



Rig Mass Flow Rate Calculations

Please Enter Parameters in highlighted boxes below

Engine Data File		
Ambient Conditions		
Air Temperature	5	[C]
Atmospheric Pressure	975	[mBar]
Air Humidity	95	[%]
Viper Engine Parameters		
Engine Air Intake Mass Flow	18.7	[Kg/s]
Butane Flow Rate	1732	[Ltr/h]
Engine Speed	12150	[RPM]
ETC	650	[C]
Gas Delivery System Data File		
Gas Delivery System		
Mixed Gas (Fuel) Mass Flow rate	0.07	[Kg/s]
Oxygen Mass Flow rate	0.154	[Kg/s]

Please do not change anything in this box

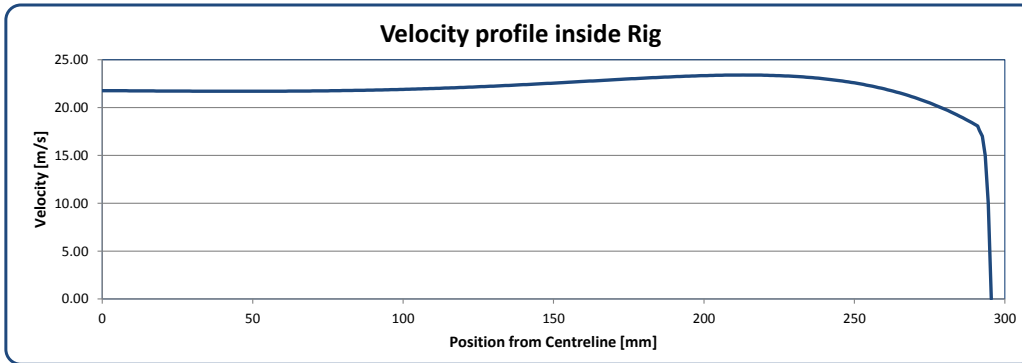
Test Date and Time = 16.04.2015 14:00:46.6

Calculated Parameters		
Air density	1.217898	[Kg/m3]
Liquid Butane density	584	[Kg/m3]
Butane mass Flow rate	0.280969	[Kg/s]
Air Fuel Ratio	79.23263	[]
Calculated Exhaust gas properties (Reaction Engines)		
Exhaust products density	0.389	[Kg/m3]
Pitot Traverse Results		
Rig Gas flow rate - Integrated	2.331616	[Kg/s]
Total Rig Mass flow	2.555616	[Kg/s]
Rig Gas Temperature as read from TC 11		
Gas Temperature	516	[C]

Bruce Ewan to fill in

Note

Manual for viper 201 gives figures for fuel flow rate to be as follows at maximum power					
Fuel Flow	2035	lb/hr	to	2920	lb/hr
	925	Kg/hr		1327.273	Kg/hr
	1156.25	ltr/hr		1659.091	ltr/hr



Data Acquisition Parameters

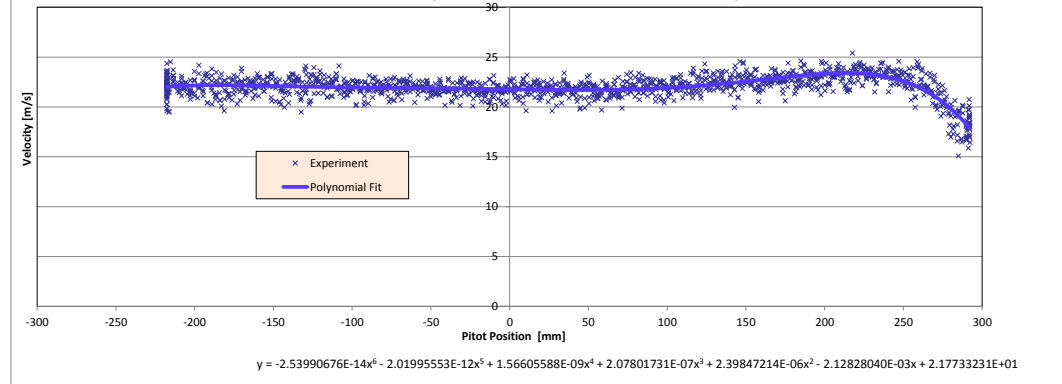
Sampling Rate	1000	[Hz]	
No of samples recorded	100	Samples	
Averaged samples sampling	10	[Hz]	
Pitot Traverse speed	7	[mm/s]	Averaged Pitot dp
Distance Travelled every 0.1	0.7	[mm]	0.944779062
			Average Vel 22.00551 [m/s]

Raw Data from CSV File

Date and time [dd:mm:yyyy hh:mm:ss.ms]	Pitot Position from rig centre [mm]	TC11 - Pitot [deg C]	Pitot dP [mBar]	O2 %
16.04.2015 14:00:46.6	-217.6	515.7	1.0155	16.25
16.04.2015 14:00:46.7	-217.6	515.6	0.8612	16
16.04.2015 14:00:46.8	-217.57	515.6	0.9189	16.07
16.04.2015 14:00:46.9	-217.55	515.5	0.9627	16.28
16.04.2015 14:00:47.0	-217.56	515.4	0.7648	16.24
16.04.2015 14:00:47.1	-217.59	515.4	0.7982	16.01
16.04.2015 14:00:47.2	-217.58	515.5	0.9506	16.17
16.04.2015 14:00:47.3	-217.57	515.5	0.7991	16.33
16.04.2015 14:00:47.4	-217.58	515.3	0.7468	16.16
16.04.2015 14:00:47.5	-217.59	515.3	0.8469	16.07
16.04.2015 14:00:47.6	-217.57	515.4	0.8839	16.17
16.04.2015 14:00:47.7	-217.54	515.4	0.9897	16.2
16.04.2015 14:00:47.8	-217.57	515.2	0.9521	16.06
16.04.2015 14:00:47.9	-217.17	515.2	0.9462	16.02
16.04.2015 14:00:48.0	-216.15	515.4	0.9233	16.24
16.04.2015 14:00:48.1	-216.3	515.4	0.7447	16.2
16.04.2015 14:00:48.2	-216.27	515.3	0.7387	16
16.04.2015 14:00:48.3	-215.3	515.3	1.1705	16.01
16.04.2015 14:00:48.4	-213.56	515.4	1.0936	16.2
16.04.2015 14:00:48.5	-213.74	515.3	1.0407	16.31
16.04.2015 14:00:48.6	-213.72	515.3	0.9564	16.08
16.04.2015 14:00:48.7	-211.53	515.4	0.9523	16.12
16.04.2015 14:00:48.8	-211.19	515.5	0.947	16.37
16.04.2015 14:00:48.9	-211.19	515.5	0.9459	16.32
16.04.2015 14:00:49.0	-209.55	515.5	0.9128	16.01
16.04.2015 14:00:49.1	-208.11	515.6	0.9283	16.09
16.04.2015 14:00:49.2	-208.27	515.7	1.0141	16.3
16.04.2015 14:00:49.3	-208.28	515.6	0.9829	16.18
16.04.2015 14:00:49.4	-206.6	515.6	0.9417	15.99
16.04.2015 14:00:49.5	-205.57	515.7	0.9824	16.17
16.04.2015 14:00:49.6	-205.8	515.8	0.9807	16.22
16.04.2015 14:00:49.7	-205.64	515.6	0.9531	16.04
16.04.2015 14:00:49.8	-202.71	515.6	1.0001	16.02
16.04.2015 14:00:49.9	-202.76	515.8	0.8947	16.16
16.04.2015 14:00:50.0	-202.87	515.8	0.9211	16.2
16.04.2015 14:00:50.1	-202.57	515.7	0.9031	16.04
16.04.2015 14:00:50.2	-199.97	515.7	0.8641	16.03
16.04.2015 14:00:50.3	-200.15	515.8	1.0801	16.24
16.04.2015 14:00:50.4	-200.22	515.8	0.9981	16.24
16.04.2015 14:00:50.5	-197.64	515.7	0.9571	15.96
16.04.2015 14:00:50.6	-197.15	515.8	0.947	16.02
16.04.2015 14:00:50.7	-197.25	515.8	1.0603	16.32
16.04.2015 14:00:50.8	-197.25	515.8	1.1373	16.31
16.04.2015 14:00:50.9	-194.71	515.7	0.9956	16.04
16.04.2015 14:00:51.0	-194.52	515.8	0.9012	16.21
16.04.2015 14:00:51.1	-194.62	515.8	0.9907	16.36
16.04.2015 14:00:51.2	-193.75	515.7	1.041	16.3
16.04.2015 14:00:51.3	-191.89	515.7	0.9648	16.12
16.04.2015 14:00:51.4	-191.97	515.8	0.8103	16.23
16.04.2015 14:00:51.5	-191.75	515.8	0.8114	16.4
16.04.2015 14:00:51.6	-188.92	515.5	0.7989	16.22
16.04.2015 14:00:51.7	-189.14	515.5	0.9155	16.19
16.04.2015 14:00:51.8	-189.01	515.6	0.9956	16.3
16.04.2015 14:00:51.9	-187.8	515.5	0.8894	16.4
16.04.2015 14:00:52.0	-186.55	515.4	0.8617	16.11
16.04.2015 14:00:52.1	-186.51	515.4	0.8825	16.16
16.04.2015 14:00:52.2	-186.5	515.5	0.8721	16.33
16.04.2015 14:00:52.3	-184.14	515.5	0.8931	16.36
16.04.2015 14:00:52.4	-184.13	515.4	0.8317	16.04

Calculated Velocity [m/s]
22.849682
21.0422515
21.7357346
22.2477289
19.8296084
20.2579763
22.1074729
20.2693939
19.5948684
20.8668197
21.3177696
22.5575528
22.1249083
22.0562497
21.7877114
19.5672987
19.488313
24.5316018
23.7120689
23.1314562
22.1748138
22.127232
22.0655718
22.0527528
21.6634695
21.8466259
22.833926
22.4799253
22.0037389
22.4742069
22.4547531
22.1365243
22.6757631
21.4476106
21.7617386
21.5480571
21.0776505
23.565257
22.6530782
22.1829273
22.0655718
23.3482631
24.1811926
22.6246902
21.5253781
22.5689461
23.13479
22.2719809
20.4109452
20.4247947
20.2668572
21.6954854
22.6246902
21.3839908
21.0483591
21.3008804
21.1749962
21.4284245
20.678715

Raw Data Plot with Polynomial fit on Calculated Velocity



16.04.2015 14:00:52.5	-183.82	515.4	0.8288	16.07	20.6426319
16.04.2015 14:00:52.6	-182.96	515.4	0.7847	16.25	20.0859336
16.04.2015 14:00:52.7	-180.96	515.3	0.8383	16.24	20.7606014
16.04.2015 14:00:52.8	-181.19	515.2	0.7488	16.03	19.6210893
16.04.2015 14:00:52.9	-180.91	515.2	0.9162	16.04	21.7037781
16.04.2015 14:00:53.0	-179.06	515.3	0.8768	16.36	21.2319786
16.04.2015 14:00:53.1	-178.47	515.1	1.0207	16.23	22.9081097
16.04.2015 14:00:53.2	-178.6	515.1	0.9642	15.99	22.2650544
16.04.2015 14:00:53.3	-178.29	515.2	0.878	16.05	21.2465028
16.04.2015 14:00:53.4	-176.22	515.3	0.8326	16.28	20.6899004
16.04.2015 14:00:53.5	-175.86	515.2	0.9969	16.17	22.6394564
16.04.2015 14:00:53.6	-175.87	515.2	1.0101	16.06	22.7888486
16.04.2015 14:00:53.7	-174.19	515.4	0.9457	16.22	22.0504213
16.04.2015 14:00:53.8	-172.84	515.4	1.0289	16.31	22.9999441
16.04.2015 14:00:53.9	-172.96	515.3	0.9687	16.18	22.3169503
16.04.2015 14:00:54.0	-172.93	515.3	0.8014	16.16	20.298543
16.04.2015 14:00:54.1	-171.2	515.4	0.9016	16.38	21.5301546
16.04.2015 14:00:54.2	-170.29	515.4	0.9232	16.38	21.7865315
16.04.2015 14:00:54.3	-170.46	515.3	0.9837	16.09	22.4890719
16.04.2015 14:00:54.4	-170.16	515.4	0.9914	16.11	22.5769179
16.04.2015 14:00:54.5	-167.56	515.4	0.9097	16.36	21.6266521
16.04.2015 14:00:54.6	-167.74	515.4	0.9587	16.31	22.2014613
16.04.2015 14:00:54.7	-167.77	515.3	0.8719	16.1	21.172568
16.04.2015 14:00:54.8	-165.26	515.4	0.9514	16.09	22.1167735
16.04.2015 14:00:54.9	-164.69	515.4	0.9985	16.43	22.657617
16.04.2015 14:00:55.0	-164.77	515.3	0.9786	16.28	22.4306988
16.04.2015 14:00:55.1	-164.83	515.3	0.9524	16.11	22.1283937
16.04.2015 14:00:55.2	-162.39	515.3	0.9905	16.07	22.5666679
16.04.2015 14:00:55.3	-162.25	515.4	0.978	16.32	22.4238213
16.04.2015 14:00:55.4	-162.21	515.2	0.9269	16.16	21.8301459
16.04.2015 14:00:55.5	-161.66	515.2	0.8755	16.05	21.2162328
16.04.2015 14:00:55.6	-159.39	515.2	0.8657	16.19	21.0971556
16.04.2015 14:00:55.7	-159.68	515.3	0.9394	16.3	21.9768516
16.04.2015 14:00:55.8	-159.57	515.1	1.02	16.08	22.9002531
16.04.2015 14:00:55.9	-156.67	515.1	0.9654	16.04	22.2789051
16.04.2015 14:00:56.0	-156.66	515.2	0.9564	16.23	22.1748138
16.04.2015 14:00:56.1	-156.71	515.2	0.9455	16.32	22.0480895
16.04.2015 14:00:56.2	-155.86	515	0.9035	16.04	21.5528286
16.04.2015 14:00:56.3	-153.93	515	1.0273	16.14	22.982054
16.04.2015 14:00:56.4	-154.01	515	0.9815	16.31	22.4639099
16.04.2015 14:00:56.5	-154.23	515	0.9756	16.3	22.3962905
16.04.2015 14:00:56.6	-152.2	514.9	0.9456	16.05	22.0492554
16.04.2015 14:00:56.7	-151.46	515	1.0589	16.11	23.3328437
16.04.2015 14:00:56.8	-151.45	515	0.8535	16.35	20.9479708
16.04.2015 14:00:56.9	-151.04	515	0.825	16.3	20.5952549
16.04.2015 14:00:57.0	-148.52	515	0.8226	16.09	20.5652763
16.04.2015 14:00:57.1	-148.51	515.1	0.9313	16.1	21.8818985
16.04.2015 14:00:57.2	-148.63	515.1	1.0122	16.28	22.8125253
16.04.2015 14:00:57.3	-147.88	515	0.9666	16.16	22.2927473
16.04.2015 14:00:57.4	-145.93	515	1.0043	16	22.7233275
16.04.2015 14:00:57.5	-146.06	515.1	0.8168	16.1	20.4926471
16.04.2015 14:00:57.6	-146.07	515.2	0.8168	16.26	20.4926471
16.04.2015 14:00:57.7	-144.09	515	0.9002	16.16	21.5134322
16.04.2015 14:00:57.8	-143.48	515	0.8463	16.04	20.8594267
16.04.2015 14:00:57.9	-143.42	515.2	0.9178	16.22	21.722721
16.04.2015 14:00:58.0	-143.05	515.2	0.7759	16.22	19.9729895
16.04.2015 14:00:58.1	-140.32	515	0.8093	16.02	20.3983466
16.04.2015 14:00:58.2	-140.49	515	0.9048	16.04	21.5683287
16.04.2015 14:00:58.3	-140.46	515.1	0.9533	16.21	22.1388467
16.04.2015 14:00:58.4	-138.85	515.1	0.9905	16.23	22.5666679
16.04.2015 14:00:58.5	-137.54	515	1.0581	15.99	23.324028
16.04.2015 14:00:58.6	-137.51	515	0.9472	16	22.0679018
16.04.2015 14:00:58.7	-137.44	515	1.0441	16.29	23.169211
16.04.2015 14:00:58.8	-135.04	515	1.0325	16.3	23.040146
16.04.2015 14:00:58.9	-135.13	514.9	0.8961	16	21.4643843
16.04.2015 14:00:59.0	-134.88	515	0.9911	16.03	22.5735018
16.04.2015 14:00:59.1	-134.88	515	1.0079	16.36	22.764018
16.04.2015 14:00:59.2	-132.3	514.8	0.8477	16.29	20.876673
16.04.2015 14:00:59.3	-132.61	514.8	0.8318	16.15	20.6799581
16.04.2015 14:00:59.4	-132.32	514.9	0.7386	16.23	19.4869939
16.04.2015 14:00:59.5	-130.1	514.9	1.1012	16.43	23.79432

16.04.2015 14:00:59.6	-129.49	514.8	1.1306	16.25	24.10986
16.04.2015 14:00:59.7	-129.64	514.7	1.0897	16.21	23.6697501
16.04.2015 14:00:59.8	-129.44	514.9	0.8941	16.3	21.4404178
16.04.2015 14:00:59.9	-127.17	514.9	0.8018	16.39	20.3036081
16.04.2015 14:01:00.0	-126.92	514.8	1.0099	16.12	22.7865924
16.04.2015 14:01:00.1	-126.97	514.8	0.8213	16.28	20.5490197
16.04.2015 14:01:00.2	-126.23	515	0.8284	16.36	20.63765
16.04.2015 14:01:00.3	-124.14	514.9	0.8849	16.39	21.3298251
16.04.2015 14:01:00.4	-124.49	514.9	0.97	16.07	22.33192
16.04.2015 14:01:00.5	-124.25	514.9	1.0507	16.19	23.2423247
16.04.2015 14:01:00.6	-122.18	515	1.0091	16.33	22.7775653
16.04.2015 14:01:00.7	-121.41	514.9	0.9818	16.31	22.4673428
16.04.2015 14:01:00.8	-121.48	514.9	0.8897	16.01	21.387597
16.04.2015 14:01:00.9	-121.04	515	0.9858	16.06	22.5130639
16.04.2015 14:01:01.0	-118.27	515.1	0.8901	16.29	21.3924043
16.04.2015 14:01:01.1	-118.43	515	0.9535	16.18	22.1411689
16.04.2015 14:01:01.2	-118.47	515	0.9618	15.96	22.2373271
16.04.2015 14:01:01.3	-117.03	515.1	0.9558	16.13	22.1678569
16.04.2015 14:01:01.4	-115.77	515.2	0.853	16.27	20.941834
16.04.2015 14:01:01.5	-115.84	515	0.8589	16.15	21.0141341
16.04.2015 14:01:01.6	-115.9	515.1	0.9313	16	21.8818985
16.04.2015 14:01:01.7	-113.4	515.2	0.9493	16.14	22.0923512
16.04.2015 14:01:01.8	-113.29	515.3	1.0118	16.3	22.8080174
16.04.2015 14:01:01.9	-113.26	515.1	0.8646	16.1	21.0837478
16.04.2015 14:01:02.0	-112.51	515.2	0.8647	16.05	21.084967
16.04.2015 14:01:02.1	-110.07	515.3	1.0564	16.24	23.3052837
16.04.2015 14:01:02.2	-110.42	515.3	1.0059	16.23	22.7414212
16.04.2015 14:01:02.3	-110.57	515.2	1.0184	16.08	22.8822851
16.04.2015 14:01:02.4	-108.39	515.3	1.1313	16.1	24.1173225
16.04.2015 14:01:02.5	-107.65	515.4	0.8845	16.41	21.3250037
16.04.2015 14:01:02.6	-107.87	515.4	0.933	16.33	21.901861
16.04.2015 14:01:02.7	-106.77	515.3	0.9482	16.14	22.0795477
16.04.2015 14:01:02.8	-104.97	515.3	0.9019	16.11	21.5337363
16.04.2015 14:01:02.9	-105.16	515.2	1.0126	16.39	22.8170324
16.04.2015 14:01:03.0	-105.3	515.1	0.8554	16.3	20.9712743
16.04.2015 14:01:03.1	-102.93	515.1	0.9188	16.11	21.7345519
16.04.2015 14:01:03.2	-102.54	515.2	0.9832	16.17	22.4833557
16.04.2015 14:01:03.3	-102.72	515.2	0.8719	16.42	21.172568
16.04.2015 14:01:03.4	-100.97	515.1	0.9011	16.26	21.5241838
16.04.2015 14:01:03.5	-100.03	515.1	0.9421	16.07	22.0084116
16.04.2015 14:01:03.6	-100.01	515.3	0.9498	16.18	22.0981684
16.04.2015 14:01:03.7	-99.95	515.4	0.9924	16.35	22.5883015
16.04.2015 14:01:03.8	-97.33	515.2	0.7973	16.16	20.2465523
16.04.2015 14:01:03.9	-97.57	515.2	0.7882	16.03	20.1306785
16.04.2015 14:01:04.0	-97.46	515.4	0.9697	16.17	22.3284664
16.04.2015 14:01:04.1	-95.42	515.5	0.9241	16.25	21.7971485
16.04.2015 14:01:04.2	-94.91	515.4	0.9038	16.02	21.5564065
16.04.2015 14:01:04.3	-94.88	515.5	0.9019	16.03	21.5337363
16.04.2015 14:01:04.4	-94.4	515.5	0.9386	16.21	21.9674918
16.04.2015 14:01:04.5	-92.16	515.5	0.8676	16.23	21.1202945
16.04.2015 14:01:04.6	-92.48	515.4	0.7916	15.96	20.1740499
16.04.2015 14:01:04.7	-92.24	515.4	0.818	16.02	20.507695
16.04.2015 14:01:04.8	-90.74	515.4	0.9096	16.26	21.6254634
16.04.2015 14:01:04.9	-89.74	515.3	0.8046	16.3	20.3390288
16.04.2015 14:01:05.0	-89.83	515.3	0.9632	15.99	22.2535055
16.04.2015 14:01:05.1	-89.6	515.4	0.96	16.19	22.2165088
16.04.2015 14:01:05.2	-86.75	515.5	1.0214	16.34	22.9159636
16.04.2015 14:01:05.3	-86.86	515.4	1.0115	16.31	22.8046358
16.04.2015 14:01:05.4	-86.96	515.3	0.8538	16.04	20.951652
16.04.2015 14:01:05.5	-85.73	515.5	0.96	16.25	22.2165088
16.04.2015 14:01:05.6	-84.12	515.5	0.9269	16.28	21.8301459
16.04.2015 14:01:05.7	-84.3	515.4	0.982	16.19	22.469631
16.04.2015 14:01:05.8	-84.38	515.3	0.9083	16.06	21.6100043
16.04.2015 14:01:05.9	-82.02	515.4	0.9393	16.19	21.9756818
16.04.2015 14:01:06.0	-81.65	515.4	0.9835	16.27	22.4867856
16.04.2015 14:01:06.1	-81.7	515.2	0.8946	16.19	21.446412
16.04.2015 14:01:06.2	-81.19	515.2	0.8973	16.15	21.4787514
16.04.2015 14:01:06.3	-78.44	515.2	1.0116	16.42	22.805763
16.04.2015 14:01:06.4	-78.75	515.1	0.9554	16.31	22.1632179
16.04.2015 14:01:06.5	-78.91	515	0.9297	16.11	21.8630935
16.04.2015 14:01:06.6	-77.21	515	0.8621	16.13	21.0532438

16.04.2015 14:01:06.7	-76.36	514.9	0.946	16.31	22.0539185
16.04.2015 14:01:06.8	-76.56	514.8	0.8173	16.3	20.4989184
16.04.2015 14:01:06.9	-75.61	514.7	0.8415	16.06	20.8001879
16.04.2015 14:01:07.0	-73.25	514.6	0.8304	16.21	20.6625476
16.04.2015 14:01:07.1	-73.61	514.6	1.0099	16.38	22.7865924
16.04.2015 14:01:07.2	-73.6	514.4	0.8308	16.36	20.6675235
16.04.2015 14:01:07.3	-71.56	514.3	0.8863	16.05	21.3466914
16.04.2015 14:01:07.4	-70.91	514.4	0.9238	16.29	21.7936101
16.04.2015 14:01:07.5	-71.05	514.4	0.8683	16.35	21.1288129
16.04.2015 14:01:07.6	-69.63	514.3	0.8979	16.2	21.4859313
16.04.2015 14:01:07.7	-68.42	514.2	0.9369	16.12	21.9475889
16.04.2015 14:01:07.8	-68.42	514.4	0.8884	16.26	21.3719659
16.04.2015 14:01:07.9	-68.46	514.4	0.8349	16.26	20.7184579
16.04.2015 14:01:08.0	-65.93	514.2	0.942	16.09	22.0072435
16.04.2015 14:01:08.1	-65.95	514.2	0.9197	16.06	21.7451942
16.04.2015 14:01:08.2	-65.8	514.4	0.8985	16.22	21.4931088
16.04.2015 14:01:08.3	-65.04	514.4	1.0016	16.2	22.6927618
16.04.2015 14:01:08.4	-63.19	514.2	1.0396	16.06	23.1192282
16.04.2015 14:01:08.5	-63.2	514.2	0.9023	16.1	21.538511
16.04.2015 14:01:08.6	-63.22	514.3	0.9875	16.37	22.5324673
16.04.2015 14:01:08.7	-61.08	514.2	0.9785	16.25	22.4295527
16.04.2015 14:01:08.8	-60.4	514.2	0.9307	16.01	21.8748485
16.04.2015 14:01:08.9	-60.22	514.2	0.8131	16.08	20.4461799
16.04.2015 14:01:09.0	-60	514.2	0.9532	16.37	22.1376855
16.04.2015 14:01:09.1	-58	514.1	0.9387	16.28	21.968662
16.04.2015 14:01:09.2	-58.17	514	0.8755	16.11	21.2162328
16.04.2015 14:01:09.3	-58.04	514.1	0.908	16.15	21.6064353
16.04.2015 14:01:09.4	-55.38	514.1	0.9903	16.41	22.5643894
16.04.2015 14:01:09.5	-55.16	513.9	0.9519	16.25	22.1225844
16.04.2015 14:01:09.6	-55.22	513.8	0.91	16.1	21.6302178
16.04.2015 14:01:09.7	-54.41	513.9	0.9114	16.12	21.6468501
16.04.2015 14:01:09.8	-52.35	513.9	0.8453	16.22	20.8470991
16.04.2015 14:01:09.9	-52.55	513.7	1.0008	16.07	22.6836974
16.04.2015 14:01:10.0	-52.6	513.7	0.9906	16.07	22.567807
16.04.2015 14:01:10.1	-51.61	513.7	0.9009	16.19	21.521795
16.04.2015 14:01:10.2	-49.83	513.7	0.8615	16.23	21.0459163
16.04.2015 14:01:10.3	-50.05	513.5	0.9349	16.02	21.9241506
16.04.2015 14:01:10.4	-49.63	513.5	0.8975	16.12	21.481145
16.04.2015 14:01:10.5	-46.84	513.6	0.8951	16.29	21.4524044
16.04.2015 14:01:10.6	-47.08	513.5	0.93	16.21	21.8666207
16.04.2015 14:01:10.7	-47.17	513.5	0.9696	15.97	22.3273151
16.04.2015 14:01:10.8	-45.57	513.5	0.8882	16.03	21.3695601
16.04.2015 14:01:10.9	-44.38	513.5	0.9485	16.32	22.0830403
16.04.2015 14:01:11.0	-44.52	513.5	0.879	16.25	21.2585987
16.04.2015 14:01:11.1	-44.51	513.4	0.9107	16.04	21.6385356
16.04.2015 14:01:11.2	-41.87	513.5	0.9004	16.11	21.5158219
16.04.2015 14:01:11.3	-41.91	513.6	0.9069	16.3	21.5933437
16.04.2015 14:01:11.4	-41.84	513.5	0.9292	16.23	21.8572137
16.04.2015 14:01:11.5	-41	513.5	0.7909	16.02	20.1651281
16.04.2015 14:01:11.6	-38.68	513.6	0.9016	16.08	21.5301546
16.04.2015 14:01:11.7	-38.98	513.6	0.9116	16.24	21.6492251
16.04.2015 14:01:11.8	-38.95	513.5	0.926	16.1	21.819545
16.04.2015 14:01:11.9	-37.28	513.4	0.9277	16.02	21.8395646
16.04.2015 14:01:12.0	-36.63	513.6	0.8146	16.17	20.4650307
16.04.2015 14:01:12.1	-36.78	513.6	0.8275	16.26	20.6264362
16.04.2015 14:01:12.2	-35.32	513.5	0.8806	16.13	21.2779379
16.04.2015 14:01:12.3	-33.6	513.5	0.9116	16.16	21.6492251
16.04.2015 14:01:12.4	-33.79	513.6	0.9194	16.32	21.7416473
16.04.2015 14:01:12.5	-33.84	513.6	0.8529	16.27	20.9406064
16.04.2015 14:01:12.6	-31.44	513.5	0.7901	16.04	20.1549269
16.04.2015 14:01:12.7	-31.17	513.6	0.9853	16.09	22.5073538
16.04.2015 14:01:12.8	-31.17	513.7	0.9937	16.3	22.6030914
16.04.2015 14:01:12.9	-29.53	513.6	0.944	16.23	22.0305934
16.04.2015 14:01:13.0	-28.63	513.6	0.9209	16.01	21.7593758
16.04.2015 14:01:13.1	-28.58	513.8	0.908	16.09	21.6064353
16.04.2015 14:01:13.2	-28.54	513.7	0.8868	16.26	21.3527118
16.04.2015 14:01:13.3	-25.94	513.7	0.9321	16.16	21.8912949
16.04.2015 14:01:13.4	-26.16	513.7	0.9144	15.96	21.6824476
16.04.2015 14:01:13.5	-26.03	513.9	0.8838	16.04	21.3165637
16.04.2015 14:01:13.6	-24.93	514	0.9771	16.35	22.4135013
16.04.2015 14:01:13.7	-23.34	513.8	0.7844	16.12	20.0820937

16.04.2015 14:01:13.8	-23.54	513.9	0.9629	16.13	22.2500397
16.04.2015 14:01:13.9	-23.49	514.1	0.9054	16.24	21.5754788
16.04.2015 14:01:14.0	-20.86	514.1	0.9119	16.36	21.6527871
16.04.2015 14:01:14.1	-20.62	514	0.9302	16.1	21.8689718
16.04.2015 14:01:14.2	-20.6	514	0.8743	16.11	21.2016879
16.04.2015 14:01:14.3	-19.88	514.1	0.8822	16.3	21.2972596
16.04.2015 14:01:14.4	-17.8	514	0.8701	16.31	21.1507018
16.04.2015 14:01:14.5	-18.1	514	0.9303	16.1	21.8701473
16.04.2015 14:01:14.6	-17.91	514	0.8233	16.18	20.5740246
16.04.2015 14:01:14.7	-16.08	514	0.9029	16.4	21.545671
16.04.2015 14:01:14.8	-15.47	514	0.8589	16.38	21.0141341
16.04.2015 14:01:14.9	-15.53	513.9	0.818	16.05	20.507695
16.04.2015 14:01:15.0	-15.07	514	0.9041	16.25	21.5599839
16.04.2015 14:01:15.1	-12.33	513.9	0.8291	16.49	20.6463676
16.04.2015 14:01:15.2	-12.53	513.8	0.9046	16.33	21.5659448
16.04.2015 14:01:15.3	-12.55	513.8	0.8128	16.06	20.4424077
16.04.2015 14:01:15.4	-11.25	513.9	0.8621	16.14	21.0532438
16.04.2015 14:01:15.5	-10.21	513.9	0.8534	16.28	20.9467436
16.04.2015 14:01:15.6	-10.35	513.7	0.8889	16.17	21.3779792
16.04.2015 14:01:15.7	-9.67	513.6	0.9117	16.07	21.6504125
16.04.2015 14:01:15.8	-7.09	513.8	0.9048	16.21	21.5683287
16.04.2015 14:01:15.9	-7.43	513.8	0.956	16.3	22.1701761
16.04.2015 14:01:16.0	-7.34	513.6	0.8432	16.07	20.8211875
16.04.2015 14:01:16.1	-5.61	513.5	0.8301	16.03	20.6588149
16.04.2015 14:01:16.2	-4.65	513.6	0.9036	16.19	21.5540213
16.04.2015 14:01:16.3	-4.81	513.6	0.884	16.23	21.3189755
16.04.2015 14:01:16.4	-4.77	513.4	0.8011	16	20.2947433
16.04.2015 14:01:16.5	-2.01	513.4	0.8243	15.97	20.5865157
16.04.2015 14:01:16.6	-2.16	513.5	0.7932	16.3	20.1944277
16.04.2015 14:01:16.7	-2.3	513.4	0.8969	16.27	21.4739634
16.04.2015 14:01:16.8	-1.04	513.3	0.9601	15.99	22.2176659
16.04.2015 14:01:16.9	1.04	513.3	0.9295	16.04	21.8607418
16.04.2015 14:01:17.0	0.79	513.3	0.9118	16.33	21.6515998
16.04.2015 14:01:17.1	0.6	513.2	0.9034	16.23	21.5516358
16.04.2015 14:01:17.2	2.96	513.2	0.8949	15.99	21.4500076
16.04.2015 14:01:17.3	3.47	513.2	0.8871	16.09	21.3563233
16.04.2015 14:01:17.4	3.19	513.2	0.9295	16.3	21.8607418
16.04.2015 14:01:17.5	4.94	513.1	0.8645	16.14	21.0825285
16.04.2015 14:01:17.6	5.79	513	0.9175	15.98	21.7191705
16.04.2015 14:01:17.7	6	513.1	0.829	16.14	20.6451224
16.04.2015 14:01:17.8	5.93	513.2	0.8579	16.24	21.0018973
16.04.2015 14:01:17.9	8.6	513	0.8065	16.11	20.3630292
16.04.2015 14:01:18.0	8.31	513.1	0.8577	16.04	20.9994491
16.04.2015 14:01:18.1	8.5	513.3	0.9629	16.23	22.2500397
16.04.2015 14:01:18.2	10.47	513.3	0.7483	16.22	19.6145374
16.04.2015 14:01:18.3	10.85	513.2	0.8781	16.08	21.2477127
16.04.2015 14:01:18.4	11.03	513.2	0.9726	16.04	22.3618294
16.04.2015 14:01:18.5	11.58	513.3	0.8809	16.2	21.2815621
16.04.2015 14:01:18.6	13.74	513.3	0.9186	16.22	21.7321862
16.04.2015 14:01:18.7	13.32	513.3	0.9273	16	21.8348557
16.04.2015 14:01:18.8	13.73	513.4	0.9217	16.08	21.7688251
16.04.2015 14:01:18.9	15.24	513.4	0.9795	16.29	22.4410109
16.04.2015 14:01:19.0	16.07	513.4	0.9059	16.37	21.5814354
16.04.2015 14:01:19.1	16.05	513.4	0.8519	16.1	20.9283267
16.04.2015 14:01:19.2	16.38	513.4	0.9191	16.09	21.7380999
16.04.2015 14:01:19.3	19.22	513.4	0.8883	16.35	21.370763
16.04.2015 14:01:19.4	19.08	513.3	0.856	16.31	20.9786279
16.04.2015 14:01:19.5	19.07	513.2	0.8303	16.07	20.6613034
16.04.2015 14:01:19.6	20.17	513.3	0.853	16.25	20.941834
16.04.2015 14:01:19.7	21.79	513.3	0.9301	16.28	21.8677963
16.04.2015 14:01:19.8	21.72	513.2	0.8862	16.29	21.3454871
16.04.2015 14:01:19.9	21.98	513.1	0.922	16.13	21.7723676
16.04.2015 14:01:20.0	24.5	513.2	0.8186	16.31	20.5152147
16.04.2015 14:01:20.1	24.25	513.1	0.9345	16.34	21.91946
16.04.2015 14:01:20.2	24.26	512.8	0.8969	16.17	21.4739634
16.04.2015 14:01:20.3	25.71	512.8	0.9112	16.15	21.6444748
16.04.2015 14:01:20.4	27.02	512.9	0.7476	16.4	19.605361
16.04.2015 14:01:20.5	26.81	512.9	0.852	16.39	20.929555
16.04.2015 14:01:20.6	27.32	512.8	0.9249	16.13	21.8065814
16.04.2015 14:01:20.7	29.76	512.8	0.7876	16.14	20.123015
16.04.2015 14:01:20.8	29.49	512.9	0.871	16.39	21.1616377

16.04.2015 14:01:20.9	29.4	512.9	0.8705	16.36
16.04.2015 14:01:21.0	32.04	512.9	0.8859	16.11
16.04.2015 14:01:21.1	32.08	513	0.94	16.19
16.04.2015 14:01:21.2	31.96	513.1	0.8999	16.41
16.04.2015 14:01:21.3	33.03	513.1	0.8089	16.33
16.04.2015 14:01:21.4	34.66	513.1	0.887	16.12
16.04.2015 14:01:21.5	34.64	513.3	1.0645	16.26
16.04.2015 14:01:21.6	34.54	513.5	1.007	16.36
16.04.2015 14:01:21.7	36.88	513.4	0.9406	16.26
16.04.2015 14:01:21.8	37.1	513.4	0.9584	16.1
16.04.2015 14:01:21.9	37.17	513.6	0.9151	16.39
16.04.2015 14:01:22.0	37.72	513.6	0.8499	16.32
16.04.2015 14:01:22.1	39.9	513.4	0.8772	16.23
16.04.2015 14:01:22.2	39.66	513.5	0.893	16.11
16.04.2015 14:01:22.3	39.78	513.6	0.9196	16.43
16.04.2015 14:01:22.4	41.79	513.6	0.9435	16.35
16.04.2015 14:01:22.5	42.58	513.5	0.9352	16.17
16.04.2015 14:01:22.6	42.72	513.6	0.9287	16.15
16.04.2015 14:01:22.7	42.97	513.6	0.8215	16.45
16.04.2015 14:01:22.8	44.83	513.6	0.7701	16.33
16.04.2015 14:01:22.9	44.64	513.6	0.7614	16.07
16.04.2015 14:01:23.0	45.04	513.6	0.859	16.13
16.04.2015 14:01:23.1	47.35	513.7	0.9217	16.36
16.04.2015 14:01:23.2	47.71	513.6	0.7707	16.26
16.04.2015 14:01:23.3	47.7	513.6	0.8457	15.96
16.04.2015 14:01:23.4	48.48	513.7	0.9259	16.08
16.04.2015 14:01:23.5	50.44	513.8	0.8546	16.3
16.04.2015 14:01:23.6	50.36	513.7	0.8056	16.22
16.04.2015 14:01:23.7	50.26	513.7	0.9842	16.04
16.04.2015 14:01:23.8	53.06	513.9	0.9466	16.3
16.04.2015 14:01:23.9	52.9	513.9	0.8637	16.3
16.04.2015 14:01:24.0	52.96	513.7	0.8899	16.18
16.04.2015 14:01:24.1	53.71	513.7	0.8275	16.1
16.04.2015 14:01:24.2	55.85	513.8	0.8433	16.25
16.04.2015 14:01:24.3	55.49	513.8	0.8791	16.19
16.04.2015 14:01:24.4	55.32	513.6	0.8667	16.12
16.04.2015 14:01:24.5	56.78	513.7	0.8647	16.07
16.04.2015 14:01:24.6	58.38	513.8	0.8706	16.38
16.04.2015 14:01:24.7	58.01	513.8	0.8939	16.28
16.04.2015 14:01:24.8	58.39	513.7	0.7542	16.11
16.04.2015 14:01:24.9	61.41	513.8	0.8329	16.07
16.04.2015 14:01:25.0	61.09	513.9	0.8367	16.3
16.04.2015 14:01:25.1	61.01	513.8	0.9437	16.23
16.04.2015 14:01:25.2	62.52	513.8	0.9386	15.99
16.04.2015 14:01:25.3	63.85	513.9	0.8624	16.06
16.04.2015 14:01:25.4	63.56	514	0.9221	16.31
16.04.2015 14:01:25.5	63.75	513.9	0.8455	16.17
16.04.2015 14:01:25.6	66.26	513.9	0.8671	16.01
16.04.2015 14:01:25.7	66.29	514.1	0.8743	16.16
16.04.2015 14:01:25.8	66.21	514.1	0.9618	16.2
16.04.2015 14:01:25.9	68.52	514	0.9161	16.08
16.04.2015 14:01:26.0	69.12	514	1.0247	16.02
16.04.2015 14:01:26.1	69.23	514.2	0.8596	16.27
16.04.2015 14:01:26.2	69.47	514.2	0.8884	16.22
16.04.2015 14:01:26.3	71.4	514.1	0.9439	16.07
16.04.2015 14:01:26.4	71.4	514.1	0.7683	16.1
16.04.2015 14:01:26.5	71.42	514.3	0.8551	16.36
16.04.2015 14:01:26.6	72.99	514.3	0.9369	16.33
16.04.2015 14:01:26.7	74.29	514.3	0.9202	16.01
16.04.2015 14:01:26.8	74.41	514.4	0.9827	16
16.04.2015 14:01:26.9	74.35	514.5	0.9906	16.36
16.04.2015 14:01:27.0	76.89	514.4	0.9372	16.24
16.04.2015 14:01:27.1	76.78	514.5	0.9652	15.97
16.04.2015 14:01:27.2	77	514.6	1.0687	16.09
16.04.2015 14:01:27.3	77.75	514.7	0.9535	16.36
16.04.2015 14:01:27.4	79.63	514.7	0.8606	16.19
16.04.2015 14:01:27.5	79.36	514.6	0.9628	16.09
16.04.2015 14:01:27.6	79.51	514.8	0.9344	16.23
16.04.2015 14:01:27.7	81.89	514.9	0.8921	16.38
16.04.2015 14:01:27.8	82.45	514.7	0.988	16.17
16.04.2015 14:01:27.9	82.34	514.7	0.8366	16.16

21.1555629
21.3418738
21.9838688
21.5098471
20.393305
21.3551196
23.3944603
22.7538522
21.9908838
22.1979874
21.6907453
20.9037456
21.2368211
21.4272248
21.744012
22.0247582
21.927668
21.8513322
20.5515216
19.8981985
19.7854819
21.0153573
21.7688251
19.9059485
20.852031
21.8183668
20.9614654
20.3516641
22.4947866
22.0609112
21.0727715
21.3900008
20.6264362
20.8224222
21.259808
21.1093371
21.084967
21.156778
21.4380197
19.6917114
20.6936275
20.7407798
22.0270925
21.9674918
21.0569066
21.7735483
20.8495652
21.1142077
21.2016879
22.2373271
21.7025936
22.9529529
21.0226955
21.3719659
22.0294265
19.8749303
20.9675965
21.9475889
21.7511043
22.4776381
22.567807
21.9511025
22.2765973
23.4405664
22.1411689
21.0349202
22.2488843
21.9182871
21.4164245
22.538171
20.7395404

16.04.2015 14:01:28.0	82.94	514.9	0.925	16.28	21.8077602
16.04.2015 14:01:28.1	85.11	514.9	0.935	16.25	21.9253231
16.04.2015 14:01:28.2	84.87	514.8	0.8915	16.07	21.4092213
16.04.2015 14:01:28.3	85.01	514.8	0.8907	16.17	21.3996132
16.04.2015 14:01:28.4	86.65	515	0.9134	16.31	21.6705883
16.04.2015 14:01:28.5	87.57	515	0.8656	16.3	21.0959371
16.04.2015 14:01:28.6	87.41	515	0.9237	16.09	21.7924305
16.04.2015 14:01:28.7	88.6	515.1	1.0097	16.12	22.7843359
16.04.2015 14:01:28.8	90.81	515.2	0.9779	16.42	22.4226749
16.04.2015 14:01:28.9	90.4	515.2	0.893	16.38	21.4272248
16.04.2015 14:01:29.0	90.36	515.1	0.8907	16.1	21.3996132
16.04.2015 14:01:29.1	92.35	515.2	1.009	16.2	22.7764367
16.04.2015 14:01:29.2	92.72	515.3	0.8216	16.42	20.5527724
16.04.2015 14:01:29.3	92.67	515.2	0.8605	16.32	21.033698
16.04.2015 14:01:29.4	93.12	515.2	0.9476	16.11	22.0725609
16.04.2015 14:01:29.5	95.95	515.3	0.8329	16.25	20.6936275
16.04.2015 14:01:29.6	95.53	515.3	0.8673	16.34	21.1166426
16.04.2015 14:01:29.7	95.65	515.1	0.9894	16.12	22.5541337
16.04.2015 14:01:29.8	97.97	515.1	0.8329	16.08	20.6936275
16.04.2015 14:01:29.9	98.26	515.2	0.81	16.19	20.4071664
16.04.2015 14:01:30.0	98.17	515.2	0.9255	16.27	21.8136534
16.04.2015 14:01:30.1	98.96	515.1	0.9536	16.1	22.14233
16.04.2015 14:01:30.2	100.92	515.1	0.9343	16.13	21.9171143
16.04.2015 14:01:30.3	100.8	515.3	0.9143	16.31	21.681262
16.04.2015 14:01:30.4	100.7	515.2	0.8564	16.22	20.9835289
16.04.2015 14:01:30.5	102.46	515.2	0.8814	16.01	21.2876009
16.04.2015 14:01:30.6	103.48	515.2	0.9396	16.03	21.9791909
16.04.2015 14:01:30.7	103.46	515.3	0.9752	16.25	22.3916988
16.04.2015 14:01:30.8	104.35	515.2	0.8282	16.27	20.6351586
16.04.2015 14:01:30.9	105.9	515.1	0.9169	16.01	21.7120677
16.04.2015 14:01:31.0	106.07	515.1	0.9111	16.12	21.6432871
16.04.2015 14:01:31.1	105.96	515.1	0.9311	16.34	21.8795487
16.04.2015 14:01:31.2	108.17	515.1	0.9655	16.35	22.280059
16.04.2015 14:01:31.3	108.39	515	0.9812	16.07	22.4604766
16.04.2015 14:01:31.4	108.62	515.1	0.9098	16.24	21.6278408
16.04.2015 14:01:31.5	110	515.1	0.8514	16.41	20.9221841
16.04.2015 14:01:31.6	111.18	515	0.9429	16.26	22.017754
16.04.2015 14:01:31.7	111.06	514.9	0.932	16.14	21.8901206
16.04.2015 14:01:31.8	111.95	515	0.9482	16.37	22.0795477
16.04.2015 14:01:31.9	113.81	515	0.887	16.38	21.3551196
16.04.2015 14:01:32.0	113.66	514.9	0.973	16.22	22.3664273
16.04.2015 14:01:32.1	113.6	514.8	0.935	16.21	21.9253231
16.04.2015 14:01:32.2	115.75	515	0.9018	16.37	21.5325425
16.04.2015 14:01:32.3	116.2	515	0.8836	16.4	21.3141516
16.04.2015 14:01:32.4	116.18	514.9	0.8514	16.16	20.9221841
16.04.2015 14:01:32.5	116.73	514.9	0.9259	16.16	21.8183668
16.04.2015 14:01:32.6	119.06	515.1	0.9537	16.4	22.1434909
16.04.2015 14:01:32.7	118.79	515	0.9155	16.42	21.6954854
16.04.2015 14:01:32.8	118.71	515	0.8896	16.07	21.386395
16.04.2015 14:01:32.9	120.45	515.1	0.9391	16.16	21.9733421
16.04.2015 14:01:33.0	121.53	515.3	0.8473	16.35	20.8717469
16.04.2015 14:01:33.1	121.37	515.2	0.8741	16.33	21.1992627
16.04.2015 14:01:33.2	121.31	515.2	0.9094	16.06	21.6230858
16.04.2015 14:01:33.3	124.61	515.3	0.9235	16.14	21.7900711
16.04.2015 14:01:33.4	124.24	515.4	0.9987	16.34	22.6598861
16.04.2015 14:01:33.5	124.32	515.3	0.9554	16.33	22.1632179
16.04.2015 14:01:33.6	125.22	515.4	1.0826	16.15	23.5925133
16.04.2015 14:01:33.7	127.14	515.6	0.968	16.27	22.3088856
16.04.2015 14:01:33.8	126.81	515.6	0.939	16.3	21.9721722
16.04.2015 14:01:33.9	127.12	515.5	0.914	16.24	21.6777047
16.04.2015 14:01:34.0	129.59	515.5	0.9176	16.13	21.720354
16.04.2015 14:01:34.1	129.52	515.7	1.0442	16.33	23.1703205
16.04.2015 14:01:34.2	129.38	515.7	1.0641	16.28	23.3900645
16.04.2015 14:01:34.3	130.69	515.6	0.9846	16.17	22.4993573
16.04.2015 14:01:34.4	132.22	515.7	1.0813	16.07	23.5783439
16.04.2015 14:01:34.5	132.1	515.8	0.9878	16.31	22.5358897
16.04.2015 14:01:34.6	131.91	515.7	0.9367	16.25	21.9452462
16.04.2015 14:01:34.7	134.53	515.7	1.0385	16.12	23.1069938
16.04.2015 14:01:34.8	134.71	515.7	0.9884	16.12	22.5427329
16.04.2015 14:01:34.9	134.59	515.8	0.9285	16.45	21.8489792
16.04.2015 14:01:35.0	135.56	515.7	0.904	16.35	21.5587915

16.04.2015 14:01:35.1	137.76	515.6	1.0795	16.1	23.5587108
16.04.2015 14:01:35.2	137.65	515.7	0.9848	16.16	22.5016423
16.04.2015 14:01:35.3	137.56	515.6	0.9339	16.34	21.9124221
16.04.2015 14:01:35.4	139.65	515.5	0.9501	16.3	22.1016581
16.04.2015 14:01:35.5	140.16	515.5	1.029	16.09	23.0010618
16.04.2015 14:01:35.6	140.21	515.6	0.8753	16.27	21.2138093
16.04.2015 14:01:35.7	141.42	515.6	0.9506	16.37	22.1074729
16.04.2015 14:01:35.8	142.81	515.5	0.9184	16.2	21.7298203
16.04.2015 14:01:35.9	142.73	515.5	0.9178	16.06	21.722721
16.04.2015 14:01:36.0	142.78	515.7	0.7757	16.17	19.9704151
16.04.2015 14:01:36.1	145.16	515.8	0.8502	16.21	20.9074346
16.04.2015 14:01:36.2	144.98	515.7	0.8564	16	20.9835289
16.04.2015 14:01:36.3	145.39	515.8	0.9592	16.05	22.20725
16.04.2015 14:01:36.4	147.13	515.9	0.9617	16.26	22.236171
16.04.2015 14:01:36.5	147.82	515.9	0.9296	16.28	21.8619177
16.04.2015 14:01:36.6	147.73	515.9	1.0125	16.05	22.8159057
16.04.2015 14:01:36.7	148.94	515.9	0.9696	16.16	22.3273151
16.04.2015 14:01:36.8	150.57	515.9	0.9767	16.29	22.408913
16.04.2015 14:01:36.9	150.37	515.8	0.9834	16.3	22.4856424
16.04.2015 14:01:37.0	150.36	515.8	1.0928	16.02	23.7033943
16.04.2015 14:01:37.1	152.7	515.8	1.0453	16.16	23.1825216
16.04.2015 14:01:37.2	153.04	515.8	1.0531	16.38	23.2688545
16.04.2015 14:01:37.3	153.09	515.6	1.0052	16.36	22.733507
16.04.2015 14:01:37.4	153.53	515.5	0.9761	16.12	22.4020289
16.04.2015 14:01:37.5	155.86	515.6	0.9171	16.21	21.7144355
16.04.2015 14:01:37.6	155.53	515.6	0.9297	16.37	21.8630935
16.04.2015 14:01:37.7	155.59	515.3	0.9892	16.24	22.551854
16.04.2015 14:01:37.8	158.07	515.3	0.9362	16.12	21.9393883
16.04.2015 14:01:37.9	158.19	515.4	0.8953	16.39	21.4548009
16.04.2015 14:01:38.0	158.14	515.5	0.8205	16.35	20.5390092
16.04.2015 14:01:38.1	158.76	515.4	0.9101	16.22	21.6314063
16.04.2015 14:01:38.2	161.04	515.4	0.9606	16.17	22.2234504
16.04.2015 14:01:38.3	160.85	515.7	1.0079	16.3	22.764018
16.04.2015 14:01:38.4	160.83	515.7	0.9153	16.27	21.6931155
16.04.2015 14:01:38.5	163.27	515.7	1.0036	15.99	22.715407
16.04.2015 14:01:38.6	163.4	515.8	1.0366	16.08	23.0858463
16.04.2015 14:01:38.7	163.3	515.9	0.9591	16.36	22.2060924
16.04.2015 14:01:38.8	165.47	515.9	1.0407	16.37	23.1314562
16.04.2015 14:01:38.9	165.84	515.9	0.9489	16.1	22.0876962
16.04.2015 14:01:39.0	166.02	516	0.9808	16.2	22.4558979
16.04.2015 14:01:39.1	166.45	516.1	0.9852	16.4	22.5062117
16.04.2015 14:01:39.2	168.67	516	1.0852	16.25	23.6208265
16.04.2015 14:01:39.3	168.42	515.9	1.0283	15.99	22.993237
16.04.2015 14:01:39.4	168.53	516.1	1.0957	16.07	23.7348247
16.04.2015 14:01:39.5	170.15	516.1	0.9759	16.26	22.3997337
16.04.2015 14:01:39.6	171.11	515.9	1.0456	16.16	23.185848
16.04.2015 14:01:39.7	170.99	515.8	1.046	16.07	23.1902825
16.04.2015 14:01:39.8	171.25	516	1.0061	16.21	22.7436819
16.04.2015 14:01:39.9	173.66	516	1.0717	16.28	23.4734439
16.04.2015 14:01:40.0	173.4	515.8	0.9232	16.09	21.7865315
16.04.2015 14:01:40.1	173.61	515.8	0.8877	16.07	21.3635444
16.04.2015 14:01:40.2	175.01	515.9	0.8273	16.21	20.6239435
16.04.2015 14:01:40.3	176.66	515.9	0.9416	16.25	22.0025705
16.04.2015 14:01:40.4	176.36	515.8	0.9932	16.04	22.5974041
16.04.2015 14:01:40.5	176.67	515.8	1.0653	16.08	23.4032494
16.04.2015 14:01:40.6	178.97	516	0.9963	16.24	22.6326424
16.04.2015 14:01:40.7	179.05	515.9	1.0559	16.25	23.2997678
16.04.2015 14:01:40.8	178.99	515.8	0.9995	15.97	22.66896
16.04.2015 14:01:40.9	180.85	515.8	0.8831	16.08	21.3081203
16.04.2015 14:01:41.0	181.72	515.8	0.902	16.36	21.5349301
16.04.2015 14:01:41.1	181.72	515.7	0.9417	16.24	22.0037389
16.04.2015 14:01:41.2	181.73	515.7	0.9818	16.1	22.4673428
16.04.2015 14:01:41.3	184.52	515.7	0.9635	16.13	22.2569708
16.04.2015 14:01:41.4	184.25	515.7	0.9435	16.36	22.0247582
16.04.2015 14:01:41.5	184.3	515.5	1.002	16.24	22.6972927
16.04.2015 14:01:41.6	186.31	515.5	0.9908	16.19	22.5700851
16.04.2015 14:01:41.7	186.94	515.6	0.9554	16.29	22.1632179
16.04.2015 14:01:41.8	186.77	515.6	1.1462	16.36	24.2756238
16.04.2015 14:01:41.9	187.11	515.4	1.1336	16.24	24.141826
16.04.2015 14:01:42.0	189.54	515.4	0.9641	16.18	22.2638998
16.04.2015 14:01:42.1	189.49	515.5	0.952	16.41	22.1237464

16.04.2015 14:01:42.2	189.31	515.5	1.0425	16.41	23.1514517
16.04.2015 14:01:42.3	190.66	515.3	1.083	16.21	23.5968714
16.04.2015 14:01:42.4	192.19	515.3	1.0855	16.18	23.6240912
16.04.2015 14:01:42.5	192.07	515.4	1.0044	16.44	22.7244588
16.04.2015 14:01:42.6	191.84	515.4	0.9209	16.38	21.7593758
16.04.2015 14:01:42.7	194.93	515.3	0.9943	16.14	22.6099143
16.04.2015 14:01:42.8	195.06	515.3	1.0299	16.13	23.0111184
16.04.2015 14:01:42.9	194.91	515.4	0.9397	16.31	21.9803605
16.04.2015 14:01:43.0	195.87	515.2	0.9167	16.27	21.7096995
16.04.2015 14:01:43.1	197.67	515.2	0.8744	16	21.2029003
16.04.2015 14:01:43.2	197.61	515.3	1.0683	16.02	23.4361793
16.04.2015 14:01:43.3	197.77	515.4	0.9514	16.31	22.1167735
16.04.2015 14:01:43.4	200.27	515.2	1.0429	16.15	23.1558928
16.04.2015 14:01:43.5	200.09	515.3	0.958	16.04	22.1933546
16.04.2015 14:01:43.6	200.18	515.4	0.9101	16.23	21.6314063
16.04.2015 14:01:43.7	202.43	515.5	0.9732	16.39	22.3687259
16.04.2015 14:01:43.8	202.66	515.3	0.9572	16.19	22.1840861
16.04.2015 14:01:43.9	202.67	515.4	0.9804	16.18	22.4513184
16.04.2015 14:01:44.0	203.35	515.6	0.9692	16.28	22.3227091
16.04.2015 14:01:44.1	205.37	515.6	0.904	16.35	21.5587915
16.04.2015 14:01:44.2	205.04	515.5	1.0325	16.08	23.040146
16.04.2015 14:01:44.3	205.32	515.6	1.0248	16.08	22.9540728
16.04.2015 14:01:44.4	207.2	515.8	1.0644	16.33	23.3933614
16.04.2015 14:01:44.5	207.64	515.8	1.1162	16.41	23.9558291
16.04.2015 14:01:44.6	207.55	515.8	1.082	16.12	23.5859747
16.04.2015 14:01:44.7	208.19	515.9	1.0576	16.15	23.3185165
16.04.2015 14:01:44.8	210.56	516	1.0592	16.41	23.3361487
16.04.2015 14:01:44.9	210.24	515.9	1.0589	16.41	23.3328437
16.04.2015 14:01:45.0	210.24	515.9	0.9886	16.14	22.5450135
16.04.2015 14:01:45.1	212.01	516	1.1174	16.19	23.9687028
16.04.2015 14:01:45.2	213.4	516.1	1.0654	16.39	23.4043478
16.04.2015 14:01:45.3	213.27	515.9	0.9293	16.37	21.8583898
16.04.2015 14:01:45.4	213.36	515.9	0.9629	16.14	22.2500397
16.04.2015 14:01:45.5	215.91	515.9	0.9137	16.33	21.6741468
16.04.2015 14:01:45.6	215.83	515.9	0.9975	16.4	22.6462684
16.04.2015 14:01:45.7	215.89	515.7	0.921	16.22	21.7605572
16.04.2015 14:01:45.8	217.67	515.7	1.0593	16.09	23.3372503
16.04.2015 14:01:45.9	218.61	515.9	1.13	16.33	24.1034617
16.04.2015 14:01:46.0	218.49	515.9	1.119	16.32	23.985857
16.04.2015 14:01:46.1	218.64	515.7	0.9752	16.09	22.3916988
16.04.2015 14:01:46.2	221.28	515.7	0.9972	16.02	22.6428626
16.04.2015 14:01:46.3	221.1	515.9	1.0805	16.24	23.5696201
16.04.2015 14:01:46.4	221.04	515.9	1.0346	16.24	23.0635648
16.04.2015 14:01:46.5	222.15	515.7	1.1498	16.09	24.3137165
16.04.2015 14:01:46.6	223.87	515.8	0.9521	16.04	22.1249083
16.04.2015 14:01:46.7	223.63	515.8	1.1222	16.43	24.0201287
16.04.2015 14:01:46.8	224.14	515.7	0.9529	16.31	22.1342016
16.04.2015 14:01:46.9	226.68	515.7	1.0293	16.02	23.0044145
16.04.2015 14:01:47.0	226.72	515.8	1.0509	16.05	23.2445366
16.04.2015 14:01:47.1	226.49	515.8	1.0112	16.36	22.8012537
16.04.2015 14:01:47.2	227.15	515.7	1.0818	16.23	23.5837947
16.04.2015 14:01:47.3	229.26	515.7	1.0817	16.11	23.5827047
16.04.2015 14:01:47.4	229.2	515.9	1.077	16.21	23.5314153
16.04.2015 14:01:47.5	229.13	515.9	1.0432	16.39	23.1592231
16.04.2015 14:01:47.6	231.77	515.8	0.8996	16.22	21.5062614
16.04.2015 14:01:47.7	231.62	515.7	1.0125	16.2	22.8159057
16.04.2015 14:01:47.8	231.78	515.9	1.0682	16.26	23.4350824
16.04.2015 14:01:47.9	232.74	515.8	1.0672	16.31	23.4241104
16.04.2015 14:01:48.0	234.35	515.6	1.0518	16.19	23.2544879
16.04.2015 14:01:48.1	234.29	515.6	1.0985	16.18	23.7651318
16.04.2015 14:01:48.2	234.77	515.7	1.0342	16.45	23.0591059
16.04.2015 14:01:48.3	237	515.6	1.1634	16.39	24.4570869
16.04.2015 14:01:48.4	236.64	515.4	1.0416	16.12	23.1414561
16.04.2015 14:01:48.5	236.97	515.5	1.0268	16.09	22.9764605
16.04.2015 14:01:48.6	239.42	515.5	1.0522	16.37	23.2589093
16.04.2015 14:01:48.7	239.28	515.4	1.0952	16.23	23.7294086
16.04.2015 14:01:48.8	239.3	515.4	1.0752	16.07	23.511743
16.04.2015 14:01:48.9	240.31	515.5	1.1057	16.06	23.8428876
16.04.2015 14:01:49.0	242.15	515.6	1.0117	16.35	22.8068902
16.04.2015 14:01:49.1	241.92	515.5	0.956	16.22	22.1701761
16.04.2015 14:01:49.2	241.97	515.5	1.0183	16.05	22.8811616

16.04.2015 14:01:49.3	244.06	515.6	1.0794	16.15	23.5576196
16.04.2015 14:01:49.4	244.57	515.6	1.022	16.4	22.9226934
16.04.2015 14:01:49.5	244.59	515.4	1.0433	16.17	23.1603331
16.04.2015 14:01:49.6	245.78	515.4	0.9673	16.06	22.3008179
16.04.2015 14:01:49.7	247.35	515.5	0.9599	16.23	22.2153517
16.04.2015 14:01:49.8	247.15	515.5	1.034	16.33	23.0568761
16.04.2015 14:01:49.9	247.15	515.3	1.1738	16.15	24.5661585
16.04.2015 14:01:50.0	249.56	515.2	1.0434	16.12	23.161443
16.04.2015 14:01:50.1	249.81	515.3	0.9876	16.41	22.5336081
16.04.2015 14:01:50.2	249.74	515.3	1.0024	16.35	22.7018226
16.04.2015 14:01:50.3	251.34	515.1	0.9562	16.14	22.1724951
16.04.2015 14:01:50.4	252.43	515.2	0.9304	16.13	21.8713227
16.04.2015 14:01:50.5	252.41	515.3	0.983	16.41	22.4810689
16.04.2015 14:01:50.6	252.33	515.3	1.0005	16.37	22.6802973
16.04.2015 14:01:50.7	254.99	515.3	0.9707	16.05	22.3399765
16.04.2015 14:01:50.8	255.01	515.4	0.9278	16.06	21.8407416
16.04.2015 14:01:50.9	254.92	515.4	0.833	16.33	20.6948698
16.04.2015 14:01:51.0	255.99	515.3	0.9222	16.27	21.7747289
16.04.2015 14:01:51.1	257.63	515.3	0.8533	15.98	20.9455163
16.04.2015 14:01:51.2	257.55	515.4	0.7751	16.01	19.9626901
16.04.2015 14:01:51.3	257.43	515.4	0.8611	16.31	21.0410298
16.04.2015 14:01:51.4	260.11	515.3	0.9466	16.18	22.0609112
16.04.2015 14:01:51.5	260.41	515.3	0.9619	16.01	22.2384831
16.04.2015 14:01:51.6	260.52	515.5	0.9276	16.16	21.8383875
16.04.2015 14:01:51.7	261	515.5	1.0075	16.29	22.7595004
16.04.2015 14:01:51.8	263.19	515.3	0.9571	16.11	22.1829273
16.04.2015 14:01:51.9	262.95	515.3	0.9601	16.05	22.2176659
16.04.2015 14:01:52.0	263.06	515.5	0.8747	16.18	21.2065373
16.04.2015 14:01:52.1	264.72	515.5	0.9135	16.25	21.6717745
16.04.2015 14:01:52.2	265.46	515.4	0.9405	16.02	21.9897148
16.04.2015 14:01:52.3	265.65	515.4	0.9497	16.06	22.0970051
16.04.2015 14:01:52.4	266.81	515.5	0.8909	16.25	21.4020156
16.04.2015 14:01:52.5	268.65	515.5	0.8561	16.22	20.9798532
16.04.2015 14:01:52.6	268.4	515.3	0.8957	16.03	21.4595932
16.04.2015 14:01:52.7	268.63	515.3	0.805	16.12	20.3440839
16.04.2015 14:01:52.8	270.37	515.4	0.8618	16.41	21.0495803
16.04.2015 14:01:52.9	270.64	515.3	0.7811	16.31	20.0398061
16.04.2015 14:01:53.0	270.62	515.2	0.796	16.06	20.2300395
16.04.2015 14:01:53.1	271.44	515.4	0.7596	16.13	19.762081
16.04.2015 14:01:53.2	273.82	515.4	0.7081	16.46	19.0804009
16.04.2015 14:01:53.3	273.61	515.3	0.8841	16.25	21.3201813
16.04.2015 14:01:53.4	273.59	515.3	0.7823	16.17	20.0551938
16.04.2015 14:01:53.5	275.35	515.5	0.7283	16.24	19.3506408
16.04.2015 14:01:53.6	276.3	515.5	0.8136	16.5	20.4524654
16.04.2015 14:01:53.7	276.19	515.3	0.9107	16.19	21.6385356
16.04.2015 14:01:53.8	276.32	515.3	0.8338	16.21	20.7048049
16.04.2015 14:01:53.9	279.01	515.6	0.7346	16.32	19.4341549
16.04.2015 14:01:54.0	278.75	515.6	0.5831	16.43	17.3145703
16.04.2015 14:01:54.1	278.65	515.5	0.7225	16.13	19.273435
16.04.2015 14:01:54.2	280.13	515.5	0.561	16.15	16.9832823
16.04.2015 14:01:54.3	282.01	515.8	0.6363	16.3	18.0871924
16.04.2015 14:01:54.4	281.64	515.8	0.5824	16.39	17.3041743
16.04.2015 14:01:54.5	281.63	515.7	0.6158	16.07	17.793445
16.04.2015 14:01:54.6	284.2	515.9	0.535	16.12	16.5850616
16.04.2015 14:01:54.7	284.31	515.9	0.6451	16.33	18.2118355
16.04.2015 14:01:54.8	284.32	515.9	0.5726	16.36	17.1579686
16.04.2015 14:01:54.9	284.89	515.8	0.4435	16.04	15.1003498
16.04.2015 14:01:55.0	287.21	515.9	0.5287	16.11	16.487122
16.04.2015 14:01:55.1	286.83	515.9	0.5502	16.33	16.8190124
16.04.2015 14:01:55.2	286.97	515.7	0.5483	16.27	16.7899468
16.04.2015 14:01:55.3	289.92	515.7	0.5513	16.01	16.8358169
16.04.2015 14:01:55.4	289.86	515.8	0.5626	16.1	17.0074836
16.04.2015 14:01:55.5	289.87	515.9	0.6479	16.32	18.2513161
16.04.2015 14:01:55.6	290.12	515.7	0.5415	16.14	16.6855078
16.04.2015 14:01:55.7	290.42	515.6	0.5406	16.01	16.6716359
16.04.2015 14:01:55.8	290.5	515.8	0.606	16.26	17.6512924
16.04.2015 14:01:55.9	290.42	515.8	0.6213	16.3	17.8727292
16.04.2015 14:01:56.0	291.26	515.6	0.7553	16.11	19.7060663
16.04.2015 14:01:56.1	291.59	515.6	0.6601	16.23	18.4223515
16.04.2015 14:01:56.2	291.57	515.8	0.6213	16.38	17.8727292
16.04.2015 14:01:56.3	291.69	515.7	0.7571	16.37	19.7295337

16.04.2015 14:01:56.4	291.75	515.5	0.8363	16.17	20.7358215
16.04.2015 14:01:56.5	291.91	515.6	0.6536	16.14	18.3314247
16.04.2015 14:01:56.6	291.82	515.6	0.6916	16.36	18.8567867
16.04.2015 14:01:56.7	291.84	515.6	0.7868	16.31	20.1127925
16.04.2015 14:01:56.8	291.82	515.4	0.7117	15.99	19.128842
16.04.2015 14:01:56.9	291.99	515.5	0.7187	16.02	19.2226837
16.04.2015 14:01:57.0	291.9	515.5	0.7025	16.35	19.0048025
16.04.2015 14:01:57.1	291.99	515.4	0.7026	16.21	19.0061551
16.04.2015 14:01:57.2	291.89	515.3	0.5671	16.09	17.075366
16.04.2015 14:01:57.3	292.07	515.4	0.5593	16.12	16.9575305
16.04.2015 14:01:57.4	291.89	515.4	0.6446	16.45	18.2047763
16.04.2015 14:01:57.5	291.77	515.2	0.5763	16.22	17.2133146
16.04.2015 14:01:57.6	291.84	515.2	0.6212	16.19	17.8712908
16.04.2015 14:01:57.7	292.13	515.3	0.6133	16.35	17.7572897
16.04.2015 14:01:57.8	292.25	515.3	0.6592	16.39	18.4097884
16.04.2015 14:01:57.9	292.22	515.1	0.636	16.15	18.0829281
16.04.2015 14:01:58.0	292.29	515	0.5251	16.23	16.4308945
16.04.2015 14:01:58.1	291.2	515.2	0.4907	16.37	15.8835738
16.04.2015 14:01:58.2	290.39	515.1	0.5671	16.43	17.075366
16.04.2015 14:01:58.3	290.37	515	0.6736	16.14	18.6097799
16.04.2015 14:01:58.4	289.8	515	0.635	16.27	18.0687063
16.04.2015 14:01:58.5	287.84	515.1	0.7306	16.43	19.3811718
16.04.2015 14:01:58.6	287.87	515.1	0.7816	16.44	20.0462191
16.04.2015 14:01:58.7	287.62	515.1	0.7914	16.12	20.1715012
16.04.2015 14:01:58.8	285.38	515.1	0.7459	16.22	19.5830576
16.04.2015 14:01:58.9	285.38	515.1	0.7522	16.4	19.6655846
16.04.2015 14:01:59.0	285.32	515	0.7345	16.3	19.432832
16.04.2015 14:01:59.1	283.96	514.9	0.7105	15.99	19.1127086
16.04.2015 14:01:59.2	282.8	515.1	0.7023	16.07	19.002097
16.04.2015 14:01:59.3	282.76	515.1	0.7441	16.32	19.5594145
16.04.2015 14:01:59.4	282.77	514.9	0.8294	16.16	20.6501025
16.04.2015 14:01:59.5	280.26	514.9	0.7995	16.08	20.2744663
16.04.2015 14:01:59.6	280.36	515.1	0.7751	16.23	19.9626901
16.04.2015 14:01:59.7	280.15	515.1	0.7104	16.43	19.1113635
16.04.2015 14:01:59.8	279.38	515	0.6423	16.16	18.1722691
16.04.2015 14:01:59.9	277.39	515	0.7721	16.14	19.9240202
16.04.2015 14:02:00.0	277.82	515.2	0.7916	16.29	20.1740499
16.04.2015 14:02:00.1	277.41	515.2	0.8604	16.4	21.0324758
16.04.2015 14:02:00.2	274.32	515.1	0.8978	16.11	21.4847348
16.04.2015 14:02:00.3	274.87	515.1	0.9534	16.26	22.1400079
16.04.2015 14:02:00.4	274.82	515.2	0.7909	16.4	20.1651281
16.04.2015 14:02:00.5	274.18	515.1	0.8219	16.48	20.5565244
16.04.2015 14:02:00.6	271.74	515	0.8865	16.14	21.3490998
16.04.2015 14:02:00.7	272.31	515.1	0.963	16.23	22.2511951
16.04.2015 14:02:00.8	272.14	515.1	0.9225	16.43	21.7782703
16.04.2015 14:02:00.9	269.7	515.1	1.0443	16.37	23.17143
16.04.2015 14:02:01.0	269.4	515.1	1.0062	16.06	22.7448121
16.04.2015 14:02:01.1	269.73	515.2	0.9843	16.08	22.4959294
16.04.2015 14:02:01.2	267.89	515.2	0.9111	16.32	21.6432871
16.04.2015 14:02:01.3	266.84	515.1	1.0271	16.22	22.9798168
16.04.2015 14:02:01.4	266.89	515	1.0628	16	23.3757724
16.04.2015 14:02:01.5	266.98	515.2	0.9033	16.09	21.550443
16.04.2015 14:02:01.6	264.26	515.2	1.0583	16.3	23.3262322
16.04.2015 14:02:01.7	264.44	514.9	0.9416	16.15	22.0025705
16.04.2015 14:02:01.8	264.35	515	0.933	16.12	21.901861
16.04.2015 14:02:01.9	263.44	515.1	0.9482	16.23	22.0795477
16.04.2015 14:02:02.0	261.65	515.1	1.007	16.3	22.7538522
16.04.2015 14:02:02.1	261.64	514.9	1.0855	16.09	23.6240912
16.04.2015 14:02:02.2	261.89	515	1.1068	16.16	23.8547447
16.04.2015 14:02:02.3	259.71	515.2	1.1488	16.29	24.3031412
16.04.2015 14:02:02.4	259.17	515.1	1.1096	16.32	23.8848997
16.04.2015 14:02:02.5	259.12	515.1	1.1303	16.1	24.106661
16.04.2015 14:02:02.6	258.78	515.2	1.1714	16.21	24.5410312
16.04.2015 14:02:02.7	256.21	515.2	0.9618	16.46	22.2373271
16.04.2015 14:02:02.8	256.27	515.1	1.115	16.4	23.9429485
16.04.2015 14:02:02.9	256.15	515	1.0324	16.07	23.0390303
16.04.2015 14:02:03.0	254.72	515	1.0092	16.23	22.7786939
16.04.2015 14:02:03.1	253.66	515	1.0459	16.42	23.189174
16.04.2015 14:02:03.2	253.73	514.9	1.1043	16.21	23.8277883
16.04.2015 14:02:03.3	252.74	514.8	1.045	16.03	23.1791946
16.04.2015 14:02:03.4	251.06	515	1.0739	16.1	23.4975249

16.04.2015 14:02:03.5	251.22	515	0.9782	16.28
16.04.2015 14:02:03.6	250.86	514.8	0.9401	16.1
16.04.2015 14:02:03.7	248.4	514.8	1.0938	16.03
16.04.2015 14:02:03.8	248.71	515	1.0669	16.2
16.04.2015 14:02:03.9	248.6	515	1.0602	16.21
16.04.2015 14:02:04.0	247.07	514.8	1.046	16.08
16.04.2015 14:02:04.1	246	514.9	0.9969	16.06
16.04.2015 14:02:04.2	246.17	515.1	1.096	16.33
16.04.2015 14:02:04.3	245.96	515.1	1.0342	16.34
16.04.2015 14:02:04.4	243.33	515.1	1.0807	16.08
16.04.2015 14:02:04.5	243.6	515.2	1.02	16.14
16.04.2015 14:02:04.6	243.53	515.3	0.9679	16.4
16.04.2015 14:02:04.7	242.55	515.3	1.0845	16.33
16.04.2015 14:02:04.8	240.66	515.2	1.1203	16.11
16.04.2015 14:02:04.9	241.06	515.4	1.0262	16.2
16.04.2015 14:02:05.0	240.58	515.4	0.901	16.44
16.04.2015 14:02:05.1	237.81	515.4	1.0341	16.31
16.04.2015 14:02:05.2	237.96	515.4	1.0664	16.09
16.04.2015 14:02:05.3	238	515.6	1.0476	16.21
16.04.2015 14:02:05.4	237.59	515.7	1.0257	16.47
16.04.2015 14:02:05.5	235.61	515.5	1.1003	16.22
16.04.2015 14:02:05.6	235.77	515.6	1.1576	16.15
16.04.2015 14:02:05.7	235.82	515.7	1.1534	16.27
16.04.2015 14:02:05.8	232.91	515.7	0.9699	16.35
16.04.2015 14:02:05.9	232.77	515.6	0.9769	16.13
16.04.2015 14:02:06.0	232.83	515.7	1.0434	16.12
16.04.2015 14:02:06.1	231.14	515.9	1.0065	16.27
16.04.2015 14:02:06.2	230.16	515.9	1.029	16.29
16.04.2015 14:02:06.3	230.2	515.8	1.1137	16.06
16.04.2015 14:02:06.4	230.19	515.9	1.0381	16.07
16.04.2015 14:02:06.5	227.58	516	1.109	16.35
16.04.2015 14:02:06.6	227.65	515.9	1.0394	16.32
16.04.2015 14:02:06.7	227.63	515.9	1.0958	16.07
16.04.2015 14:02:06.8	226.55	515.9	1.014	16.14
16.04.2015 14:02:06.9	224.92	515.9	1.0828	16.39
16.04.2015 14:02:07.0	225.15	515.8	1.105	16.29
16.04.2015 14:02:07.1	225.1	515.7	1.1395	16.06
16.04.2015 14:02:07.2	222.74	515.9	1.1234	16.11
16.04.2015 14:02:07.3	222.52	515.9	1.0657	16.44
16.04.2015 14:02:07.4	222.47	515.7	1.1646	16.21
16.04.2015 14:02:07.5	221.7	515.7	1.1327	16.09
16.04.2015 14:02:07.6	219.37	515.9	1.0859	16.25
16.04.2015 14:02:07.7	219.6	515.9	1.1068	16.32
16.04.2015 14:02:07.8	219.5	515.7	1.1435	16.2
16.04.2015 14:02:07.9	217.74	515.7	1.255	16.19
16.04.2015 14:02:08.0	217.04	515.9	1.0876	16.37
16.04.2015 14:02:08.1	216.89	515.9	1.027	16.32
16.04.2015 14:02:08.2	216.55	515.8	0.9804	16.08
16.04.2015 14:02:08.3	214.35	515.8	0.9169	16.06
16.04.2015 14:02:08.4	214.49	515.9	1.0765	16.32
16.04.2015 14:02:08.5	214.31	515.9	0.9015	16.29
16.04.2015 14:02:08.6	212.81	515.8	0.9485	16
16.04.2015 14:02:08.7	211.44	515.9	1.0206	16.05
16.04.2015 14:02:08.8	211.46	515.9	1.0111	16.41
16.04.2015 14:02:08.9	211.44	515.8	1.086	16.28
16.04.2015 14:02:09.0	208.84	515.8	1.1509	16.03
16.04.2015 14:02:09.1	208.99	515.9	1.1111	16.08
16.04.2015 14:02:09.2	208.86	515.9	1.0764	16.37
16.04.2015 14:02:09.3	208.04	515.7	1.0449	16.18
16.04.2015 14:02:09.4	206.11	515.7	1.0279	16.02
16.04.2015 14:02:09.5	206.45	515.8	1.046	16.16
16.04.2015 14:02:09.6	206.31	515.9	1.031	16.36
16.04.2015 14:02:09.7	203.97	515.7	1.0363	16.18
16.04.2015 14:02:09.8	203.31	515.7	1.1257	16.15
16.04.2015 14:02:09.9	203.48	515.9	1.0987	16.33
16.04.2015 14:02:10.0	202.93	515.9	1.0572	16.34
16.04.2015 14:02:10.1	200.46	515.7	1.0934	16.13
16.04.2015 14:02:10.2	200.97	515.7	1.1602	16.16
16.04.2015 14:02:10.3	200.94	515.8	1.0745	16.38
16.04.2015 14:02:10.4	198.21	515.7	1.0286	16.38
16.04.2015 14:02:10.5	198.06	515.6	1.1727	16.1

22.426114
21.9850381
23.714237
23.4208178
23.347162
23.1902825
22.6394564
23.7380737
23.0591059
23.5718014
22.9002531
22.3077332
23.6132071
23.9997858
22.9697465
21.5229894
23.057991
23.4153291
23.2080121
22.96415
23.7845946
24.3960467
24.3517497
22.3307689
22.4112073
23.161443
22.7482026
23.0010618
23.9289866
23.1025433
23.8784411
23.1170043
23.7359077
22.8328001
23.5946924
23.8353392
24.2045695
24.0329679
23.4076427
24.4696969
24.1322406
23.6284435
23.8547447
24.247015
25.4016577
23.6469317
22.9786981
22.4513184
21.7120677
23.5259524
21.5289606
22.0830403
22.9069875
22.8001263
23.6295314
24.3253441
23.9010385
23.5248597
23.1780856
22.9887644
23.1902825
23.0234038
23.0825054
24.0575574
23.7672952
23.3141064
23.7099005
24.4234284
23.5040881
22.9965908
24.554645

16.04.2015 14:02:10.6	198.37	515.7	1.1521	16.09
16.04.2015 14:02:10.7	197.54	515.8	1.0312	16.42
16.04.2015 14:02:10.8	195.37	515.7	1.0122	16.32
16.04.2015 14:02:10.9	195.54	515.7	1.0309	16.05
16.04.2015 14:02:11.0	195.64	515.8	1.0472	16.1
16.04.2015 14:02:11.1	192.93	515.8	1.0285	16.37
16.04.2015 14:02:11.2	193.09	515.7	1.059	16.2
16.04.2015 14:02:11.3	193.04	515.7	1.0229	16.06
16.04.2015 14:02:11.4	192.01	515.8	0.9572	16.2
16.04.2015 14:02:11.5	190.34	515.8	0.9975	16.35
16.04.2015 14:02:11.6	190.52	515.6	1.0146	16.09
16.04.2015 14:02:11.7	190.54	515.6	1.0755	16.04
16.04.2015 14:02:11.8	188.27	515.7	1.041	16.2
16.04.2015 14:02:11.9	187.92	515.7	1.0574	16.25
16.04.2015 14:02:12.0	187.76	515.5	1.0751	16.12
16.04.2015 14:02:12.1	187.31	515.6	1.0704	16.1
16.04.2015 14:02:12.2	184.83	515.7	1.0347	16.34
16.04.2015 14:02:12.3	184.98	515.7	1.118	16.39
16.04.2015 14:02:12.4	184.91	515.7	1.1781	16.14
16.04.2015 14:02:12.5	183.27	515.9	1.0012	16.19
16.04.2015 14:02:12.6	182.42	516	1.0005	16.55
16.04.2015 14:02:12.7	182.44	516	0.9367	16.36
16.04.2015 14:02:12.8	182.08	516	1.055	16.13
16.04.2015 14:02:12.9	179.82	516.1	1.0406	16.24
16.04.2015 14:02:13.0	179.85	516.2	1.0895	16.47
16.04.2015 14:02:13.1	179.86	516.1	1.0815	16.33
16.04.2015 14:02:13.2	178.37	516.2	1.0607	16.05
16.04.2015 14:02:13.3	176.86	516.3	1.1584	16.14
16.04.2015 14:02:13.4	176.95	516.4	1.0254	16.34
16.04.2015 14:02:13.5	176.98	516.2	1.0374	16.25
16.04.2015 14:02:13.6	174.44	516.2	1.0101	16.19
16.04.2015 14:02:13.7	174.41	516.4	0.9851	16.36
16.04.2015 14:02:13.8	174.32	516.4	0.998	16.41
16.04.2015 14:02:13.9	173.53	516.2	0.9873	16.2
16.04.2015 14:02:14.0	171.64	516.3	0.9939	16.19
16.04.2015 14:02:14.1	171.91	516.4	1.0382	16.34
16.04.2015 14:02:14.2	171.62	516.4	0.9768	16.33
16.04.2015 14:02:14.3	168.6	516.3	0.9905	16.11
16.04.2015 14:02:14.4	168.98	516.4	1.0379	16.14
16.04.2015 14:02:14.5	168.88	516.5	1.0523	16.36
16.04.2015 14:02:14.6	168.49	516.4	1.0289	16.4
16.04.2015 14:02:14.7	166.05	516.4	0.9775	16.11
16.04.2015 14:02:14.8	166.43	516.5	1.0003	16.23
16.04.2015 14:02:14.9	166.23	516.6	1.1062	16.46
16.04.2015 14:02:15.0	163.93	516.5	1.0141	16.37
16.04.2015 14:02:15.1	163.7	516.4	0.9899	16.2
16.04.2015 14:02:15.2	163.71	516.6	1.0349	16.29
16.04.2015 14:02:15.3	162.95	516.7	0.981	16.37
16.04.2015 14:02:15.4	160.91	516.5	1.0431	16.25
16.04.2015 14:02:15.5	161.1	516.5	0.9984	16.15
16.04.2015 14:02:15.6	161.09	516.7	0.9865	16.26
16.04.2015 14:02:15.7	158.42	516.8	0.9429	16.26
16.04.2015 14:02:15.8	158.51	516.7	0.9598	16.19
16.04.2015 14:02:15.9	158.57	516.7	1.0106	16.14
16.04.2015 14:02:16.0	156.59	516.9	1.1011	16.29
16.04.2015 14:02:16.1	155.86	516.8	1.0968	16.27
16.04.2015 14:02:16.2	155.81	516.7	1.0933	16.08
16.04.2015 14:02:16.3	155.7	516.8	1.0307	16.02
16.04.2015 14:02:16.4	153.26	516.9	0.9539	16.29
16.04.2015 14:02:16.5	153.32	516.8	0.9671	16.33
16.04.2015 14:02:16.6	153.32	516.7	1.0455	16.12
16.04.2015 14:02:16.7	151.06	516.8	1.0295	16.18
16.04.2015 14:02:16.8	150.74	516.8	0.9965	16.41
16.04.2015 14:02:16.9	150.82	516.7	1.0187	16.32
16.04.2015 14:02:17.0	150	516.7	1.0656	16.04
16.04.2015 14:02:17.1	148.07	516.9	1.0436	16.12
16.04.2015 14:02:17.2	148.23	516.9	1.1661	16.32
16.04.2015 14:02:17.3	148.26	516.8	1.1525	16.2
16.04.2015 14:02:17.4	146.23	516.8	1.1724	16.07
16.04.2015 14:02:17.5	145.69	516.9	1.0539	16.25
16.04.2015 14:02:17.6	145.62	517	1.0257	16.39

24.3380223
23.0256368
22.8125253
23.0222872
23.203581
22.9954729
23.3339454
22.9327843
22.1840861
22.6462684
22.8395544
23.5150228
23.13479
23.3163116
23.5106496
23.4592027
23.0646794
23.9751371
24.6111142
22.6882301
22.6802973
21.9452462
23.2898358
23.1303449
23.6675779
23.5805244
23.3526667
24.4044751
22.9607914
23.0947529
22.7888486
22.5050694
22.6519434
22.5301854
22.605366
23.103656
22.4100602
22.5666679
23.1003177
23.2600146
22.9999441
22.4180885
22.6780303
23.8482779
22.833926
22.5598319
23.0669084
22.4581874
23.1581131
22.6564824
22.5210556
22.017754
22.2141945
22.7944881
23.7932396
23.7467357
23.7088163
23.0200538
22.1458127
22.2985123
23.1847392
23.0066493
22.634914
22.8856552
23.4065445
23.1636627
24.4854503
24.342247
24.551504
23.277691
22.96415

16.04.2015 14:02:17.7	145.25	516.8	1.0427	16.21	23.1536724
16.04.2015 14:02:17.8	142.98	516.8	1.026	16.25	22.9675081
16.04.2015 14:02:17.9	143.25	516.9	1.1307	16.37	24.1109262
16.04.2015 14:02:18.0	142.97	516.8	1.0928	16.38	23.7033943
16.04.2015 14:02:18.1	141.28	516.6	1.0504	16.2	23.2390063
16.04.2015 14:02:18.2	140.17	516.6	0.9463	16.25	22.0574151
16.04.2015 14:02:18.3	140.27	516.6	1.0175	16.4	22.8721719
16.04.2015 14:02:18.4	139.96	516.5	0.9948	16.44	22.6155985
16.04.2015 14:02:18.5	137.35	516.4	0.9362	16.12	21.9393883
16.04.2015 14:02:18.6	137.76	516.4	0.9811	16.08	22.459332
16.04.2015 14:02:18.7	137.52	516.4	0.9601	16.38	22.2176659
16.04.2015 14:02:18.8	135.68	516.3	0.9938	16.32	22.6042287
16.04.2015 14:02:18.9	134.79	516.2	1.0616	16.09	23.362572
16.04.2015 14:02:19.0	135.1	516.4	1.0805	16.16	23.5696201
16.04.2015 14:02:19.1	134.67	516.5	1.0157	16.39	22.851932
16.04.2015 14:02:19.2	132.3	516.3	1.0247	16.19	22.9529529
16.04.2015 14:02:19.3	132.3	516.3	0.9632	16.11	22.2535055
16.04.2015 14:02:19.4	132.53	516.5	0.9404	16.27	21.9885457
16.04.2015 14:02:19.5	130.13	516.5	0.9599	16.34	22.2153517
16.04.2015 14:02:19.6	129.74	516.3	1.0043	16.14	22.7233275
16.04.2015 14:02:19.7	129.88	516.3	0.9887	16.07	22.5461537
16.04.2015 14:02:19.8	128.47	516.5	0.964	16.25	22.2627451
16.04.2015 14:02:19.9	127.12	516.5	0.9164	16.34	21.7061469
16.04.2015 14:02:20.0	127.12	516.4	1.0285	16.09	22.9954729
16.04.2015 14:02:20.1	127.41	516.4	0.9821	16.11	22.4707751
16.04.2015 14:02:20.2	124.67	516.6	1.0752	16.3	23.511743
16.04.2015 14:02:20.3	124.64	516.6	1.0811	16.3	23.5761633
16.04.2015 14:02:20.4	124.65	516.6	1.0195	16.05	22.8946396
16.04.2015 14:02:20.5	123.88	516.6	1.1499	16.03	24.3147738
16.04.2015 14:02:20.6	121.96	516.7	1.0187	16.35	22.8856552
16.04.2015 14:02:20.7	122.24	516.6	0.9842	16.3	22.4947866
16.04.2015 14:02:20.8	122.07	516.5	1.0829	16.14	23.5957819
16.04.2015 14:02:20.9	120.05	516.6	1.0331	16.23	23.0468395
16.04.2015 14:02:21.0	119.57	516.7	1.0319	16.42	23.0334506
16.04.2015 14:02:21.1	119.61	516.5	0.98	16.32	22.4467379
16.04.2015 14:02:21.2	118.98	516.5	1.0171	16.17	22.8676757
16.04.2015 14:02:21.3	116.51	516.7	1.0538	16.29	23.2765866
16.04.2015 14:02:21.4	116.67	516.8	1.0742	16.4	23.5008067
16.04.2015 14:02:21.5	116.61	516.6	1.1102	16.21	23.8913565
16.04.2015 14:02:21.6	114.98	516.7	1.0639	16.11	23.3878663
16.04.2015 14:02:21.7	114.07	516.9	0.9718	16.29	22.3526308
16.04.2015 14:02:21.8	114	516.9	0.9434	16.28	22.023591
16.04.2015 14:02:21.9	113.85	516.8	0.9371	16.14	21.9499313
16.04.2015 14:02:22.0	111.48	516.9	0.9426	16.13	22.0142511
16.04.2015 14:02:22.1	111.61	517	0.8904	16.38	21.396009
16.04.2015 14:02:22.2	111.35	517	0.9885	16.38	22.5438732
16.04.2015 14:02:22.3	110.1	516.9	0.9784	16.15	22.4284065
16.04.2015 14:02:22.4	108.47	517	1.0513	16.15	23.24896
16.04.2015 14:02:22.5	108.53	517.1	0.9546	16.47	22.1539368
16.04.2015 14:02:22.6	108.5	517.1	1.0207	16.37	22.9081097
16.04.2015 14:02:22.7	106.17	517.1	0.943	16.08	22.0189215
16.04.2015 14:02:22.8	106.14	517.2	1.0179	16.16	22.8766672
16.04.2015 14:02:22.9	105.87	517.3	1.0161	16.4	22.8564313
16.04.2015 14:02:23.0	104.4	517.2	1.0239	16.33	22.9439913
16.04.2015 14:02:23.1	103.22	517.2	1.0209	16.17	22.910354
16.04.2015 14:02:23.2	103.49	517.4	0.9901	16.26	22.5621108
16.04.2015 14:02:23.3	103.27	517.5	0.9487	16.39	22.0853684
16.04.2015 14:02:23.4	100.72	517.3	0.9524	16.18	22.1283937
16.04.2015 14:02:23.5	100.78	517.3	0.8927	16.15	21.4236253
16.04.2015 14:02:23.6	100.89	517.6	0.8869	16.3	21.3539157
16.04.2015 14:02:23.7	98.81	517.6	0.9439	16.45	22.0294265
16.04.2015 14:02:23.8	98.13	517.5	0.9569	16.16	22.1806094
16.04.2015 14:02:23.9	98.33	517.6	0.9219	16.24	21.7711868
16.04.2015 14:02:24.0	97.99	517.7	0.9968	16.38	22.6383209
16.04.2015 14:02:24.1	95.47	517.8	0.997	16.4	22.6405919
16.04.2015 14:02:24.2	95.64	517.7	0.9729	16.1	22.3652779
16.04.2015 14:02:24.3	95.82	517.8	0.9805	16.12	22.4524634
16.04.2015 14:02:24.4	95.16	517.9	0.9412	16.37	21.9978966
16.04.2015 14:02:24.5	92.96	517.9	0.9183	16.27	21.7286372
16.04.2015 14:02:24.6	93.1	517.9	0.9549	16.01	22.1574176
16.04.2015 14:02:24.7	93.19	518	0.9349	16.05	21.9241506

16.04.2015 14:02:24.8	90.05	518	0.9714	16.39	22.3480301
16.04.2015 14:02:24.9	90.23	517.9	1.0068	16.26	22.7515925
16.04.2015 14:02:25.0	90.18	517.9	0.9196	16.15	21.744012
16.04.2015 14:02:25.1	89.3	518.1	0.9696	16.19	22.3273151
16.04.2015 14:02:25.2	87.4	518.2	1.0178	16.35	22.8755435
16.04.2015 14:02:25.3	87.53	518	0.9599	16.18	22.2153517
16.04.2015 14:02:25.4	87.56	518.1	0.9487	16.11	22.0853684
16.04.2015 14:02:25.5	85.54	518.3	0.9938	16.24	22.6042287
16.04.2015 14:02:25.6	85	518.3	0.959	16.38	22.2049347
16.04.2015 14:02:25.7	84.89	518.2	0.9977	16.16	22.6485385
16.04.2015 14:02:25.8	84.57	518.2	1.0453	16.12	23.1825216
16.04.2015 14:02:25.9	82	518.4	0.9968	16.42	22.6383209
16.04.2015 14:02:26.0	81.98	518.4	1.0629	16.38	23.3768721
16.04.2015 14:02:26.1	81.85	518.3	1.0137	16.14	22.8294222
16.04.2015 14:02:26.2	80.86	518.3	0.9147	16.14	21.6860042
16.04.2015 14:02:26.3	79.87	518.3	1.0258	16.43	22.9652694
16.04.2015 14:02:26.4	79.85	518.2	0.941	16.29	21.9955593
16.04.2015 14:02:26.5	78.89	518.2	0.9588	16.09	22.2026192
16.04.2015 14:02:26.6	76.85	518.2	1.0199	16.13	22.8991306
16.04.2015 14:02:26.7	76.94	518.3	0.9056	16.44	21.5778616
16.04.2015 14:02:26.8	76.92	518.2	0.8977	16.33	21.4835383
16.04.2015 14:02:26.9	74.87	518.1	0.8835	16.07	21.3129455
16.04.2015 14:02:27.0	74.39	518.3	0.9301	16.19	21.8677963
16.04.2015 14:02:27.1	74.35	518.3	1.0541	16.38	23.2798996
16.04.2015 14:02:27.2	73.18	518.1	0.9378	16.21	21.9581279
16.04.2015 14:02:27.3	71.67	518	0.9433	16.1	22.0224237
16.04.2015 14:02:27.4	71.88	518.1	0.9075	16.26	21.6004856
16.04.2015 14:02:27.5	71.83	518	0.9904	16.39	22.5655287
16.04.2015 14:02:27.6	69.29	517.8	0.8488	16.14	20.8902137
16.04.2015 14:02:27.7	69.31	517.8	0.8888	16.17	21.3767767
16.04.2015 14:02:27.8	69.23	517.9	0.867	16.3	21.1129902
16.04.2015 14:02:27.9	67.46	517.8	0.9003	16.33	21.5146271
16.04.2015 14:02:28.0	66.46	517.6	0.9078	16.09	21.6040556
16.04.2015 14:02:28.1	66.78	517.7	1.0002	16.12	22.6768967
16.04.2015 14:02:28.2	66.55	517.8	0.9655	16.36	22.280059
16.04.2015 14:02:28.3	63.85	517.7	0.9174	16.35	21.7179868
16.04.2015 14:02:28.4	64	517.6	0.8966	16.05	21.4703718
16.04.2015 14:02:28.5	64.18	517.6	0.8833	16.06	21.310533
16.04.2015 14:02:28.6	62.81	517.7	0.9161	16.33	21.7025936
16.04.2015 14:02:28.7	61.38	517.6	0.9528	16.24	22.1330401
16.04.2015 14:02:28.8	61.42	517.5	0.9697	15.98	22.3284664
16.04.2015 14:02:28.9	61.61	517.7	0.9529	16.1	22.1342016
16.04.2015 14:02:29.0	58.84	517.6	0.9927	16.33	22.5917154
16.04.2015 14:02:29.1	58.56	517.5	0.922	16.17	21.7723676
16.04.2015 14:02:29.2	58.42	517.4	0.9012	16.13	21.5253781
16.04.2015 14:02:29.3	58.01	517.6	0.9127	16.24	21.6622829
16.04.2015 14:02:29.4	55.77	517.6	0.9449	16.42	22.0410927
16.04.2015 14:02:29.5	55.9	517.4	0.8848	16.14	21.3286199
16.04.2015 14:02:29.6	56.09	517.4	0.846	16.14	20.8557292
16.04.2015 14:02:29.7	54.25	517.6	0.9498	16.31	22.0981684
16.04.2015 14:02:29.8	53.33	517.5	0.9628	16.36	22.2488843
16.04.2015 14:02:29.9	53.34	517.4	0.9558	16.08	22.1678569
16.04.2015 14:02:30.0	53.23	517.4	0.9437	16.13	22.0270925
16.04.2015 14:02:30.1	50.37	517.5	0.9402	16.35	21.9862074
16.04.2015 14:02:30.2	50.51	517.5	0.971	16.36	22.3434284
16.04.2015 14:02:30.3	50.45	517.4	1.0436	16.11	23.1636627
16.04.2015 14:02:30.4	49.27	517.5	1.0288	16.14	22.9988264
16.04.2015 14:02:30.5	47.77	517.5	0.9705	16.34	22.337675
16.04.2015 14:02:30.6	47.97	517.4	0.9501	16.35	22.1016581
16.04.2015 14:02:30.7	47.81	517.4	0.921	16.04	21.7605572
16.04.2015 14:02:30.8	45.45	517.5	0.9203	16.18	21.7522862
16.04.2015 14:02:30.9	45.31	517.6	0.9839	16.38	22.491358
16.04.2015 14:02:31.0	45.31	517.5	0.9623	16.29	22.2431064
16.04.2015 14:02:31.1	44.41	517.5	0.9505	16.1	22.1063101
16.04.2015 14:02:31.2	42.2	517.7	0.8889	16.21	21.3779792
16.04.2015 14:02:31.3	42.39	517.6	0.8496	16.32	20.900056
16.04.2015 14:02:31.4	42.32	517.5	0.9195	16.1	21.7428297
16.04.2015 14:02:31.5	40.4	517.5	0.8822	16.03	21.2972596
16.04.2015 14:02:31.6	39.86	517.7	0.9271	16.27	21.8325009
16.04.2015 14:02:31.7	39.81	517.7	0.9313	16.3	21.8818985
16.04.2015 14:02:31.8	39.25	517.5	0.8993	16.08	21.5026751

16.04.2015 14:02:31.9	37.14	517.6	0.9227	16.08	21.780631
16.04.2015 14:02:32.0	37.4	517.7	0.9395	16.24	21.9780213
16.04.2015 14:02:32.1	37.11	517.6	0.9726	16.29	22.3618294
16.04.2015 14:02:32.2	35.29	517.6	0.9666	16.02	22.2927473
16.04.2015 14:02:32.3	34.33	517.7	0.9939	16.18	22.605366
16.04.2015 14:02:32.4	34.37	517.7	0.933	16.33	21.901861
16.04.2015 14:02:32.5	34.2	517.6	0.8898	16.31	21.3887989
16.04.2015 14:02:32.6	31.57	517.5	0.878	15.98	21.2465028
16.04.2015 14:02:32.7	31.93	517.7	0.9057	16.11	21.579053
16.04.2015 14:02:32.8	31.74	517.7	0.9765	16.37	22.4066186
16.04.2015 14:02:32.9	29.93	517.5	0.8881	16.31	21.3683571
16.04.2015 14:02:33.0	29.04	517.4	0.8928	16.05	21.4248252
16.04.2015 14:02:33.1	29.2	517.6	0.9628	16.21	22.2488843
16.04.2015 14:02:33.2	28.88	517.6	0.9664	16.39	22.2904408
16.04.2015 14:02:33.3	26.51	517.3	0.9563	16.23	22.1736544
16.04.2015 14:02:33.4	26.58	517.3	0.9365	16.18	21.9429032
16.04.2015 14:02:33.5	26.66	517.4	1.0047	16.35	22.7278523
16.04.2015 14:02:33.6	24.34	517.4	0.9287	16.27	21.8513322
16.04.2015 14:02:33.7	24.03	517.2	0.9744	16.14	22.3825125
16.04.2015 14:02:33.8	24.06	517.2	0.9525	16.14	22.1295554
16.04.2015 14:02:33.9	23.51	517.3	0.9345	16.39	21.91946
16.04.2015 14:02:34.0	21.2	517.2	0.9339	16.33	21.9124221
16.04.2015 14:02:34.1	21.34	517	0.9062	16.1	21.5850086
16.04.2015 14:02:34.2	21.54	517	0.9892	16.2	22.551854
16.04.2015 14:02:34.3	18.86	517	0.9399	16.5	21.9826994
16.04.2015 14:02:34.4	18.83	516.8	0.9756	16.36	22.3962905
16.04.2015 14:02:34.5	18.78	516.7	0.9568	16.15	22.1794504
16.04.2015 14:02:34.6	17.96	516.8	1.0039	16.13	22.7188019
16.04.2015 14:02:34.7	16.04	516.8	0.98	16.37	22.4467379
16.04.2015 14:02:34.8	16.28	516.6	0.9502	16.26	22.1028212
16.04.2015 14:02:34.9	15.86	516.6	0.9942	16	22.6087773
16.04.2015 14:02:35.0	13.65	516.7	0.8807	16.12	21.279146
16.04.2015 14:02:35.1	13.65	516.7	0.9512	16.34	22.1144487
16.04.2015 14:02:35.2	13.76	516.6	0.9472	16.15	22.0679018
16.04.2015 14:02:35.3	12.08	516.6	0.9292	16.1	21.8572137
16.04.2015 14:02:35.4	11.13	516.8	0.9067	16.23	21.5909626
16.04.2015 14:02:35.5	11.05	516.7	0.9424	16.26	22.0119154
16.04.2015 14:02:35.6	11.06	516.6	1.0471	16.12	23.2024731
16.04.2015 14:02:35.7	8.47	516.6	0.9757	16.03	22.3974383
16.04.2015 14:02:35.8	8.75	516.7	1.0063	16.33	22.7459423
16.04.2015 14:02:35.9	8.53	516.7	1.0162	16.29	22.857556
16.04.2015 14:02:36.0	7.43	516.6	0.9643	16.09	22.266209
16.04.2015 14:02:36.1	5.54	516.6	0.9365	16.07	21.9429032
16.04.2015 14:02:36.2	5.72	516.6	0.9335	16.45	21.9077289
16.04.2015 14:02:36.3	5.54	516.5	0.9295	16.36	21.8607418
16.04.2015 14:02:36.4	3.45	516.4	0.8503	16.06	20.9086641
16.04.2015 14:02:36.5	3.18	516.5	0.943	16.08	22.0189215
16.04.2015 14:02:36.6	3.08	516.6	0.9666	16.35	22.2927473
16.04.2015 14:02:36.7	2.67	516.4	1.0141	16.28	22.833926
16.04.2015 14:02:36.8	0.27	516.4	1.0066	16.06	22.7493326
16.04.2015 14:02:36.9	0.6	516.6	0.9824	16.2	22.4742069
16.04.2015 14:02:37.0	0.46	516.5	0.9957	16.39	22.6258264
16.04.2015 14:02:37.1	-1.27	516.4	0.9092	16.25	21.620708
16.04.2015 14:02:37.2	-2.51	516.4	0.8994	16.13	21.5038706
16.04.2015 14:02:37.3	-2.32	516.6	0.9318	16.26	21.8877717
16.04.2015 14:02:37.4	-2.53	516.5	0.9478	16.33	22.0748901
16.04.2015 14:02:37.5	-5.17	516.3	0.904	16.14	21.5587915
16.04.2015 14:02:37.6	-4.99	516.3	0.9188	16.24	21.7345519
16.04.2015 14:02:37.7	-4.98	516.4	0.935	16.4	21.9253231
16.04.2015 14:02:37.8	-7.14	516.4	0.9504	16.43	22.1051472
16.04.2015 14:02:37.9	-7.74	516.3	0.9264	16.11	21.8242572
16.04.2015 14:02:38.0	-7.51	516.3	0.8968	16.13	21.4727663
16.04.2015 14:02:38.1	-7.86	516.4	0.955	16.27	22.1585778
16.04.2015 14:02:38.2	-10.45	516.3	0.9726	16.26	22.3618294
16.04.2015 14:02:38.3	-10.26	516.3	0.9798	16.02	22.4444473
16.04.2015 14:02:38.4	-10.08	516.4	1.0428	16.09	23.1547826
16.04.2015 14:02:38.5	-12.55	516.5	1.0078	16.41	22.7628887
16.04.2015 14:02:38.6	-12.85	516.4	1.0095	16.29	22.7820793
16.04.2015 14:02:38.7	-12.9	516.4	0.9117	16.02	21.6504125
16.04.2015 14:02:38.8	-13.29	516.6	0.9147	16.17	21.6860042
16.04.2015 14:02:38.9	-15.58	516.6	0.8777	16.34	21.2428727

16.04.2015 14:02:39.0	-15.27	516.5	0.8921	16.25	21.4164245
16.04.2015 14:02:39.1	-15.44	516.5	0.9727	16.08	22.362979
16.04.2015 14:02:39.2	-17.94	516.7	0.9542	16.33	22.1492948
16.04.2015 14:02:39.3	-17.88	516.8	0.8964	16.28	21.467977
16.04.2015 14:02:39.4	-17.9	516.6	0.8961	16.21	21.4643843
16.04.2015 14:02:39.5	-19.01	516.6	0.9695	16.19	22.3261637
16.04.2015 14:02:39.6	-20.52	516.9	0.9842	16.35	22.4947866
16.04.2015 14:02:39.7	-20.4	516.9	0.9127	16.3	21.6622829
16.04.2015 14:02:39.8	-20.93	516.8	0.8716	16.01	21.1689252
16.04.2015 14:02:39.9	-23.11	516.9	0.9093	16.03	21.6218969
16.04.2015 14:02:40.0	-22.94	517.1	0.8437	16.3	20.8273599
16.04.2015 14:02:40.1	-23.02	517	0.9847	16.26	22.5004999
16.04.2015 14:02:40.2	-24.7	517	0.9748	16	22.3871061
16.04.2015 14:02:40.3	-25.57	517	0.9717	16.08	22.3514807
16.04.2015 14:02:40.4	-25.56	517	0.8762	16.37	21.2247128
16.04.2015 14:02:40.5	-26.46	516.9	0.9742	16.25	22.3802153
16.04.2015 14:02:40.6	-28.42	516.8	1.0149	15.98	22.8429308
16.04.2015 14:02:40.7	-28.06	516.9	0.944	16.1	22.0305934
16.04.2015 14:02:40.8	-28.27	516.9	0.9299	16.37	21.865445
16.04.2015 14:02:40.9	-30.18	516.7	0.9776	16.21	22.4192352
16.04.2015 14:02:41.0	-30.86	516.6	0.8661	16.05	21.102029
16.04.2015 14:02:41.1	-30.7	516.8	1.0207	16.17	22.9081097
16.04.2015 14:02:41.2	-30.78	516.9	0.9823	16.31	22.473063
16.04.2015 14:02:41.3	-33	516.8	0.9339	16.09	21.9124221
16.04.2015 14:02:41.4	-33.41	516.9	0.9773	16.14	22.415795
16.04.2015 14:02:41.5	-33.23	517.2	0.9239	16.4	21.7947896
16.04.2015 14:02:41.6	-34.95	517.3	0.88	16.39	21.2706878
16.04.2015 14:02:41.7	-36.6	517.2	0.9288	16.08	21.8525086
16.04.2015 14:02:41.8	-36.19	517.3	0.9185	16.14	21.7310033
16.04.2015 14:02:41.9	-36.14	517.5	0.9771	16.32	22.4135013
16.04.2015 14:02:42.0	-38.89	517.5	0.9993	16.33	22.6666919
16.04.2015 14:02:42.1	-38.86	517.4	1.0136	16.01	22.8282962
16.04.2015 14:02:42.2	-38.71	517.5	0.9003	16.15	21.5146271
16.04.2015 14:02:42.3	-39.74	517.6	0.9099	16.32	21.6290293
16.04.2015 14:02:42.4	-41.61	517.5	0.9399	16.32	21.9826994
16.04.2015 14:02:42.5	-41.45	517.5	0.9364	16.05	21.9417317
16.04.2015 14:02:42.6	-41.31	517.7	0.9306	16.15	21.8736733
16.04.2015 14:02:42.7	-43.85	517.7	0.9745	16.36	22.383661
16.04.2015 14:02:42.8	-44.27	517.6	0.988	16.2	22.538171
16.04.2015 14:02:42.9	-44.35	517.7	1.0082	16.1	22.7674056
16.04.2015 14:02:43.0	-44.77	517.9	0.8719	16.26	21.172568
16.04.2015 14:02:43.1	-47.09	517.9	0.9198	16.36	21.7463763
16.04.2015 14:02:43.2	-46.88	517.8	0.8782	16.14	21.2489225
16.04.2015 14:02:43.3	-47	517.8	0.8798	16.13	21.2682705
16.04.2015 14:02:43.4	-49.42	518	0.9129	16.29	21.6646562
16.04.2015 14:02:43.5	-49.43	518.1	0.8785	16.27	21.2525516
16.04.2015 14:02:43.6	-49.59	517.9	0.9197	16.07	21.7451942
16.04.2015 14:02:43.7	-50.28	518	0.9471	16.05	22.0667368
16.04.2015 14:02:43.8	-52.19	518.1	0.961	16.32	22.2280769
16.04.2015 14:02:43.9	-52.12	518	0.9749	16.31	22.3882544
16.04.2015 14:02:44.0	-52.54	518	0.9573	16.12	22.1852449
16.04.2015 14:02:44.1	-54.65	518	0.9406	16.15	21.9908838
16.04.2015 14:02:44.2	-54.52	518.1	0.9144	16.44	21.6824476
16.04.2015 14:02:44.3	-54.76	517.9	0.9333	16.34	21.9053819
16.04.2015 14:02:44.4	-56.06	517.9	0.9462	16.1	22.0562497
16.04.2015 14:02:44.5	-57.2	518	0.946	16.2	22.0539185
16.04.2015 14:02:44.6	-57.34	518	0.9349	16.41	21.9241506
16.04.2015 14:02:44.7	-57.74	517.8	0.993	16.3	22.5951288
16.04.2015 14:02:44.8	-60.11	517.8	0.9389	16.2	21.9710022
16.04.2015 14:02:44.9	-59.68	517.9	0.9372	16.3	21.9511025
16.04.2015 14:02:45.0	-59.79	517.9	0.9599	16.39	22.2153517
16.04.2015 14:02:45.1	-61.43	517.7	0.9212	16.15	21.7629198
16.04.2015 14:02:45.2	-62.54	517.8	0.9401	16.11	21.9850381
16.04.2015 14:02:45.3	-62.29	517.9	0.9355	16.22	21.9311847
16.04.2015 14:02:45.4	-63.29	517.9	0.9341	16.22	21.9147683
16.04.2015 14:02:45.5	-65.21	517.7	0.9785	16.04	22.4295527
16.04.2015 14:02:45.6	-64.87	517.7	0.9768	16.02	22.4100602
16.04.2015 14:02:45.7	-64.81	517.8	0.9625	16.26	22.2454178
16.04.2015 14:02:45.8	-67.08	517.7	0.9368	16.26	21.9464176
16.04.2015 14:02:45.9	-67.57	517.7	0.9841	16.03	22.4936438
16.04.2015 14:02:46.0	-67.39	517.8	0.9922	16.04	22.5860252

16.04.2015 14:02:46.1	-67.5	517.9	1.0108	16.27	22.7967436
16.04.2015 14:02:46.2	-69.89	517.8	0.9881	16.3	22.5393116
16.04.2015 14:02:46.3	-70.12	517.9	0.999	16.03	22.6632892
16.04.2015 14:02:46.4	-69.99	518	0.9821	16.07	22.4707751
16.04.2015 14:02:46.5	-71.89	518	0.9494	16.36	22.0935147
16.04.2015 14:02:46.6	-72.98	517.9	1.0261	16.23	22.9686273
16.04.2015 14:02:46.7	-73.01	517.9	0.9073	16.07	21.5981052
16.04.2015 14:02:46.8	-73.02	518.1	0.9588	16.21	22.2026192
16.04.2015 14:02:46.9	-75.69	518.2	0.9266	16.3	21.8266128
16.04.2015 14:02:47.0	-75.52	518	0.949	16.09	22.08886
16.04.2015 14:02:47.1	-75.61	518.1	1.0121	16.03	22.8113984
16.04.2015 14:02:47.2	-76.59	518.3	0.9661	16.2	22.2869808
16.04.2015 14:02:47.3	-78.31	518.3	0.9444	16.24	22.0352604
16.04.2015 14:02:47.4	-78.16	518.2	0.9153	16.05	21.6931155
16.04.2015 14:02:47.5	-78.15	518.2	0.9872	16.12	22.5290444
16.04.2015 14:02:47.6	-80.68	518.4	0.9542	16.31	22.1492948
16.04.2015 14:02:47.7	-81.09	518.3	0.9059	16.33	21.5814354
16.04.2015 14:02:47.8	-81.19	518.2	0.8835	16.08	21.3129455
16.04.2015 14:02:47.9	-81.62	518.3	0.9512	16.04	22.1144487
16.04.2015 14:02:48.0	-83.8	518.4	0.9933	16.39	22.5985417
16.04.2015 14:02:48.1	-83.69	518.3	0.9345	16.29	21.91946
16.04.2015 14:02:48.2	-83.71	518.3	0.9426	16.03	22.0142511
16.04.2015 14:02:48.3	-85.33	518.4	1.0289	16.06	22.9999441
16.04.2015 14:02:48.4	-86.31	518.5	0.9525	16.39	22.1295554
16.04.2015 14:02:48.5	-86.26	518.4	0.9032	16.26	21.5492501
16.04.2015 14:02:48.6	-86.54	518.4	0.9589	16.08	22.203777
16.04.2015 14:02:48.7	-89.28	518.6	0.9121	16.17	21.6551614
16.04.2015 14:02:48.8	-89.16	518.6	0.9208	16.39	21.7581944
16.04.2015 14:02:48.9	-89.17	518.5	1.043	16.2	23.157003
16.04.2015 14:02:49.0	-90.44	518.5	0.9243	16.14	21.7995071
16.04.2015 14:02:49.1	-91.86	518.7	0.9893	16.25	22.5529939
16.04.2015 14:02:49.2	-91.78	518.7	0.9771	16.36	22.4135013
16.04.2015 14:02:49.3	-92.28	518.5	0.9324	16.1	21.8948175
16.04.2015 14:02:49.4	-94.56	518.5	0.9141	16.18	21.6788905
16.04.2015 14:02:49.5	-94.28	518.6	0.9852	16.37	22.5062117
16.04.2015 14:02:49.6	-94.33	518.6	0.9241	16.35	21.7971485
16.04.2015 14:02:49.7	-96.07	518.5	0.9894	16.12	22.5541337
16.04.2015 14:02:49.8	-96.88	518.5	0.9922	16.23	22.5860252
16.04.2015 14:02:49.9	-96.79	518.6	0.9818	16.4	22.4673428
16.04.2015 14:02:50.0	-97.82	518.5	0.9697	16.37	22.3284664
16.04.2015 14:02:50.1	-99.82	518.5	0.9321	16.05	21.8912949
16.04.2015 14:02:50.2	-99.34	518.6	1.0001	16.15	22.6757631
16.04.2015 14:02:50.3	-99.44	518.6	0.9182	16.46	21.7274541
16.04.2015 14:02:50.4	-101.55	518.5	0.9103	16.31	21.633783
16.04.2015 14:02:50.5	-102.2	518.5	0.9595	16.05	22.2107225
16.04.2015 14:02:50.6	-101.92	518.7	0.9144	16.09	21.6824476
16.04.2015 14:02:50.7	-103.46	518.7	0.8723	16.34	21.1774241
16.04.2015 14:02:50.8	-104.7	518.6	0.8931	16.21	21.4284245
16.04.2015 14:02:50.9	-104.75	518.6	0.9695	16.12	22.3261637
16.04.2015 14:02:51.0	-104.56	518.9	0.9795	16.31	22.4410109
16.04.2015 14:02:51.1	-107.17	518.8	0.948	16.31	22.077219
16.04.2015 14:02:51.2	-107.15	518.7	0.9296	16.09	21.8619177
16.04.2015 14:02:51.3	-107.33	518.7	0.9362	16.13	21.9393883
16.04.2015 14:02:51.4	-108.79	519	0.9223	16.27	21.7759094
16.04.2015 14:02:51.5	-109.78	519	1.0065	16.29	22.7482026
16.04.2015 14:02:51.6	-109.97	518.9	1.0582	16.04	23.3251302
16.04.2015 14:02:51.7	-109.83	519	0.9203	16.11	21.7522862
16.04.2015 14:02:51.8	-112.36	519.1	0.97	16.31	22.33192
16.04.2015 14:02:51.9	-112.34	519.1	0.9952	16.37	22.6201448
16.04.2015 14:02:52.0	-112.46	519.1	0.9704	16.04	22.3365241
16.04.2015 14:02:52.1	-112.59	519.2	0.9859	16.08	22.5142057
16.04.2015 14:02:52.2	-115.03	519.2	0.9803	16.37	22.4501733
16.04.2015 14:02:52.3	-114.88	519.1	1.0303	16.36	23.0155865
16.04.2015 14:02:52.4	-114.96	519	0.967	16.09	22.2973594
16.04.2015 14:02:52.5	-117.56	519.2	0.9404	16.29	21.9885457
16.04.2015 14:02:52.6	-117.83	519.2	0.9632	16.44	22.2535055
16.04.2015 14:02:52.7	-117.78	519.1	1.0472	16.28	23.203581
16.04.2015 14:02:52.8	-117.82	519.1	1.0075	16.12	22.7595004
16.04.2015 14:02:52.9	-120.39	519.3	0.9996	16.31	22.670094
16.04.2015 14:02:53.0	-120.3	519.4	1.054	16.35	23.2787954
16.04.2015 14:02:53.1	-120.4	519.2	1.0855	16.18	23.6240912

16.04.2015 14:02:53.2	-121.34	519.3	0.984	16.11	22.4925009
16.04.2015 14:02:53.3	-123.08	519.5	0.9853	16.27	22.5073538
16.04.2015 14:02:53.4	-122.98	519.5	1.0242	16.26	22.9473523
16.04.2015 14:02:53.5	-123.08	519.3	1.0079	16.06	22.764018
16.04.2015 14:02:53.6	-124.26	519.4	1.1154	16.07	23.9472428
16.04.2015 14:02:53.7	-125.97	519.5	1.0446	16.31	23.174758
16.04.2015 14:02:53.8	-125.99	519.4	1.0506	16.28	23.2412186
16.04.2015 14:02:53.9	-126.6	519.3	0.9747	16.01	22.3859578
16.04.2015 14:02:54.0	-128.95	519.4	0.9209	16.08	21.7593758
16.04.2015 14:02:54.1	-128.8	519.5	0.9796	16.3	22.4421564
16.04.2015 14:02:54.2	-128.94	519.4	1.0499	16.24	23.2334747
16.04.2015 14:02:54.3	-129.67	519.4	0.8865	16.01	21.3490998
16.04.2015 14:02:54.4	-131.52	519.6	0.9425	16.18	22.0130833
16.04.2015 14:02:54.5	-131.49	519.6	0.984	16.39	22.4925009
16.04.2015 14:02:54.6	-131.38	519.5	0.9095	16.32	21.6242747
16.04.2015 14:02:54.7	-133.39	519.6	0.8852	16.15	21.3334404
16.04.2015 14:02:54.8	-134.01	519.8	0.9943	16.32	22.6099143
16.04.2015 14:02:54.9	-133.98	519.8	1.0148	16.3	22.8418054
16.04.2015 14:02:55.0	-133.98	519.7	1.0106	16.14	22.7944881
16.04.2015 14:02:55.1	-136.42	519.8	0.9771	16.11	22.4135013
16.04.2015 14:02:55.2	-136.87	520.1	1.0024	16.29	22.7018226
16.04.2015 14:02:55.3	-136.94	520.1	0.9921	16.29	22.584887
16.04.2015 14:02:55.4	-138.49	520	1.0556	16.17	23.2964576
16.04.2015 14:02:55.5	-139.92	520.1	1.0319	16.18	23.0334506
16.04.2015 14:02:55.6	-139.77	520.3	0.8798	16.46	21.2682705
16.04.2015 14:02:55.7	-139.94	520.2	1.018	16.44	22.8777909
16.04.2015 14:02:55.8	-141.52	520.2	0.9588	16.11	22.2026192
16.04.2015 14:02:55.9	-142.41	520.2	0.983	16.17	22.4810689
16.04.2015 14:02:56.0	-142.41	520.3	0.9524	16.47	22.1283937
16.04.2015 14:02:56.1	-142.53	520.2	0.8908	16.4	21.4008144
16.04.2015 14:02:56.2	-145.28	520.2	0.9069	16.07	21.5933437
16.04.2015 14:02:56.3	-144.91	520.3	0.9247	16.24	21.8042235
16.04.2015 14:02:56.4	-145.07	520.3	0.9217	16.39	21.7688251
16.04.2015 14:02:56.5	-145.28	520.2	0.7966	16.35	20.2376625
16.04.2015 14:02:56.6	-148.22	520.1	0.98	16.13	22.4467379
16.04.2015 14:02:56.7	-147.89	520.3	0.9674	16.36	22.3019706
16.04.2015 14:02:56.8	-147.94	520.4	0.9551	16.4	22.1597379
16.04.2015 14:02:56.9	-150.47	520.1	0.9415	16.2	22.0014022
16.04.2015 14:02:57.0	-150.97	520.2	1.0593	16.2	23.3372503
16.04.2015 14:02:57.1	-150.84	520.4	1.0116	16.34	22.805763
16.04.2015 14:02:57.2	-151.43	520.4	1.0477	16.36	23.2091197
16.04.2015 14:02:57.3	-153.65	520.3	1.0309	16.16	23.0222872
16.04.2015 14:02:57.4	-153.36	520.3	1.0295	16.15	23.0066493
16.04.2015 14:02:57.5	-153.4	520.5	0.9612	16.35	22.2303898
16.04.2015 14:02:57.6	-154.25	520.5	0.9646	16.34	22.2696723
16.04.2015 14:02:57.7	-156.39	520.4	1.0067	16.12	22.7504626
16.04.2015 14:02:57.8	-155.97	520.5	0.9076	16.16	21.6016756
16.04.2015 14:02:57.9	-156.12	520.6	0.939	16.42	21.9721722
16.04.2015 14:02:58.0	-159.21	520.5	0.9711	16.31	22.3445789
16.04.2015 14:02:58.1	-159.18	520.5	1.0303	16	23.0155865
16.04.2015 14:02:58.2	-158.85	520.7	1.0238	16.14	22.9428708
16.04.2015 14:02:58.3	-160.2	520.7	1.0592	16.31	23.3361487
16.04.2015 14:02:58.4	-161.68	520.6	1.0187	16.18	22.8856552
16.04.2015 14:02:58.5	-161.61	520.6	0.9328	16.05	21.8995134
16.04.2015 14:02:58.6	-161.52	520.8	0.9421	16.15	22.0084116
16.04.2015 14:02:58.7	-162.95	520.8	0.8451	16.27	20.8446328
16.04.2015 14:02:58.8	-164.16	520.6	0.9073	16.1	21.5981052
16.04.2015 14:02:58.9	-164.17	520.6	0.9799	16.15	22.4455926
16.04.2015 14:02:59.0	-164.08	520.8	0.9567	16.26	22.1782913
16.04.2015 14:02:59.1	-166.02	520.8	1.0172	16.3	22.8687998
16.04.2015 14:02:59.2	-167.26	520.6	0.8908	16.13	21.4008144
16.04.2015 14:02:59.3	-167.05	520.7	0.9067	16.21	21.5909626
16.04.2015 14:02:59.4	-168	520.8	1.0036	16.37	22.715407
16.04.2015 14:02:59.5	-170.27	520.8	1.1086	16.35	23.8741344
16.04.2015 14:02:59.6	-170.21	520.7	1.0792	16.06	23.555437
16.04.2015 14:02:59.7	-169.88	520.7	0.929	16.14	21.8548613
16.04.2015 14:02:59.8	-171.07	520.8	0.8299	16.33	20.656326
16.04.2015 14:02:59.9	-172.85	520.7	0.9874	16.38	22.5313264
16.04.2015 14:03:00.0	-172.67	520.6	0.9192	16.01	21.7392824
16.04.2015 14:03:00.1	-172.48	520.7	0.9824	16.15	22.4742069
16.04.2015 14:03:00.2	-174.96	520.7	0.9125	16.33	21.6599093

16.04.2015 14:03:00.3	-175.11	520.5	0.8804	16.24	21.2755215
16.04.2015 14:03:00.4	-175.17	520.5	0.949	16.05	22.088886
16.04.2015 14:03:00.5	-175.07	520.6	1.0442	16.18	23.1703205
16.04.2015 14:03:00.6	-178.03	520.6	0.8526	16.24	20.9369233
16.04.2015 14:03:00.7	-178.02	520.4	0.9721	16.11	22.3560807
16.04.2015 14:03:00.8	-178.18	520.4	0.8871	16.03	21.3563233
16.04.2015 14:03:00.9	-180.15	520.5	0.9082	16.29	21.6088147
16.04.2015 14:03:01.0	-181.08	520.5	0.9989	16.31	22.6621549
16.04.2015 14:03:01.1	-181.16	520.3	0.9632	16.08	22.2535055
16.04.2015 14:03:01.2	-181.03	520.3	0.9941	16.05	22.6076403
16.04.2015 14:03:01.3	-182.94	520.5	1.0562	16.26	23.3030775
16.04.2015 14:03:01.4	-183.69	520.5	0.9712	16.24	22.3457293
16.04.2015 14:03:01.5	-183.88	520.4	1.0167	15.99	22.8631786
16.04.2015 14:03:01.6	-183.91	520.4	0.9563	16.09	22.1736544
16.04.2015 14:03:01.7	-186.3	520.5	0.9985	16.31	22.657617
16.04.2015 14:03:01.8	-186.21	520.4	1.0716	16.26	23.4723488
16.04.2015 14:03:01.9	-186.26	520.4	0.9726	16.03	22.3618294
16.04.2015 14:03:02.0	-186.78	520.6	0.8375	16.11	20.750693
16.04.2015 14:03:02.1	-189.31	520.6	0.9381	16.37	21.9616398
16.04.2015 14:03:02.2	-189.01	520.6	1.1035	16.25	23.8191558
16.04.2015 14:03:02.3	-189.15	520.6	1.0417	16.01	23.142567
16.04.2015 14:03:02.4	-191.09	520.8	1.0163	16.17	22.8586806
16.04.2015 14:03:02.5	-192.11	520.8	1.0359	16.28	23.0780502
16.04.2015 14:03:02.6	-192.07	520.7	1.0631	16.06	23.3790713
16.04.2015 14:03:02.7	-193.07	520.8	1.0558	16.16	23.2986644
16.04.2015 14:03:02.8	-194.77	521	0.9668	16.25	22.2950535
16.04.2015 14:03:02.9	-194.63	521.1	0.868	16.29	21.1251626
16.04.2015 14:03:03.0	-194.79	521	0.9132	16.03	21.6682156
16.04.2015 14:03:03.1	-195.86	521.1	0.9497	16.06	22.0970051
16.04.2015 14:03:03.2	-197.24	521.3	0.9293	16.3	21.8583898
16.04.2015 14:03:03.3	-197.34	521.3	0.9403	16.28	21.9873766
16.04.2015 14:03:03.4	-198.02	521.2	0.8496	16.01	20.900056
16.04.2015 14:03:03.5	-200.23	521.3	0.8888	16.1	21.3767767
16.04.2015 14:03:03.6	-200.12	521.3	0.9956	16.31	22.6246902
16.04.2015 14:03:03.7	-200.21	521.3	1.0045	16.36	22.72559
16.04.2015 14:03:03.8	-201.91	521.2	0.8881	15.98	21.3683571
16.04.2015 14:03:03.9	-202.73	521.3	0.9083	16.08	21.6100043
16.04.2015 14:03:04.0	-202.77	521.3	0.8684	16.3	21.1300296
16.04.2015 14:03:04.1	-202.71	521.2	0.8387	16.22	20.7655538
16.04.2015 14:03:04.2	-204.66	521.2	0.8806	15.96	21.2779379
16.04.2015 14:03:04.3	-205.25	521.3	0.9159	16.11	21.7002245
16.04.2015 14:03:04.4	-205.27	521.3	0.9618	16.32	22.2373271
16.04.2015 14:03:04.5	-206.61	521.2	0.927	16.2	21.8313235
16.04.2015 14:03:04.6	-208.37	521.2	0.9715	16.09	22.3491803
16.04.2015 14:03:04.7	-208.22	521.3	0.8673	16.29	21.1166426
16.04.2015 14:03:04.8	-208.26	521.3	1.0356	16.32	23.0747082
16.04.2015 14:03:04.9	-209.63	521.1	0.8937	16.13	21.4356213
16.04.2015 14:03:05.0	-210.83	521.1	0.9055	16.05	21.5766703
16.04.2015 14:03:05.1	-210.76	521.3	0.9366	16.29	21.9440747
16.04.2015 14:03:05.2	-210.8	521.3	0.9808	16.35	22.4558979
16.04.2015 14:03:05.3	-213.38	521.2	0.9954	16.02	22.6224176
16.04.2015 14:03:05.4	-213.32	521.3	1.0159	16.08	22.8541818
16.04.2015 14:03:05.5	-213.39	521.4	1.0416	16.34	23.1414561
16.04.2015 14:03:05.6	-213.5	521.4	0.984	16.31	22.4925009
16.04.2015 14:03:05.7	-216.43	521.4	1.0234	16.04	22.9383885
16.04.2015 14:03:05.8	-216.18	521.6	0.8945	16.13	21.4452133
16.04.2015 14:03:05.9	-216.23	521.7	0.9001	16.46	21.5122372
16.04.2015 14:03:06.0	-217.33	521.6	0.8978	16.4	21.4847348
16.04.2015 14:03:06.1	-217.59	521.6	1.0131	16.06	22.822665
16.04.2015 14:03:06.2	-217.57	521.8	1.0119	16.23	22.8091444
16.04.2015 14:03:06.3	-217.56	521.8	0.9505	16.4	22.1063101
16.04.2015 14:03:06.4	-217.6	521.7	0.8377	16.27	20.7531705
16.04.2015 14:03:06.5	-217.53	521.7	0.891	16.08	21.4032167
16.04.2015 14:03:06.6	-217.58	522	0.95	16.26	22.1004949
16.04.2015 14:03:06.7	-217.54	522	0.908	16.27	21.6064353
16.04.2015 14:03:06.8	-217.58	521.8	0.9349	16.12	21.9241506
16.04.2015 14:03:06.9	-217.56	521.8	0.9657	16.05	22.2823665
16.04.2015 14:03:07.0	-217.6	522	0.8698	16.3	21.1470552
16.04.2015 14:03:07.1	-217.56	521.9	1.0017	16.3	22.6938946
16.04.2015 14:03:07.2	-217.58	521.8	1.0533	16.2	23.2710639
16.04.2015 14:03:07.3	-217.57	521.8	1.066	16.11	23.4109372

16.04.2015 14:03:07.4	-217.54	522	1.0778	16.42	23.5401533
16.04.2015 14:03:07.5	-217.55	522	0.9301	16.28	21.8677963
16.04.2015 14:03:07.6	-217.61	522	0.9853	16.06	22.5073538
16.04.2015 14:03:07.7	-217.57	522.1	0.9534	16.04	22.1400079
16.04.2015 14:03:07.8	-217.58	522.2	0.9956	16.34	22.6246902
16.04.2015 14:03:07.9	-217.61	522.1	1.069	16.27	23.4438563
16.04.2015 14:03:08.0	-217.58	522.1	0.9494	16.01	22.0935147
16.04.2015 14:03:08.1	-217.56	522.3	0.9737	16.16	22.3744713
16.04.2015 14:03:08.2	-217.59	522.4	1.1541	16.33	24.3591381
16.04.2015 14:03:08.3	-217.55	522.2	0.9644	16.21	22.2673635
16.04.2015 14:03:08.4	-217.58	522.3	0.9702	16.08	22.3342222
16.04.2015 14:03:08.5	-217.63	522.5	1.039	16.33	23.1125557
16.04.2015 14:03:08.6	-217.58	522.5	0.918	16.36	21.7250877
16.04.2015 14:03:08.7	-217.59	522.4	0.8899	16.26	21.3900008
16.04.2015 14:03:08.8	-217.59	522.4	0.9317	16.15	21.8865972
16.04.2015 14:03:08.9	-217.57	522.6	1.0397	16.4	23.1203401
16.04.2015 14:03:09.0	-217.53	522.6	1.0905	16.33	23.678437
16.04.2015 14:03:09.1	-217.6	522.5	1.0772	16.21	23.5336001
16.04.2015 14:03:09.2	-217.58	522.6	1.0532	16.18	23.2699592
16.04.2015 14:03:09.3	-217.56	522.6	0.9949	16.5	22.6167352

Calculation of mass flow rate based on polynomial equation fitted to the experimental data

$$y = -2.53990676E-14x^6 - 2.01995553E-12x^5 + 1.56605588E-09x^4 + 2.07801731E-07x^3 + 2.39847214E-06x^2 - 2.12828040E-03x + 2.17733231E+01$$

Please enter below Polynomial Coefficients

Order no	Coeff
6	-2.53990676E-14
5	-2.01995553E-12
4	1.56605588E-09
3	2.07801731E-07
2	2.39847214E-06
1	-2.12828040E-03
0	2.17733231E+01

Actual Area	0.274324656	[m2]
Integrated area	0.274324656	[m2]
Area Error	0	[%]
Integrated Mass flow	2.331615581	[Kg/s]

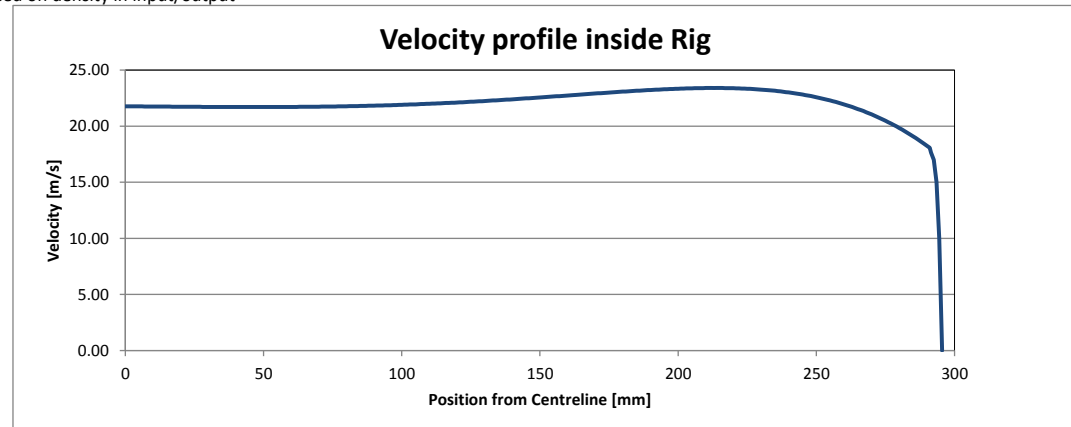
Polynomial curve (dP vs position)

Please do NOT alter any of the figures below

position [mm]	Velocity [m/s]
0	21.773323
1	21.771197
2	21.769078
3	21.766966
4	21.764862
5	21.762769
6	21.760687
7	21.758618
8	21.756563
9	21.754524
10	21.752503
11	21.750501
12	21.748520
13	21.746561
14	21.744626
15	21.742717
16	21.740836
17	21.738984
18	21.737163
19	21.735375
20	21.733622
21	21.731906
22	21.730228
23	21.728591
24	21.726997
25	21.725448
26	21.723945
27	21.722492
28	21.721089
29	21.719739
30	21.718445
31	21.717208
32	21.716030
33	21.714915

Delta Area [m2]	Delta Mass flow [Kg/s]
0	0
3.14159E-06	2.66061E-05
9.42478E-06	7.98106E-05
1.5708E-05	0.000133005
2.19911E-05	0.000186189
2.82743E-05	0.000239363
3.45575E-05	0.000292526
4.08407E-05	0.00034568
4.71239E-05	0.000398824
5.34071E-05	0.000451958
5.96903E-05	0.000505082
6.59734E-05	0.000558198
7.22566E-05	0.000611304
7.85398E-05	0.000664401
8.4823E-05	0.000717489
9.11062E-05	0.000770569
9.73894E-05	0.00082364
0.000103673	0.000876703
0.000109956	0.000929759
0.000116239	0.000982807
0.000122522	0.001035848
0.000128805	0.001088883
0.000135088	0.001141911
0.000141372	0.001194933
0.000147655	0.00124795
0.000153938	0.001300961
0.000160221	0.001353968
0.000166504	0.00140697
0.000172788	0.001459969
0.000179071	0.001512965
0.000185354	0.001565958
0.000191637	0.001618949
0.00019792	0.001671939
0.000204204	0.001724928

Based on density in input/output



34	21.713863
35	21.712878
36	21.711962
37	21.711116
38	21.710343
39	21.709646
40	21.709027
41	21.708488
42	21.708032
43	21.707660
44	21.707376
45	21.707181
46	21.707079
47	21.707072
48	21.707161
49	21.707350
50	21.707640
51	21.708035
52	21.708537
53	21.709148
54	21.709870
55	21.710707
56	21.711660
57	21.712732
58	21.713925
59	21.715243
60	21.716686
61	21.718258
62	21.719962
63	21.721798
64	21.723771
65	21.725882
66	21.728133
67	21.730527
68	21.733066
69	21.735753
70	21.738590
71	21.741578
72	21.744721
73	21.748020
74	21.751478
75	21.755097
76	21.758878
77	21.762825
78	21.766938
79	21.771220
80	21.775674
81	21.780300
82	21.785101
83	21.790079

0.000210487	0.001777917
0.00021677	0.001830906
0.000223053	0.001883896
0.000229336	0.001936888
0.000235619	0.001989882
0.000241903	0.00204288
0.000248186	0.002095882
0.000254469	0.002148889
0.000260752	0.002201902
0.000267035	0.002254921
0.000273319	0.002307948
0.000279602	0.002360983
0.000285885	0.002414028
0.000292168	0.002467082
0.000298451	0.002520148
0.000304734	0.002573226
0.000311018	0.002626318
0.000317301	0.002679424
0.000323584	0.002732545
0.000329867	0.002785682
0.00033615	0.002838837
0.000342434	0.002892011
0.000348717	0.002945205
0.000355	0.002998419
0.000361283	0.003051657
0.000367566	0.003104917
0.00037385	0.003158203
0.000380133	0.003211514
0.000386416	0.003264853
0.000392699	0.003318221
0.000398982	0.003371618
0.000405265	0.003425047
0.000411549	0.003478509
0.000417832	0.003532006
0.000424115	0.003585537
0.000430398	0.003639106
0.000436681	0.003692714
0.000442965	0.003746361
0.000449248	0.00380005
0.000455531	0.003853783
0.000461814	0.003907559
0.000468097	0.003961382
0.00047438	0.004015253
0.000480664	0.004069173
0.000486947	0.004123144
0.00049323	0.004177168
0.000499513	0.004231245
0.000505796	0.004285379
0.00051208	0.00433957
0.000518363	0.00439382

84	21.795235
85	21.800572
86	21.806090
87	21.811792
88	21.817680
89	21.823754
90	21.830016
91	21.836468
92	21.843112
93	21.849948
94	21.856978
95	21.864202
96	21.871623
97	21.879241
98	21.887058
99	21.895073
100	21.903288
101	21.911705
102	21.920323
103	21.929143
104	21.938165
105	21.947391
106	21.956820
107	21.966453
108	21.976290
109	21.986331
110	21.996577
111	22.007026
112	22.017679
113	22.028535
114	22.039595
115	22.050857
116	22.062321
117	22.073987
118	22.085853
119	22.097918
120	22.110182
121	22.122643
122	22.135300
123	22.148151
124	22.161195
125	22.174431
126	22.187856
127	22.201468
128	22.215265
129	22.229245
130	22.243406
131	22.257746
132	22.272260
133	22.286947

0.000524646	0.00444813
0.000530929	0.004502504
0.000537212	0.004556941
0.000543496	0.004611444
0.000549779	0.004666014
0.000556062	0.004720654
0.000562345	0.004775365
0.000568628	0.004830148
0.000574911	0.004885006
0.000581195	0.004939939
0.000587478	0.00499495
0.000593761	0.005050041
0.000600044	0.005105213
0.000606327	0.005160467
0.000612611	0.005215806
0.000618894	0.005271232
0.000625177	0.005326745
0.00063146	0.005382347
0.000637743	0.005438041
0.000644026	0.005493827
0.00065031	0.005549708
0.000656593	0.005605685
0.000662876	0.005661759
0.000669159	0.005717932
0.000675442	0.005774207
0.000681726	0.005830583
0.000688009	0.005887063
0.000694292	0.005943648
0.000700575	0.00600034
0.000706858	0.00605714
0.000713142	0.006114049
0.000719425	0.006171069
0.000725708	0.006228202
0.000731991	0.006285447
0.000738274	0.006342807
0.000744557	0.006400283
0.000750841	0.006457876
0.000757124	0.006515587
0.000763407	0.006573417
0.00076969	0.006631367
0.000775973	0.006689438
0.000782257	0.006747631
0.00078854	0.006805946
0.000794823	0.006864386
0.000801106	0.006922949
0.000807389	0.006981638
0.000813672	0.007040452
0.000819956	0.007099392
0.000826239	0.007158458
0.000832522	0.007217652

134	22.301804
135	22.316827
136	22.332013
137	22.347359
138	22.362860
139	22.378514
140	22.394317
141	22.410263
142	22.426349
143	22.442570
144	22.458922
145	22.475400
146	22.491999
147	22.508713
148	22.525536
149	22.542465
150	22.559492
151	22.576611
152	22.593817
153	22.611102
154	22.628461
155	22.645886
156	22.663371
157	22.680907
158	22.698488
159	22.716106
160	22.733752
161	22.751419
162	22.769098
163	22.786780
164	22.804457
165	22.822119
166	22.839757
167	22.857361
168	22.874921
169	22.892428
170	22.909870
171	22.927237
172	22.944518
173	22.961702
174	22.978777
175	22.995732
176	23.012554
177	23.029230
178	23.045750
179	23.062098
180	23.078263
181	23.094230
182	23.109986
183	23.125516

0.000838805	0.007276972
0.000845088	0.00733642
0.000851372	0.007395995
0.000857655	0.007455698
0.000863938	0.007515528
0.000870221	0.007575486
0.000876504	0.007635571
0.000882788	0.007695782
0.000889071	0.007756119
0.000895354	0.007816583
0.000901637	0.007877171
0.00090792	0.007937884
0.000914203	0.00799872
0.000920487	0.008059679
0.00092677	0.008120759
0.000933053	0.008181959
0.000939336	0.008243278
0.000945619	0.008304715
0.000951903	0.008366267
0.000958186	0.008427933
0.000964469	0.00848971
0.000970752	0.008551598
0.000977035	0.008613593
0.000983319	0.008675694
0.000989602	0.008737898
0.000995885	0.008800202
0.01002168	0.008862603
0.01008451	0.008925098
0.01014734	0.008987685
0.01021018	0.009050359
0.01027301	0.009113117
0.01033584	0.009175956
0.01039867	0.009238872
0.0104615	0.00930186
0.01052434	0.009364916
0.01058717	0.009428036
0.01065	0.009491215
0.01071283	0.009554448
0.01077566	0.009617729
0.01083849	0.009681054
0.01090133	0.009744417
0.01096416	0.009807812
0.01102699	0.009871233
0.01108982	0.009934674
0.01115265	0.009998127
0.01121549	0.010061587
0.01127832	0.010125047
0.01134115	0.010188498
0.01140398	0.010251933
0.01146681	0.010315345

184	23.140807
185	23.155843
186	23.170609
187	23.185090
188	23.199270
189	23.213134
190	23.226664
191	23.239844
192	23.252657
193	23.265085
194	23.277112
195	23.288717
196	23.299885
197	23.310594
198	23.320827
199	23.330563
200	23.339783
201	23.348467
202	23.356593
203	23.364141
204	23.371090
205	23.377417
206	23.383100
207	23.388118
208	23.392446
209	23.396061
210	23.398940
211	23.401058
212	23.402391
213	23.402914
214	23.402600
215	23.401425
216	23.399362
217	23.396384
218	23.392464
219	23.387574
220	23.381686
221	23.374771
222	23.366801
223	23.357746
224	23.347576
225	23.336260
226	23.323768
227	23.310068
228	23.295129
229	23.278918
230	23.261402
231	23.242547
232	23.222321
233	23.200688

0.001152965	0.010378726
0.001159248	0.010442066
0.001165531	0.010505357
0.001171814	0.010568591
0.001178097	0.010631758
0.00118438	0.010694848
0.001190664	0.010757851
0.001196947	0.010820757
0.00120323	0.010883556
0.001209513	0.010946237
0.001215796	0.011008788
0.00122208	0.011071199
0.001228363	0.011133456
0.001234646	0.011195548
0.001240929	0.011257463
0.001247212	0.011319186
0.001253495	0.011380705
0.001259779	0.011442007
0.001266062	0.011503077
0.001272345	0.0115639
0.001278628	0.011624462
0.001284911	0.011684747
0.001291195	0.01174474
0.001297478	0.011804424
0.001303761	0.011863783
0.001310044	0.0119228
0.001316327	0.011981458
0.001322611	0.012039739
0.001328894	0.012097624
0.001335177	0.012155094
0.00134146	0.012212131
0.001347743	0.012268715
0.001354026	0.012324825
0.00136031	0.012380441
0.001366593	0.012435541
0.001372876	0.012490105
0.001379159	0.012544109
0.001385442	0.012597531
0.001391726	0.012650348
0.001398009	0.012702535
0.001404292	0.01275407
0.001410575	0.012804926
0.001416858	0.012855078
0.001423141	0.012904501
0.001429425	0.012953168
0.001435708	0.013001051
0.001441991	0.013048123
0.001448274	0.013094355
0.001454557	0.013139719
0.001460841	0.013184185

234	23.177614
235	23.153063
236	23.127000
237	23.099388
238	23.070189
239	23.039368
240	23.006884
241	22.972701
242	22.936779
243	22.899077
244	22.859557
245	22.818176
246	22.774895
247	22.729670
248	22.682459
249	22.633220
250	22.581908
251	22.528480
252	22.472890
253	22.415093
254	22.355043
255	22.292693
256	22.227996
257	22.160905
258	22.091370
259	22.019342
260	21.944772
261	21.867609
262	21.787802
263	21.705300
264	21.620050
265	21.531999
266	21.441093
267	21.347278
268	21.250499
269	21.150701
270	21.047826
271	20.941818
272	20.832619
273	20.720170
274	20.604413
275	20.485287
276	20.362732
277	20.236687
278	20.107089
279	19.973875
280	19.836983
281	19.696347
282	19.551903
283	19.403586

0.001467124	0.013227723
0.001473407	0.013270301
0.001479669	0.013311889
0.001485973	0.013352454
0.001492257	0.013391963
0.00149854	0.013430383
0.001504823	0.01346768
0.001511106	0.013503819
0.001517389	0.013538764
0.001523672	0.013572479
0.001529956	0.013604928
0.001536239	0.013636071
0.001542522	0.013665872
0.001548805	0.01369429
0.001555088	0.013721286
0.001561372	0.013746819
0.001567655	0.013770847
0.001573938	0.013793329
0.001580221	0.01381422
0.001586504	0.013833478
0.001592787	0.013851058
0.001599071	0.013866913
0.001605354	0.013880998
0.001611637	0.013893265
0.00161792	0.013903667
0.001624203	0.013912153
0.001630487	0.013918675
0.00163677	0.013923182
0.001643053	0.013925622
0.001649336	0.013925942
0.001655619	0.013924089
0.001661903	0.013920008
0.001668186	0.013913645
0.001674469	0.013904942
0.001680752	0.013893843
0.001687035	0.013880289
0.001693318	0.013864221
0.001699602	0.013845579
0.001705885	0.013824301
0.001712168	0.013800324
0.001718451	0.013773587
0.001724734	0.013744023
0.001731018	0.013711568
0.001737301	0.013676155
0.001743584	0.013637716
0.001749867	0.013596183
0.00175615	0.013551485
0.001762433	0.013503552
0.001768717	0.013452311
0.001775	0.01339769

284	19.251328
285	19.095062
286	18.934720
287	18.770234
288	18.601533
289	18.428548
290	18.251207
291	18.069438
291.5	17.650000
292.5	17.000000
293.5	15.000000
294.5	10.000000
295.5	0.000000

0.001781283	0.013339613
0.001787566	0.013278004
0.001793849	0.013212788
0.001800133	0.013143886
0.001806416	0.013071218
0.001812699	0.012994704
0.001818982	0.012914263
0.001825265	0.012829811
0.000914989	0.006282176
0.00183469	0.012132806
0.001840973	0.010742079
0.001847256	0.007185828
0.00185354	0

Please do not change any of the values in this sheet

Patm	Atmospheric air pressure - (As recorded from engine data)	975 [mBar]
Patm		97500 [Pa]
Tatm		5 [C]
Tatm		278 [K]
Relative Humidity		95 [%]

$$\rho_{\text{humid air}}^{[1]} = \frac{p_d}{R_d T} + \frac{p_v}{R_v T} = \frac{p_d M_d + p_v M_v}{RT}$$

where:

$\rho_{\text{humid air}}$	Density of the humid air (kg/m ³)
p_d	Partial pressure of dry air (Pa)
R_d	Specific gas constant for dry air, 287.058 J/(kg·K)
T	Temperature (K)
p_v	Pressure of water vapor (Pa)
R_v	Specific gas constant for water vapor, 461.495 J/(kg·K)
M_d	Molar mass of dry air, 0.028964 (kg/mol)
M_v	Molar mass of water vapor, 0.018016 (kg/mol)
R	Universal gas constant, 8.314 J/(K·mol)

$$\rho_{\text{humid air}} = 1.217898 \text{ Kg/m}^3$$

$$0.318090154$$

The vapor pressure of water may be calculated from the [saturation vapor pressure](#) and [relative humidity](#). It is found by:

$$p_v = \phi p_{\text{sat}}$$

$$p_u = 828.6578 \text{ [Pa]}$$

Where:

p_v	Vapor pressure of water
ϕ	Relative humidity
p_{sat}	Saturation vapor pressure

The [saturation vapor pressure of water](#) at any given temperature is the vapor pressure when relative humidity is 100%. One formula ^[1] used to find the saturation vapor pressure is:

$$p_{\text{sat}} = 6.1078 \times 10^{\frac{7.5T}{T+237.3}}$$

$$p_{\text{sat}} = 8.722714 \text{ hPa}$$

$$p_{\text{sat}} = 872.2714 \text{ [Pa]}$$

where T is in degrees C. Note:

$$\rho = \frac{p}{R_{\text{specific}} T} \quad 1.22177 \text{ [kg/m}^3]$$

$$R = 287.058 \text{ J/Kg K}$$

$$T = \text{Temperature in degrees Kelvin}$$

$$P = \text{Absolute Pressure in Pa}$$