ANNEX E
TO
Critique of All NASA Mars Weather Data, With Emphasis on Pressure:

Measured vs. Predicted Pressure Percent Differences for Viking-1 Time-bins 0.3 and 0.34
(Based on data from http://www-k12.atmos.washington.edu/k12/resources/mars_data-information/data.html)

This Annex focuses on two specific time-bins (0.3 and 0.34) for Viking 1 pressures between its sols 200 and 350. As with Appendix 2 to Annex D, it compares pressures recorded by Viking 1 to pressures predicted by what is often called Gay-Lussac's Law (also known as Amonton's law (http://chemed.chem.purdue.edu/genchem/topicreview/bp/ch4/gaslaws3.html#amonton). It can be summed up as follows:

$$\frac{P_1}{T_1} = \frac{P_2}{T_2}$$

The two time-bins correspond roughly to 0730 Local True Solar Time (the 0.3 time-bin) and 0830 (the 0.34 time-bin). These times were shown in Annexes A and B to be associated with highly consistent pressure increases. This report asserts that these pressure spikes are caused by the heater coming on then or by the powering up of some other electronic device that provides heat to pressure transducers trapped behind a dust clot. The purpose of Annex E is to show that the accuracy of the percent difference studies offered in Annex D is vastly improved when the focus is on the time associated with pressure spikes. This is in fact confirmed with the data in this Annex. Whereas the overall percent difference between measured pressures in Annex D was 8.448% between VL-1 sols 1 to 116 and 134 to 350, and just 5.325% between VL-1 sols 200 to 350; the percent difference between VL-1 sols 200 to 350 for the two specific 0.3 and 0.34 time-bins studied in this Annex is only 2.667%. Note the many percent differences shown in red fonts were less than 2%. These are made easier to follow in Annex F.

Data presented in the Appendices to Annex E again has data presented as follows:

A	B	C	D	E	F	G	H
VL-1 SOL	LS	MEASURED PRESSURE (Mbar)	Δ PRESS. (Mbar)	° CELSIUS Temp.	KELVIN Temp.	PREDICTED PRESSURE (Mbar)	% Difference From Pressure Law

A = Sol (Martian day) of the Viking Mission. Each sol is divided into 25 equal length intervals or "time-bins." The increase on each line by .04 sols is about 59 minutes. For Viking 1 Sol 1 (landing day) was on July 20, 1976. On the Martian calendar it was month 4, Ls 97, sol 209. For Viking 2 Sol 1 was on September 3, 1976 still in month 4 but at Ls 117.6, sol 253.

B = Ls. This indicates where Mars is in its orbit around the sun. Ls 0 = spring, Ls 90 = summer, Ls 180 = fall, and Ls 270 = winter.

C = Measured pressure (in mbar)

D = change in pressure from the previous time-bin (in mbar)

E = Temperature Celsius.

F = Temperature Kelvin. This figure is required for gas law calculations.

G = Predicted pressure at Viking 1 in accordance with the following formula:
Predicted pressure = 6.51 (minimum pressure in mbar measured at VL-1) * 255.17 (maximum temperature at Viking 1) divide by temperature (Kelvin) for the time bin-bin in question.

H = Percent difference between the predicted pressure and measured pressure.
   % Difference = [Absolute value of predicted minus measured pressure] * 100%
                  (Predicted + Measured pressure)/2

VL-1 SOL	LS	Measured Pressure (mbar)	ΔP from previous time-bin (0.26 or 0.3)	Temperature °C	Temp. Kelvin	Predicted pressure (mbar)	% Difference between measured and predicted pressure. Red fonts are <2%
200.3	201.883	7.82	0.18	-72.99	200.16	8.2991442	5.9450326
200.34	201.908	7.82	0	-65.26	207.89	7.9905561	2.1574961
201.3	202.498	7.9	0.17	-76.29	196.86	8.4382642	6.5890016
201.34	202.523	7.9	0	-67.74	205.41	8.0870294	2.3397637
202.3	203.114	7.87	0.21	-76.65	196.5	8.4537237	7.1518445
202.34	203.139	7.85	-0.02	-62.55	210.6	7.8877336	0.4795305
203.3	203.731	7.85	0.19	-75.86	197.29	8.4198728	7.0052518
203.34	203.756	7.85	0	-65.66	207.49	8.0059603	1.9672134
204.3	204.349	7.96	0.17	-81.95	191.2	8.6880581	8.7464622
204.34	204.373	7.99	0.03	-71.16	201.99	8.2239551	2.8858492
205.3	204.967	7.93	0.2	-76.2	196.95	8.4344082	6.1646986
205.34	204.992	7.9	-0.03	-66.8	206.35	8.05019	1.8832374
206.3	205.587	7.96	0.21	-78.74	194.41	8.5446052	7.0841466
206.34	205.611	7.93	-0.03	-67.77	205.38	8.0882106	1.9753846
207.3	206.207	7.95	0.21	-78.44	194.71	8.5314401	7.0556952
207.34	206.232	7.93	-0.02	-67.22	205.93	8.0666086	1.707969
208.3	206.828	7.93	0.2	-78.15	195	8.5187523	7.1586257
208.34	206.853	7.93	0	-66.68	206.47	8.0455112	1.4461035
209.3	207.45	7.87	0.17	-74	199.15	8.3412337	5.8136691
209.34	207.475	7.87	0	-63.66	209.49	7.9295274	0.7535342
210.3	208.072	8.31	0.26	-78.61	194.54	8.5388953	2.7170368
210.34	208.097	8.31	0	-74.13	199.02	8.3466822	0.4404508
211.3	208.696	8.48	0.39	-79.36	193.79	8.5719423	1.0783793
211.34	208.721	8.49	0.01	-71.32	201.83	8.2304747	3.104282

212.3	209.32	8.37	0.35	-75	198.15	8.3833293	**0.1591241**
212.34	209.345	8.36	-0.01	-68.75	204.4	8.1269897	**2.8265957**
213.3	209.945	8.34	0.34	-75.21	197.94	8.3922234	**0.6242255**
213.34	209.97	8.34	0	-68.99	204.16	8.1365434	**2.4696515**
214.3	210.571	8.25	0.33	-74.24	198.91	8.3512981	**1.2203633**
214.34	210.596	8.29	0.04	-66.66	206.49	8.0447319	**3.0030251**
215.3	211.198	8.4	0.29	-77.67	195.48	8.4978346	**1.1579538**
215.34	211.223	8.49	0.09	-73.16	199.99	8.3061988	**2.1886046**
216.3	211.825	8.22	0.35	-71.51	201.64	8.23823	**0.2215307**
216.34	211.85	8.29	0.07	-66.4	206.75	8.0346152	**3.1288304**
217.3	212.453	8.22	0.3	-73.33	199.82	8.3132654	**1.1282156**
217.34	212.478	8.36	0.14	-68.61	204.54	8.1214271	**2.8950514**
218.3	213.082	8.19	0.32	-72.91	200.24	8.2958285	**1.2838725**
218.34	213.107	8.36	0.17	-67.66	205.49	8.083881	**3.3583195**
219.3	213.711	8.22	0.28	-74.11	199.04	8.3458435	**1.5193135**
219.34	213.736	8.38	0.16	-67.84	205.31	8.0909683	**3.5095898**
220.3	214.342	8.28	0.34	-74.67	198.48	8.3693909	**1.0738035**
220.34	214.367	8.42	0.14	-69.93	203.22	8.1741792	**2.9627351**
221.3	214.973	8.31	0.35	-75.24	197.91	8.3934955	**0.9997372**
221.34	214.998	8.47	0.16	-69.36	203.79	8.1513161	**3.8346415**
222.3	215.604	8.31	0.29	-76.34	196.81	8.440408	**1.5570726**
222.34	215.63	8.49	0.18	-70.65	202.5	8.203243	**3.4356061**
223.3	216.237	8.4	0.31	-77.43	195.72	8.4874142	**1.0352581**
223.34	216.262	8.49	0.09	-71.51	201.64	8.23823	**3.010121**
224.3	216.87	8.37	0.28	-77.57	195.58	8.4934896	**1.4645797**

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224.34	216.895	8.42	0.05	-71.52	201.63	8.2386386	**2.1773857**
225.3	217.504	8.38	0.29	-76.41	196.74	8.4434111	**0.7538436**
225.34	217.529	8.4	0.02	-71.19	201.96	8.2251768	**2.1031143**
226.3	218.138	8.49	0.31	-78.08	195.07	8.5156954	**0.3021975**
226.34	218.163	8.47	-0.02	-73.27	199.88	8.31077	**1.897768**
227.3	218.773	8.4	0.29	-77.58	195.57	8.4939239	**1.1119254**
227.34	218.799	8.4	0	-73.98	199.17	8.3403961	**0.7120961**
228.3	219.409	8.46	0.28	-78.8	194.35	8.5472431	**1.0259525**
228.34	219.434	8.4	-0.06	-81.83	191.32	8.6826087	**3.3087302**
229.3	220.045	8.37	0.21	-76.95	196.2	8.4666498	**1.1480888**
229.34	220.071	8.36	-0.01	-73.89	199.26	8.336629	**0.2799484**
230.3	220.682	8.64	0.28	-80.89	192.26	8.6401576	**0.001824**
230.34	220.708	8.58	-0.06	-76.39	196.76	8.4425529	**1.6148829**
231.3	221.32	8.58	0.22	-81.05	192.1	8.647354	**0.7819423**
231.34	221.345	8.58	0	-76.58	196.57	8.4507132	**1.5182778**
232.3	221.958	8.46	0.17	-79.85	193.3	8.5936715	**1.5676565**
232.34	221.984	8.49	0.03	-74.17	198.98	8.3483601	**1.6823475**
233.3	222.597	8.49	0.2	-80.45	192.7	8.6204292	**1.5245575**
233.34	222.623	8.49	0	-74	199.15	8.3412337	**1.7677404**
234.3	223.236	8.49	0.18	-80.5	192.65	8.6226665	**1.5505064**
234.34	223.262	8.49	0	-73.96	199.19	8.3395587	**1.7878221**
235.3	223.876	8.4	0.15	-78.09	195.06	8.516132	**1.3730321**
235.34	223.902	8.42	0.02	-72.29	200.86	8.2702215	**1.7948048**
236.3	224.517	8.58	0.07	-81.7	191.45	8.676713	**1.1208737**
236.34	224.542	8.58	0	-76.64	196.51	8.4532935	**1.4877514**

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237.3	225.158	8.52	0.1	-80.63	192.52	8.628489	**1.2652892**
237.34	225.183	8.58	0.06	-74.61	198.54	8.3668616	**2.5153732**
238.3	225.799	8.64	0.13	-80.92	192.23	8.641506	**0.0174291**
238.34	225.825	8.67	0.03	-81.64	191.51	8.6739946	**0.0460629**
239.3	226.441	8.58	0.07	-81.59	191.56	8.6717305	**1.0634357**
239.34	226.467	8.63	0.05	-75.05	198.1	8.3854452	**2.8745033**
240.3	227.084	8.64	-0.03	-83.45	189.7	8.7567565	**1.3422785**
240.34	227.11	8.67	0.03	-77.01	196.14	8.4692398	**2.3426963**
241.3	227.727	8.64	0.13	-84.1	189.05	8.7868643	**1.6854934**
241.34	227.753	8.67	0.03	-76.66	196.49	8.4541539	**2.5209549**
242.3	228.371	8.58	0.07	-82.4	190.75	8.7085541	**1.4871588**
242.34	228.397	8.65	0.07	-76.62	196.53	8.4524332	**2.3103939**
243.3	229.015	8.7	0.1	-82.71	190.44	8.72273	**0.2609234**
243.34	229.041	8.76	0.06	-76.58	196.57	8.4507132	**3.5941191**
244.3	229.66	8.67	0.07	-81.68	191.47	8.6758067	**0.0669517**
244.34	229.685	8.67	0	-75.49	197.66	8.4041116	**3.114521**
245.3	230.305	8.67	0.11	-81.54	191.61	8.6694677	**0.0061401**
245.34	230.33	8.67	0	-75.43	197.72	8.4015613	**3.1448641**
246.3	230.95	8.85	0.09	-83.76	189.39	8.7710898	**0.8956334**
246.34	230.976	8.85	0	-77.79	195.36	8.5030544	**3.9986694**
247.3	231.596	8.82	0.1	-84.5	188.65	8.8054954	**0.164587**
247.34	231.622	8.85	0.03	-76.67	196.48	8.4545842	**4.5700702**
248.3	232.242	8.76	0.07	-84.45	188.7	8.8031622	**0.4915079**
248.34	232.268	8.81	0.05	-78.15	195	8.5187523	**3.3614387**
249.3	232.889	8.7	0.05	-83.97	189.18	8.7808262	**0.9247412**
249.34	232.915	8.76	0.06	-77.83	195.32	8.5047957	**2.9563545**

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250.3	233.536	8.91	0.09	-86.24	186.91	8.8874683	**0.2532012**
250.34	233.562	8.94	0.03	-80.95	192.2	8.6428548	**3.3799422**
251.3	234.183	8.76	0.11	-85.12	188.03	8.8345301	**0.8471966**
251.34	234.209	8.82	0.06	-79.19	193.96	8.5644293	**2.9402258**
252.3	234.831	8.76	0.07	-83.97	189.18	8.7808262	**0.2374597**
252.34	234.857	8.76	0	-77.35	195.8	8.4839464	**3.2017454**
253.3	235.479	8.91	0.08	-85.36	187.79	8.8458209	**0.7229081**
253.34	235.505	8.89	-0.02	-79.75	193.4	8.589228	**3.4414789**
254.3	236.128	8.79	0.12	-83.58	189.57	8.7627615	**0.3103613**
254.34	236.153	8.83	0.04	-76.89	196.26	8.4640614	**4.2319562**
255.3	236.776	8.85	0.09	-84.11	189.04	8.7873291	**0.7106616**
255.34	236.802	8.85	0	-80.73	192.42	8.6329732	**2.4827221**
256.3	237.425	8.91	0.13	-84.99	188.16	8.8284263	**0.9197395**
256.34	237.451	8.87	-0.04	-79.11	194.04	8.5608983	**3.5465956**
257.3	238.075	8.94	0.13	-86.01	187.14	8.8765454	**0.7123113**
257.34	238.101	8.94	0	-79.34	193.81	8.5710577	**4.2138204**
258.3	238.724	8.91	0.06	-86.35	186.8	8.8927018	**0.1943321**
258.34	238.75	8.94	0.03	-79.76	193.39	8.5896722	**3.9969696**
259.3	239.374	8.94	0.09	-86.75	186.4	8.9117849	**0.3161043**
259.34	239.4	8.94	0	-79.97	193.18	8.5990097	**3.888364**
260.3	240.024	8.94	0.06	-88.34	184.81	8.9884568	**0.5405573**
260.34	240.05	8.94	0	-81.06	192.09	8.6478042	**3.3227098**
261.3	240.675	8.94	0.09	-89.03	184.12	9.0221415	**0.9146074**
261.34	240.701	8.96	0.02	-78.39	194.76	8.5292498	**4.9258848**
262.3	241.325	9.03	0.14	-87.56	185.59	8.95068	**0.8822804**

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262.34	241.351	9.03	0	-80.71	192.44	8.632076	4.5059712
263.3	241.976	9	0.11	-87.62	185.53	8.9535746	0.5171714
263.34	242.002	9.03	0.03	-80.7	192.45	8.6316274	4.5111648
264.3	242.627	9.03	0.09	-88.65	184.5	9.0035594	0.2932383
264.34	242.653	9.05	0.02	-82.63	190.52	8.7190673	3.724818
265.3	243.278	8.85	0.07	-87.09	186.06	8.92807	0.8782728
265.34	243.304	8.89	0.04	-80.61	192.54	8.6275927	2.9959287
266.3	243.93	9	0.17	-87.55	185.6	8.9501977	0.5548938
266.34	243.956	9.03	0.03	-81.85	191.3	8.6835165	3.9120807
267.3	244.581	8.97	0.1	-88.03	185.12	8.9734048	0.0379506
267.34	244.607	8.98	0.01	-81.4	191.75	8.6631379	3.5919014
268.3	245.233	8.94	0.13	-87.85	185.3	8.9646881	0.2757722
268.34	245.259	8.94	0	-81.39	191.76	8.6626862	3.1508126
269.3	245.885	9	0.11	-89.29	183.86	9.0348999	0.3870265
269.34	245.911	9.05	0.05	-79.41	193.74	8.5741545	5.3999239
270.3	246.536	9.03	0.14	-89.02	184.13	9.0216516	0.0924951
270.34	246.562	9.03	0	-82.77	190.38	8.725479	3.4301632
271.3	247.188	9.03	0.09	-89.49	183.66	9.0447386	0.1630856
271.34	247.215	9.03	0	-82.91	190.24	8.7319002	3.3566202
272.3	247.84	9.03	0.12	-90.27	182.88	9.0833153	0.5886861
272.34	247.866	9.03	0	-83.82	189.33	8.7738694	2.8772461
273.3	248.493	9.15	0.1	-90.61	182.54	9.1002339	0.5453747
273.34	248.519	9.12	-0.03	-84.58	188.57	8.8092311	3.4666177
274.3	249.145	9.18	0.13	-91.85	181.3	9.1624749	0.1910876
274.34	249.171	9.12	-0.06	-85.84	187.31	8.8684891	2.7963534

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275.3	249.797	9.03	0.14	-88.66	184.49	9.0040474	0.2878181
275.34	249.823	9.03	0	-81.62	191.53	8.6730888	4.0321911
276.3	250.449	9.03	0.05	-91.55	181.6	9.1473387	1.2910433
276.34	250.475	9.03	0	-85.53	187.62	8.8538359	1.9700925
277.3	251.101	9.12	0.14	-91.19	181.96	9.129241	0.1012759
277.34	251.127	9.05	-0.07	-84.58	188.57	8.8092311	2.6962969
278.3	251.753	9.12	0.09	-91.31	181.84	9.1352656	0.1672462
278.34	251.779	9.12	0	-84.59	188.56	8.8096982	3.461316
279.3	252.406	9.03	0.14	-90.39	182.76	9.0892794	0.6543238
279.34	252.432	9.03	0	-84.4	188.75	8.8008302	2.5704894
280.3	253.058	9.06	0.12	-90.94	182.21	9.1167153	0.6240438
280.34	253.084	9.1	0.04	-84.92	188.23	8.8251432	3.0667183
281.3	253.71	9.12	0.14	-91.58	181.57	9.14885	0.3158385
281.34	253.736	9.12	0	-85.52	187.63	8.8533641	2.967012
282.3	254.362	9.03	0.14	-91.71	181.44	9.1554051	1.3791839
282.34	254.388	9.03	0	-85.73	187.42	8.8632841	1.863447
283.3	255.014	9.03	0.14	-91.33	181.82	9.1362705	1.1699758
283.34	255.04	9.03	0	-85.25	187.9	8.8406424	2.1192035
284.3	255.666	9.09	0.13	-92.52	180.63	9.1964607	1.1643666
284.34	255.692	9.12	0.03	-86.35	186.8	8.8927018	2.5237544
286.3	256.969	8.97	0.1	-90.8	182.35	9.1097159	1.5455545
286.34	256.995	8.98	0.01	-83.56	189.59	8.7618371	2.4593043
287.3	257.62	9.18	0.13	-93.19	179.96	9.2306996	0.5507623
287.34	257.646	9.21	0.03	-88.32	184.83	8.9874842	2.4455669
288.3	258.272	9.15	0.12	-94	179.15	9.2724348	1.3291927
288.34	258.298	9.14	-0.01	-87.53	185.62	8.9492334	2.1091731

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289.3	258.923	9	0.13	-92.56	180.59	9.1984977	**2.1814735**
289.34	258.949	9.03	0.03	-86.12	187.03	8.881766	**1.6551575**
290.3	259.574	9.12	0.18	-92.61	180.54	9.2010452	**0.8847224**
290.34	259.6	9.12	0	-87.61	185.54	8.9530921	**1.8470325**
291.3	260.225	9.18	0.13	-93.97	179.18	9.2708824	**0.9851274**
291.34	260.251	9.21	0.03	-87.86	185.29	8.9651719	**2.694094**
292.3	260.875	9.12	0.11	-94.83	178.32	9.3155939	**2.1219157**
292.34	260.901	9.12	0	-88.44	184.71	8.993323	**1.3987158**
293.3	261.526	9.03	0.09	-94.42	178.73	9.2942242	**2.8838792**
293.34	261.552	9.07	0.04	-88.55	184.6	8.998682	**0.7894099**
294.3	262.176	9.18	0.13	-94.78	178.37	9.3129826	**1.4381949**
294.34	262.202	9.21	0.03	-89.02	184.13	9.0216516	**2.0661699**
295.3	262.826	9.27	0.13	-93.99	179.16	9.2719173	**0.0206805**
295.34	262.852	9.28	0.01	-89	184.15	9.0206717	**2.8340847**
296.3	263.475	9	0.11	-93.22	179.93	9.2322386	**2.5475604**
296.34	263.501	9.03	0.03	-87.22	185.93	8.9343124	**1.065308**
297.3	264.125	9	0.13	-93.47	179.68	9.245084	**2.6865762**
297.34	264.151	9.03	0.03	-88.11	185.04	8.9772844	**0.5854923**
298.3	264.774	9.09	0.13	-94.72	178.43	9.3098509	**2.3897033**
298.34	264.8	9.12	0.03	-89.57	183.58	9.0486801	**0.7850858**
299.3	265.422	9.06	0.1	-94.36	178.79	9.2911052	**2.5187061**
299.34	265.448	9.1	0.04	-89.54	183.61	9.0472017	**0.5818894**
300.3	266.071	8.85	0.09	-93.33	179.82	9.2378862	**4.288906**
300.34	266.097	8.89	0.04	-86.69	186.46	8.9089172	**0.2125657**
301.3	266.719	8.91	0.1	-94.74	178.41	9.3108946	**4.4003829**

301.34	266.745	8.94	0.03	-89.31	183.84	9.0358828	1.0667941
302.3	267.367	8.85	0.04	-94.52	178.63	9.2994273	4.9525233
302.34	267.392	8.94	0.09	-89.27	183.88	9.0339172	1.0450391
303.3	268.014	8.85	0.09	-93.34	179.81	9.2384	4.2944647
303.34	268.04	8.87	0.02	-88.38	184.77	8.9904027	1.3482637
304.3	268.661	8.94	0.09	-94.48	178.67	9.2973454	3.9188311
304.34	268.687	8.98	0.04	-89.57	183.58	9.0486801	0.7618987
305.3	269.308	8.97	0.12	-94.22	178.93	9.2838356	3.4385713
305.34	269.333	9.03	0.06	-88.91	184.24	9.0162652	0.1522177
306.3	269.954	8.94	0.09	-94.91	178.24	9.319775	4.1596901
306.34	269.98	9.01	0.07	-89.43	183.72	9.0417848	0.3521511
307.3	270.6	8.85	0.09	-94.82	178.33	9.3150715	5.1205028
307.34	270.625	8.85	0	-89.68	183.47	9.0541053	2.2799833
308.3	271.245	8.88	0.03	-95.08	178.07	9.3286724	4.928118
308.34	271.271	8.94	0.06	-89.95	183.2	9.0674492	1.4155168
309.3	271.89	8.94	0.09	-94.31	178.84	9.2885076	3.8237645
309.34	271.916	8.94	0	-89.99	183.16	9.0694295	1.4373521
310.3	272.535	8.67	0.04	-94.12	179.03	9.2786499	6.7821251
310.34	272.56	8.76	0.09	-89.84	183.31	9.0620081	3.3891588
311.3	273.179	8.76	0	-94.37	178.78	9.2916249	5.8900504
311.34	273.204	8.76	0	-89.66	183.49	9.0531184	3.29104
312.3	273.822	8.7	0.1	-94	179.15	9.2724348	6.3701422
312.34	273.848	8.76	0.06	-85.54	187.61	8.8543079	1.0708099
313.3	274.465	8.79	0.12	-92.26	180.89	9.1832423	4.3758638
313.34	274.491	8.92	0.13	-88.51	184.64	8.9967326	0.8565464

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314.3	275.108	8.82	0.19	-86.35	186.8	8.8927018	0.8209004
314.34	275.133	8.94	0.12	-84.18	188.97	8.7905842	1.6854017
315.3	275.75	8.79	0.1	-86.67	186.48	8.9079617	1.3330542
315.34	275.775	8.96	0.17	-84.71	188.44	8.8153083	1.6280075
316.3	276.391	9	0.17	-85	188.15	8.8288956	1.9194059
316.34	276.417	9.16	0.16	-83.54	189.61	8.7609129	4.4538699
317.3	277.032	9.18	0.17	-85.14	188.01	8.8354699	3.8248248
317.34	277.058	9.36	0.18	-83.94	189.21	8.779434	6.4011483
318.3	277.673	9.18	0.31	-83.46	189.69	8.7572181	4.7140187
318.34	277.698	9.39	0.21	-82.52	190.63	8.7140361	7.4675493
319.3	278.313	9.27	0.46	-80.63	192.52	8.628489	7.1683259
319.34	278.338	9.36	0.09	-80.01	193.14	8.6007906	8.4540753
320.3	278.952	9.3	0.49	-80.8	192.35	8.6361149	7.4027749
320.34	278.978	9.36	0.06	-80.45	192.7	8.6204292	8.226398
321.3	279.591	9.42	0.46	-82.75	190.4	8.7245625	7.6655196
321.34	279.616	9.41	-0.01	-82.91	190.24	8.7319002	7.4755098
322.3	280.229	9.45	0.58	-82.53	190.62	8.7144932	8.0982911
322.34	280.255	9.3	-0.15	-82.98	190.17	8.7351144	6.2642866
323.3	280.867	9.36	0.55	-82.16	190.99	8.6976109	7.3363983
323.34	280.892	9.23	-0.13	-82.76	190.39	8.7250207	5.6249364
324.3	281.503	9.36	0.53	-82.57	190.58	8.7163223	7.1217774
324.34	281.529	9.24	-0.12	-83.18	189.97	8.7443107	5.5124639
325.3	282.14	9.3	0.43	-83.65	189.5	8.7659984	5.9116753
325.34	282.165	9.23	-0.07	-83.64	189.51	8.7655359	5.1619929
326.3	282.775	9.27	0.46	-83.25	189.9	8.747534	5.7995288
326.34	282.801	9.25	-0.02	-83.49	189.66	8.7586033	5.457355

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327.3	283.41	9.3	0.45	-83.83	189.32	8.7743329	**5.8167251**
327.34	283.436	9.34	0.04	-83.49	189.66	8.7586033	**6.4247688**
328.3	284.045	9.33	0.46	-84.28	188.87	8.7952385	**5.9007386**
328.34	284.07	9.34	0.01	-84.28	188.87	8.7952385	**6.0077674**
329.3	284.678	9.33	0.52	-84.4	188.75	8.8008302	**5.8372374**
329.34	284.704	9.32	-0.01	-84.45	188.7	8.8031622	**5.7036165**
330.3	285.312	9.39	0.58	-84.21	188.94	8.79198	**6.5781615**
330.34	285.337	9.34	-0.05	-84.62	188.53	8.8111001	**5.827745**
331.3	285.944	9.36	0.58	-83.59	189.56	8.7632238	**6.5857623**
331.34	285.969	9.23	-0.13	-84.19	188.96	8.7910494	**4.8715317**
332.3	286.576	9.36	0.62	-84.21	188.94	8.79198	**6.2584909**
332.34	286.601	9.25	-0.11	-84.78	188.37	8.8185842	**4.7753142**
333.3	287.206	9.27	0.51	-84.91	188.24	8.8246744	**4.9221737**
333.34	287.232	9.3	0.03	-85.2	187.95	8.8382905	**5.0909924**
334.3	287.837	9.21	0.47	-86.15	187	8.8831909	**3.6125092**
334.34	287.862	9.36	0.15	-85.87	187.28	8.8699098	**5.3767709**
335.3	288.466	9.3	0.54	-86.47	186.68	8.8984181	**4.413371**
335.34	288.491	9.39	0.09	-86.16	186.99	8.883666	**5.5416798**
336.3	289.095	9.27	0.53	-87.76	185.39	8.960336	**3.397238**
336.34	289.12	9.32	0.05	-87.66	185.49	8.9555054	**3.9888865**
337.3	289.723	9.27	0.46	-87.22	185.93	8.9343124	**3.6880011**
337.34	289.748	9.32	0.05	-86.92	186.23	8.91992	**4.3868614**
338.3	290.35	9.18	0.44	-86.1	187.05	8.8808164	**3.3130689**
338.34	290.375	9.25	0.07	-85.99	187.16	8.8755968	**4.1312095**
339.3	290.977	9.12	0.4	-86.28	186.87	8.8893707	**2.5612146**

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339.34	291.002	9.28	0.16	-85.89	187.26	8.8708571	**4.5082488**
340.3	291.602	9.03	0.31	-87.54	185.61	8.9497155	**0.893056**
340.34	291.627	9.25	0.22	-86.78	186.37	8.9132194	**3.70838**
341.3	292.227	9.15	0.41	-87.25	185.9	8.9357542	**2.369222**
341.34	292.252	9.23	0.08	-86.92	186.23	8.91992	**3.4168747**
342.3	292.852	9.15	0.39	-87.66	185.49	8.9555054	**2.1484579**
342.34	292.877	9.25	0.1	-87.24	185.91	8.9352735	**3.4613335**
343.3	293.475	9.15	0.37	-88.34	184.81	8.9884568	**1.7812233**
343.34	293.5	9.21	0.06	-88.37	184.78	8.9899161	**2.4185154**
344.3	294.097	9.12	0.29	-89.01	184.14	9.0211616	**1.0896588**
344.34	294.122	9.23	0.11	-88.51	184.64	8.9967326	**2.5596188**
345.3	294.719	9.12	0.29	-89.79	183.36	9.059537	**0.6651767**
345.34	294.744	9.21	0.09	-89.24	183.91	9.0324436	**1.9466297**
346.3	295.34	9.03	0.2	-89.55	183.6	9.0476944	**0.19576**
346.34	295.365	9.21	0.18	-88.89	184.26	9.0152866	**2.1367395**
347.3	295.96	9.06	0.23	-89.91	183.24	9.0654699	**0.0603557**
347.34	295.985	9.21	0.15	-89.15	184	9.0280255	**1.99555**
348.3	296.58	9.09	0.26	-89.81	183.34	9.0605253	**0.3247812**
348.34	296.604	9.21	0.12	-89.15	184	9.0280255	**1.99555**
349.3	297.198	9	0.26	-89.57	183.58	9.0486801	**0.5394316**
349.34	297.223	9.12	0.12	-88.81	184.34	9.0113741	**1.1982093**
350.3	297.816	8.94	0.2	-89.58	183.57	9.0491731	**1.2137642**
350.34	297.84	9.12	0.18	-88.85	184.3	9.0133299	**1.1765087**
AVERAGE							2.667244

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