	6.32	18.57	13.04	92.32	0	60.8
7/19/17 13:00	2017	200.54	6.37	18.01	13.353	92.286	0	60.8
7/19/17 14:00	2017	200.58	6.53	17.77	12.871	92.281	0	60.8

7/19/17 15:00	2017	200.63	6.74	18.01	12.268	92.286	0	60.8
7/19/17 16:00	2017	200.67	7.27	18.97	12.098	92.308	0	60.8
7/19/17 17:00	2017	200.71	7.57	19.63	12.92	92.256	0	60.8
7/19/17 18:00	2017	200.75	7.86	20.64	13.209	92.19	0	60.8
7/19/17 19:00	2017	200.79	8.38	28.87	11.662	92.208	3.2	64
7/19/17 20:00	2017	200.83	9.31	34.06	11.053	92.305	0.2	64.2
7/19/17 21:00	2017	200.88	9.26	35.24	11.175	92.168	0	64.2
7/19/17 22:00	2017	200.92	9.89	38.95	11.37	92.137	0	64.2
7/19/17 23:00	2017	200.96	9.50	39.48	12.63	92.068	0	64.2
7/20/17 0:00	2017	201.00	10.21	44.08	13.209	92.092	0	64.2
7/20/17 1:00	2017	201.04	9.95	44.96	12.799	92.088	0	64.2
7/20/17 2:00	2017	201.08	9.89	46.20	12.678	92.089	0	64.2
7/20/17 3:00	2017	201.13	9.38	45.18	12.534	92.066	0	64.2
7/20/17 4:00	2017	201.17	8.98	43.71	10.98	92.066	0	64.2
7/20/17 5:00	2017	201.21	8.57	41.64	10.467	92.057	0	64.2
7/20/17 6:00	2017	201.25	8.36	39.87	10.883	92.038	0	64.2
7/20/17 7:00	2017	201.29	8.19	39.25	10.198	92.019	0.4	64.6
7/20/17 8:00	2017	201.33	7.86	37.09	9.903	91.999	0.4	65
7/20/17 9:00	2017	201.38	7.64	35.04	9.608	92.014	1	66
7/20/17 10:00	2017	201.42	7.46	33.11	9.213	91.986	0	66
7/20/17 11:00	2017	201.46	8.06	37.24	9.015	91.966	0.8	66.8
7/20/17 12:00	2017	201.50	9.28	49.50	8.295	91.955	3.4	70.2
7/20/17 13:00	2017	201.54	9.18	54.69	7.268	92.072	4.6	74.8
7/20/17 14:00	2017	201.58	9.21	57.57	6	92.191	3.8	78.6
7/20/17 15:00	2017	201.63	9.52	56.18	5.539	92.484	0.2	78.8
7/20/17 16:00	2017	201.67	10.87	61.79	5.437	93.042	0.4	79.2
7/20/17 17:00	2017	201.71	17.69	94.46	4.011	93.24	1.6	80.8
7/20/17 18:00	2017	201.75	25.89	130.00	2.877	93.343	1.4	82.2
7/20/17 19:00	2017	201.79	26.74	108.77	2.343	93.433	1.2	83.4
7/20/17 20:00	2017	201.83	26.01	102.02	1.507	93.496	0.4	83.8
7/20/17 21:00	2017	201.88	26.17	109.39	0.687	93.559	0.6	84.4
7/20/17 22:00	2017	201.92	25.69	112.41	0.522	93.636	0	84.4
7/20/17 23:00	2017	201.96	27.57	120.02	0.605	93.547	0.2	84.6
7/21/17 0:00	2017	202.00	26.01	114.26	0.88	93.53	0.6	85.2
7/21/17 1:00	2017	202.04	27.56	119.55	0.495	93.539	0.2	85.4

7/21/17 2:00	2017	202.08	24.69	107.20	-0.004	93.549	0	85.4
7/21/17 3:00	2017	202.13	24.01	102.05	-0.171	93.526	0	85.4
7/21/17 4:00	2017	202.17	21.23	88.78	-0.563	93.513	0	85.4
7/21/17 5:00	2017	202.21	22.62	89.53	-1.128	93.523	0	85.4
7/21/17 6:00	2017	202.25	20.94	78.94	-1.157	93.509	0	85.4
7/21/17 7:00	2017	202.29	19.14	66.07	-1.128	93.575	0	85.4
7/21/17 8:00	2017	202.33	19.68	61.41	-1.071	93.575	0	85.4
7/21/17 9:00	2017	202.38	16.17	46.95	-0.479	93.509	0.2	85.6
7/21/17 10:00	2017	202.42	17.18	44.72	0.439	93.594	0	85.6
7/21/17 11:00	2017	202.46	16.37	35.58	0.632	93.641	0	85.6
7/21/17 12:00	2017	202.50	15.42	25.26	1.262	93.575	0	85.6
7/21/17 13:00	2017	202.54	14.25	18.85	1.697	93.561	0	85.6
7/21/17 14:00	2017	202.58	13.54	15.68	2.477	93.531	0	85.6
7/21/17 15:00	2017	202.63	12.12	13.91	3.538	93.439	0	85.6
7/21/17 16:00	2017	202.67	12.07	13.57	4.141	93.362	0	85.6
7/21/17 17:00	2017	202.71	11.73	12.90	4.428	93.322	0	85.6
7/21/17 18:00	2017	202.75	11.54	12.87	4.141	93.311	0	85.6
7/21/17 19:00	2017	202.79	10.63	11.75	4.662	93.24	0.2	85.8
7/21/17 20:00	2017	202.83	10.56	12.29	5.539	93.212	0	85.8
7/21/17 21:00	2017	202.88	9.87	11.70	6.535	93.128	0	85.8
7/21/17 22:00	2017	202.92	10.03	12.29	6.914	93.074	0	85.8
7/21/17 23:00	2017	202.96	9.56	12.64	7.293	93	0	85.8
7/22/17 0:00	2017	203.00	9.58	13.53	7.67	92.935	0	85.8
7/22/17 1:00	2017	203.04	9.48	14.28	7.945	92.88	0	85.8
7/22/17 2:00	2017	203.08	9.33	14.88	7.745	92.828	0	85.8
7/22/17 3:00	2017	203.13	9.07	15.14	6.458	92.8	0	85.8
7/22/17 4:00	2017	203.17	8.46	14.72	6.864	92.687	0	85.8
7/22/17 5:00	2017	203.21	8.13	14.56	7.544	92.597	0	85.8
7/22/17 6:00	2017	203.25	8.10	14.70	8.12	92.521	0	85.8
7/22/17 7:00	2017	203.29	8.09	15.38	7.419	92.496	1	86.8
7/22/17 8:00	2017	203.33	8.01	15.45	7.217	92.467	0.4	87.2
7/22/17 9:00	2017	203.38	8.05	15.79	7.795	92.429	0.8	88
7/22/17 10:00	2017	203.42	7.77	15.35	8.27	92.438	0.4	88.4
7/22/17 11:00	2017	203.46	7.44	14.50	8.22	92.385	0	88.4
7/22/17 12:00	2017	203.50	7.54	14.36	8.07	92.384	0.4	88.8

7/22/17 13:00	2017	203.54	7.09	13.82	7.015	92.411	0.8	89.6
7/22/17 14:00	2017	203.58	7.57	15.02	5.924	92.458	1.4	91
7/22/17 15:00	2017	203.63	8.04	16.01	5.796	92.554	1.8	92.8
7/22/17 16:00	2017	203.67	8.84	18.48	4.766	92.587	1.4	94.2
7/22/17 17:00	2017	203.71	9.35	20.36	4.141	92.64	2.2	96.4
7/22/17 18:00	2017	203.75	10.45	24.71	4.636	92.645	1.6	98
7/22/17 19:00	2017	203.79	11.23	27.04	4.766	92.618	0	98
7/22/17 20:00	2017	203.83	14.09	34.17	6.204	92.618	0	98
7/22/17 21:00	2017	203.88	15.38	38.46	6.611	92.617	0	98
7/22/17 22:00	2017	203.92	16.50	42.77	6.687	92.781	0	98
7/22/17 23:00	2017	203.96	17.12	46.11	6.509	92.867	0	98
7/23/17 0:00	2017	204.00	17.22	48.14	6.408	92.849	0	98
7/23/17 1:00	2017	204.04	15.88	46.43	6.433	92.888	0	98
7/23/17 2:00	2017	204.08	17.12	50.71	6.636	92.893	0	98
7/23/17 3:00	2017	204.13	16.04	48.96	7.091	92.893	0	98
7/23/17 4:00	2017	204.17	16.47	54.29	7.544	92.846	0	98
7/23/17 5:00	2017	204.21	15.84	50.13	7.92	92.798	0.8	98.8
7/23/17 6:00	2017	204.25	14.34	40.79	8.17	92.807	1.4	100.2
7/23/17 7:00	2017	204.29	14.10	40.14	8.469	92.749	1.8	102
7/23/17 8:00	2017	204.33	13.57	37.32	8.369	92.687	1.4	103.4
7/23/17 9:00	2017	204.38	13.90	40.51	8.941	92.691	1	104.4
7/23/17 10:00	2017	204.42	14.55	45.06	9.485	92.629	1	105.4
7/23/17 11:00	2017	204.46	14.72	45.17	9.829	92.638	0.2	105.6
7/23/17 12:00	2017	204.50	17.47	74.06	9.46	92.553	0.6	106.2
7/23/17 13:00	2017	204.54	19.92	100.57	10.638	92.547	0	106.2
7/23/17 14:00	2017	204.58	22.90	141.73	10.81	92.514	0.2	106.4
7/23/17 15:00	2017	204.63	23.69	153.83	10.907	92.484	0.4	106.8
7/23/17 16:00	2017	204.67	21.23	112.17	10.026	92.494	0.8	107.6
7/23/17 17:00	2017	204.71	22.06	128.15	10.1	92.494	0.8	108.4
7/23/17 18:00	2017	204.75	25.83	190.84	10.026	92.48	0	108.4
7/23/17 19:00	2017	204.79	24.20	168.55	10.149	92.48	0	108.4
7/23/17 20:00	2017	204.83	25.86	213.01	9.731	92.461	0	108.4
7/23/17 21:00	2017	204.88	29.14	327.21	8.941	92.476	0.4	108.8
7/23/17 22:00	2017	204.92	25.55	247.20	8.27	92.515	0.6	109.4
7/23/17 23:00	2017	204.96	21.67	170.82	9.064	92.449	0.4	109.8

7/24/17 0:00	2017	205.00	25.09	282.33	8.519	92.477	0.8	110.6
7/24/17 1:00	2017	205.04	22.01	209.57	8.27	92.472	0.2	110.8
7/24/17 2:00	2017	205.08	27.17	421.17	8.12	92.534	1	111.8
7/24/17 3:00	2017	205.13	26.41	425.59	8.245	92.511	1	112.8
7/24/17 4:00	2017	205.17	26.93	484.57	8.07	92.549	2.6	115.4
7/24/17 5:00	2017	205.21	25.71	441.90	7.569	92.464	1.4	116.8
7/24/17 6:00	2017	205.25	27.00	467.84	6.839	92.544	1	117.8
7/24/17 7:00	2017	205.29	28.48	484.13	6.281	92.724	1	118.8
7/24/17 8:00	2017	205.33	25.81	337.03	6.661	92.808	0.8	119.6
7/24/17 9:00	2017	205.38	28.76	412.62	6.306	92.837	1.2	120.8
7/24/17 10:00	2017	205.42	34.02	595.62	6.965	92.861	0	120.8
7/24/17 11:00	2017	205.46	34.99	644.36	7.293	92.85	0.8	121.6
7/24/17 12:00	2017	205.50	41.00	1028.21	6.585	92.911	2.8	124.4
7/24/17 13:00	2017	205.54	45.89	1386.06	7.594	92.964	0.6	125
7/24/17 14:00	2017	205.58	43.23	1189.83	6.661	93.086	1	126
7/24/17 15:00	2017	205.63	40.10	943.37	6.408	93.199	0.4	126.4
7/24/17 16:00	2017	205.67	45.84	1313.19	6.255	93.256	0.4	126.8
7/24/17 17:00	2017	205.71	56.62	1600.00	5.898	93.337	0.4	127.2
7/24/17 18:00	2017	205.75	49.40	1600.00	5.282	93.502	0.4	127.6
7/24/17 19:00	2017	205.79	55.46	1600.00	5.616	93.423	0.4	128
7/24/17 20:00	2017	205.83	45.24	1304.37	5.591	93.413	0.4	128.4
7/24/17 21:00	2017	205.88	47.07	1438.35	5.719	93.541	0	128.4
7/24/17 22:00	2017	205.92	43.42	1155.81	6.051	93.579	0	128.4
7/24/17 23:00	2017	205.96	37.55	773.56	6.026	93.679	0	128.4
7/25/17 0:00	2017	206.00	40.83	964.57	5.514	93.646	0	128.4
7/25/17 1:00	2017	206.04	38.38	815.63	5.05	93.75	0	128.4
7/25/17 2:00	2017	206.08	37.94	741.90	4.584	93.717	0	128.4
7/25/17 3:00	2017	206.13	32.84	466.73	4.662	93.737	0	128.4
7/25/17 4:00	2017	206.17	33.52	453.83	4.636	93.78	0	128.4
7/25/17 5:00	2017	206.21	31.76	354.69	4.115	93.771	0	128.4
7/25/17 6:00	2017	206.25	29.37	267.97	3.854	93.843	0	128.4
7/25/17 7:00	2017	206.29	24.78	157.13	3.617	93.838	0	128.4
7/25/17 8:00	2017	206.33	23.33	121.54	4.662	93.81	0	128.4
7/25/17 9:00	2017	206.38	25.40	57.24	5.847	93.787	0	128.4
7/25/17 10:00	2017	206.42	21.25	46.85	6.737	93.81	0	128.4

7/25/17 11:00	2017	206.46	18.30	36.86	7.343	93.838	0	128.4
7/25/17 12:00	2017	206.50	19.66	32.87	7.268	93.763	0	128.4
7/25/17 13:00	2017	206.54	17.66	27.92	7.594	93.696	0	128.4
7/25/17 14:00	2017	206.58	16.57	24.17	8.22	93.613	0	128.4
7/25/17 15:00	2017	206.63	16.40	23.16	8.394	93.62	0	128.4
7/25/17 16:00	2017	206.67	15.70	21.85	8.419	93.541	0	128.4
7/25/17 17:00	2017	206.71	17.00	22.89	7.82	93.552	0	128.4
7/25/17 18:00	2017	206.75	17.65	23.93	6.661	93.547	0	128.4
7/25/17 19:00	2017	206.79	17.67	24.48	7.167	93.511	0	128.4
7/25/17 20:00	2017	206.83	18.32	26.22	5.847	93.485	0	128.4
7/25/17 21:00	2017	206.88	16.92	25.62	5.745	93.487	0.4	128.8
7/25/17 22:00	2017	206.92	17.31	27.36	6	93.488	0	128.8
7/25/17 23:00	2017	206.96	16.77	27.91	6.23	93.479	0	128.8
7/26/17 0:00	2017	207.00	16.95	29.48	6.077	93.471	0	128.8
7/26/17 1:00	2017	207.04	15.77	28.88	6.026	93.434	0	128.8
7/26/17 2:00	2017	207.08	14.84	28.32	5.796	93.449	0	128.8
7/26/17 3:00	2017	207.13	13.92	27.42	5.872	93.435	0	128.8
7/26/17 4:00	2017	207.17	14.00	27.82	5.872	93.445	0	128.8
7/26/17 5:00	2017	207.21	13.26	26.57	5.872	93.412	0	128.8
7/26/17 6:00	2017	207.25	12.99	25.78	5.77	93.422	0	128.8
7/26/17 7:00	2017	207.29	12.13	23.83	6.051	93.416	0	128.8
7/26/17 8:00	2017	207.33	12.84	24.18	5.488	93.445	0	128.8
7/26/17 9:00	2017	207.38	12.23	22.12	4.921	93.406	0	128.8
7/26/17 10:00	2017	207.42	11.29	19.57	4.999	93.401	0	128.8
7/26/17 11:00	2017	207.46	11.12	18.28	4.921	93.424	0	128.8
7/26/17 12:00	2017	207.50	10.61	16.76	6.179	93.414	0	128.8
7/26/17 13:00	2017	207.54	10.54	15.96	6.433	93.409	0	128.8
7/26/17 14:00	2017	207.58	9.91	14.62	6.408	93.384	0	128.8
7/26/17 15:00	2017	207.63	10.48	14.94	6.153	93.405	0	128.8
7/26/17 16:00	2017	207.67	10.46	14.74	6.839	93.409	0	128.8
7/26/17 17:00	2017	207.71	11.76	16.35	7.066	93.394	0	128.8
7/26/17 18:00	2017	207.75	11.07	15.82	6.712	93.389	0	128.8
7/26/17 19:00	2017	207.79	12.13	17.52	5.924	93.393	0	128.8
7/26/17 20:00	2017	207.83	11.77	17.69	5.462	93.383	0	128.8
7/26/17 21:00	2017	207.88	12.14	19.00	6.051	93.409	0	128.8

7/26/17 22:00	2017	207.92	12.11	19.83	5.437	93.392	0	128.8
7/26/17 23:00	2017	207.96	12.18	20.87	6.026	93.404	0	128.8
7/27/17 0:00	2017	208.00	12.23	21.92	6.737	93.367	0	128.8
7/27/17 1:00	2017	208.04	11.04	20.91	6.661	93.359	0	128.8
7/27/17 2:00	2017	208.08	11.42	22.30	7.97	93.322	0	128.8
7/27/17 3:00	2017	208.13	10.98	22.12	8.145	93.299	0	128.8
7/27/17 4:00	2017	208.17	10.73	21.98	7.82	93.285	0	128.8
7/27/17 5:00	2017	208.21	10.05	20.81	8.145	93.276	0	128.8
7/27/17 6:00	2017	208.25	9.61	19.84	8.519	93.229	0	128.8
7/27/17 7:00	2017	208.29	9.37	19.06	8.965	93.205	0	128.8
7/27/17 8:00	2017	208.33	9.21	18.32	9.064	93.143	0	128.8
7/27/17 9:00	2017	208.38	8.96	17.43	10.173	93.1	0	128.8
7/27/17 10:00	2017	208.42	8.23	15.74	10.271	93.086	0	128.8
7/27/17 11:00	2017	208.46	7.86	14.79	11.953	93.053	0	128.8
7/27/17 12:00	2017	208.50	7.54	13.99	12.654	93.043	0	128.8
7/27/17 13:00	2017	208.54	7.25	13.30	12.534	93.009	0	128.8
7/27/17 14:00	2017	208.58	6.76	12.47	13.305	92.958	0	128.8
7/27/17 15:00	2017	208.63	6.72	12.49	13.666	92.921	0	128.8
7/27/17 16:00	2017	208.67	6.87	12.95	13.522	92.874	0	128.8
7/27/17 17:00	2017	208.71	7.18	13.84	13.738	92.846	0	128.8
7/27/17 18:00	2017	208.75	7.84	15.50	12.534	92.827	0	128.8
7/27/17 19:00	2017	208.79	8.37	17.21	12.147	92.805	0	128.8
7/27/17 20:00	2017	208.83	8.91	19.22	11.321	92.808	0.4	129.2
7/27/17 21:00	2017	208.88	9.07	20.72	10.785	92.784	1.4	130.6
7/27/17 22:00	2017	208.92	9.70	23.36	10.247	92.739	0	130.6
7/27/17 23:00	2017	208.96	10.23	25.98	10.296	92.751	0	130.6
7/28/17 0:00	2017	209.00	10.18	27.30	10.026	92.744	0	130.6
7/28/17 1:00	2017	209.04	9.70	27.52	10.051	92.722	0	130.6
7/28/17 2:00	2017	209.08	9.58	28.21	10.149	92.676	0	130.6
7/28/17 3:00	2017	209.13	10.15	30.40	10.296	92.672	0	130.6
7/28/17 4:00	2017	209.17	10.30	31.21	10.173	92.668	0	130.6
7/28/17 5:00	2017	209.21	9.07	27.99	9.903	92.645	0	130.6
7/28/17 6:00	2017	209.25	9.18	27.81	9.238	92.636	0	130.6
7/28/17 7:00	2017	209.29	7.50	22.77	9.287	92.613	0	130.6
7/28/17 8:00	2017	209.33	7.16	21.12	9.509	92.613	0	130.6

7/28/17 9:00	2017	209.38	6.73	19.12	9.558	92.566	0	130.6
7/28/17 10:00	2017	209.42	7.25	19.44	10.614	92.547	0	130.6
7/28/17 11:00	2017	209.46	7.30	18.60	10.932	92.518	0	130.6
7/28/17 12:00	2017	209.50	6.62	16.29	11.224	92.481	0	130.6
7/28/17 13:00	2017	209.54	7.43	17.27	11.977	92.438	0	130.6
7/28/17 14:00	2017	209.58	6.31	14.61	13.618	92.398	0	130.6
7/28/17 15:00	2017	209.63	6.53	14.88	15.652	92.354	0	130.6
7/28/17 16:00	2017	209.67	6.39	14.59	14.984	92.331	0	130.6
7/28/17 17:00	2017	209.71	6.46	14.83	14.337	92.308	0	130.6
7/28/17 18:00	2017	209.75	7.40	17.04	13.714	92.272	0	130.6
7/28/17 19:00	2017	209.79	8.70	20.16	12.871	92.272	0	130.6
7/28/17 20:00	2017	209.83	9.16	22.03	13.594	92.258	0	130.6
7/28/17 21:00	2017	209.88	9.14	23.10	12.389	92.274	0	130.6
7/28/17 22:00	2017	209.92	9.68	25.60	11.929	92.277	0	130.6
7/28/17 23:00	2017	209.96	9.86	27.39	12.05	92.266	0	130.6
7/29/17 0:00	2017	210.00	9.74	28.60	13.137	92.284	0	130.6
7/29/17 1:00	2017	210.04	9.09	28.30	13.209	92.281	0	130.6
7/29/17 2:00	2017	210.08	9.02	29.04	11.54	92.287	0	130.6
7/29/17 3:00	2017	210.13	8.28	27.55	10.858	92.285	0	130.6
7/29/17 4:00	2017	210.17	8.16	27.39	10.394	92.28	0	130.6
7/29/17 5:00	2017	210.21	7.76	26.12	10.394	92.286	0	130.6
7/29/17 6:00	2017	210.25	7.26	24.29	10.1	92.282	0	130.6
7/29/17 7:00	2017	210.29	7.24	23.65	10.492	92.272	0	130.6
7/29/17 8:00	2017	210.33	6.87	21.89	10.932	92.272	0	130.6
7/29/17 9:00	2017	210.38	6.62	20.44	11.904	92.233	0	130.6
7/29/17 10:00	2017	210.42	6.39	19.07	12.944	92.233	0	130.6
7/29/17 11:00	2017	210.46	6.13	17.70	13.016	92.233	0	130.6
7/29/17 12:00	2017	210.50	5.72	16.12	13.906	92.205	0	130.6
7/29/17 13:00	2017	210.54	5.61	15.43	14.984	92.2	0	130.6
7/29/17 14:00	2017	210.58	5.33	14.42	15.127	92.174	0	130.6
7/29/17 15:00	2017	210.63	5.17	13.75	14.745	92.156	0	130.6
7/29/17 16:00	2017	210.67	5.21	13.73	14.409	92.139	0	130.6
7/29/17 17:00	2017	210.71	5.74	15.03	14.768	92.157	0	130.6
7/29/17 18:00	2017	210.75	6.50	17.05	13.978	92.196	0	130.6
7/29/17 19:00	2017	210.79	7.60	21.40	12.437	92.186	0	130.6

7/29/17 20:00	2017	210.83	7.86	30.42	11.977	92.314	0.2	130.8
7/29/17 21:00	2017	210.88	8.03	32.20	10.858	92.33	0	130.8
7/29/17 22:00	2017	210.92	8.19	34.27	11.54	92.343	0	130.8
7/29/17 23:00	2017	210.96	9.10	39.14	11.053	92.37	0	130.8
7/30/17 0:00	2017	211.00	9.43	41.74	10.418	92.414	0	130.8
7/30/17 1:00	2017	211.04	9.80	44.28	9.952	92.482	0	130.8
7/30/17 2:00	2017	211.08	9.08	42.43	9.731	92.498	0	130.8
7/30/17 3:00	2017	211.13	9.67	50.10	8.916	92.541	2.4	133.2
7/30/17 4:00	2017	211.17	9.03	50.42	8.095	92.645	1.2	134.4
7/30/17 5:00	2017	211.21	8.74	51.78	8.543	92.616	0.6	135
7/30/17 6:00	2017	211.25	8.73	59.66	8.045	92.688	2	137
7/30/17 7:00	2017	211.29	8.23	55.36	8.319	92.75	0	137
7/30/17 8:00	2017	211.33	8.10	58.36	8.519	92.75	1.6	138.6
7/30/17 9:00	2017	211.38	8.11	58.87	7.494	92.853	1.6	140.2
7/30/17 10:00	2017	211.42	8.52	58.90	8.02	92.863	0.4	140.6
7/30/17 11:00	2017	211.46	8.75	58.46	8.07	92.886	0.8	141.4
7/30/17 12:00	2017	211.50	8.31	52.52	8.07	92.918	0.2	141.6
7/30/17 13:00	2017	211.54	8.19	48.81	8.295	92.945	0	141.6
7/30/17 14:00	2017	211.58	8.71	48.69	7.519	92.98	0	141.6
7/30/17 15:00	2017	211.63	8.99	47.88	7.217	92.984	0.2	141.8
7/30/17 16:00	2017	211.67	8.92	46.16	7.594	93.003	0.2	142
7/30/17 17:00	2017	211.71	9.27	46.85	7.745	93.045	0	142
7/30/17 18:00	2017	211.75	8.96	45.36	7.67	93.063	0	142
7/30/17 19:00	2017	211.79	9.15	43.68	7.444	93.073	0	142
7/30/17 20:00	2017	211.83	9.74	35.16	7.519	93.052	0	142
7/30/17 21:00	2017	211.88	10.43	38.53	7.845	93.091	0	142
7/30/17 22:00	2017	211.92	10.38	39.82	8.568	93.243	0	142
7/30/17 23:00	2017	211.96	10.43	41.85	10.736	93.372	0	142
7/31/17 0:00	2017	212.00	10.80	45.08	10.956	93.572	0	142
7/31/17 1:00	2017	212.04	10.90	47.41	11.492	93.676	0	142
7/31/17 2:00	2017	212.08	11.40	50.96	11.394	93.699	0	142
7/31/17 3:00	2017	212.13	10.18	42.94	11.419	93.747	0	142
7/31/17 4:00	2017	212.17	10.26	41.15	11.492	93.741	0	142
7/31/17 5:00	2017	212.21	10.29	38.73	11.71	93.707	0	142
7/31/17 6:00	2017	212.25	9.82	31.24	11.783	93.677	0	142

7/31/17 7:00	2017	212.29	9.29	28.97	11.613	93.658	0	142
7/31/17 8:00	2017	212.33	9.16	24.93	11.783	93.63	0	142
7/31/17 9:00	2017	212.38	9.33	22.97	11.734	93.611	0	142
7/31/17 10:00	2017	212.42	9.96	22.94	11.759	93.602	0	142
7/31/17 11:00	2017	212.46	9.41	20.52	12.968	93.588	0	142
7/31/17 12:00	2017	212.50	9.78	20.62	12.678	93.564	0	142
7/31/17 13:00	2017	212.54	8.70	18.33	13.978	93.562	0	142
7/31/17 14:00	2017	212.58	8.47	17.80	14.074	93.528	0	142
7/31/17 15:00	2017	212.63	9.03	18.91	14.218	93.467	0	142
7/31/17 16:00	2017	212.67	8.60	18.31	12.219	93.413	0.4	142.4
7/31/17 17:00	2017	212.71	9.92	21.18	12.968	93.432	0	142.4
7/31/17 18:00	2017	212.75	10.15	22.44	13.305	93.334	0	142.4
7/31/17 19:00	2017	212.79	10.91	25.06	13.57	93.238	0	142.4
7/31/17 20:00	2017	212.83	11.79	28.36	13.401	93.185	0	142.4
7/31/17 21:00	2017	212.88	12.26	31.16	12.896	93.158	0	142.4
7/31/17 22:00	2017	212.92	13.11	35.04	12.413	93.131	0	142.4
7/31/17 23:00	2017	212.96	13.06	36.76	12.098	93.053	0	142.4
8/1/17 0:00	2017	213.00	12.16	36.23	12.122	93.041	0	142.4
8/1/17 1:00	2017	213.04	12.91	39.62	11.613	93.028	0	142.4
8/1/17 2:00	2017	213.08	12.51	39.61	11.005	92.995	0	142.4
8/1/17 3:00	2017	213.13	12.66	40.70	10.956	92.953	0	142.4
8/1/17 4:00	2017	213.17	10.98	36.14	10.663	92.906	0	142.4
8/1/17 5:00	2017	213.21	11.29	36.62	10.565	92.855	0	142.4
8/1/17 6:00	2017	213.25	11.02	34.97	9.928	92.898	0	142.4
8/1/17 7:00	2017	213.29	11.67	35.52	10.026	92.837	0	142.4
8/1/17 8:00	2017	213.33	10.43	30.88	9.854	92.871	0	142.4
8/1/17 9:00	2017	213.38	10.63	29.81	9.558	92.833	0	142.4
8/1/17 10:00	2017	213.42	9.90	26.56	9.706	92.852	0	142.4
8/1/17 11:00	2017	213.46	9.79	24.84	9.731	92.862	0	142.4
8/1/17 12:00	2017	213.50	9.70	23.34	9.657	92.856	0	142.4
8/1/17 13:00	2017	213.54	9.99	22.69	9.608	92.898	0	142.4
8/1/17 14:00	2017	213.58	9.36	20.60	10.418	92.882	0	142.4
8/1/17 15:00	2017	213.63	9.57	20.36	10.687	92.875	0	142.4
8/1/17 16:00	2017	213.67	9.44	19.87	10.467	92.856	0	142.4
8/1/17 17:00	2017	213.71	10.02	20.86	10.467	92.805	0	142.4

8/1/17 18:00	2017	213.75	10.50	21.90	10.516	92.847	0	142.4
8/1/17 19:00	2017	213.79	11.12	23.40	10.296	92.836	0	142.4
8/1/17 20:00	2017	213.83	11.50	24.61	8.941	92.866	0	142.4
8/1/17 21:00	2017	213.88	11.89	26.00	7.745	92.896	0	142.4
8/1/17 22:00	2017	213.92	12.84	28.55	7.041	92.887	0	142.4
8/1/17 23:00	2017	213.96	12.16	28.49	8.27	92.898	0	142.4
8/2/17 0:00	2017	214.00	11.88	28.81	8.593	92.923	0	142.4
8/2/17 1:00	2017	214.04	11.02	27.78	8.643	92.83	0	142.4
8/2/17 2:00	2017	214.08	10.80	27.88	8.817	92.803	0	142.4
8/2/17 3:00	2017	214.13	10.28	27.32	8.841	92.733	0	142.4
8/2/17 4:00	2017	214.17	9.42	25.36	9.064	92.656	0	142.4
8/2/17 5:00	2017	214.21	9.04	24.21	9.015	92.651	0	142.4
8/2/17 6:00	2017	214.25	8.77	23.06	8.693	92.595	0	142.4
8/2/17 7:00	2017	214.29	8.48	21.69	8.841	92.557	0	142.4
8/2/17 8:00	2017	214.33	8.25	20.34	8.891	92.561	0	142.4
8/2/17 9:00	2017	214.38	8.27	19.43	8.593	92.584	0	142.4
8/2/17 10:00	2017	214.42	8.40	18.72	8.817	92.56	0	142.4
8/2/17 11:00	2017	214.46	8.10	17.29	9.114	92.597	0	142.4
8/2/17 12:00	2017	214.50	8.48	17.16	8.742	92.611	0	142.4
8/2/17 13:00	2017	214.54	8.90	17.21	9.706	92.614	0	142.4
8/2/17 14:00	2017	214.58	8.79	16.54	10.001	92.588	0	142.4
8/2/17 15:00	2017	214.63	8.76	16.22	11.321	92.577	0	142.4
8/2/17 16:00	2017	214.67	8.49	15.80	12.122	92.522	0	142.4
8/2/17 17:00	2017	214.71	8.57	16.08	11.807	92.487	0	142.4
8/2/17 18:00	2017	214.75	8.96	19.05	10.638	92.558	0	142.4
8/2/17 19:00	2017	214.79	9.71	22.77	8.045	92.637	2	144.4
8/2/17 20:00	2017	214.83	9.94	24.09	8.568	92.611	0	144.4
8/2/17 21:00	2017	214.88	10.37	26.51	9.41	92.575	0	144.4
8/2/17 22:00	2017	214.92	11.12	38.51	6.204	92.689	3	147.4
8/2/17 23:00	2017	214.96	11.26	43.25	5.847	92.723	0.6	148
8/3/17 0:00	2017	215.00	11.23	46.85	6.889	92.748	1	149
8/3/17 1:00	2017	215.04	11.61	50.12	5.872	92.721	0.4	149.4
8/3/17 2:00	2017	215.08	11.14	51.46	5.385	92.745	1	150.4
8/3/17 3:00	2017	215.13	10.53	49.37	5.539	92.76	0.2	150.6
8/3/17 4:00	2017	215.17	10.05	47.21	5.949	92.747	0	150.6

8/3/17 5:00	2017	215.21	9.38	44.02	7.544	92.742	0	150.6
8/3/17 6:00	2017	215.25	9.45	43.32	7.77	92.729	0	150.6
8/3/17 7:00	2017	215.29	8.77	39.44	8.245	92.705	0	150.6
8/3/17 8:00	2017	215.33	9.04	38.92	8.568	92.681	0	150.6
8/3/17 9:00	2017	215.38	8.45	35.35	6.94	92.694	0.2	150.8
8/3/17 10:00	2017	215.42	8.40	33.35	7.116	92.736	0	150.8
8/3/17 11:00	2017	215.46	8.03	30.55	8.295	92.735	0	150.8
8/3/17 12:00	2017	215.50	7.70	28.32	9.756	92.72	0	150.8
8/3/17 13:00	2017	215.54	7.56	26.92	10.492	92.696	0	150.8
8/3/17 14:00	2017	215.58	7.99	27.43	10.001	92.7	0	150.8
8/3/17 15:00	2017	215.63	7.78	26.08	8.866	92.678	0	150.8
8/3/17 16:00	2017	215.67	8.60	28.25	8.866	92.676	0.2	151
8/3/17 17:00	2017	215.71	9.04	34.22	7.92	92.695	1.8	152.8
8/3/17 18:00	2017	215.75	9.91	36.83	6.965	92.78	1.8	154.6
8/3/17 19:00	2017	215.79	9.94	37.82	6.661	92.777	2	156.6
8/3/17 20:00	2017	215.83	11.08	46.19	6.357	92.793	1.6	158.2
8/3/17 21:00	2017	215.88	10.62	50.86	5.796	92.86	2.4	160.6
8/3/17 22:00	2017	215.92	11.79	46.01	5.796	92.932	0.6	161.2
8/3/17 23:00	2017	215.96	13.02	50.14	5.898	92.971	0.6	161.8
8/4/17 0:00	2017	216.00	14.19	54.33	6.077	93.028	0.2	162
8/4/17 1:00	2017	216.04	16.48	69.27	5.745	93.086	1.8	163.8
8/4/17 2:00	2017	216.08	18.11	79.03	5.514	93.242	2.2	166
8/4/17 3:00	2017	216.13	18.67	89.26	5.334	93.502	1.6	167.6
8/4/17 4:00	2017	216.17	19.87	97.59	5.076	93.852	0.8	168.4
8/4/17 5:00	2017	216.21	21.79	105.05	4.61	94.139	0.4	168.8
8/4/17 6:00	2017	216.25	21.66	101.37	4.506	94.219	0	168.8
8/4/17 7:00	2017	216.29	22.61	103.16	4.35	94.29	0.2	169
8/4/17 8:00	2017	216.33	22.61	97.91	4.298	94.394	0.4	169.4
8/4/17 9:00	2017	216.38	21.96	89.69	4.662	94.45	0.2	169.6
8/4/17 10:00	2017	216.42	22.32	86.16	5.128	94.498	0	169.6
8/4/17 11:00	2017	216.46	20.41	76.00	7.091	94.517	0	169.6
8/4/17 12:00	2017	216.50	20.53	72.54	7.419	94.541	0	169.6
8/4/17 13:00	2017	216.54	20.76	69.75	7.368	94.555	0	169.6
8/4/17 14:00	2017	216.58	20.71	67.37	8.817	94.541	0	169.6
8/4/17 15:00	2017	216.63	20.44	65.61	9.558	94.473	0	169.6

8/4/17 16:00	2017	216.67	19.62	62.37	9.46	94.522	0	169.6
8/4/17 17:00	2017	216.71	20.38	55.71	9.558	94.533	0	169.6
8/4/17 18:00	2017	216.75	21.41	54.04	9.903	94.517	0	169.6
8/4/17 19:00	2017	216.79	20.45	49.46	10.149	94.54	0	169.6
8/4/17 20:00	2017	216.83	19.30	46.07	12.098	94.497	0	169.6
8/4/17 21:00	2017	216.88	21.85	48.81	11.71	94.479	0	169.6
8/4/17 22:00	2017	216.92	20.15	47.08	11.565	94.482	0	169.6
8/4/17 23:00	2017	216.96	21.06	50.45	11.467	94.427	0	169.6
8/5/17 0:00	2017	217.00	19.82	50.36	11.273	94.434	0	169.6
8/5/17 1:00	2017	217.04	18.85	46.63	11.029	94.406	0	169.6
8/5/17 2:00	2017	217.08	18.52	44.98	10.785	94.37	0	169.6
8/5/17 3:00	2017	217.13	17.05	39.72	10.81	94.365	0	169.6
8/5/17 4:00	2017	217.17	17.44	40.07	10.026	94.328	0	169.6
8/5/17 5:00	2017	217.21	15.56	36.31	9.46	94.295	0	169.6
8/5/17 6:00	2017	217.25	14.98	35.06	9.336	94.244	0	169.6
8/5/17 7:00	2017	217.29	13.80	31.58	9.114	94.234	0	169.6
8/5/17 8:00	2017	217.33	13.00	29.44	9.608	94.187	0	169.6
8/5/17 9:00	2017	217.38	12.80	28.41	11.078	94.159	0	169.6
8/5/17 10:00	2017	217.42	12.02	26.26	11.662	94.102	0	169.6
8/5/17 11:00	2017	217.46	11.97	25.40	12.703	94.031	0	169.6
8/5/17 12:00	2017	217.50	11.10	23.20	12.389	94.016	0	169.6
8/5/17 13:00	2017	217.54	11.08	22.75	13.185	93.977	0	169.6
8/5/17 14:00	2017	217.58	10.88	22.11	13.425	93.933	0	169.6
8/5/17 15:00	2017	217.63	10.68	21.57	12.678	93.917	0	169.6
8/5/17 16:00	2017	217.67	10.60	21.60	13.425	93.893	0	169.6
8/5/17 17:00	2017	217.71	11.32	23.27	13.257	93.841	0	169.6
8/5/17 18:00	2017	217.75	11.63	24.46	12.219	93.807	0	169.6
8/5/17 19:00	2017	217.79	12.40	26.97	11.419	93.816	0	169.6
8/5/17 20:00	2017	217.83	12.84	28.74	11.127	93.788	0	169.6
8/5/17 21:00	2017	217.88	12.41	29.03	10.173	93.746	0	169.6
8/5/17 22:00	2017	217.92	12.64	30.70	9.657	93.742	0	169.6
8/5/17 23:00	2017	217.96	13.18	36.65	9.731	93.739	0	169.6
8/6/17 0:00	2017	218.00	12.34	37.59	9.41	93.782	2	171.6
8/6/17 1:00	2017	218.04	12.64	39.55	8.941	93.726	0	171.6
8/6/17 2:00	2017	218.08	11.62	38.47	8.767	93.726	0	171.6

8/6/17 3:00	2017	218.13	12.08	41.17	9.015	93.708	1.2	172.8
8/6/17 4:00	2017	218.17	11.63	39.82	8.17	93.698	0.2	173
8/6/17 5:00	2017	218.21	11.54	39.12	7.92	93.689	0.2	173.2
8/6/17 6:00	2017	218.25	12.55	41.49	7.92	93.666	0.8	174
8/6/17 7:00	2017	218.29	14.49	45.25	7.041	93.638	0	174
8/6/17 8:00	2017	218.33	14.41	43.47	6.99	93.638	0.2	174.2
8/6/17 9:00	2017	218.38	16.35	46.27	7.494	93.624	0.2	174.4
8/6/17 10:00	2017	218.42	16.67	44.24	7.519	93.596	0.2	174.6
8/6/17 11:00	2017	218.46	14.97	37.86	7.695	93.553	0	174.6
8/6/17 12:00	2017	218.50	14.51	34.81	8.27	93.529	0	174.6
8/6/17 13:00	2017	218.54	14.58	33.10	8.419	93.504	0	174.6
8/6/17 14:00	2017	218.58	13.37	29.47	9.361	93.447	0	174.6
8/6/17 15:00	2017	218.63	14.05	29.83	9.262	93.403	0	174.6
8/6/17 16:00	2017	218.67	14.11	29.37	9.706	93.378	0	174.6
8/6/17 17:00	2017	218.71	13.98	28.91	9.163	93.377	0	174.6
8/6/17 18:00	2017	218.75	15.45	31.73	9.139	93.338	0	174.6
8/6/17 19:00	2017	218.79	16.00	33.03	9.435	93.314	0	174.6
8/6/17 20:00	2017	218.83	16.17	34.33	9.188	93.314	0.6	175.2
8/6/17 21:00	2017	218.88	15.71	36.02	8.643	93.305	1.2	176.4
8/6/17 22:00	2017	218.92	17.61	41.44	8.618	93.307	1.4	177.8
8/6/17 23:00	2017	218.96	16.74	37.49	8.99	93.285	0.2	178
8/7/17 0:00	2017	219.00	17.09	38.02	8.841	93.305	0	178
8/7/17 1:00	2017	219.04	17.60	40.94	8.941	93.282	0	178
8/7/17 2:00	2017	219.08	17.26	40.53	9.04	93.268	0	178
8/7/17 3:00	2017	219.13	17.93	41.65	8.742	93.255	0	178
8/7/17 4:00	2017	219.17	16.40	38.95	9.139	93.241	0	178
8/7/17 5:00	2017	219.21	15.08	36.18	9.089	93.232	0	178
8/7/17 6:00	2017	219.25	15.63	36.42	9.78	93.166	0	178
8/7/17 7:00	2017	219.29	13.72	31.97	9.731	93.185	0	178
8/7/17 8:00	2017	219.33	13.77	30.89	10.418	93.166	0	178
8/7/17 9:00	2017	219.38	13.58	29.24	10.98	93.166	0	178
8/7/17 10:00	2017	219.42	12.67	26.63	11.467	93.166	0	178
8/7/17 11:00	2017	219.46	11.87	24.40	11.953	93.155	0	178
8/7/17 12:00	2017	219.50	11.94	23.81	12.413	93.112	0	178
8/7/17 13:00	2017	219.54	11.81	23.06	12.92	93.088	0	178

8/7/17 14:00	2017	219.58	11.86	22.85	13.738	93.081	0	178
8/7/17 15:00	2017	219.63	12.15	23.29	14.337	93.092	0	178
8/7/17 16:00	2017	219.67	12.50	24.05	13.618	93.095	0	178
8/7/17 17:00	2017	219.71	12.76	24.94	13.257	93.11	0	178
8/7/17 18:00	2017	219.75	12.90	25.95	12.389	93.134	0	178
8/7/17 19:00	2017	219.79	13.30	27.48	10.394	92.383	0	178
8/7/17 20:00	2017	219.83	12.66	27.48	10.614	92.373	0	178
8/7/17 21:00	2017	219.88	13.23	28.94	9.78	92.337	0	178
8/7/17 22:00	2017	219.92	12.95	29.88	9.485	92.337	0	178
8/7/17 23:00	2017	219.96	12.51	30.51	10.394	92.292	0	178
8/8/17 0:00	2017	220.00	13.01	33.02	9.386	92.335	0	178
8/8/17 1:00	2017	220.04	13.43	34.86	9.163	92.321	0	178
8/8/17 2:00	2017	220.08	13.05	36.07	8.319	92.308	0.4	178.4
8/8/17 3:00	2017	220.13	12.85	36.19	8.22	92.34	0	178.4
8/8/17 4:00	2017	220.17	12.28	34.93	8.369	92.326	0	178.4
8/8/17 5:00	2017	220.21	11.78	33.58	9.829	92.298	0	178.4
8/8/17 6:00	2017	220.25	11.11	31.42	10.492	92.176	0	178.4
8/8/17 7:00	2017	220.29	10.70	29.70	11.029	92.178	0	178.4
8/8/17 8:00	2017	220.33	10.62	28.44	10.59	92.169	0	178.4
8/8/17 9:00	2017	220.38	10.67	27.28	10.565	92.244	0	178.4
8/8/17 10:00	2017	220.42	10.25	25.14	11.419	92.231	0	178.4
8/8/17 11:00	2017	220.46	10.46	24.17	9.213	92.266	0	178.4
8/8/17 12:00	2017	220.50	10.37	25.14	9.361	92.294	1.6	180
8/8/17 13:00	2017	220.54	10.99	32.41	8.319	92.346	3.6	183.6
8/8/17 14:00	2017	220.58	11.14	31.78	9.829	92.366	0	183.6
8/8/17 15:00	2017	220.63	11.02	30.43	9.756	92.316	0	183.6
8/8/17 16:00	2017	220.67	12.09	32.28	9.608	92.356	0	183.6
8/8/17 17:00	2017	220.71	12.28	32.61	10.59	92.292	0	183.6
8/8/17 18:00	2017	220.75	14.17	37.41	11.394	92.259	0	183.6
8/8/17 19:00	2017	220.79	14.44	39.17	10.834	92.222	0	183.6
8/8/17 20:00	2017	220.83	14.16	40.04	11.151	92.236	0	183.6
8/8/17 21:00	2017	220.88	13.29	39.86	11.443	92.238	0	183.6
8/8/17 22:00	2017	220.92	13.77	43.31	11.151	92.235	0	183.6
8/8/17 23:00	2017	220.96	13.56	44.92	11.492	92.197	0	183.6
8/9/17 0:00	2017	221.00	12.64	44.49	11.516	92.173	0	183.6

8/9/17 1:00	2017	221.04	13.29	48.57	11.37	92.203	0	183.6
8/9/17 2:00	2017	221.08	12.36	45.86	11.102	92.18	0	183.6
8/9/17 3:00	2017	221.13	11.29	43.54	10.443	92.194	0	183.6
8/9/17 4:00	2017	221.17	11.76	45.76	10.98	92.185	0	183.6
8/9/17 5:00	2017	221.21	11.25	43.92	10.834	92.124	0	183.6
8/9/17 6:00	2017	221.25	11.23	43.10	10.858	92.162	0	183.6
8/9/17 7:00	2017	221.29	10.82	40.55	10.858	92.066	0	183.6
8/9/17 8:00	2017	221.33	10.99	39.64	10.956	92.065	0	183.6
8/9/17 9:00	2017	221.38	10.73	37.16	10.712	92.065	0	183.6
8/9/17 10:00	2017	221.42	9.94	33.04	10.001	92.065	0	183.6
8/9/17 11:00	2017	221.46	10.17	32.23	9.731	92.068	0	183.6

(mm)

Notes:

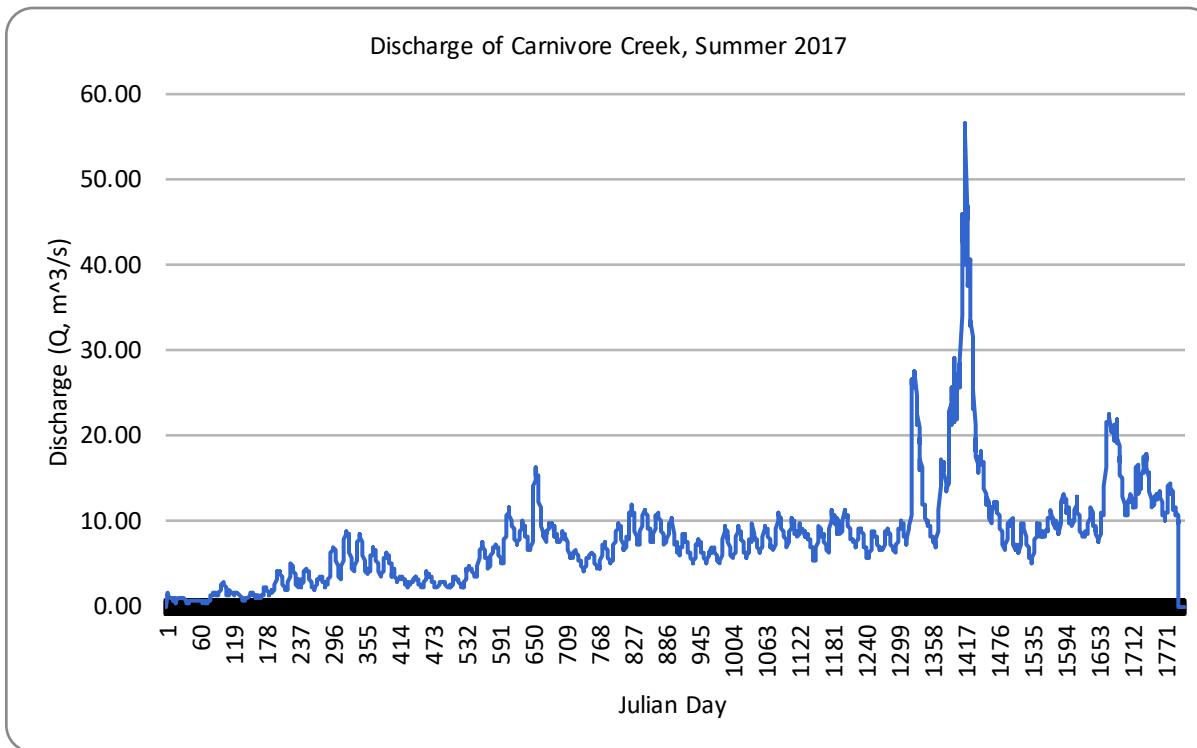
SSC = Suspended Sediment Concentration (mg/L)

Q = Discharge (m^3/s)

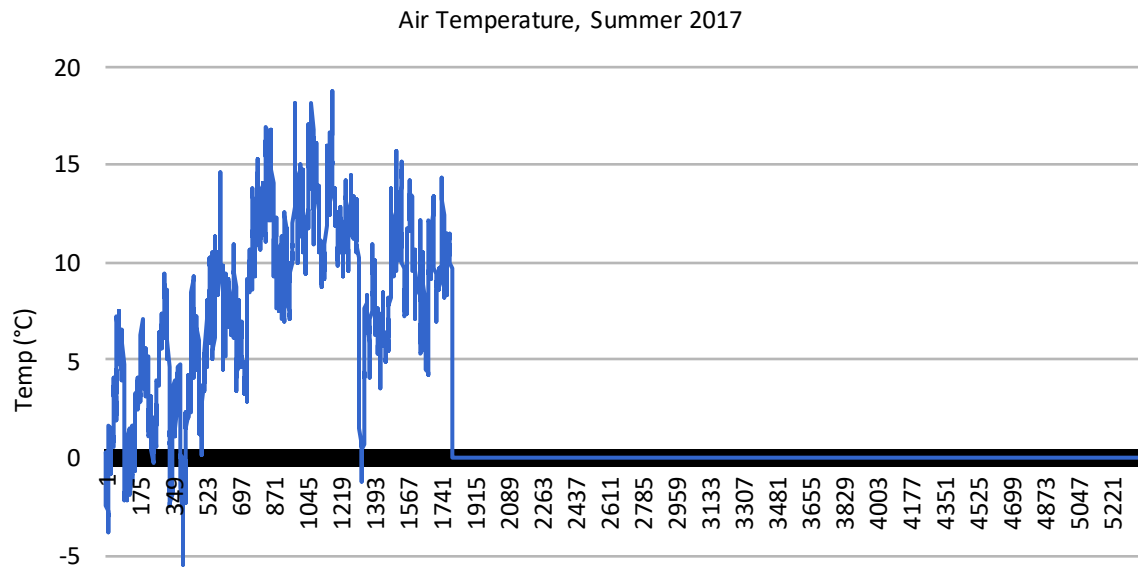
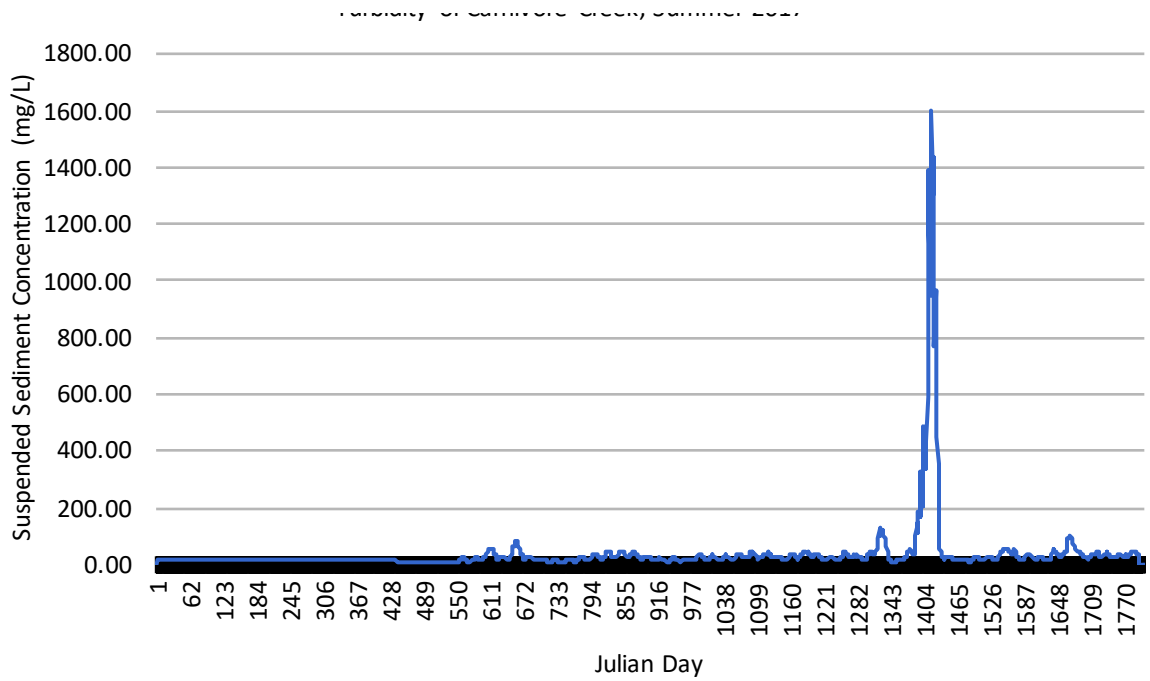
Pressure = the pressure of water on a submerged logger, which acts as a rough approximation of discharge (KPa)

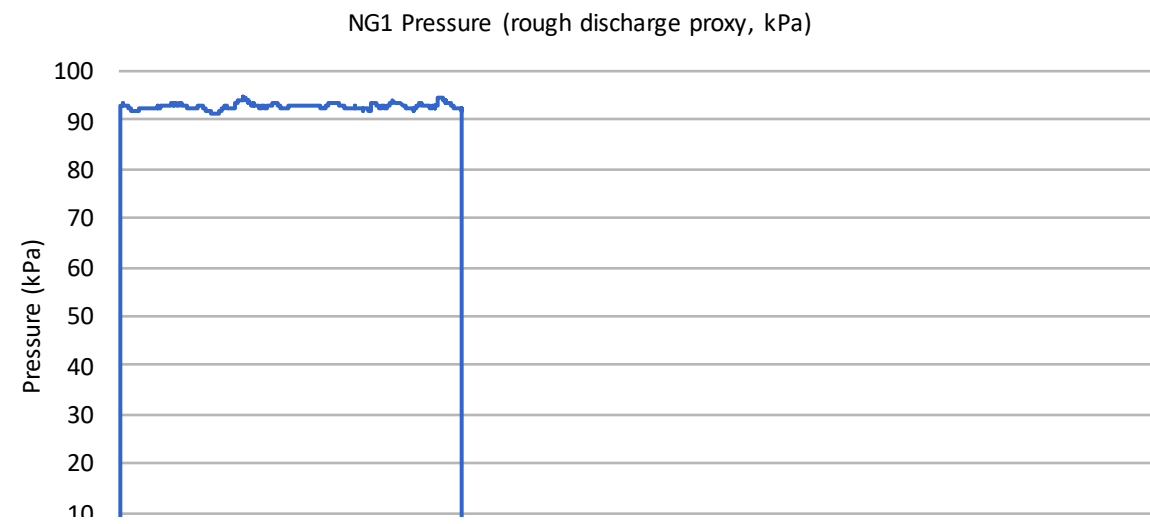
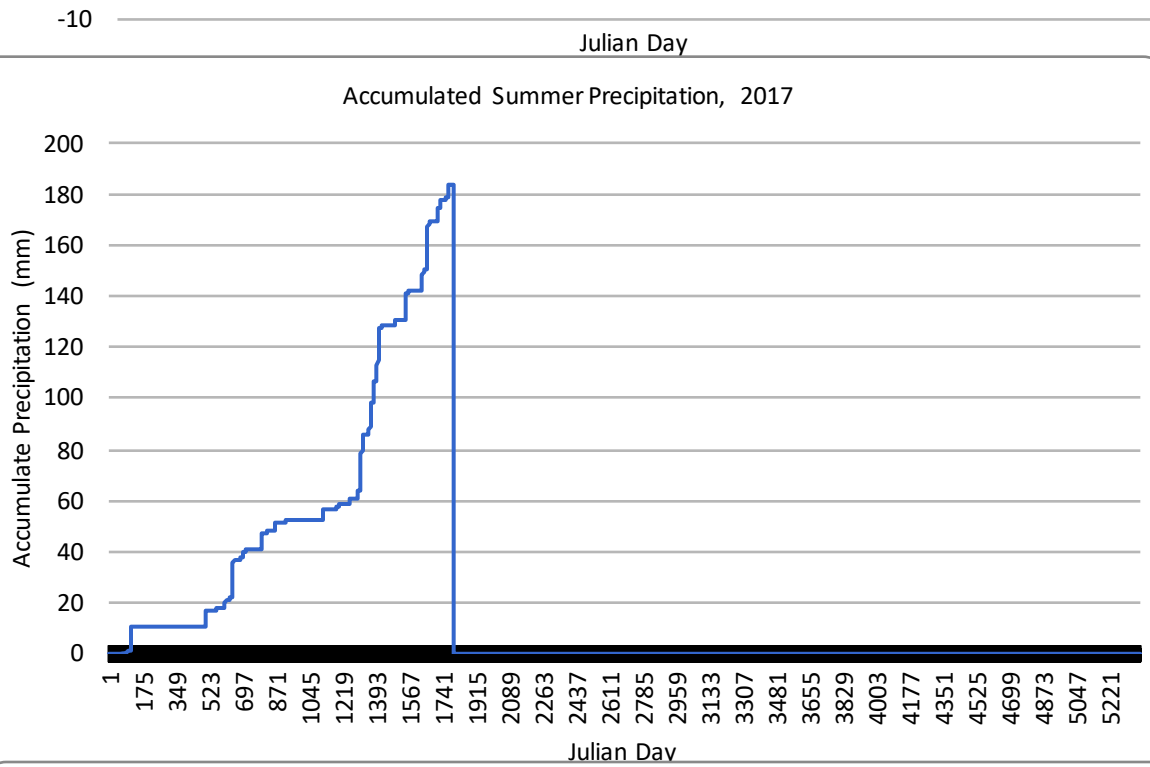
NG1 is a non-glaciated basin

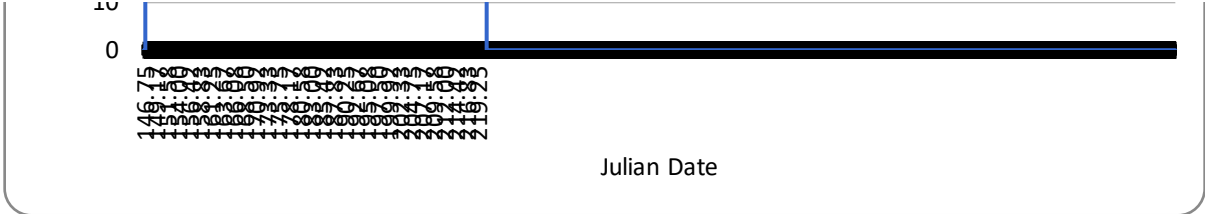
Carnivore Creek is fed by many glaciated basins

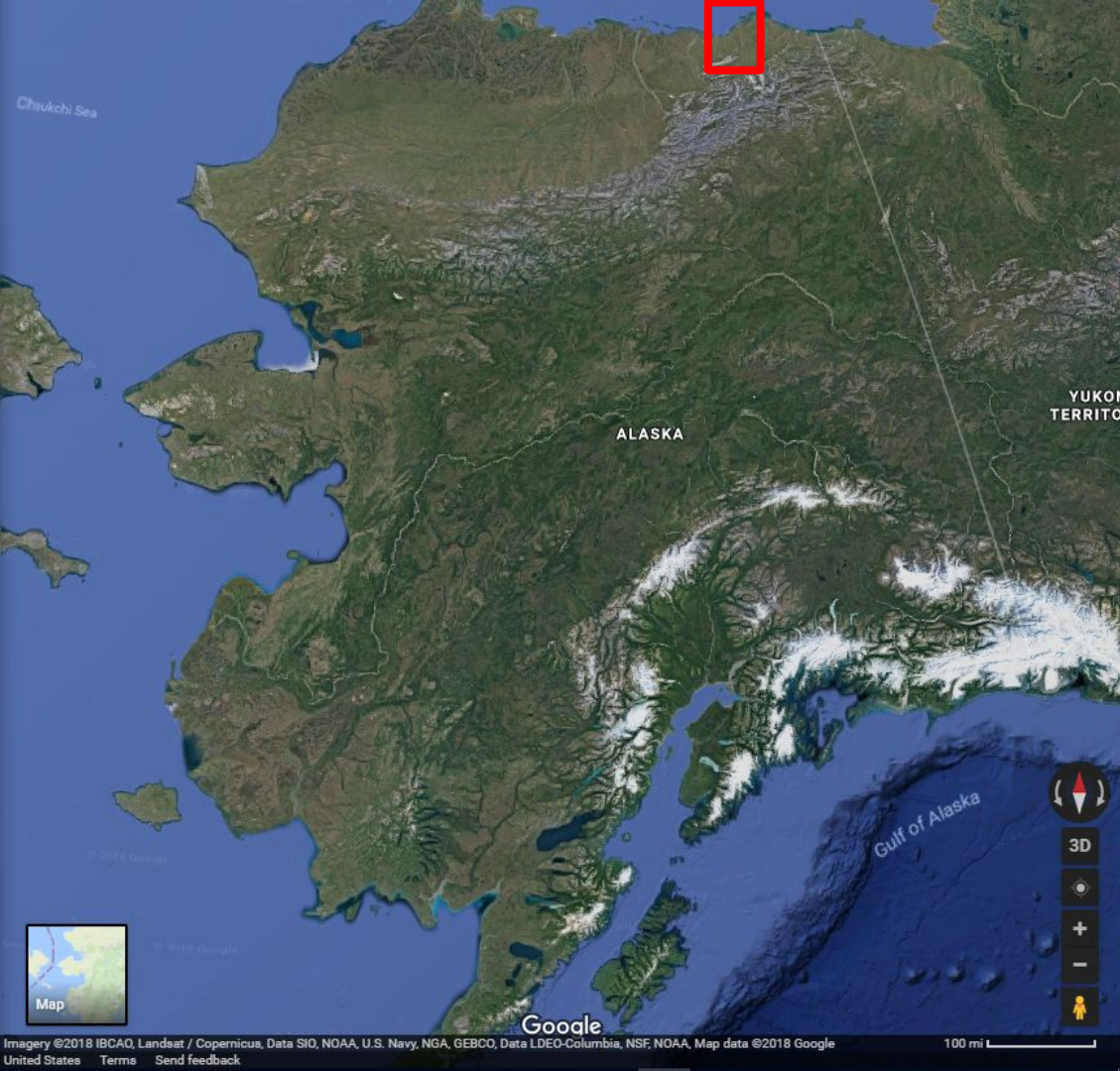


Turbidity of Carnivore Creek, Summer 2017

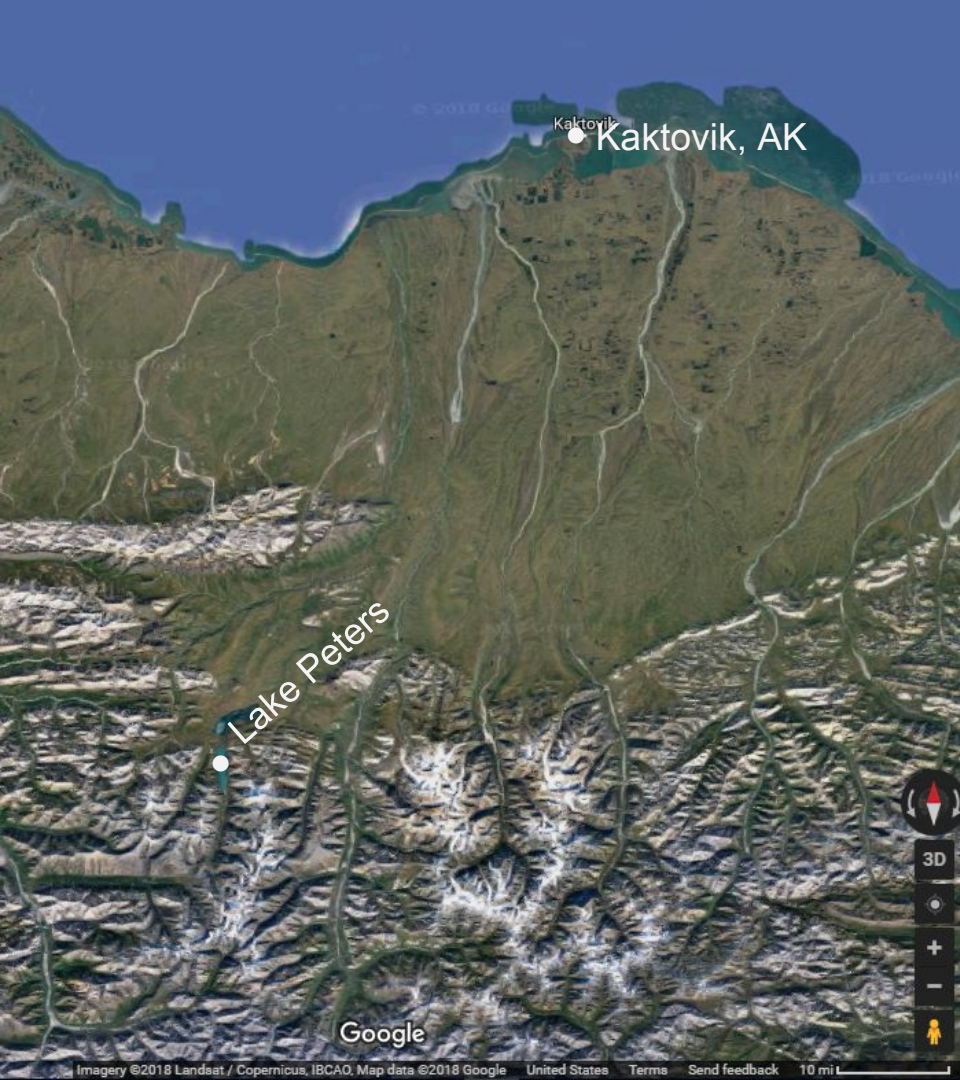








Approximate
regional location of
Lake Peters field
site



Lake Peters in
relation to nearest
town, Kaktovik, AK



View of Carnivore watershed, Chamberlin glacier, and NG1 watershed



Arrows for NG1 and Carnivore Creek indicate approximate location of data loggers



Measuring discharge of Carnivore Creek



Loggers in NG 1