

Kurzy akcií pro hypotetické kurzovní lístky

Obchodní den na burze	Kurzy akcií jednotlivých firem		
	F1	F2	F3
1.	100	200	1000
2.	110	210	1050
3.	121	205	1080
4.	95	150	1020
5.	98	210	950

Vynosnosti

Var(X)

0.09531	0.04879	0.04879	0.010072
0.09531	-0.0241	0.028171	0.010072
-0.24191	-0.31237	-0.05716	0.056104
0.031091	0.336472	-0.0711	0.001306

E(X)	-0.00505	0.012198	-0.01282	Var(X)	0.025852
				fce	0.025852
				Sigma(X)	0.160784
				fce	0.160784

Vynosnost 2-denni

Var(X)

0.001339	0.003796						
0.001317	0.001681		0.19062	0.024693	0.076961		0.060625 0.014541
0.105347	0.001966		-0.1466	-0.33647	-0.02899		0.008281 0.057878
0.105154	0.003396		-0.21082	0.024098	-0.12825		0.024094 0.014398
0.071053	0.003613	E(X)	-0.0556	-0.09589	-0.02676	Var(X)	0.0465 0.043408
0.071053	0.003613					fce	0.0465 0.043408
0.266557	0.060106					Sigma(X)	0.215639 0.208347
0.266557	0.060106						

0.010758

4.96E-06

0.010301

0.010532

0.010532

0.102626

Emise	R o k							
	2007				2008			
	I.	II.	III.	IV.	I.	II.	III.	IV.
A	1010	1055	1100	1031	988	1065	918	1060
B	2650	3000	3848	3228	3638	4205	3979	4731
C	1505	2030	2190	2325	2250	2443	1700	1796
D	178	300	325	396	351	370	335	327
E	281	372	358	494	460	539	443	468
F	2645	3125	3400	3330	3400	3425	3475	4100
G	547	800	803	1070	975	952	997	944

Vynosnost

								E(X)
A	0.04359	0.041769	-0.06478	-0.0426	0.075047	-0.14853	0.143827	0.006903
B	0.124053	0.248941	-0.17569	0.119571	0.14484	-0.05524	0.173106	0.082797
C	0.299243	0.075866	0.059818	-0.03279	0.082297	-0.3626	0.054934	0.025253
D	0.521999	0.080043	0.197589	-0.12063	0.052717	-0.09937	-0.02417	0.086882
E	0.280539	-0.03836	0.322003	-0.07131	0.158489	-0.19615	0.054899	0.072873
F	0.166763	0.084341	-0.0208	0.020803	0.007326	0.014493	0.165392	0.062617
G	0.380163	0.003743	0.287059	-0.09298	-0.02387	0.046186	-0.05462	0.077954

A	0.048319
B	0.579577
C	0.176769
D	0.608177
E	0.510114
F	0.438316
G	0.545677

A
B
C
D
E
F
G

A-A
A-B
A-C
A-D
A-E
A-F
A-G

B-B
B-C
B-D
B-E
B-F
B-G

Var(X)

							Var(X)	Sigma(X)
0.001346	0.001216	0.005139	0.002451	0.004644	0.02416	0.018748	0.009617	0.098067
0.001702	0.027604	0.066816	0.001352	0.003849	0.019055	0.008156	0.021422	0.146364
0.075071	0.002562	0.001195	0.003369	0.003254	0.150429	0.000881	0.03946	0.198645
0.189326	4.68E-05	0.012256	0.043061	0.001167	0.034691	0.012333	0.048813	0.220938
0.043125	0.012373	0.062065	0.020789	0.00733	0.072371	0.000323	0.036396	0.190778
0.010847	0.000472	0.006959	0.001748	0.003057	0.002316	0.010563	0.005994	0.077418
0.09133	0.005507	0.043725	0.029217	0.010369	0.001009	0.017577	0.033122	0.181996

Covar(X,Y)

0.036688	0.034867	-0.07168	-0.0495	0.068145	-0.15544	0.136924
0.041256	0.166145	-0.25849	0.036775	0.062044	-0.13804	0.090309
0.27399	0.050613	0.034566	-0.05804	0.057044	-0.38785	0.029681
0.435117	-0.00684	0.110707	-0.20751	-0.03417	-0.18625	-0.11105
0.207666	-0.11123	0.249129	-0.14418	0.085616	-0.26902	-0.01797
0.104147	0.021725	-0.08342	-0.04181	-0.05529	-0.04812	0.102776
0.302209	-0.07421	0.209105	-0.17093	-0.10183	-0.03177	-0.13258

Covar(X,Y)

0.001346	0.001216	0.005139	0.002451	0.004644	0.02416	0.018748	0.009617	0.009617
0.001514	0.005793	0.018529	-0.00182	0.004228	0.021456	0.012366	0.010344	0.010344
0.010052	0.001765	-0.00248	0.002873	0.003887	0.060286	0.004064	0.013408	0.013408
0.015963	-0.00024	-0.00794	0.010273	-0.00233	0.028951	-0.01521	0.004913	0.004913
0.007619	-0.00388	-0.01786	0.007138	0.005834	0.041815	-0.00246	0.006368	0.006368
0.003821	0.000757	0.00598	0.00207	-0.00377	0.00748	0.014073	0.005069	0.005069
0.011087	-0.00259	-0.01499	0.008462	-0.00694	0.004938	-0.01815	-0.00303	-0.00303

Covar_M

	A	B	C	D	E	F
A	0.009617	0.010344	0.013408	0.004913	0.006368	0.005069
B	0.010344					
C	0.013408					
D	0.004913					
E	0.006368					
F	0.005069					
G	-0.00303					

Covar_M

Var(X)	A	B	C	D	E	F
0.009617	0.009617	0.010344	0.013408	0.004913	0.006368	0.005069
0.021422	0.010344	0.021422	0.0114	-0.00098	-0.00646	0.006738
0.03946	0.013408	0.0114	0.03946	0.033623	0.02949	0.007957
0.048813	0.004913	-0.00098	0.033623	0.048813	0.032966	0.007341
0.036396	0.006368	-0.00646	0.02949	0.032966	0.036396	0.001804
0.005994	0.005069	0.006738	0.007957	0.007341	0.001804	0.005994
0.033122	-0.00303	-0.01235	0.016462	0.03579	0.024994	0.002183

0.098067	0.146364	0.198645	0.220938	0.190778	0.077418	0.181996
0.098067	0.146364	0.198645	0.220938	0.190778	0.077418	0.181996

Sigma(X)
0.098067
0.146364
0.198645

Correl_M

	1	0.720674	0.688288	0.226756	0.340369	0.667638
	0.720674	1	0.392109	-0.03026	-0.23152	0.594603

0.220938
0.190778
0.077418
0.181996

0.688288	0.392109		1	0.766101	0.778153	0.517375
0.226756	-0.03026	0.766101		1	0.782114	0.429199
0.340369	-0.23152	0.778153	0.782114		1	0.122128
0.667638	0.594603	0.517375	0.429199	0.122128		1
-0.16979	-0.46366	0.455353	0.890092	0.719859	0.154941	

1
1

G
-0.00303

G
-0.00303
-0.01235
0.016462
0.03579
0.024994
0.002183
0.033122

-0.16979
-0.46366

0.455353

0.890092

0.719859

0.154941

1

Date	Exxon	Goldman	Apple	Exxon	Goldman	Apple	Var(X)	Exxon
3/1/2015	85	190	129.25					
4/1/2015	87.37	187.94	124.82	0.027501	-0.0109	-0.03488		0.000955
5/1/2015	85.2	198.45	126.1	-0.02515	0.054414	0.010203		0.000473
6/1/2015	83.2	207.32001	130.28	-0.02375	0.043726	0.032611		0.000414
7/1/2015	79.21	211.63001	126.9	-0.04914	0.020576	-0.02629		0.002092
8/1/2015	75.24	205.75	121.5	-0.05142	-0.02818	-0.04349		0.002306
9/1/2015	74.35	184.24001	110.15	-0.0119	-0.11042	-0.09807		7.22E-05
#####	82.74	174.39999	109.07	0.106919	-0.05489	-0.00985		0.012171
#####	81.66	188.32001	120.8	-0.01314	0.076791	0.102146		9.48E-05
#####	77.95	191.22	118.75	-0.0465	0.015282	-0.01712		0.001857
1/1/2016	77.85	175.78999	102.61	-0.00128	-0.08413	-0.14609		4.49E-06
2/1/2016	80.15	160.41	96.470001	0.029116	-0.09156	-0.0617		0.001057
3/1/2016	83.59	150.95	97.650002	0.042024	-0.06078	0.012158		0.002064
4/1/2016	88.4	156.46001	108.78	0.055948	0.035852	0.107938		0.003523
5/1/2016	89.02	165.08	93.970001	0.006989	0.05363	-0.14635		0.000108
6/1/2016	93.74	157.89999	99.019997	0.051664	-0.04447	0.052346		0.003032
7/1/2016	88.95	148.49001	95.489998	-0.05245	-0.06144	-0.0363		0.002406
8/1/2016	87.14	158.81	104.41	-0.02056	0.067191	0.089304		0.000294
9/1/2016	87.28	170	106.14	0.001605	0.06809	0.016433		2.51E-05
#####	83.32	160.5	112.71	-0.04643	-0.0575	0.060059		0.001852
#####	87.3	179	113.46	0.046662	0.109092	0.006632		0.002506
#####	90.26	220.92999	110.37	0.033344	0.21046	-0.02761		0.00135
1/1/2017	83.89	242.7	115.8	-0.07319	0.09398	0.048026		0.00487
2/1/2017	81.32	230.51	127.03	-0.03111	-0.05153	0.092559		0.000768
3/1/2017	82.01	253.71001	137.89	0.008449	0.095898	0.082033		0.00014
4/1/2017	81.65	230	143.71001	-0.0044	-0.09811	0.041341		9.93E-07
5/1/2017	80.5	224.89999	145.10001	-0.01418	-0.02242	0.009626		0.000116
6/1/2017	80.73	212.61	153.17	0.002853	-0.0562	0.054125		3.91E-05
7/1/2017	80.04	224.46001	144.88001	-0.00858	0.054238	-0.05564		2.68E-05
8/1/2017	76.33	227.09	149.10001	-0.04746	0.011649	0.028711		0.001941
9/1/2017	81.98	224.55	164.8	0.071409	-0.01125	0.100115		0.005597
#####	83.35	237.2	154.26	0.016573	0.054805	-0.06609		0.000399
#####	83.29	243.89	169.87	-0.00072	0.027814	0.096394		7.2E-06
#####	83.64	249.78	169.95	0.004193	0.023863	0.000471		5.77E-05
1/1/2018	87.3	257.76999	170.16	0.042829	0.031487	0.001235		0.002137
2/1/2018	75.74	266.14999	167.17	-0.14204	0.031992	-0.01773		0.019221
3/1/2018	75.2	262.60999	178.53999	-0.00716	-0.01339	0.065801		1.41E-05
			E(X)	-0.0034	0.00899	0.008974	Var(X)	0.002055
							fce	0.002055
							Sigma(X)	0.045336
							fce	0.045336

Goldman	Apple	Exxon	Goldman	Apple	E-E	E-G	E-A	G-G
0.000396	0.001923	0.030904	-0.01989	-0.04385	0.000955	-0.000614716	-0.00136	0.000396
0.002063	1.51E-06	-0.02175	0.045424	0.001229	0.000473	-0.000987878	-2.7E-05	0.002063
0.001207	0.000559	-0.02035	0.034736	0.023637	0.000414	-0.000706927	-0.00048	0.001207
0.000134	0.001243	-0.04574	0.011586	-0.03526	0.002092	-0.000529958	0.001613	0.000134
0.001381	0.002752	-0.04802	-0.03717	-0.05246	0.002306	0.001784679	0.002519	0.001381
0.014259	0.011459	-0.0085	-0.11941	-0.10705	7.22E-05	0.001014596	0.00091	0.014259
0.00408	0.000354	0.110322	-0.06388	-0.01883	0.012171	-0.007047163	-0.00208	0.00408
0.004597	0.008681	-0.00974	0.067801	0.093172	9.48E-05	-0.000660112	-0.00091	0.004597
3.96E-05	0.000681	-0.04309	0.006292	-0.02609	0.001857	-0.000271137	0.001124	3.96E-05
0.008672	0.024043	0.002119	-0.09312	-0.15506	4.49E-06	-0.00019734	-0.00033	0.008672
0.01011	0.004995	0.032519	-0.10055	-0.07068	0.001057	-0.003269674	-0.0023	0.01011
0.004868	1.01E-05	0.045427	-0.06977	0.003184	0.002064	-0.003169631	0.000145	0.004868
0.000722	0.009794	0.059351	0.026862	0.098964	0.003523	0.001594263	0.005874	0.000722
0.001993	0.024126	0.010392	0.04464	-0.15533	0.000108	0.000463887	-0.00161	0.001993
0.002858	0.001881	0.055067	-0.05346	0.043372	0.003032	-0.002943784	0.002388	0.002858
0.004961	0.00205	-0.04905	-0.07043	-0.04527	0.002406	0.003454653	0.002221	0.004961
0.003387	0.006453	-0.01716	0.058201	0.08033	0.000294	-0.000998467	-0.00138	0.003387
0.003493	5.56E-05	0.005008	0.0591	0.007459	2.51E-05	0.000295978	3.74E-05	0.003493
0.004422	0.00261	-0.04303	-0.06649	0.051085	0.001852	0.002861261	-0.0022	0.004422
0.01002	5.48E-06	0.050065	0.100102	-0.00234	0.002506	0.005011558	-0.00012	0.01002
0.04059	0.001339	0.036747	0.20147	-0.03659	0.00135	0.007403354	-0.00134	0.04059
0.007223	0.001525	-0.06979	0.08499	0.039052	0.00487	-0.005931051	-0.00273	0.007223
0.003663	0.006986	-0.02771	-0.06052	0.083585	0.000768	0.001677165	-0.00232	0.003663
0.007553	0.005338	0.011852	0.086908	0.073059	0.00014	0.001030028	0.000866	0.007553
0.011471	0.001048	-0.001	-0.1071	0.032367	9.93E-07	0.000106738	-3.2E-05	0.011471
0.000987	4.25E-07	-0.01078	-0.03141	0.000652	0.000116	0.000338698	-7E-06	0.000987
0.004249	0.002039	0.006256	-0.06519	0.045151	3.91E-05	-0.000407799	0.000282	0.004249
0.002047	0.004175	-0.00518	0.045248	-0.06462	2.68E-05	-0.000234429	0.000335	0.002047
7.07E-06	0.00039	-0.04406	0.002659	0.019737	0.001941	-0.000117135	-0.00087	7.07E-06
0.00041	0.008307	0.074812	-0.02024	0.091141	0.005597	-0.001514058	0.006818	0.00041
0.002099	0.005635	0.019976	0.045815	-0.07507	0.000399	0.000915203	-0.0015	0.002099
0.000354	0.007642	0.002683	0.018823	0.08742	7.2E-06	5.04978E-05	0.000235	0.000354
0.000221	7.23E-05	0.007596	0.014873	-0.0085	5.77E-05	0.000112978	-6.5E-05	0.000221
0.000506	5.99E-05	0.046231	0.022497	-0.00774	0.002137	0.001040067	-0.00036	0.000506
0.000529	0.000713	-0.13864	0.023002	-0.0267	0.019221	-0.003189056	0.003702	0.000529
0.000501	0.003229	-0.00375	-0.02238	0.056827	1.41E-05	8.39801E-05	-0.00021	0.000501
0.004613	0.004227				E-E	E-G	E-A	G-G
0.004613	0.004227				0.002055	-9.86315E-05	0.00019	0.004613
0.06792	0.065016							
0.06792	0.065016							

Covar_M

	Exxon	Goldman	Apple
Exxon	0.002055371	-9.9E-05	0.00019
Goldman	-9.86315E-05	0.004613	0.000693
Apple	0.000190463	0.000693	0.004227

Covar_M(fce)

	Exxon	Goldman	Apple
Exxon	0.002055371	-9.9E-05	0.00019
Goldman	-9.86315E-05	0.004613	0.000693
Apple	0.000190463	0.000693	0.004227

G-A	A-A
0.000872	0.001923
5.58E-05	1.51E-06
0.000821	0.000559
-0.00041	0.001243
0.00195	0.002752
0.012783	0.011459
0.001203	0.000354
0.006317	0.008681
-0.00016	0.000681
0.01444	0.024043
0.007106	0.004995
-0.00022	1.01E-05
0.002658	0.009794
-0.00693	0.024126
-0.00232	0.001881
0.003189	0.00205
0.004675	0.006453
0.000441	5.56E-05
-0.0034	0.00261
-0.00023	5.48E-06
-0.00737	0.001339
0.003319	0.001525
-0.00506	0.006986
0.006349	0.005338
-0.00347	0.001048
-2E-05	4.25E-07
-0.00294	0.002039
-0.00292	0.004175
5.25E-05	0.00039
-0.00184	0.008307
-0.00344	0.005635
0.001646	0.007642
-0.00013	7.23E-05
-0.00017	5.99E-05
-0.00061	0.000713
-0.00127	0.003229
G-A	A-A
0.000693	0.004227

Correl_M	Sigma(X)	0.045336	0.06792	0.065016
	Exxon	Goldman	Apple	
0.045336	Exxon	1	-0.03203	0.064617
0.06792	Goldman	-0.03203	1	0.156912
0.065016	Apple	0.064617	0.156912	1

Correl_M

	Exxon	Goldman	Apple
Exxon	1	-0.03203	0.064617
Goldman	-0.03203	1	0.156912
Apple	0.064617	0.156912	1

Date	Exxon	Goldman	Apple	Amzn	Tesla	
3/2/2015	88.04	191.78999	129.09	385.660004	197.33	
3/3/2015	87.62	191.27	129.36	384.609985	199.56	
3/4/2015	87.18	189.67	128.53999	382.720001	202.44	
3/5/2015	86.74	190.08	126.41	387.829987	200.63001	
3/6/2015	85.63	186.91	126.6	380.089996	193.88001	
3/9/2015	85.16	187.92999	127.14	378.559998	190.88001	
3/10/2015	84.26	182.71001	124.51	369.51001	190.32001	
3/11/2015	84.02	184.17999	122.24	366.369995	193.74001	
3/12/2015	84.22	189.95	124.45	374.23999	191.07001	
3/13/2015	83.87	189.34	123.59	370.579987	188.67999	
3/16/2015	84.76	191.89999	124.95	373.350006	195.7	
3/17/2015	84.08	190.57001	127.04	371.920013	194.73	
3/18/2015	86.07	192.32001	128.47	375.140015	200.71001	
3/19/2015	84.41	189.97	127.5	373.23999	195.64999	
3/20/2015	84.54	193.13001	125.9	378.48999	198.08	
3/23/2015	85.43	191.96001	127.21	375.109985	199.63001	
3/24/2015	84.52	191.28	126.69	374.089996	201.72	
3/25/2015	84.86	187.35001	123.38	370.959991	194.3	
3/26/2015	84.32	187.24001	124.24	367.350006	190.41	
3/27/2015	83.58	188.06	123.25	370.559998	185	
3/30/2015	85.63	191.02	126.37	374.589996	190.57001	-0.02776
3/31/2015	85	187.97	124.43	372.100006	188.77	-0.03036
4/1/2015	84.46	192.23	124.25	370.26001	187.59	-0.0317
4/2/2015	84.3	191.55	125.32	372.25	191	-0.02853
4/6/2015	85.13	192.05	127.35	377.040009	203.10001	-0.00586
4/7/2015	85.75	192.39	126.01	374.410004	203.25	0.006904
4/8/2015	84.06	192.56	125.6	381.200012	207.67	-0.00238
4/9/2015	84.65	194.89	126.56	383.540009	210.09	0.00747
4/10/2015	85.56	195.64	127.1	382.649994	210.89999	0.015785
4/13/2015	85.34	195.58	126.85	382.359985	209.78	0.017375
4/14/2015	86.63	197.72	126.3	385.109985	207.46001	0.021822
4/15/2015	88.08	201.10001	126.78	383.450012	207.83	0.046477
4/16/2015	87.73	200.21001	126.17	386.040009	206.7	0.019103
4/17/2015	86.93	197.35001	124.75	375.559998	206.78999	0.029417
4/20/2015	87.24	198.10001	127.6	389.51001	205.27	0.031438
4/21/2015	86.88	196.84	126.91	391.179993	209.41	0.01683
4/22/2015	87.46	198.32001	128.62	389.799988	219.44	0.034193
4/23/2015	87.54	199.31	129.67	389.98999	218.60001	0.031093
4/24/2015	86.97	197.99001	130.28	445.100006	218.42999	0.030944
4/27/2015	87.01	196.52	132.64999	438.559998	231.55	0.040219
4/28/2015	87.8	197.49001	130.56	429.309998	230.48	0.025026
4/29/2015	87.87	198.56	128.64	429.369995	232.45	0.033207
4/30/2015	87.37	196.42	125.15	421.779999	226.05	0.033874
5/1/2015	88.85	197.53	128.95	422.869995	226.03	0.052568
5/4/2015	89.11	199.3	128.7	423.040009	230.51	0.045692
5/5/2015	88.61	197.28999	125.8	421.190002	232.95	0.032809
5/6/2015	88.19	196.25	125.01	419.100006	230.42999	0.047963
5/7/2015	87.6	197.39	125.26	426.880005	236.8	0.034256
5/8/2015	88.99	200.5	127.62	433.690002	236.61	0.039306

5/11/2015	86.78	201.73	126.32	432.850006	239.49001	0.016733
5/12/2015	87.02	200.53	125.87	431.019989	244.74001	0.004492
5/13/2015	86.56	201.42999	126.01	426.869995	243.17999	-0.01741
5/14/2015	86.97	202.62	128.95	432.279999	244.10001	-0.0087
5/15/2015	87.35	202.97	128.77	426	248.84	0.00482
5/18/2015	86.85	204.66	130.19	425.23999	248.75	-0.00448
5/19/2015	86.99	205.39999	130.07001	421.709991	247.14	0.001265
5/20/2015	87.13	205.08	130.06	423.859985	244.35001	-0.00378
5/21/2015	87.21	204.95	131.39	431.630005	245.62	-0.00378
5/22/2015	86.52	207.8	132.53999	427.630005	247.73	-0.00519
5/26/2015	85.35	206.38001	129.62	425.470001	247.46001	-0.01926
5/27/2015	85.11	209.06	132.03999	431.420013	247.42999	-0.03112
5/28/2015	85.11	208.48	131.78	426.570007	251.45	-0.03191
5/29/2015	85.2	206.19	130.28	429.230011	250.8	-0.02515
6/1/2015	85.13	207.81	130.53999	430.920013	249.45	-0.04277
6/2/2015	85.14	206.42999	129.96001	430.98999	248.35001	-0.04557
6/3/2015	84.95	208.28999	130.12	436.589996	248.99001	-0.04218
6/4/2015	84.22	208.87	129.36	430.779999	245.92	-0.04606
6/5/2015	84.28	210.45	128.64999	426.950012	249.14	-0.03864
6/8/2015	84.85	209.78999	127.8	423.5	256.29001	-0.04764
6/9/2015	84.58	209.02	127.42	425.480011	256	-0.02568
6/10/2015	85.21	213.13001	128.88001	430.769989	250.7	-0.02102
6/11/2015	85.09	213.94	128.59	432.970001	251.41	-0.01713
6/12/2015	84.02	213.06	127.17	429.920013	250.69	-0.03451
6/15/2015	83.72	211.76	126.92	423.670013	250.38001	-0.04245
6/16/2015	84.68	213.56	127.6	427.26001	253.12	-0.0253
6/17/2015	84.73	212.92999	127.3	427.809998	260.41	-0.02632
6/18/2015	85.48	214.60001	127.88	439.390015	261.89002	-0.01912
6/19/2015	85.21	213.19	126.6	434.920013	262.51001	-0.0232
6/22/2015	85.17	216.51	127.61	436.290009	259.79001	-0.01573
6/23/2015	85.07	218.39999	127.03	445.98999	267.67001	-0.00329
6/24/2015	84.68	214.42999	128.11	440.839996	265.17001	-0.00507
6/25/2015	83.93	212.82001	127.5	440.100006	268.79001	-0.01396
6/26/2015	83.86	213.17	126.75	438.100006	267.09	-0.01585
6/29/2015	82.82	207.64999	124.53	429.859985	262.01999	-0.02751
6/30/2015	83.2	208.78999	125.43	434.089996	268.26001	-0.02305
7/1/2015	82.37	209.94	126.6	437.390015	269.14999	-0.03084
7/2/2015	83.14	209.2	126.44	437.709991	280.01999	-0.01291
7/6/2015	82.53	208.03999	126	436.040009	279.72	-0.02098
7/7/2015	82.87	208.21001	125.69	436.720001	267.88001	-0.02361
7/8/2015	81.97	204.06	122.57	429.700012	254.96001	-0.03134
7/9/2015	81.6	204.81	120.07	434.390015	257.92001	-0.04329
7/10/2015	82.22	207.19	123.28	443.51001	259.14999	-0.03431
7/13/2015	82.42	210.12	125.66	455.570007	262.16	-0.01923
7/14/2015	83.11	212.16	125.61	465.570007	265.64999	-0.00731
7/15/2015	82.76	212.96001	126.82	461.190002	263.14002	-0.02293
7/16/2015	82.91	211.17999	128.51	475.480011	266.67999	-0.02171
7/17/2015	82.61	212.46001	129.62	483.01001	274.66	-0.03415
7/20/2015	81.76	212.39	132.07001	488.100006	282.26001	-0.04133
7/21/2015	81.66	211.5	130.75	488	266.76999	-0.04208

7/22/2015	81.79	213.25	125.22	488.269989	267.87	-0.03932
7/23/2015	81.14	211.05	125.16	482.179993	267.20001	-0.0427
7/24/2015	79.94	207.35001	124.5	529.419983	265.41	-0.04871
7/27/2015	79.26	205.02	122.77	531.409973	253.01	-0.05642
7/28/2015	82.48	206.24001	123.38	526.030029	264.82001	-0.00411
7/29/2015	83.14	206.84	122.99	529	263.82001	-0.00072
7/30/2015	83.01	207.2	122.37	536.76001	266.79001	0.00774
7/31/2015	79.21	205.07001	121.3	536.150024	266.14999	-0.04842
8/3/2015	78.06	204.69	118.44	535.030029	259.98999	-0.05568
8/4/2015	77.17	205.17	114.64	531.900024	266.28	-0.07126
8/5/2015	77.17	205.7	115.4	537.01001	270.13001	-0.06034
8/6/2015	78.09	205.09	115.13	529.460022	246.13001	-0.04397
8/7/2015	76.83	203.44	115.52	522.619995	242.51	-0.0678
8/10/2015	78.75	205.97	119.72	524	241.14	-0.04555
8/11/2015	77.49	201.7	113.49	527.460022	237.37	-0.07002
8/12/2015	78.79	201.13001	115.24	525.909973	238.17	-0.04916
8/13/2015	78.65	200.74001	115.15	529.659973	242.51	-0.05275
8/14/2015	78.36	202.02	115.96	531.52002	243.14999	-0.05282
8/17/2015	78.77	202.57001	117.16	535.219971	254.99001	-0.03726
8/18/2015	77.9	201.17999	116.5	535.02002	260.72	-0.04714
8/19/2015	76.23	200.95	115.01	532.919983	255.25	-0.0704
8/20/2015	74.57	196.75	112.65	515.780029	242.17999	-0.08444
8/21/2015	72.13	187.74001	105.76	494.470001	230.77	-0.10281
8/24/2015	68.72	179.46001	103.12	463.369995	218.87	-0.14269
8/25/2015	68.71	178.22	103.74	466.369995	220.03	-0.18266
8/26/2015	72.5	184.39999	109.69	500.769989	224.84	-0.13694
8/27/2015	74.85	189.21001	112.92	518.369995	242.99001	-0.10348
8/28/2015	75.07	187.75	113.29	518.01001	248.48	-0.05368
8/31/2015	75.24	188.60001	112.76	512.890015	249.06	-0.03679
9/1/2015	72.08	182.12	107.72	496.540009	238.63001	-0.06823
9/2/2015	73.23	184.51	112.34	510.549988	247.69	-0.05241
9/3/2015	73.79	185.06	110.37	504.720001	245.57001	-0.05664
9/4/2015	72.46	180.38001	109.27	499	241.92999	-0.05856
9/8/2015	73.5	185.88001	112.31	517.539978	248.17	-0.06899
9/9/2015	72	185.67999	110.15	516.890015	248.91	-0.07348
9/10/2015	72.52	185.91	112.57	522.23999	248.48	-0.08292
9/11/2015	72.69	185.27	114.21	529.440002	250.24001	-0.0788
9/14/2015	72.49	183.94	115.31	521.380005	253.19	-0.07787
9/15/2015	72.86	187.45	116.28	522.369995	253.57001	-0.07799
9/16/2015	74.3	188.64	116.41	527.390015	262.25	-0.04731
9/17/2015	74.46	186.45	113.92	538.869995	262.07001	-0.02349
9/18/2015	72.68	180.94	113.45	540.26001	260.62	-0.02567
9/21/2015	73.39	183.35001	115.21	548.390015	264.20001	0.017318
9/22/2015	72.74	179.72	113.4	538.400024	260.94	0.056851
9/23/2015	72.3	179.41	114.32	536.070007	261.06	0.050929
9/24/2015	72.73	176.91	115	533.75	263.12	0.003167
9/25/2015	73.23	179.83	114.71	524.25	256.91	-0.02188
9/28/2015	72.6	173.02	112.44	504.059998	248.42999	-0.03346
9/29/2015	72.97	171.86	109.06	496.070007	246.64999	-0.03063
9/30/2015	74.35	173.76	110.3	511.890015	248.39999	0.031007

10/1/2015	74.06	176.02	109.58	520.719971	239.88001	0.01127
10/2/2015	75.88	177.01	110.38	532.539978	247.57001	0.02793
10/5/2015	76.81	180.7	110.78	543.679993	246.14999	0.0583
10/6/2015	77.89	180.32001	111.31	537.47998	241.46001	0.058012
10/7/2015	79.2	182.23	110.78	541.940002	231.96001	0.09531
10/8/2015	80.03	181.07001	109.5	533.159973	226.72	0.098539
10/9/2015	79.26	179.19	112.12	539.799988	220.69	0.08653
#####	79.3	180.23	111.6	550.190002	215.58	0.08979
#####	79.16	180.97	111.79	548.900024	219.25	0.082931
#####	80.16	179.51	110.21	544.830017	216.88001	0.075914
#####	81.48	184.96001	111.86	562.440002	221.31	0.090096
#####	82.48	185.17999	111.04	570.76001	227.01	0.12649
#####	80.99	185.74001	111.73	573.150024	228.10001	0.098538
#####	80.83	185.51	113.77	560.880005	213.03	0.105457
#####	80.21	179.7	113.76	555.77002	210.09	0.103824
#####	82.89	183.56	115.5	563.909973	211.72	0.13076
#####	82.98	185.5	119.08	599.030029	209.09	0.124994
#####	81.22	187.01	115.28	608.609985	215.26	0.112197
#####	81.09	186.31	114.55	611.01001	210.35001	0.105511
#####	82.28	191.32001	119.27	617.099976	212.96001	0.101344
#####	82.23	189.89	120.53	626.549988	211.63001	0.104645
#####	82.74	187.5	119.5	625.900024	206.92999	0.08655
11/2/2015	85.28	189.67999	121.18	628.349976	213.78999	0.104605
11/3/2015	86.85	190.69	122.57	625.309998	208.35001	0.108885
11/4/2015	85.98	191.64999	122	640.950012	231.63001	0.082138
11/5/2015	84.81	192.02	120.92	655.650024	231.77	0.058012
11/6/2015	84.47	199.17	121.06	659.369995	232.36	0.063663
11/9/2015	81.95	196.76	120.57	655.48999	225.33	0.032871
#####	82.35	197.81	116.77	659.679993	216.5	0.039507
#####	81.62	197.39	116.11	673.25	219.08	0.01805
#####	79.41	192.77	115.72	665.599976	212.94	-0.02573
#####	78.1	190.39	112.34	642.349976	207.19	-0.05457
#####	80.9	192.16	114.18	647.809998	214.31	-0.00111
#####	79.96	190.57001	113.69	643.299988	214	-0.01082
#####	80.74	193.66	117.29	663.539978	221.07001	0.006586
#####	80.3	193.03	118.78	661.27002	221.8	-0.03174
#####	79.79	191.47	119.3	668.450012	220.01	-0.0392
#####	80.28	189.19	117.75	678.98999	217.75	-0.01164
#####	81.88	188.67	118.88	671.150024	218.25	0.009695
#####	81.25	189.14999	118.03	675.340027	229.64	-0.0126
#####	81.23	190.47	117.81	673.26001	231.61	-0.01224
#####	81.66	190.02	118.3	664.799988	230.26	-0.01314
12/1/2015	81.89	193.07001	117.34	679.059998	237.19	-0.04056
12/2/2015	79.55	190.26	116.28	676.01001	231.99001	-0.0878
12/3/2015	78.41	185.2	115.2	666.25	232.71001	-0.09216
12/4/2015	78.86	189.99001	119.03	672.640015	230.38001	-0.07274
12/7/2015	76.8	185.49001	118.28	669.830017	231.13001	-0.09519
12/8/2015	74.63	182.92	118.23	677.330017	226.72	-0.09357
12/9/2015	75.63	180.71001	115.62	664.789978	224.52	-0.08513
#####	75.69	182.11	116.17	662.320007	227.07001	-0.07543

#####	74.34	176.56	113.18	640.150024	217.02	-0.06598
#####	76.03	176.39999	112.48	657.909973	218.58	-0.02686
#####	79.43	182.01	110.49	658.640015	221.09	-0.01834
#####	79.15	186.21001	111.34	675.77002	234.51	-0.01018
#####	77.96	182.61	108.98	670.650024	233.39	-0.03504
#####	77.28	175.49001	106.03	664.140015	230.46001	-0.03833
#####	77.26	177.75	107.33	664.51001	232.56	-0.03222
#####	77.65	180.05	107.23	663.150024	229.95	-0.03331
#####	80.19	182.95	108.61	663.700012	229.7	-0.02086
#####	79.33	182.47	108.03	662.789978	230.57001	-0.02391
#####	78.74	181.62	106.82	675.200012	228.95	-0.03113
#####	79.16	183.53	108.74	693.969971	237.19	-0.03109
#####	78.11	182.01	107.32	689.070007	238.09	-0.04726
#####	77.95	180.23	105.26	675.890015	240.01	-0.02032
1/4/2016	77.46	177.14	105.35	636.98999	223.41	-0.01219
1/5/2016	78.12	174.09	102.71	633.789978	223.42999	-0.00943
1/6/2016	77.47	169.84	100.7	632.650024	219.03999	0.008686
1/7/2016	76.23	164.62	96.449997	607.940002	215.64999	0.021213
1/8/2016	74.69	163.94	96.959999	607.049988	211	-0.01251
1/11/2016	73.69	165.73	98.529999	617.73999	207.85001	-0.02678
1/12/2016	75.2	165.71001	99.959999	617.890015	209.97	0.011502
1/13/2016	75.65	158.99001	97.389999	581.809998	200.31	-0.00501
1/14/2016	79.12	161.39	99.519997	593	206.17999	-0.00391
1/15/2016	77.58	155.61	97.129997	570.179993	204.99001	-0.02004
1/19/2016	76.4	156.82001	96.660004	574.47998	204.72	-0.02021
1/20/2016	73.18	153.75	96.790001	571.77002	198.7	-0.05451
1/21/2016	74.1	151.64999	96.300003	575.02002	199.97	-0.04176
1/22/2016	76.57	156.86	101.42	596.380005	202.55	-0.01401
1/25/2016	73.98	151.12	99.440002	596.530029	196.38001	-0.0806
1/26/2016	76.7	154.45	99.989998	601.25	193.56	-0.03371
1/27/2016	75.29	153.72	93.419998	583.349976	188.07001	-0.0448
1/28/2016	76.99	157.06	94.089996	635.349976	189.7	-0.0278
1/29/2016	77.85	161.56	97.339996	587	191.2	-0.00333
2/1/2016	76.29	159.64999	96.43	574.809998	196.94	-0.02153
2/2/2016	74.59	151.7	94.480003	552.099976	182.78	-0.03776
2/3/2016	78.48	152.67999	96.349998	531.070007	173.48	0.004598
2/4/2016	79.83	156.49001	96.599998	536.26001	175.33	0.030009
2/5/2016	80.08	156.47	94.019997	502.130005	162.60001	0.049271
2/8/2016	81.16	149.25	95.010002	488.100006	147.99001	0.083076
2/9/2016	80.08	148.25	94.989998	482.070007	148.25	0.083159
2/10/2016	79.35	147.23	94.269997	490.480011	143.67	0.053717
2/11/2016	79.6	140.69	93.699997	503.820007	150.47	0.050897
2/12/2016	81.03	146.13001	93.989998	507.079987	151.03999	0.023854
2/16/2016	81.22	149.02	96.639999	521.099976	155.17	0.045852
2/17/2016	82	150.94	98.120003	534.099976	168.67999	0.070737
2/18/2016	82.45	147.73	96.260002	525	166.77	0.11927
2/19/2016	82.5	146.91	96.040001	534.900024	166.58	0.107383
2/22/2016	82.39	148.78999	96.879997	559.5	177.74001	0.073259
2/23/2016	81.23	144.91	94.690002	552.940002	177.21001	0.09349
2/24/2016	81.52	145.56	96.099998	554.039978	179	0.060947

2/25/2016	82.01	148.25	96.760002	555.150024	187.42999	0.085494
2/26/2016	81.75	150.25	96.910004	555.22998	190.34	0.05999
2/29/2016	80.15	149.53	96.690002	552.52002	191.92999	0.029116
3/1/2016	81.28	154.64999	100.53	579.039978	186.35001	0.063358
3/2/2016	82.7	154.2	100.75	580.210022	188.34	0.103213
3/3/2016	82.4	155.33	101.5	577.48999	195.74001	0.048742
3/4/2016	82.29	156.84	103.01	575.140015	201.03999	0.03035
3/7/2016	84.46	155.35001	101.87	562.799988	205.28999	0.053252
3/8/2016	82.63	151.60001	101.03	560.26001	202.60001	0.01795
3/9/2016	82.4	149.91	101.12	559.469971	208.72	0.028559
3/10/2016	82.18	151.02	101.17	558.929993	205.17999	0.035044
3/11/2016	82.19	153.94	102.26	569.609985	207.5	0.03202
3/14/2016	82.41	153.49001	102.52	573.369995	215.14999	0.016887
3/15/2016	82.82	152.03	104.58	577.02002	218.34	0.019508
3/16/2016	82.87	150.53999	105.97	574.27002	221.92999	0.010554
3/17/2016	84.1	152.91	105.8	559.440002	226.38001	0.019815
3/18/2016	84.2	157.60001	105.92	552.080017	232.74001	0.020397
3/21/2016	83.62	156.28999	105.91	553.97998	238.32001	0.014819
3/22/2016	84.12	154.2	106.72	560.47998	234.24001	0.03496
3/23/2016	83.75	154.08	106.13	569.630005	222.58	0.026988
3/24/2016	83.98	153	105.67	582.950012	227.75	0.023737
3/28/2016	84.22	153.84	105.19	579.869995	230.26	0.029767
3/29/2016	84.53	155.03	107.68	593.859985	230.13001	0.053207
3/30/2016	84.52	156.5	109.56	598.690002	226.89	0.039088
3/31/2016	83.59	156.98	108.99	593.640015	229.77	0.010704
4/1/2016	82.96	159.82001	109.99	598.5	237.59	0.006773
4/4/2016	83.16	157.77	111.12	593.190002	246.99001	0.010517
4/5/2016	82.21	155.35001	109.81	586.140015	255.47	-0.027
4/6/2016	83.31	155.19	110.96	602.080017	265.42001	0.008196
4/7/2016	82.37	150.41	108.54	591.429993	257.20001	-0.00036
4/8/2016	83.21	150.28	108.66	594.599976	250.07001	0.012456
4/11/2016	83.32	152.2	109.02	595.929993	249.92	0.013655
4/12/2016	84.35	154.31	110.44	603.169983	247.82001	0.023268
4/13/2016	84.83	159.85001	112.04	614.820007	254.53	0.02398
4/14/2016	85.43	160.91	112.1	620.75	251.86	0.030424
4/15/2016	84.97	158.52	109.85	625.890015	254.51	0.010292
4/18/2016	85.78	159.02	107.48	635.349976	253.88001	0.018591
4/19/2016	86.21	162.64999	106.91	627.900024	247.37	0.030503
4/20/2016	86.8	166.98	107.13	632.98999	249.97	0.031362
4/21/2016	86.79	165.32001	105.97	631	248.28999	0.035655
4/22/2016	87.53	166.75	105.68	620.5	253.75	0.041403
4/25/2016	87.33	165.09	105.08	626.200012	251.82001	0.036262
4/26/2016	87.63	165.84	104.35	616.880005	253.74001	0.036017
4/27/2016	88.46	166.92	97.82	606.570007	251.47	0.045562
4/28/2016	88.03	164.28999	94.830002	602	247.71001	0.051754
4/29/2016	88.4	164.11	93.739998	659.590027	240.76	0.063513
5/2/2016	89.13	166.17999	93.639999	683.849976	241.8	0.069329
5/3/2016	88.11	163.14	95.18	671.320007	232.32001	0.069309
5/4/2016	87.94	160.07001	94.190002	670.900024	222.56	0.054086
5/5/2016	88.04	159.53	93.239998	659.090027	211.53	0.06657

5/6/2016	88.51	158.85001	92.720001	673.950012	214.92999	0.061748
5/9/2016	88.57	157.51	92.790001	679.75	208.92	0.061105
5/10/2016	89.99	161.42	93.419998	703.070007	208.69	0.064724
5/11/2016	88.81	159.42	92.510002	713.22998	208.96001	0.04585
5/12/2016	89.67	158.07001	90.339996	717.929993	207.28	0.048439
5/13/2016	88.66	155.34	90.519997	709.919983	207.61	0.042511
5/16/2016	89.57	155.38001	93.879997	710.659973	208.28999	0.043235
5/17/2016	89.53	154.64999	93.489998	695.27002	204.66	0.037788
5/18/2016	89.35	159.94	94.559998	697.450012	211.17	0.028955
5/19/2016	90.11	154.7	94.199997	698.52002	215.21001	0.03754
5/20/2016	89.74	154.51	95.220001	702.799988	220.28	0.024935
5/23/2016	89.6	155.45	96.43	696.75	216.22	0.025661
5/24/2016	89.67	157.59	97.900002	704.200012	217.91	0.023013
5/25/2016	90.26	161.25	99.620003	708.349976	219.58	0.020144
5/26/2016	89.8	159.22	100.41	714.909973	225.12	0.019907
5/27/2016	90.01	159.53	100.35	712.23999	223.03999	0.018049
5/31/2016	89.02	159.48	99.860001	722.789978	223.23	-0.00123
6/1/2016	89.24	159.97	98.459999	719.440002	219.56	0.012743
6/2/2016	88.53	159.28	97.720001	728.23999	218.96001	0.006687
6/3/2016	88.37	155.67	97.919998	725.539978	218.99001	0.003741
6/6/2016	89.34	157.06	98.629997	726.72998	220.67999	0.009334
6/7/2016	90.71	155.17	99.029999	723.73999	232.34	0.023874
6/8/2016	90.79	154.64	98.940002	726.640015	235.52	0.008851
6/9/2016	90.67	153.17	99.650002	727.650024	229.36	0.020727
6/10/2016	89.98	149.89	98.830002	717.909973	218.78999	0.003451
6/13/2016	90.59	148.63001	97.339996	715.23999	217.87	0.021535
6/14/2016	90.43	146.19	97.459999	719.299988	214.96001	0.009556
6/15/2016	90.16	146.16	97.139999	714.26001	217.7	0.007012
6/16/2016	91.22	146.63001	97.550003	717.51001	217.92999	0.020713
6/17/2016	90.72	145.64	95.330002	706.390015	215.47	0.006747
6/20/2016	91.12	147.75	95.099998	714.01001	219.7	0.015261
6/21/2016	91.53	148.35001	95.910004	715.820007	219.61	0.021311
6/22/2016	91.17	148.14	95.550003	710.599976	196.66	0.01659
6/23/2016	91.8	152.66	96.099998	722.080017	196.39999	0.016918
6/24/2016	89.39	141.86	93.400002	698.960022	193.14999	-0.00458
6/27/2016	88.86	139.51	92.040001	691.359985	198.55	-0.01286
6/28/2016	90.91	142.41	93.589996	707.950012	201.78999	0.021009
6/29/2016	92.46	145.5	94.400002	715.599976	210.19	0.035447
6/30/2016	93.74	148.58	95.599998	715.619995	212.28	0.057184
7/1/2016	93.84	148.25	95.889999	725.679993	216.5	0.060059
7/5/2016	93.02	144.45	94.989998	728.099976	213.98	0.040365
7/6/2016	94.09	145.58	95.529999	737.609985	214.44	0.036584
7/7/2016	92.96	147	95.940002	736.570007	215.94	0.02362
7/8/2016	93.54	150.38001	96.68	745.809998	216.78	0.031163
7/11/2016	93.89	152.19	96.980003	753.780029	224.78	0.042536
7/12/2016	94.95	156.92	97.419998	748.210022	224.64999	0.047007
7/13/2016	94.88	157.92	96.870003	742.630005	222.53	0.048037
7/14/2016	94.95	162.53999	98.790001	741.200012	221.53	0.051764
7/15/2016	95.12	161.64	98.779999	735.440002	220.39999	0.041865
7/18/2016	94.82	163.33	99.830002	736.070007	226.25	0.044203

7/19/2016	94.47	161.41	99.870003	739.950012	225.26	0.036105
7/20/2016	93.93	161.77	99.959999	745.719971	228.36	0.025883
7/21/2016	93.85	160.05	99.43	744.429993	220.5	0.028972
7/22/2016	94.01	160.41	98.660004	744.859985	222.27	0.023789
7/25/2016	92.2	160.51	97.339996	739.609985	230.01	0.030951
7/26/2016	91.53	161.16	96.669998	735.590027	229.51	0.029605
7/27/2016	90.91	160.99001	102.95	736.669983	228.49001	0
7/28/2016	90.2	160.53	104.34	752.609985	230.61	-0.02475
7/29/2016	88.95	158.81	104.21	758.809998	234.78999	-0.05245
8/1/2016	85.86	158.17999	106.05	767.73999	230.01	-0.08887
8/2/2016	87.04	156.06	104.48	760.580017	227.2	-0.06645
8/3/2016	87.49	158.34	105.79	754.640015	225.78999	-0.07273
8/4/2016	87.48	158.05	105.87	760.77002	230.61	-0.06076
8/5/2016	87.56	162.09	107.48	765.97998	230.03	-0.06606
8/8/2016	88.59	162.83	108.37	766.559998	226.16	-0.0581
8/9/2016	88.7	163.44	108.81	768.309998	229.08	-0.06809
8/10/2016	86.41	162.19	108	768.559998	225.64999	-0.09351
8/11/2016	86.72	163.86	107.93	771.23999	224.91	-0.09067
8/12/2016	87.85	163.25	108.18	772.559998	225.61	-0.07951
8/15/2016	87.81	165.55	109.48	768.48999	225.59	-0.0768
8/16/2016	87.92	165.64999	109.38	764.039978	223.61	-0.07186
8/17/2016	88.11	165.67	109.22	764.630005	223.24001	-0.06396
8/18/2016	88.91	166.06	109.08	764.460022	223.51	-0.05407
8/19/2016	87.8	166.23	109.36	757.309998	225	-0.06834
8/22/2016	87.99	166.26	108.51	759.47998	222.92999	-0.04674
8/23/2016	87.72	166.08	108.85	762.450012	224.84	-0.04252
8/24/2016	88.02	165.3	108.03	757.25	222.62	-0.03231
8/25/2016	87.46	165.89999	107.57	759.219971	220.96001	-0.03085
8/26/2016	87.27	165.97	106.94	769	219.99001	-0.01907
8/29/2016	87.84	166.87	106.82	771.289978	215.2	0.022799
8/30/2016	87.52	169.37	106	767.580017	211.34	0.0055
8/31/2016	87.14	169.46001	106.1	769.159973	212.01	-0.00401
9/1/2016	86.84	168.51	106.73	770.619995	200.77	-0.00734
9/2/2016	87.42	169.17999	107.73	772.440002	197.78	-0.0016
9/6/2016	88.57	169.33	107.7	788.869995	202.83	-0.00023
9/7/2016	88.24	169.67	108.36	784.47998	201.71001	-0.0052
9/8/2016	89.05	171.66	105.52	784.059998	197.36	0.030095
9/9/2016	86.84	168.57001	103.13	760.140015	194.47	0.001383
9/12/2016	87.29	171.06	105.44	771.48999	198.3	-0.00639
9/13/2016	85.21	167	107.95	761.01001	196.05	-0.03006
9/14/2016	84.6	166.16	111.77	761.090027	196.41	-0.03849
9/15/2016	85.08	168.08	115.57	769.690002	200.42	-0.03499
9/16/2016	84.03	166	114.92	778.52002	205.39999	-0.05645
9/19/2016	83.83	166.21001	113.58	775.099976	206.34	-0.04627
9/20/2016	82.54	166.47	113.57	780.219971	204.64	-0.06394
9/21/2016	83.3	167.03	113.55	789.73999	205.22	-0.0517
9/22/2016	83.54	168.02	114.62	804.700012	206.42999	-0.05224
9/23/2016	83.45	165.13001	112.71	805.75	207.45	-0.04693
9/26/2016	83.06	161.48	112.88	799.159973	208.99001	-0.04944
9/27/2016	83.24	162.89	113.09	816.109985	205.81	-0.05379

9/28/2016	86.9	163.45	113.95	828.719971	206.27	-0.00711
9/29/2016	86.46	158.95	112.18	829.049988	200.7	-0.00783
9/30/2016	87.28	161.27	113.05	837.309998	204.03	0.005054
10/3/2016	87.05	161.07001	112.52	836.73999	213.7	-0.00424
10/4/2016	86.25	162.27	113	834.030029	211.41	-0.02654
10/5/2016	87	166.39999	113.05	844.359985	208.46001	-0.01415
10/6/2016	87.04	167.14999	113.89	841.659973	201	-0.02283
10/7/2016	86.74	169.83	114.06	839.429993	196.61	-0.00115
#####	88.44	171.03999	116.05	841.710022	200.95	0.013088
#####	87.74	169.03999	116.3	831	200.10001	0.029259
#####	87.13	169.3	117.34	834.090027	201.51	0.029467
#####	86.56	167.42	116.98	829.280029	200.24001	0.017246
#####	86.54	170.52	117.63	822.960022	196.51	0.029433
#####	86.54	169	117.55	812.950012	193.96001	0.031816
#####	86.77	172.63001	117.47	817.650024	199.10001	0.049978
#####	87.17	174.51	117.12	817.690002	203.56	0.045412
#####	87.21	174.51	117.06	810.320007	199.10001	0.042993
#####	86.62	174.67	116.6	818.98999	200.09	0.037283
#####	86.91	175.12	117.65	838.090027	202.76	0.04531
#####	86.72	175.55	118.25	835.179993	202.34	0.040957
#####	87.09	177.07001	115.59	822.590027	202.24001	0.002184
#####	86.92	177.75	114.48	818.359985	204.01	0.005306
#####	84.78	177.14	113.72	776.320007	199.97	-0.02906
#####	83.32	178.24001	113.54	789.820007	197.73	-0.04379
11/1/2016	83.65	178.06	111.49	785.409973	190.78999	-0.03061
11/2/2016	83.45	176.58	111.59	765.559998	188.02	-0.04166
11/3/2016	83.66	176.21001	109.83	767.030029	187.42	-0.03961
11/4/2016	83.57	175.92	108.84	755.049988	190.56	-0.03723
11/7/2016	85.45	181.48	110.41	784.929993	193.21001	-0.03439
11/8/2016	85.31	181.92	111.06	787.75	194.94	-0.02809
11/9/2016	86.25	192.63001	110.88	771.880005	190.06	-0.01015
#####	87.05	200.87	107.79	742.380005	185.35001	0.005645
#####	85.67	203.94	108.43	739.01001	188.56	-0.0101
#####	85.28	209.17999	105.71	719.070007	181.45	-0.01467
#####	86.82	211.19	107.11	743.23999	183.77	0.000576
#####	85.75	206.26	109.99	746.48999	183.92999	-0.01642
#####	85.23	209.63001	109.95	756.400024	188.66	-0.02297
#####	85.28	210.35001	110.06	760.159973	185.02	-0.01559
#####	86.49	211.08	111.73	780	184.52	-0.00484
#####	86.68	211.11	111.8	785.330017	191.17	-0.00046
#####	86.92	212.31	111.23	780.119995	193.14	-0.00195
#####	87.12	211.38001	111.79	780.369995	196.64999	0.002298
#####	86.47	210.35001	111.57	766.77002	196.12	0.019738
#####	85.9	211.75	111.46	762.52002	189.57001	0.030495
#####	87.3	219.28999	110.52	750.570007	189.39999	0.042709
12/1/2016	87.24	226.63001	109.49	743.650024	181.88001	0.044415
12/2/2016	87.04	223.36	109.9	740.340027	181.47	0.039607
12/5/2016	87.48	228.55	109.11	759.359985	186.8	0.045726
12/6/2016	87.56	231.38001	109.95	764.719971	185.85001	0.024393
12/7/2016	88.07	235.56	111.03	770.419983	193.14999	0.03184

12/8/2016	88.32	241.45	112.12	767.330017	192.28999	0.023717
12/9/2016	89	241.85001	113.95	768.659973	192.17999	0.022154
#####	90.98	237.17	113.3	760.119995	192.42999	0.060137
#####	92.58	238.55	115.19	774.340027	198.14999	0.082133
#####	90.58	239.92999	115.19	768.820007	198.69	0.042396
#####	90.89	243	115.82	761	197.58	0.058214
#####	91.18	238.89999	115.97	757.77002	202.49001	0.067482
#####	90.42	239.07001	116.64	766	202.73	0.058526
#####	90.43	243.09	116.95	771.219971	208.78999	0.044547
#####	90.28	241.44	117.06	770.599976	207.7	0.040693
#####	90.87	240.12	116.29	766.340027	208.45	0.044442
#####	90.71	240.97	116.52	760.590027	213.34	0.040381
#####	90.75	241.56	117.26	771.400024	219.53	0.048311
#####	90.3	240.64999	116.76	772.130005	219.74001	0.049954
#####	90.35	238.17999	116.73	765.150024	214.67999	0.03434
#####	90.26	239.45	115.82	749.869995	213.69	0.034031
1/3/2017	90.89	241.57001	116.15	753.669983	216.99001	0.043282
1/4/2017	89.89	243.13001	116.02	757.179993	226.99001	0.027176
1/5/2017	88.55	241.32001	116.61	780.450012	226.75	0.011243
1/6/2017	88.5	244.89999	117.91	795.98999	229.01	0.004871
1/9/2017	87.04	242.89	118.99	796.919983	231.28	-0.0146
1/10/2017	85.93	242.57001	119.11	795.900024	229.87	-0.0351
1/11/2017	86.81	245.76	119.75	799.02002	229.73	-0.04692
1/12/2017	86.34	243.84	119.25	813.640015	229.59	-0.06978
1/13/2017	86.35	244.3	119.04	817.140015	237.75	-0.04782
1/17/2017	87.36	235.74001	120	809.719971	235.58	-0.03961
1/18/2017	86.28	234.28999	119.99	807.47998	238.36	-0.05524
1/19/2017	84.73	231.41	119.78	809.039978	243.76	-0.065
1/20/2017	85.89	232.2	120	808.330017	244.73	-0.05151
1/23/2017	84.97	232.67	120.08	817.880005	248.92	-0.06062
1/24/2017	85.09	233.67999	119.97	822.440002	254.61	-0.06572
1/25/2017	85.34	237.25	121.88	836.52002	254.47	-0.06102
1/26/2017	85.6	239.58	121.94	839.150024	252.51	-0.05842
1/27/2017	85.51	236.95	121.95	835.77002	252.95	-0.0545
1/30/2017	84.86	233.89999	121.63	830.380005	250.63001	-0.06269
1/31/2017	83.89	229.32001	121.35	823.47998	251.92999	-0.07319
2/1/2017	82.94	230.67	128.75	832.349976	249.24001	-0.09153
2/2/2017	83.45	230.41	128.53	839.950012	251.55	-0.07434
2/3/2017	83.54	240.95	129.08	810.200012	251.33	-0.05824
2/6/2017	83.31	239.98	130.28999	807.640015	257.76999	-0.06043
2/7/2017	82.77	239.62	131.53	812.5	257.48001	-0.0503
2/8/2017	81.48	237.73	132.03999	819.710022	262.07999	-0.05318
2/9/2017	81.84	241.55	132.42	821.359985	269.20001	-0.05896
2/10/2017	82.52	242.72	132.12	827.460022	269.23001	-0.04525
2/13/2017	83	246.27	133.28999	836.530029	280.60001	-0.03957
2/14/2017	82.82	249.46001	135.02	836.390015	280.98001	-0.05337
2/15/2017	83.16	250.53999	135.51	842.700012	279.76001	-0.03683
2/16/2017	82.3	249.44	135.35001	844.140015	268.95001	-0.0291
2/17/2017	81.76	250.38001	135.72	845.070007	272.23001	-0.04928
2/21/2017	81.89	251.76	136.7	856.440002	277.39002	-0.03692

2/22/2017	80.93	251.73	137.11	855.609985	273.51001	-0.05012
2/23/2017	81.78	251.19	136.53	852.190002	255.99001	-0.04261
2/24/2017	81.08	247.35001	136.66	845.23999	257	-0.05425
2/27/2017	81.54	249.33	136.92999	848.640015	246.23	-0.04754
2/28/2017	81.32	248.06	136.99001	845.039978	249.99001	-0.04261
3/1/2017	83.02	252.71001	139.78999	853.080017	250.02	-0.01042
3/2/2017	83.3	251.06	138.96001	848.909973	250.48	0.004331
3/3/2017	82.46	252.89	139.78	849.880005	251.57001	-0.01193
3/6/2017	82.83	252.01	139.34	846.609985	251.21001	-0.00854
3/7/2017	82.52	250.89999	139.52	846.02002	248.59	-0.00953
3/8/2017	81.03	250.24001	139	850.5	246.87	-0.02125
3/9/2017	81.67	250.17999	138.67999	853	244.89999	0.002329
3/10/2017	81.61	248.38001	139.14	852.460022	243.69	-0.00281
3/13/2017	81.42	248.16	139.2	854.590027	246.17	-0.01342
3/14/2017	80.99	247.72	138.99001	852.530029	258	-0.02451
3/15/2017	82	246.78	140.46001	852.969971	255.73	-0.00995
3/16/2017	82.07	248.22	140.69	853.419983	262.04999	-0.01319
3/17/2017	82	243.94	139.99001	852.309998	261.5	-0.00365
3/20/2017	82	242.14	141.46001	856.969971	261.92001	0.002931
3/21/2017	81.83	233	139.84	843.200012	250.67999	-0.00073
3/22/2017	81.76	231.07001	141.42	848.059998	255.01	0.010204
3/23/2017	81.86	231.89999	140.92	847.380005	254.78	0.000978
3/24/2017	81.23	228.41	140.64	845.609985	263.16	0.001848
3/27/2017	81.25	225.48	140.88001	846.820007	270.22	-0.00356
3/28/2017	81.84	229.33	143.8	856	277.45001	0.006374
3/29/2017	82.02	228.45	144.12	874.320007	277.38001	-0.01212
3/30/2017	83.7	231.22	143.92999	876.340027	277.92001	0.00479
3/31/2017	82.01	229.72	143.66	886.539978	278.29999	-0.00547
4/3/2017	82.07	228.96001	143.7	891.51001	298.51999	-0.00922
4/4/2017	82.37	229.26	144.77	906.830017	303.70001	-0.00182
4/5/2017	82.53	227.66	144.02	909.280029	295	0.018342
4/6/2017	83.01	228.64	143.66	898.280029	298.70001	0.016274
4/7/2017	82.76	227.88001	143.34	894.880005	302.54001	0.013993
4/10/2017	83.13	228.89	143.17	907.039978	312.39002	0.020785
4/11/2017	82.84	227.74001	141.63001	902.359985	308.70999	0.022585
4/12/2017	82.97	225.75	141.8	896.22998	296.84	0.01176
4/13/2017	81.69	223.32001	141.05	884.669983	304	-0.00464
4/17/2017	81.58	226.26	141.83	901.98999	301.44	-0.00514
4/18/2017	81.05	215.59	141.2	903.780029	300.25	-0.01165
4/19/2017	80.49	214.09	140.67999	899.200012	305.51999	-0.01651
4/20/2017	81.01	218.06	142.44	902.059998	302.51001	-0.00922
4/21/2017	80.69	216.86	142.27	898.530029	305.60001	-0.0144
4/24/2017	81.11	223.22	143.64	907.409973	308.03	-0.00148
4/25/2017	81.73	226.63001	144.53	907.619995	313.79001	0.00589
4/26/2017	81.4	226.2	143.67999	909.289978	310.17001	-0.00539
4/27/2017	81.26	225.81	143.78999	918.380005	308.63001	-0.00931
4/28/2017	81.65	223.8	143.64999	924.98999	314.07001	-0.0248
5/1/2017	82.06	224.85001	146.58	948.22998	322.82999	0.000609
5/2/2017	82.05	225.12	147.51	946.940002	318.89002	-0.00024
5/3/2017	82.7	226.31	147.06	941.030029	311.01999	0.003998

5/4/2017	81.64	226.59	146.53	937.530029	295.45999	-0.01084
5/5/2017	82.02	226.87	148.96001	934.150024	308.35001	-0.012
5/8/2017	82.89	225.03	153.01	949.039978	307.19	0.00157
5/9/2017	82.31	223.76	153.99001	952.820007	321.26001	-0.00991
5/10/2017	81.91	224.88001	153.26	948.950012	325.22	-0.01129
5/11/2017	82.61	224.76	153.95	947.619995	323.10001	-0.00435
5/12/2017	82.55	222.82001	156.10001	961.349976	324.81	0.010473
5/15/2017	82.8	225.12	155.7	957.969971	315.88001	0.014844
5/16/2017	82.55	225.60001	155.47	966.070007	317.01001	0.018338
5/17/2017	81.99	213.72	150.25	944.76001	306.10999	0.018464
5/18/2017	81.75	215.16	152.53999	958.48999	313.06	0.009093
5/19/2017	81.93	215.39	153.06	959.840027	310.82999	0.015251
5/22/2017	82.29	216.02	153.99001	970.669983	310.35001	0.014443
5/23/2017	82.58	219.64	153.8	971.539978	303.85999	0.010346
5/24/2017	82.29	223.83	153.34	980.349976	310.22	0.010874
5/25/2017	81.75	222.47	153.87	993.380005	316.82999	0.006012
5/26/2017	81.55	223.53	153.61	995.780029	325.14002	-0.00123
5/30/2017	81.1	218.42	153.67	996.700012	335.10001	-0.01177
5/31/2017	80.5	211.26	152.76	994.619995	341.01001	-0.01907
6/1/2017	80.7	215.01	153.17999	995.950012	340.37	-0.02448
6/2/2017	79.5	213.31	155.45	1006.72998	339.85001	-0.02656
6/5/2017	80.12	213.99001	153.92999	1011.34003	347.32001	-0.02344
6/6/2017	81.21	214.53	154.45	1003	352.85001	-0.02048
6/7/2017	80.91	215.78	155.37	1010.07001	359.64999	-0.01716
6/8/2017	80.62	218.76	154.99001	1010.27002	370	-0.01587
6/9/2017	82.13	222.44	148.98	978.309998	357.32001	-0.00583
6/12/2017	82.93	221.91	145.42	964.909973	359.01001	0.004593
6/13/2017	82.96	224.2	146.59	980.789978	375.95001	0.00193
6/14/2017	82.07	226.51	145.16	976.469971	380.66	-0.00583
6/15/2017	82.26	223.23	144.28999	964.169983	375.34	0.003288
6/16/2017	83.49	221.81	142.27	987.710022	371.39999	0.021061
6/19/2017	82.76	226.13001	146.34	995.169983	369.79999	0.01008
6/20/2017	82.31	225.10001	145.01	992.590027	372.23999	0.000243
6/21/2017	81.44	222.49001	145.87	1002.22998	376.39999	-0.0139
6/22/2017	81.08	219.77	145.63001	1001.29999	382.60999	-0.01481
6/23/2017	81.61	217.19	146.28	1003.73999	383.45001	-0.00171
6/26/2017	81.24	220.44	145.82001	993.97998	377.48999	-0.00381
6/27/2017	81.11	220.28	143.73	976.780029	362.37	0.000123
6/28/2017	81.53	223.22	145.83	990.330017	371.23999	0.012714
6/29/2017	80.7	224.41	143.67999	975.929993	360.75	0
6/30/2017	80.73	221.89999	144.02	968	361.60999	0.015353
7/3/2017	82.1	227.28	143.5	953.659973	352.62	0.024412
7/5/2017	80.85	228.03999	144.09	971.400024	327.09	-0.00444
7/6/2017	80.12	226.69	142.73	965.140015	308.82999	-0.00981
7/7/2017	80.22	225.28	144.17999	978.76001	313.22	-0.00497
7/10/2017	80.16	225.84	145.06	996.469971	316.04999	-0.02428
7/11/2017	80.6	226.95	145.53	994.130005	327.22	-0.0285
7/12/2017	80.96	227.39	145.74001	1006.51001	329.51999	-0.0244
7/13/2017	80.97	230.39999	147.77	1000.63001	323.41	-0.01349
7/14/2017	81.28	228.60001	149.03999	1001.81	327.78	-0.01199

7/17/2017	80.86	229.26	149.56	1010.03998	319.57001	-0.03201
7/18/2017	80.6	223.31	150.08	1024.44995	328.23999	-0.02645
7/19/2017	80.85	222.87	151.02	1026.87	325.26001	-0.0179
7/20/2017	80.86	222.3	150.34	1028.69995	329.92001	-0.00715
7/21/2017	80.12	220.17999	150.27	1025.67004	328.39999	-0.01191
7/24/2017	79.87	218.17999	152.09	1038.94995	342.51999	-0.02155
7/25/2017	80.27	221.58	152.74001	1039.87	339.60001	-0.01201
7/26/2017	80.37	222.25	153.46001	1052.80005	343.85001	-0.00917
7/27/2017	80.83	221.48	150.56	1046	334.45999	-0.00862
7/28/2017	79.6	223.61	149.5	1020.03998	335.07001	-0.01372
7/31/2017	80.04	225.33	148.73	987.780029	323.47	-0.00858
8/1/2017	80.17	227	150.05	996.190002	319.57001	-0.02379
8/2/2017	80.6	226.27	157.14	995.890015	325.89002	-0.0031
8/3/2017	80.49	223.99001	155.57001	986.919983	347.09	0.004607
8/4/2017	80.21	229.78999	156.39	987.580017	356.91	-0.00012
8/7/2017	80.16	232.92	158.81	992.27002	355.17001	0
8/8/2017	79.96	232.05	160.08	989.840027	365.22	-0.00797
8/9/2017	80.21	231.01	161.06	982.01001	363.53	-0.00931
8/10/2017	78.97	225.5	155.32001	956.919983	355.39999	-0.02501
8/11/2017	78.21	224.14999	157.48	967.98999	357.87	-0.0385
8/14/2017	78.23	227.36	159.85001	983.299988	363.79999	-0.03307
8/15/2017	78.04	227.59	161.60001	982.73999	362.32999	-0.03228
8/16/2017	77.47	225.61	160.95	978.179993	362.91	-0.0427
8/17/2017	76.26	221.42	157.86	960.570007	351.92001	-0.05857
8/18/2017	76.64	222.14999	157.5	958.469971	347.45999	-0.04441
8/21/2017	76.38	220.78999	157.21001	953.289978	337.85999	-0.04468
8/22/2017	76.74	223.58	159.78	966.900024	341.35001	-0.04497
8/23/2017	76.61	222.74001	159.98	958	352.76999	-0.04791
8/24/2017	76.33	222.99001	159.27	952.450012	352.92999	-0.05728
8/25/2017	76.72	222.47	159.86	945.26001	348.04999	-0.03685
8/28/2017	76.47	220.35001	161.47	946.02002	345.66	-0.04563
8/29/2017	76.45	219.96001	162.91	954.059998	347.35999	-0.04751
8/30/2017	76.1	222.42	163.35001	967.590027	353.17999	-0.05745
8/31/2017	76.33	223.74001	164	980.599976	355.89999	-0.05307
9/1/2017	76.57	225.88001	164.05	978.25	355.39999	-0.04644
9/5/2017	77.18	217.78	162.08	965.27002	349.59	-0.03788
9/6/2017	78.78	218.83	161.91	967.799988	344.53	-0.01487
9/7/2017	79.03	215.84	161.26	979.469971	350.60999	-0.01482
9/8/2017	78.82	217.21001	158.63001	965.900024	343.39999	-0.0019
9/11/2017	79.25	221.06	161.5	977.960022	363.69	0.01321
9/12/2017	79.5	225.95	160.86	982.580017	362.75	0.016104
9/13/2017	79.77	226.56	159.64999	999.599976	366.23001	0.021926
9/14/2017	80.09	226.85001	158.28	992.210022	377.64002	0.03326
9/15/2017	80.07	225.22	159.88001	986.789978	379.81	0.048753
9/18/2017	80.09	227.53	158.67	974.190002	385	0.044032
9/19/2017	80.22	228.91	158.73	969.859985	375.10001	0.049052
9/20/2017	80.55	229.78999	156.07001	973.210022	373.91	0.048455
9/21/2017	79.89	231.28999	153.39	964.650024	366.48001	0.041923
9/22/2017	79.92	231.03	151.89	955.099976	351.09	0.04596
9/25/2017	80.98	230.26	150.55	939.789978	344.98999	0.05404

9/26/2017	80.89	229.94	153.14	938.599976	345.25	0.056192
9/27/2017	81.43	234.76	154.23	950.869995	340.97	0.063107
9/28/2017	82.19	235.47	153.28	956.400024	339.60001	0.076985
9/29/2017	81.98	237.19	154.12	961.349976	341.10001	0.071409
10/2/2017	81.63	240.64999	153.81	959.190002	341.53	0.063991
10/3/2017	81.76	241.62	154.48	957.099976	348.14002	0.057648
10/4/2017	81.79	240.31	153.48	965.450012	355.01001	0.037496
10/5/2017	82.02	246.06	155.39	980.849976	355.32999	0.037136
10/6/2017	81.71	246.02	155.3	989.580017	356.88001	0.03601
10/9/2017	82.03	242.8	155.84	990.98999	342.94	0.034478
#####	82.26	242.60001	155.89999	987.200012	355.59	0.034128
#####	82.6	242.39999	156.55	995	354.60001	0.034862
#####	82.43	239.8	156	1000.92999	355.67999	0.028798
#####	82.41	238.53	156.99001	1002.94	355.57001	0.028806
#####	82.81	242.41	159.88001	1006.34003	350.60001	0.033398
#####	82.96	236.09	160.47	1009.13001	355.75	0.033586
#####	82.76	242.03	159.76	997	359.64999	0.027067
#####	82.74	239.99001	155.98	986.609985	351.81	0.035052
#####	83.11	244.73	156.25	982.909973	345.10001	0.039139
#####	83.24	242.13001	156.17	966.299988	337.01999	0.027526
#####	83.47	244.84	157.10001	975.900024	337.34	0.031397
#####	83.17	241.71001	156.41	972.909973	325.84	0.021143
#####	83.47	241.72	157.41	972.429993	326.17001	0.015454
#####	83.71	241.71001	163.05	1100.94995	320.87	0.020883
#####	83.54	240.89	166.72	1110.84998	320.07999	0.023129
#####	83.35	242.48	169.03999	1105.28003	331.53	0.01926
11/1/2017	83.87	244.26	166.89	1103.68005	321.07999	0.025113
11/2/2017	83.53	246.88001	168.11	1094.21997	299.26001	0.018243
11/3/2017	83.18	244.39999	172.5	1111.59998	306.09	0.017831
11/6/2017	83.75	243.49001	174.25	1120.66003	302.78	0.020751
11/7/2017	83.58	239.81	174.81	1123.17004	306.04999	0.015919
11/8/2017	83.47	241.25	176.24001	1132.88001	304.39002	0.010478
11/9/2017	83.97	240.78999	175.88001	1129.13001	302.98999	0.01851
#####	82.94	240.14999	174.67	1125.34998	302.98999	0.006411
#####	82.89	240.27	173.97	1129.17004	315.39999	0.000966
#####	82.24	237.24001	171.34	1136.83997	308.70001	-0.00872
#####	81.21	237.61	169.08	1126.68994	311.29999	-0.01891
#####	80.56	239.37	171.10001	1137.29004	312.5	-0.0267
#####	80.24	238.02	170.14999	1129.88001	315.04999	-0.03514
#####	80.55	238.13001	169.98	1126.31006	308.73999	-0.03285
#####	80.87	238.02	173.14	1139.48999	317.81	-0.03164
#####	81.1	236.42999	174.96001	1156.16003	312.60001	-0.0252
#####	81.42	235.95	174.97	1186	315.54999	-0.02487
#####	81.11	235.11	174.09	1195.82996	316.81	-0.03155
#####	81.67	239.41	173.07001	1193.59998	317.54999	-0.02264
#####	82.27	241.36	169.48	1161.27002	307.54001	-0.01304
#####	83.29	247.64	171.85001	1176.75	308.85001	-0.00694
12/1/2017	83.46	248.95	171.05	1162.34998	306.53	-0.00084
12/4/2017	83.57	250.64999	169.8	1133.94995	305.20001	0.004678
12/5/2017	82.89	248.33	169.64	1141.56995	303.70001	-0.01032

12/6/2017	82.28	245.95	169.01	1152.34998	313.26001	-0.01568
12/7/2017	82.55	248.56	169.32001	1159.79004	311.23999	-0.01108
12/8/2017	82.66	250.35001	169.37	1162	315.13001	-0.01572
#####	83.03	250.13001	172.67	1168.92004	328.91	0.001084
#####	82.76	257.67999	171.7	1165.07996	341.03	-0.00157
#####	83.12	255.56	172.27	1164.13001	339.03	0.010644
#####	82.9	255.48	172.22	1174.26001	337.89002	0.020597
#####	83.03	257.17001	173.97	1179.14002	343.45001	0.0302
#####	82.94	260.01999	176.42	1190.57996	338.87	0.033095
#####	82.44	256.48001	174.53999	1187.38001	331.10001	0.023193
#####	82.87	255.17999	174.35001	1177.62	328.98001	0.02443
#####	83.85	261.01001	175.01	1174.76001	331.66	0.033347
#####	83.97	258.97	175.01	1168.35999	325.20001	0.030839
#####	83.98	257.72	170.57001	1176.76001	317.29001	0.034772
#####	83.9	255.95	170.60001	1182.26001	311.64002	0.026939
#####	84.02	256.5	171.08	1186.09998	315.35999	0.021048
#####	83.64	254.76	169.23	1169.46997	311.35001	0.004193
1/2/2018	85.03	255.67	172.26	1189.01001	320.53	0.018637
1/3/2018	86.7	253.28999	172.23	1204.19995	317.25	0.036769
1/4/2018	86.82	256.82999	173.03	1209.58997	314.62	0.046323
1/5/2018	86.75	255.52	175	1229.14002	316.57999	0.052902
1/8/2018	87.14	251.81	174.35001	1246.87	336.41	0.054112
1/9/2018	86.77	253.94	174.33	1252.69995	333.69	0.048525
1/10/2018	86.08	254.33	174.28999	1254.32996	334.79999	0.036075
1/11/2018	86.93	255.13001	175.28	1276.68005	337.95001	0.049158
1/12/2018	87.52	257.03	177.09	1305.19995	336.22	0.051582
1/16/2018	86.97	258.45999	176.19	1304.85999	340.06	0.047928
1/17/2018	88	253.64999	179.10001	1295	347.16	0.058135
1/18/2018	87.43	250.97	179.26	1293.31995	344.57001	0.052721
1/19/2018	87.15	256.12	178.46001	1294.57996	350.01999	0.05556
1/22/2018	88.25	261.51999	177	1327.31006	351.56	0.062901
1/23/2018	88.3	260.09	177.03999	1362.54004	352.79001	0.051711
1/24/2018	88.53	265.67999	174.22	1357.51001	345.89002	0.052882
1/25/2018	88.37	269.03	171.11	1377.94995	337.64002	0.050954
1/26/2018	89	268.14002	171.51	1402.05005	342.85001	0.059011
1/29/2018	88.01	272.48001	167.96001	1417.68005	349.53	0.046396
1/30/2018	86.78	268.94	166.97	1437.81995	345.82001	0.036854
1/31/2018	87.3	267.89002	167.42999	1450.89002	354.31	0.026346
2/1/2018	89.07	272.23001	167.78	1390	349.25	0.026969
2/2/2018	84.53	260.04001	160.5	1429.94995	343.75	-0.02673
2/5/2018	79.72	249.11	156.49001	1390	333.13001	-0.08451
2/6/2018	78.35	258.70001	163.03	1442.83997	333.97	-0.10633
2/7/2018	76.94	257.10001	159.53999	1416.78003	345	-0.12023
2/8/2018	76.07	246.35001	155.14999	1350.5	315.23001	-0.12362
2/9/2018	75.78	249.3	156.41	1339.59998	310.42001	-0.13727
2/12/2018	76.42	253.16	162.71001	1386.22998	315.73001	-0.13562
2/13/2018	76.3	255.53	164.34	1414.51001	323.66	-0.13089
2/14/2018	76.46	262.57999	167.37	1451.05005	322.31	-0.14057
2/15/2018	76.21	267.67999	172.99001	1461.76001	334.07001	-0.13735
2/16/2018	76.54	267.62	172.42999	1448.68994	335.48999	-0.12982

2/20/2018	75.75	264.89002	171.85001	1468.34998	334.76999	-0.15274
2/21/2018	74.89	263.39999	171.07001	1482.92004	333.29999	-0.16472
2/22/2018	75.86	261.42999	172.5	1485.33997	346.17001	-0.15445
2/23/2018	77.53	266.76999	175.5	1500	352.04999	-0.13087
2/26/2018	78.84	271.26001	178.97	1521.94995	357.42001	-0.12122
2/27/2018	77.5	267.92999	178.39	1511.97998	350.98999	-0.12717
2/28/2018	75.74	262.92999	178.12	1512.44995	343.06	-0.13607
3/1/2018	75.2	256.78	175	1493.44995	330.92999	-0.1492

E(X) -0.00252

-0.05329

-18.7659

Covar_M

Exxon

Exxon 0.002228

Goldman 0.000842

Apple 0.000118

Amzn 0.000321

Tesla -0.00031

Sigma(X) 0.047202

Correl_M

Exxon

0.047202 Exxon 1

0.0662347 Goldman 0.269363

0.0637483 Apple 0.039166

0.0711838 Amzn 0.095581

0.1121222 Tesla -0.05839

Var(X)

-0.00402	-0.0213	-0.02912	-0.03486	0.000637	0.000161	0.000845	0.004313
-0.0174	-0.03886	-0.03307	-0.05559	0.000775	0.00068	0.002175	0.004847
0.013407	-0.03394	-0.0331	-0.07618	0.000852	2.24E-05	0.001741	0.004851
0.007704	-0.00866	-0.041	-0.04919	0.000677	9.33E-07	0.00027	0.006015
0.027129	0.005907	-0.00806	0.046459	1.12E-05	0.000341	3.5E-06	0.00199
0.023455	-0.00893	-0.01102	0.062792	8.87E-05	0.000219	0.000279	0.002263
0.052508	0.008716	0.031146	0.087243	1.93E-08	0.001922	8.81E-07	2.92E-05
0.056522	0.03473	0.0458	0.081019	9.97E-05	0.00229	0.000726	8.55E-05
0.029515	0.02107	0.022223	0.098744	0.000335	0.000435	0.000177	0.000205
0.032425	0.026036	0.031293	0.106007	0.000396	0.000564	0.000333	2.77E-05
0.029878	0.010746	0.031013	0.058356	0.000592	0.00045	8.81E-06	3.07E-05
0.053783	-0.00205	0.03053	0.065106	0.0024	0.002035	9.66E-05	3.63E-05
0.040206	-0.01807	0.028642	0.029407	0.000467	0.000995	0.000668	6.26E-05
0.038113	-0.0218	0.006197	0.055376	0.00102	0.000867	0.000875	0.000921
0.025408	0.013412	0.0287	0.035655	0.001153	0.00028	3.18E-05	6.17E-05
0.025104	-0.00236	0.041949	0.047828	0.000374	0.00027	0.000103	2.91E-05
0.036144	0.015119	0.041137	0.084198	0.001348	0.000755	5.39E-05	2.1E-05
0.061883	0.049724	0.050027	0.11784	0.00113	0.002832	0.001759	0.000182
0.055825	0.047471	0.191984	0.137286	0.00112	0.002224	0.001576	0.024159
0.044003	0.073499	0.168481	0.22444	0.001826	0.001248	0.004319	0.017405
0.03331	0.032619	0.136347	0.190144	0.000759	0.000607	0.000617	0.009959
0.054809	0.033274	0.143156	0.208146	0.001276	0.002129	0.00065	0.011364
0.021563	0.007217	0.130278	0.186498	0.001324	0.000166	3.14E-07	0.008785
0.030742	0.028554	0.127499	0.168394	0.003034	0.000487	0.000432	0.008271
0.037055	0.010545	0.115115	0.126596	0.002324	0.000806	7.66E-06	0.006172
0.02515	-0.00167	0.117733	0.136387	0.001248	0.000272	8.92E-05	0.00659
0.018982	-0.00471	0.094785	0.103997	0.002548	0.000106	0.000156	0.003391
0.012746	-0.01032	0.107059	0.11968	0.001352	1.66E-05	0.000328	0.004971
0.024538	0.004083	0.125209	0.115029	0.001749	0.000252	1.37E-05	0.00786

0.030961	-0.00419	0.124029	0.132452	0.00037	0.000497	0.000143	0.007652
0.014112	-0.00341	0.112625	0.165258	4.91E-05	2.96E-05	0.000125	0.005787
0.00164	-0.00609	0.10727	0.157081	0.000222	4.94E-05	0.000192	0.005001
0.011965	0.021795	0.113133	0.16631	3.83E-05	1.09E-05	0.000196	0.005865
0.028079	0.031716	0.126021	0.185106	5.38E-05	0.000377	0.000573	0.008005
0.032578	0.020095	0.087764	0.192122	3.86E-06	0.000572	0.000152	0.002623
0.042568	0.024595	0.07515	0.165661	1.43E-05	0.001149	0.000283	0.00149
0.033518	0.011134	0.083769	0.107523	1.6E-06	0.000617	1.13E-05	0.002229
0.027905	0.013177	0.101448	0.116542	1.59E-06	0.00037	2.92E-05	0.004211
0.04836	0.017198	-0.04004	0.125874	7.14E-06	0.001575	8.88E-05	0.005866
0.048955	-0.02311	-0.0303	0.066453	0.00028	0.001623	0.000954	0.00447
0.056933	0.011272	0.004903	0.070964	0.000818	0.002329	1.22E-05	0.001002
0.048752	0.024116	-0.00654	0.078569	0.000864	0.001607	0.000267	0.001857
0.048543	0.040173	0.017509	0.1039	0.000512	0.00159	0.001049	0.000363
0.050734	0.012255	0.018858	0.098591	0.00162	0.001769	2E-05	0.000313
0.03515	0.009743	0.018618	0.074545	0.001854	0.000701	3.86E-06	0.000322
0.054257	0.033764	0.03591	0.066589	0.001573	0.002078	0.000675	4.12E-07
0.062323	0.034205	0.027488	0.065059	0.001896	0.002879	0.000698	8.22E-05
0.064067	0.026704	0.000164	0.050799	0.001305	0.003069	0.000358	0.001324
0.045293	0.001409	-0.02378	0.079896	0.002036	0.001341	4.06E-05	0.00364
0.0355	0.00867	-0.01717	0.066666	0.000537	0.00072	7.97E-07	0.002886
0.060938	0.023632	-0.00058	0.024061	0.000342	0.002732	0.000251	0.001379
0.060254	0.020268	0.014189	0.033283	0.000214	0.002661	0.000156	0.0005
0.050242	-0.0139	-0.00547	0.026639	0.001024	0.001728	0.00047	0.001766
0.042395	-0.01447	-0.00548	0.00617	0.001594	0.001137	0.000495	0.001767
0.042568	-0.02009	0.004739	0.017415	0.000519	0.001149	0.000777	0.001012
0.036004	-0.02153	0.014361	0.052302	0.000567	0.000747	0.000859	0.000492
0.045376	-0.0169	0.035984	0.069323	0.000276	0.001347	0.000609	3.23E-07
0.039418	-0.03714	0.007593	0.066504	0.000428	0.000945	0.002017	0.000839
0.041061	-0.03791	0.020049	0.047534	0.000175	0.001049	0.002087	0.000272
0.056609	-0.02018	0.047102	0.078506	5.94E-07	0.002298	0.000782	0.000111
0.025362	-0.03022	0.0216	0.069243	6.5E-06	0.000279	0.001443	0.000224
0.020604	-0.03302	0.031225	0.066686	0.000131	0.000142	0.001664	2.84E-05
0.033292	-0.02747	0.020454	0.06293	0.000178	0.000606	0.001242	0.000259
-0.00077	-0.04713	-0.00246	0.049162	0.000625	8.91E-05	0.003015	0.001522
0.011368	-0.03548	0.007167	0.077118	0.000422	7.28E-06	0.001871	0.000863
0.00789	-0.02742	0.001831	0.077856	0.000802	6.07E-07	0.001239	0.001206
0.001579	-0.02283	0.015959	0.129855	0.000108	5.03E-05	0.000937	0.000424
-0.01152	-0.02081	0.021067	0.115774	0.000341	0.000408	0.000817	0.00024
-0.00756	-0.01665	0.030739	0.044229	0.000445	0.000263	0.000597	3.38E-05
-0.02402	-0.03881	0.009869	-0.00407	0.000831	0.001068	0.00217	0.000712
-0.03982	-0.07081	0.008369	0.028393	0.001663	0.002351	0.006176	0.000794
-0.03206	-0.04217	0.024052	0.030322	0.001011	0.001659	0.002495	0.000156
-0.0139	-0.01194	0.05795	0.044738	0.000279	0.000509	0.000389	0.000458
0.001887	-0.01038	0.094308	0.0592	2.3E-05	4.6E-05	0.00033	0.003336
-0.00281	-0.00613	0.076417	0.038823	0.000417	0.000132	0.000193	0.001589
-0.00825	0.00946	0.105646	0.023792	0.000369	0.000286	2.83E-06	0.004774
-0.01002	0.013515	0.09465	0.047609	0.001001	0.000349	3.29E-05	0.003375
-0.00376	0.0423	0.115358	0.072539	0.001507	0.000154	0.001192	0.00621
-0.02341	0.024308	0.112008	0.026513	0.001566	0.001029	0.000273	0.005694

-0.02386	-0.01435	0.090572	0.000747	0.001355	0.001058	0.00049	0.002918
-0.01589	-0.0233	0.089635	0.007626	0.001615	0.000603	0.000966	0.002818
-0.02604	-0.02381	0.18478	-0.01265	0.002134	0.001205	0.000998	0.021971
-0.03898	-0.0319	0.193087	-0.05416	0.002905	0.002271	0.001575	0.024503
-0.00681	-0.00928	0.201899	0.01063	2.55E-06	0.00024	0.000291	0.027339
-0.00938	-0.01964	0.197737	-0.01669	3.22E-06	0.000326	0.000752	0.02598
-0.01314	-0.03398	0.204726	-0.00881	0.000105	0.000476	0.001744	0.028282
-0.01994	-0.0415	0.202857	-0.0508	0.002108	0.000818	0.002428	0.027657
-0.01623	-0.06188	0.204589	-0.07315	0.002827	0.00062	0.004852	0.028236
-0.01471	-0.09202	0.197163	-0.00599	0.004726	0.000547	0.00996	0.025796
0.008005	-0.06028	0.222929	0.057797	0.003344	4.42E-07	0.004632	0.034736
0.001366	-0.04201	0.197915	-0.04679	0.001718	5.33E-05	0.002479	0.026038
-0.01827	-0.06501	0.164134	-0.06636	0.004263	0.000725	0.005299	0.016277
-0.01995	-0.04842	0.139942	-0.08358	0.001852	0.000819	0.003159	0.01069
-0.05056	-0.10147	0.124811	-0.11256	0.004556	0.003508	0.011934	0.00779
-0.05715	-0.09575	0.13132	-0.0997	0.002176	0.004333	0.010718	0.008981
-0.0507	-0.10977	0.10791	-0.09501	0.002523	0.003525	0.013818	0.005092
-0.05039	-0.11136	0.095703	-0.12186	0.00253	0.003488	0.014194	0.003499
-0.04734	-0.11979	0.092158	-0.1016	0.001207	0.003137	0.016274	0.003092
-0.05003	-0.1154	0.091989	-0.02294	0.001991	0.003445	0.015172	0.003073
-0.05941	-0.08505	0.087503	-0.04826	0.004608	0.004635	0.008618	0.002596
-0.07016	-0.10531	0.067363	-0.09832	0.006711	0.006214	0.012788	0.000949
-0.09935	-0.16313	-0.0683	-0.13985	0.010058	0.011668	0.029211	0.010993
-0.13316	-0.17442	-0.13701	-0.14495	0.01965	0.020114	0.033196	0.030123
-0.14602	-0.17338	-0.12038	-0.18529	0.032453	0.023929	0.032819	0.024627
-0.11484	-0.11444	-0.05484	-0.15988	0.01807	0.015254	0.014938	0.008353
-0.09083	-0.08037	-0.03486	-0.09344	0.010193	0.0099	0.00777	0.0051
-0.08824	-0.06832	-0.03442	-0.0687	0.002618	0.009391	0.00579	0.005037
-0.08187	-0.04914	-0.04226	-0.04295	0.001175	0.008197	0.00324	0.006212
-0.11917	-0.06226	-0.06879	-0.10963	0.004319	0.016344	0.004905	0.011097
-0.10872	-0.02687	-0.05053	-0.08673	0.002489	0.013779	0.001201	0.007583
-0.10277	-0.04222	-0.04785	-0.00228	0.002929	0.012419	0.0025	0.007124
-0.12031	-0.05562	-0.04625	-0.00239	0.003141	0.016635	0.004019	0.006856
-0.10263	-0.06389	-0.0124	0.028736	0.004419	0.012387	0.005137	0.002397
-0.08276	-0.02987	-0.02024	0.047471	0.005036	0.008359	0.001417	0.003226
-0.07869	-0.02344	-0.007	0.042378	0.006466	0.007631	0.000975	0.001897
-0.0802	-0.0082	-0.00042	0.031378	0.00582	0.007897	0.000255	0.001367
-0.09376	-0.00562	-0.01926	0.040462	0.005678	0.010491	0.00018	0.003115
-0.07757	-0.00754	-0.0243	-0.00558	0.005697	0.007438	0.000235	0.003703
-0.06436	-0.00077	-0.01436	0.005851	0.002007	0.005333	7.31E-05	0.002592
-0.07489	-0.00952	0.011103	0.026368	0.00044	0.006983	0.000299	0.000648
-0.08377	0.007077	0.04637	0.073382	0.000536	0.008545	4.92E-07	9.64E-05
-0.02366	0.085584	0.1035	0.135285	0.000393	0.001045	0.006054	0.004482
0.001448	0.095028	0.150076	0.175813	0.003524	5.22E-05	0.007613	0.012888
0.006655	0.097114	0.139285	0.170986	0.002856	4.06E-06	0.007981	0.010554
-0.04147	0.047274	0.063781	0.157221	3.23E-05	0.002514	0.00156	0.000741
-0.05085	0.015728	0.011279	0.055706	0.000375	0.003542	6.32E-05	0.000639
-0.0817	-0.00753	-0.0273	-0.0002	0.000957	0.008167	0.000234	0.004077
-0.09295	-0.03336	-0.03334	-0.00972	0.000791	0.010326	0.001693	0.004886
-0.04699	0.023669	0.030446	0.040126	0.001124	0.003098	0.000253	3.73E-05

-0.04711	-0.02488	0.019724	-0.03204	0.00019	0.003111	0.001066	0.000283
-0.04447	9.05E-05	0.053654	0.008111	0.000927	0.002824	5.91E-05	0.000292
0.001772	0.013724	0.085755	0.017293	0.003699	4.76E-05	3.54E-05	0.002421
-0.03037	-0.00894	0.037805	-0.02741	0.003664	0.001524	0.00028	1.57E-06
-0.01876	0.005703	0.047325	-0.07053	0.00957	0.000752	4.3E-06	0.000116
-0.02638	-0.02765	0.020694	-0.09165	0.010212	0.001228	0.001255	0.000251
-0.03337	-0.01847	0.019379	-0.12566	0.007929	0.001767	0.000689	0.000295
-0.02038	-0.0327	0.053785	-0.16081	0.00852	0.000844	0.001639	0.000297
-0.03518	-0.03938	0.04954	-0.14543	0.007301	0.001923	0.002224	0.000169
-0.04961	-0.05473	0.032534	-0.18995	0.006151	0.003396	0.003907	1.61E-05
-0.00802	-0.01825	0.04281	-0.16905	0.008577	0.000279	0.000677	3.92E-05
0.023163	-0.02147	0.054918	-0.13807	0.016642	0.00021	0.000856	0.000337
0.012951	-0.03067	0.044161	-0.14692	0.010212	1.83E-05	0.001478	5.79E-05
0.031709	0.003257	0.040905	-0.20286	0.011658	0.000531	2.04E-05	1.89E-05
0.001615	-0.00491	0.03609	-0.21721	0.011308	4.98E-05	0.000161	2.14E-07
0.0369	0.004338	0.054967	-0.21735	0.017762	0.000797	1.18E-05	0.000339
0.031043	0.037388	0.133343	-0.20596	0.016259	0.000501	0.000877	0.009368
0.077755	0.024944	0.188482	-0.14331	0.013159	0.004773	0.000295	0.023083
0.080732	0.049113	0.208396	-0.1592	0.01167	0.005193	0.001709	0.02953
0.096272	0.078186	0.186921	-0.15394	0.010787	0.007674	0.004957	0.022611
0.075847	0.095244	0.185016	-0.1253	0.011483	0.004513	0.00765	0.022042
0.057573	0.079387	0.161533	-0.17931	0.007933	0.002392	0.005128	0.01562
0.0485	0.089731	0.144736	-0.14095	0.011475	0.001586	0.006716	0.011704
0.055916	0.096363	0.151356	-0.14748	0.01241	0.002232	0.007847	0.01318
0.050401	0.096475	0.167796	-0.00142	0.007166	0.001742	0.007867	0.017225
0.058716	0.099205	0.206806	0.02203	0.003664	0.002505	0.008359	0.028986
0.105712	0.076717	0.200086	0.051529	0.00438	0.009417	0.004753	0.026743
0.087751	0.077309	0.175119	0.044234	0.001252	0.006254	0.004835	0.019201
0.088976	0.043584	0.183839	-0.01262	0.001766	0.006449	0.001282	0.021693
0.094951	0.05215	0.211643	0.010093	0.000423	0.007444	0.001969	0.030657
0.041358	0.033925	0.168404	-0.03855	0.000539	0.001069	0.000684	0.017385
0.027746	0.011639	0.118164	-0.09136	0.002709	0.000364	1.49E-05	0.006661
0.033981	0.021691	0.12245	-0.06236	1.97E-06	0.000641	0.000194	0.007378
0.026911	-0.0007	0.137104	0.004543	6.9E-05	0.000333	7.19E-05	0.010111
0.074815	0.030559	0.177235	0.050943	8.28E-05	0.004375	0.000519	0.019792
0.050304	0.028003	0.159268	0.046511	0.000854	0.001733	0.000409	0.015059
0.031676	0.001846	0.10965	0.050908	0.001346	0.000529	3.52E-05	0.005343
0.01159	0.0212	0.109429	0.011501	8.33E-05	8.53E-06	0.00018	0.005311
0.012588	0.037103	0.093879	0.036868	0.000149	1.54E-05	0.00086	0.003286
-0.01141	-0.01045	0.090185	0.075408	0.000102	0.000403	0.000332	0.002877
0.00305	-0.02283	0.071903	0.090215	9.45E-05	3.16E-05	0.000937	0.00125
0.013351	-0.01009	0.060296	0.106829	0.000113	2.19E-05	0.000319	0.000564
0.017714	-0.0322	0.077612	0.103867	0.001448	8.18E-05	0.001598	0.001686
-0.00226	-0.05268	0.07796	0.107475	0.007273	0.000119	0.003655	0.001715
-0.03423	-0.05735	0.038714	0.004652	0.008037	0.001841	0.004242	4.67E-06
-0.01063	-0.01575	0.025583	-0.00602	0.004931	0.000372	0.000554	0.00012
-0.07116	-0.02323	0.015739	-0.00531	0.008589	0.006372	0.000962	0.000433
-0.07294	-0.0196	0.032776	0.00615	0.00829	0.006659	0.000749	1.43E-05
-0.09041	-0.0099	0.007716	0.036374	0.006824	0.009817	0.000312	0.000832
-0.08057	0.000517	-0.01637	0.035821	0.005316	0.007964	5.27E-05	0.002801

-0.08784	-0.02219	-0.03899	0.018979	0.004027	0.009314	0.000898	0.005706
-0.07632	0.001246	0.023935	0.053516	0.000593	0.007223	4.27E-05	0.000159
-0.05427	-0.03285	0.01658	0.031146	0.00025	0.003961	0.001651	0.000399
-0.02314	-0.02089	0.049242	0.091522	5.88E-05	0.001012	0.000822	0.000161
-0.05875	-0.07349	0.010658	0.054231	0.001058	0.004546	0.006604	0.00067
-0.09526	-0.11355	0.004331	0.038301	0.001283	0.010802	0.014721	0.001038
-0.07435	-0.10573	-0.00591	0.055475	0.000882	0.006893	0.012885	0.001803
-0.04952	-0.09359	-0.02361	0.054514	0.000948	0.003386	0.010275	0.003619
-0.03079	-0.09035	-0.01116	0.051133	0.000336	0.001557	0.009629	0.002277
-0.03595	-0.08853	-0.01876	0.004042	0.000458	0.001991	0.009275	0.003059
-0.04758	-0.09793	0.002877	-0.01155	0.000819	0.003164	0.011174	0.001134
-0.03475	-0.08426	0.042942	0.029652	0.000817	0.001885	0.008472	4.08E-05
-0.05899	-0.08926	0.014633	0.003787	0.002002	0.004578	0.009416	0.00048
-0.05416	-0.09957	-0.00018	0.033986	0.000317	0.003947	0.011523	0.001349
-0.0445	-0.08938	-0.04491	-0.04078	9.36E-05	0.002827	0.00944	0.006636
-0.0874	-0.14747	-0.05949	-0.03063	4.78E-05	0.009229	0.024101	0.009225
-0.08814	-0.16091	-0.05711	-0.05373	0.000125	0.009373	0.028455	0.008772
-0.10541	-0.20361	-0.10808	-0.05006	0.000563	0.013014	0.044684	0.020919
-0.09739	-0.17601	-0.09086	-0.06211	9.98E-05	0.011249	0.033778	0.016234
-0.09425	-0.16469	-0.06968	-0.08844	0.000589	0.010593	0.029746	0.011286
-0.06342	-0.12421	-0.03539	-0.03302	0.000196	0.005197	0.017421	0.005176
-0.10391	-0.14405	-0.12292	-0.08729	6.23E-06	0.012675	0.023052	0.025433
-0.12024	-0.10457	-0.10498	-0.06982	1.95E-06	0.016617	0.012621	0.020032
-0.17952	-0.13654	-0.1699	-0.13454	0.000307	0.035416	0.020827	0.042623
-0.15225	-0.11996	-0.15478	-0.13107	0.000313	0.025896	0.016318	0.036609
-0.13225	-0.09118	-0.14976	-0.14828	0.002704	0.01986	0.009792	0.034711
-0.1588	-0.10844	-0.14465	-0.15098	0.00154	0.028047	0.013507	0.032832
-0.13788	-0.05571	-0.10612	-0.12688	0.000132	0.021477	0.00403	0.020356
-0.19114	-0.08821	-0.1067	-0.15672	0.006098	0.039923	0.009213	0.020521
-0.16672	-0.07734	-0.09745	-0.17497	0.000973	0.03076	0.007245	0.017956
-0.16678	-0.13404	-0.14622	-0.19669	0.001788	0.030784	0.020112	0.033406
-0.15575	-0.14471	-0.08825	-0.22342	0.000639	0.027034	0.023252	0.015576
-0.11919	-0.09761	-0.16032	-0.21933	6.71E-07	0.016347	0.011106	0.038758
-0.12125	-0.08762	-0.16199	-0.19778	0.000361	0.016879	0.0091	0.039419
-0.15504	-0.1089	-0.14302	-0.20073	0.001242	0.026799	0.013614	0.032248
-0.13123	-0.06392	-0.17682	-0.25304	5.06E-05	0.019571	0.005141	0.045529
-0.08186	-0.04157	-0.1653	-0.22258	0.001058	0.008196	0.002435	0.040744
-0.05078	-0.02552	-0.19122	-0.28236	0.002682	0.003534	0.001109	0.051879
-0.09388	-0.02032	-0.21809	-0.35471	0.007326	0.010516	0.000789	0.064843
-0.11146	-0.03659	-0.24798	-0.33792	0.00734	0.014431	0.001968	0.080958
-0.11824	-0.05861	-0.23093	-0.37945	0.003162	0.016107	0.004407	0.071545
-0.12228	-0.03863	-0.14392	-0.2861	0.002853	0.017148	0.002153	0.032572
-0.09933	-0.05717	-0.15653	-0.3112	0.000695	0.011663	0.004218	0.037279
-0.04327	-0.00506	-0.09001	-0.27844	0.002339	0.002698	0.000165	0.016018
-0.03822	0.014992	-0.07288	-0.19364	0.005366	0.002198	5.2E-05	0.011976
-0.03994	-0.00549	-0.08534	-0.17518	0.014832	0.002363	0.000176	0.014857
-0.03176	-0.0027	-0.07232	-0.18269	0.012078	0.001634	0.00011	0.011854
-0.05282	-0.0458	-0.06383	-0.13066	0.005742	0.003781	0.00287	0.010077
-0.04196	-0.04895	-0.07588	-0.10272	0.009217	0.002563	0.003218	0.012641
-0.05928	-0.03968	-0.08177	-0.0782	0.004027	0.004617	0.002252	0.014001

-0.03623	0.035128	-0.04955	-0.00341	0.007746	0.002016	0.000748	0.007413
-0.04433	0.029531	-0.13479	0.003368	0.003907	0.002809	0.000473	0.029359
-0.07738	-0.0067	-0.06054	0.003811	0.001001	0.007404	0.00021	0.009426
-0.03182	0.041639	0.007332	-0.05527	0.004339	0.001639	0.001147	0.000854
0.016346	0.064254	0.049661	0.029966	0.011179	5.89E-05	0.00319	0.000172
0.017208	0.052071	0.083797	0.120725	0.002627	7.29E-05	0.001962	0.002232
0.002234	0.064247	0.069994	0.136834	0.00108	4.14E-05	0.003189	0.001118
-0.00718	0.08019	0.114065	0.23313	0.00311	0.000251	0.005244	0.006008
0.015623	0.061435	0.137881	0.314089	0.000419	4.83E-05	0.002879	0.010267
0.011135	0.062536	0.148901	0.342094	0.000966	6.08E-06	0.002999	0.012622
0.025416	0.070639	0.13064	0.356369	0.001411	0.00028	0.003952	0.008852
0.090004	0.08742	0.122733	0.321368	0.001193	0.006615	0.006343	0.007427
0.049139	0.086869	0.122862	0.353791	0.000376	0.001638	0.006256	0.007449
0.019997	0.07896	0.101935	0.341532	0.000485	0.000128	0.005067	0.004275
-0.00265	0.076965	0.072517	0.274359	0.000171	0.000128	0.004787	0.001293
0.034463	0.094498	0.063538	0.305599	0.000499	0.000665	0.00752	0.000728
0.07024	0.097919	0.031613	0.334446	0.000525	0.003791	0.008126	2.44E-05
0.049177	0.089117	-0.00991	0.293293	0.0003	0.001641	0.006616	0.002159
0.062138	0.1196	0.013544	0.279011	0.001404	0.002859	0.012504	0.000529
0.056884	0.099275	0.02775	0.217901	0.00087	0.002325	0.008372	7.75E-05
0.031538	0.088087	0.048863	0.194843	0.000689	0.000523	0.00645	0.000152
0.023613	0.081986	0.043422	0.190397	0.001042	0.000223	0.005507	4.72E-05
0.036122	0.107654	0.072154	0.181514	0.003105	0.000754	0.009975	0.001267
0.011892	0.086016	0.033372	0.196839	0.001731	1.04E-05	0.006121	1.01E-05
0.017868	0.078614	0.022883	0.19883	0.000175	8.46E-05	0.005018	0.000187
0.028496	0.080331	0.035735	0.193759	8.63E-05	0.000393	0.005264	6.67E-07
0.005912	0.075785	0.030901	0.205844	0.00017	7.6E-06	0.004625	3.19E-05
0	0.075054	0.040634	0.218681	0.0006	7.52E-05	0.004526	1.67E-05
0.023405	0.093752	0.071989	0.27008	0.000115	0.000217	0.007392	0.001256
0.00333	0.070811	0.055553	0.20886	4.63E-06	2.85E-05	0.003973	0.000361
-0.00491	0.071422	0.061865	0.197853	0.000224	0.000184	0.004051	0.000641
-0.01137	0.064013	0.045171	0.18601	0.000261	0.000401	0.003162	7.43E-05
0.005328	0.074415	0.050668	0.141367	0.000665	1.12E-05	0.00444	0.000199
0.050158	0.068904	0.063453	0.153365	0.000702	0.001721	0.003736	0.000724
0.066616	0.056235	0.077829	0.126511	0.001085	0.003358	0.002348	0.001704
0.036031	0.037565	0.112238	0.117125	0.000164	0.000749	0.000887	0.005728
0.00897	0.014621	0.140483	0.08694	0.000445	9.01E-08	4.68E-05	0.010802
0.039887	0.009398	0.125252	0.037271	0.00109	0.000975	2.62E-06	0.007868
0.079624	0.003834	0.121661	0.064995	0.001148	0.005034	1.55E-05	0.007244
0.070411	-0.00151	0.102319	0.109311	0.001457	0.003812	8.62E-05	0.004325
0.086058	9.46E-05	0.062424	0.108101	0.001929	0.005989	5.9E-05	0.000669
0.070578	-0.00105	0.076866	0.089505	0.001504	0.003833	7.79E-05	0.001625
0.067405	-0.03141	0.038031	0.097666	0.001485	0.00345	0.001536	2.19E-06
0.064459	-0.11334	0.013076	0.102858	0.002311	0.003112	0.01467	0.000551
0.045515	-0.13917	0.013984	0.07518	0.002945	0.001358	0.021594	0.000509
0.026489	-0.15986	0.097192	0.013254	0.00436	0.000318	0.028104	0.003677
0.051933	-0.17115	0.142224	-0.02124	0.005162	0.001872	0.032016	0.011166
0.048928	-0.14298	0.135687	-0.09499	0.005159	0.001621	0.022728	0.009828
0.030961	-0.16386	0.10823	-0.17612	0.003204	0.000497	0.029458	0.005138
0.058867	-0.15194	0.108317	-0.19549	0.004773	0.00252	0.02551	0.00515

0.05546	-0.15864	0.125267	-0.15143	0.00413	0.002189	0.027695	0.00787
0.034293	-0.16119	0.131602	-0.17919	0.004047	0.000657	0.028551	0.009034
0.045046	-0.16737	0.153257	-0.17185	0.004521	0.001323	0.030676	0.01362
-0.00269	-0.19154	0.148474	-0.19728	0.002339	0.000129	0.039727	0.012527
-0.01781	-0.21581	0.145444	-0.1948	0.002596	0.000701	0.049992	0.011857
-0.02026	-0.19354	0.125978	-0.20368	0.002027	0.000837	0.040531	0.007997
-0.02316	-0.13529	0.112018	-0.19793	0.002093	0.001013	0.020468	0.005695
-0.05044	-0.13413	0.101919	-0.18954	0.001624	0.003493	0.020139	0.004273
-0.04308	-0.12481	0.096976	-0.16868	0.00099	0.002678	0.017579	0.003651
-0.0664	-0.11774	0.101658	-0.14298	0.001604	0.005635	0.015754	0.004239
-0.07624	-0.10423	0.124547	-0.14145	0.000754	0.007209	0.012545	0.007743
-0.06017	-0.0859	0.106757	-0.15242	0.000794	0.004738	0.008776	0.004929
-0.05103	-0.0638	0.132388	-0.15223	0.000652	0.003564	0.005124	0.009184
-0.03456	0.018234	0.155118	-0.13561	0.000513	0.001869	0.000109	0.014058
-0.03135	0.057176	0.171899	-0.09563	0.000503	0.001601	0.00244	0.018319
-0.0283	0.068139	0.076796	-0.07645	0.000423	0.001367	0.003644	0.00162
-0.04115	0.064312	0.05538	-0.07991	1.64E-06	0.002482	0.003196	0.000354
-0.01962	0.033881	0.069227	-0.05649	0.000233	0.0008	0.000681	0.001068
-0.00495	0.036792	0.082011	-0.01631	8.47E-05	0.000185	0.000842	0.002066
-0.02449	0.048974	0.096056	0.034659	3.91E-05	0.0011	0.001697	0.003541
-0.01133	0.061791	0.075399	0.026401	0.00014	0.0004	0.002917	0.001509
-0.01497	0.065084	0.062707	0.10625	0.000696	0.000559	0.003284	0.000684
-0.04291	0.057408	0.032975	0.120946	0.000129	0.00266	0.002463	1.28E-05
-0.03999	0.074347	0.020016	0.09315	0.00054	0.002368	0.004432	0.000273
-0.05314	0.089821	-2.8E-05	0.054042	3.56E-05	0.00382	0.006731	0.001338
-0.04416	0.072639	0.007466	0.048237	0.000578	0.002791	0.004207	0.000846
-0.06097	0.037425	0.012084	0.031521	0.000146	0.004849	0.000879	0.000599
-0.05646	0.038299	0.026947	0.061768	9.08E-05	0.004242	0.000932	9.23E-05
-0.08689	0.031131	0.028356	0.03151	0.00054	0.009131	0.000545	6.72E-05
-0.06035	0.011924	0.011204	0.001207	8.58E-05	0.004764	1.72E-05	0.000643
-0.04474	-0.00126	0.015825	-0.00264	0.000316	0.002852	8.17E-05	0.00043
-0.04675	-0.00541	0.027002	0.015557	0.000568	0.003071	0.000174	9.12E-05
-0.06184	-0.0243	0.009047	-0.10261	0.000365	0.004971	0.001029	0.000757
-0.05474	-0.03597	0.019198	-0.11156	0.000378	0.004021	0.001914	0.000301
-0.11545	-0.07237	-0.02256	-0.15317	4.25E-06	0.015405	0.006424	0.003495
-0.1341	-0.08644	-0.02975	-0.11631	0.000107	0.020382	0.008877	0.004397
-0.11321	-0.06485	-0.02075	-0.10098	0.000553	0.014854	0.005274	0.003283
-0.09481	-0.04211	-0.00535	-0.04361	0.001441	0.010708	0.002489	0.001756
-0.06954	-0.02193	-0.01748	-0.03098	0.003564	0.006117	0.000883	0.00292
-0.04884	-0.02095	0.000193	-0.01144	0.003915	0.003307	0.000825	0.001322
-0.08369	-0.0376	0.001883	-0.03083	0.001839	0.008531	0.002059	0.001202
-0.0638	-0.03598	0.018983	-0.08017	0.001529	0.005251	0.001915	0.000309
-0.05067	-0.03079	0.013573	-0.0868	0.000683	0.003521	0.001488	0.000528
-0.01838	-0.03026	0.024651	-0.05641	0.001134	0.000732	0.001447	0.000142
0.015228	-0.0189	0.048756	0.02701	0.00203	4.3E-05	0.000712	0.000149
0.054276	0.000822	0.045066	0.030645	0.002452	0.00208	4.84E-05	7.25E-05
0.077181	-0.00607	0.031919	0.03461	0.002556	0.004694	0.000192	2.15E-05
0.106222	0.016843	0.037023	0.01744	0.002946	0.009517	8.22E-05	2.22E-07
0.097459	0.01253	0.024682	0.01127	0.00197	0.007884	2.26E-05	0.000141
0.114635	0.046124	0.041158	0.048819	0.002183	0.011229	0.00147	2.12E-05

0.088426	0.04894	0.035686	0.024992	0.001492	0.006361	0.001694	7.51E-07
0.086601	0.04136	0.040921	0.03907	0.000806	0.006073	0.001128	1.91E-05
0.077329	0.039804	0.046509	0.114421	0.000991	0.004714	0.001026	9.91E-05
0.04952	0.02629	0.03106	0.12374	0.000692	0.001669	0.000343	3.02E-05
0.123516	0.041319	0.056529	0.174656	0.00112	0.01319	0.001125	0.000399
0.144261	0.04908	0.062012	0.144906	0.001032	0.018385	0.001706	0.000648
0.122632	0.09532	0.039767	0.124265	6.33E-06	0.012987	0.007664	1.03E-05
0.098305	0.100114	0.050426	0.092716	0.000494	0.008034	0.008526	0.000192
0.066585	0.086235	0.058602	0.100785	0.002494	0.003354	0.006156	0.000486
0.064834	0.100709	0.056342	0.060532	0.007458	0.003154	0.008636	0.000392
0.077307	0.095224	0.043643	0.059948	0.004087	0.004711	0.007647	5.03E-05
0.084019	0.102016	0.022826	0.051575	0.00493	0.005678	0.008881	0.000188
0.072479	0.098489	0.032327	0.065727	0.003392	0.004072	0.008229	1.79E-05
0.074986	0.105898	0.026685	0.059327	0.004039	0.004398	0.009628	9.74E-05
0.067577	0.111047	0.016812	0.006121	0.00309	0.00347	0.010664	0.00039
0.04071	0.110572	0.02651	0.019528	0.0043	0.001027	0.010567	0.000101
0.02668	0.108761	0.034321	0.013923	0.00828	0.000324	0.010198	4.98E-06
0.008088	0.088486	0.039729	0.015142	0.007771	3.38E-07	0.006514	1.01E-05
0.009911	0.090901	0.049241	0.023364	0.005928	1.54E-06	0.00691	0.000161
0.013501	0.092273	0.043102	-0.00292	0.005519	2.33E-05	0.007139	4.29E-05
0.025929	0.090959	0.032037	-0.00735	0.004808	0.000298	0.006919	2.04E-05
0.023822	0.088594	0.025042	-0.02268	0.003776	0.00023	0.006531	0.000132
0.036863	0.092628	0.026551	0.013558	0.002658	0.000795	0.0072	0.0001
0.035639	0.102966	0.016576	0.012208	0.004333	0.000727	0.009061	0.000399
0.035197	0.108632	0.026511	-0.03126	0.001956	0.000704	0.010172	0.000101
0.030072	0.118668	0.035864	-0.02056	0.0016	0.000458	0.012297	4.74E-07
0.02642	0.048166	0.027553	-0.02603	0.000887	0.000315	0.001631	8.1E-05
0.032904	0.030487	0.008744	-0.04275	0.000803	0.000587	0.000516	0.000773
0.044099	0.02586	0.01334	-0.06511	0.000274	0.001255	0.000327	0.000539
0.053481	0.007234	0.004613	-0.06655	0.000641	0.002008	2.95E-07	0.00102
0.081845	0.014443	0.009161	-0.07236	6.42E-05	0.005355	4.44E-05	0.00075
0.067872	0.002926	0.019058	-0.06297	2.23E-06	0.003505	2.35E-05	0.000306
0.064084	0.00809	0.012864	-0.13857	2.33E-05	0.003071	9.78E-08	0.000561
0.042811	0.002323	0.008398	-0.15105	8.37E-07	0.001166	2.97E-05	0.000793
0.039143	-0.0062	0.028689	-0.10887	5.24E-06	0.000929	0.000195	6.18E-05
0.037409	-0.00414	0.020828	-0.12724	7.2E-06	0.000826	0.000142	0.000247
0.056747	-0.02323	0.019967	-0.13396	0.001063	0.002311	0.000962	0.000275
0.028339	-0.04549	-0.0145	-0.14542	1.52E-05	0.000387	0.002838	0.002606
0.046732	-0.02565	-0.00139	-0.12903	1.51E-05	0.001449	0.001118	0.001439
0.008721	-0.01407	-0.00978	-0.14035	0.000759	2.6E-09	0.000477	0.002147
0.003074	0.021615	-0.00387	-0.1297	0.001294	3.13E-05	0.000191	0.001634
0.014442	0.056512	0.006596	-0.10783	0.001055	3.33E-05	0.002375	0.000897
-0.00036	0.052155	0.018225	-0.0845	0.002909	8.16E-05	0.001969	0.000336
-0.00012	0.037862	0.023219	-0.08658	0.001915	7.73E-05	0.000905	0.000178
0.001262	0.045577	0.026942	-0.08561	0.003773	5.49E-05	0.001429	9.24E-05
0.005704	0.042273	0.035167	-0.09131	0.002419	8.8E-06	0.00119	1.92E-06
0.016321	0.059213	0.060776	-0.0755	0.002472	5.85E-05	0.002646	0.000587
-0.00465	0.046676	0.059482	-0.06309	0.001973	0.000177	0.001513	0.000526
-0.02743	0.054057	0.03847	-0.0513	0.002202	0.001303	0.002142	3.68E-06
-0.02414	0.057039	0.056485	-0.04461	0.002629	0.001076	0.002427	0.000397

-0.03558	0.072321	0.07664	-0.02428	2.11E-05	0.001958	0.004166	0.001607
-0.06403	0.055723	0.074981	-0.05482	2.83E-05	0.005285	0.002299	0.001477
-0.04392	0.057528	0.082999	0.016107	5.73E-05	0.002765	0.002475	0.002157
-0.04912	0.043503	0.079959	0.077418	2.98E-06	0.00334	0.001276	0.001884
-0.04259	0.048038	0.055668	0.041431	0.000577	0.002627	0.001621	0.000365
-0.01946	0.042371	0.073558	0.032916	0.000135	0.000791	0.001197	0.001369
-0.02662	0.076333	0.070891	0.018275	0.000413	0.001246	0.0047	0.001179
0.007447	0.100734	0.09922	0.010944	1.86E-06	1.5E-06	0.008641	0.003927
-0.00012	0.095879	0.087112	0.013275	0.000243	7.72E-05	0.007762	0.002556
0.012142	0.074505	0.087983	0.020448	0.00101	1.21E-05	0.004453	0.002645
0.018721	0.048633	0.09159	0.025635	0.001023	0.000101	0.001669	0.003029
-0.00393	0.012127	0.07457	-0.0009	0.000391	0.000159	1.89E-05	0.001445
0.026865	0.023308	0.055513	-0.04425	0.001021	0.000331	0.000241	0.00036
0.016647	0.034356	0.047678	-0.06187	0.001179	6.36E-05	0.000706	0.000124
0.036335	0.033764	0.046859	-0.02745	0.002756	0.000765	0.000675	0.000106
0.043809	0.030956	0.03478	-0.00812	0.002297	0.001235	0.000537	3.14E-06
0.037899	0.021064	0.00696	-0.03615	0.002071	0.000854	0.000177	0.000876
0.056165	0.033931	0.016298	-0.03612	0.001584	0.002256	0.000684	0.00041
0.08109	0.041389	0.047564	-0.03026	0.002287	0.005245	0.00113	0.000121
0.074849	0.044617	0.023098	-0.017	0.00189	0.00438	0.001357	0.000181
0.080038	0.01429	-0.00742	-0.01973	2.21E-05	0.005093	4.24E-05	0.001934
0.111788	0.020295	-0.01298	0.016358	6.12E-05	0.010633	0.000157	0.002453
0.09386	0.005909	-0.07563	-0.0201	0.000705	0.007257	3.49E-06	0.012585
0.101292	0.009024	-0.05771	-0.07767	0.001704	0.008579	1.55E-06	0.008885
0.092859	-0.01345	-0.06006	-0.10263	0.000789	0.007088	0.000451	0.009335
0.05938	-0.013	-0.09797	-0.1032	0.001532	0.002572	0.000432	0.018097
0.052785	-0.0363	-0.09285	-0.06995	0.001376	0.001946	0.001943	0.016745
0.035231	-0.04685	-0.10594	-0.03125	0.001205	0.000706	0.002984	0.020304
0.059248	-0.04982	-0.06984	-0.03928	0.001016	0.002558	0.003318	0.01132
0.073432	-0.0461	-0.05345	-0.02613	0.000654	0.004194	0.002903	0.0081
0.129099	-0.05663	-0.07751	-0.0585	5.83E-05	0.014503	0.004148	0.013011
0.182152	-0.08182	-0.1107	-0.07727	6.66E-05	0.030096	0.008027	0.021682
0.178973	-0.08144	-0.1076	-0.0413	5.76E-05	0.029003	0.00796	0.020779
0.213296	-0.10616	-0.12271	-0.06667	0.000148	0.041872	0.012983	0.025365
0.201608	-0.09233	-0.09542	-0.08012	9.56E-06	0.037225	0.010021	0.017415
0.167155	-0.06281	-0.0911	-0.10141	0.000193	0.025118	0.004983	0.016295
0.183362	-0.06266	-0.06886	-0.05386	0.000418	0.030517	0.004962	0.011111
0.185874	-0.05772	-0.07454	-0.0783	0.000171	0.031402	0.00429	0.012342
0.186766	-0.05163	-0.07183	-0.09427	5.42E-06	0.031718	0.003529	0.011747
0.184455	-0.05609	-0.06154	-0.05679	4.22E-06	0.030901	0.004079	0.009623
0.181502	-0.03845	-0.05301	-0.04604	3.15E-07	0.029871	0.002137	0.008021
0.173279	-0.02378	-0.04753	-0.03674	2.32E-05	0.027096	0.000996	0.007071
0.171832	-0.01909	-0.01238	-0.01944	0.000495	0.026622	0.000722	0.002394
0.172275	-0.01849	-0.03518	-0.04214	0.00109	0.026767	0.00069	0.005145
0.208274	-0.00874	-0.04537	-0.00731	0.002045	0.039842	0.000273	0.006712
0.249545	-0.019	-0.02904	-0.0332	0.002202	0.058021	0.000717	0.004302
0.237108	0.000637	-0.03542	-0.03226	0.001774	0.052184	5.1E-05	0.005179
0.261726	0.002478	0.005692	-0.01993	0.002327	0.064037	2.81E-05	0.000952
0.242916	-0.00418	-0.02608	-0.03884	0.000724	0.054871	0.000143	0.003923
0.258399	-0.00027	-0.02224	-0.00922	0.00118	0.062365	6.48E-05	0.003457

0.225891	0.011121	-0.00591	0.011665	0.000688	0.047185	1.12E-05	0.001803
0.18566	0.055575	0.034787	0.036186	0.000609	0.031326	0.002285	3.11E-06
0.150951	0.043934	0.028165	0.020316	0.003925	0.020244	0.001307	7.03E-05
0.131384	0.085883	0.074052	0.088044	0.007165	0.015059	0.006101	0.001406
0.127589	0.072727	0.033838	0.078061	0.002017	0.014142	0.004218	7.37E-06
0.163924	0.051648	0.019251	0.071588	0.003688	0.024104	0.001925	0.000299
0.130701	0.053306	0.00181	0.070744	0.0049	0.014892	0.002073	0.001207
0.127984	0.058067	0.007653	0.091411	0.003726	0.014236	0.002529	0.000835
0.141195	0.045661	-0.01132	0.123571	0.002215	0.017563	0.001435	0.002292
0.134242	0.045975	-0.01893	0.082932	0.001867	0.015768	0.001459	0.003079
0.123091	0.044487	-0.01782	0.076284	0.002205	0.013092	0.001348	0.002957
0.131015	0.041441	-0.02567	0.081462	0.00184	0.014968	0.001133	0.003872
0.138345	0.049742	0.00602	0.112762	0.002583	0.016816	0.001761	0.000932
0.127937	0.046455	0.012524	0.147687	0.002753	0.014225	0.001496	0.000577
0.082632	0.054667	0.019239	0.125287	0.001358	0.00547	0.002199	0.0003
0.055026	0.056204	0.008329	0.161179	0.001336	0.002149	0.002345	0.000797
0.078374	0.055312	0.017845	0.178761	0.002097	0.004859	0.002259	0.00035
0.061841	0.061406	-0.00287	0.194867	0.000882	0.002827	0.002876	0.001555
0.042062	0.058809	0.020361	0.198908	0.000189	0.001115	0.002604	0.000262
0.038884	0.060121	0.032651	0.170299	5.46E-05	0.000913	0.00274	1.52E-05
0.005946	0.05947	0.037837	0.184624	0.000146	7.42E-06	0.002672	1.65E-06
0.002973	0.044288	0.034825	0.179082	0.001062	3.25E-05	0.001333	2.98E-06
0.035578	0.055367	0.04991	0.177172	0.001972	0.000724	0.002265	0.000178
0.021933	0.034639	0.049507	0.147271	0.004525	0.000176	0.000722	0.000168
0.01805	0.032877	0.060954	0.179474	0.002053	8.8E-05	0.00063	0.000595
-0.03033	0.035454	0.062055	0.175907	0.001376	0.001521	0.000766	0.00065
-0.01949	0.034077	0.063538	0.163092	0.00278	0.000793	0.000692	0.000728
-0.03257	0.026564	0.054666	0.184309	0.003904	0.0017	0.000353	0.000328
-0.04583	0.025745	0.046997	0.158827	0.0024	0.00297	0.000323	0.000109
-0.037	0.025472	0.059546	0.181037	0.003376	0.002086	0.000313	0.000529
-0.02719	0.031155	0.07065	0.200034	0.003995	0.001286	0.000546	0.001163
-0.01556	0.044974	0.095156	0.176296	0.003423	0.000587	0.001384	0.003434
-0.00823	0.039135	0.084182	0.139962	0.003126	0.000286	0.000983	0.002269
-0.01549	0.043491	0.079201	0.140747	0.002703	0.000584	0.001275	0.001819
-0.01813	0.04112	0.081812	0.154829	0.003621	0.000718	0.001112	0.002048
-0.04323	0.046642	0.093639	0.164625	0.004995	0.002693	0.00151	0.003259
-0.04617	0.10299	0.099298	0.138565	0.007924	0.003008	0.009065	0.003937
-0.05374	0.1024	0.103741	0.102736	0.005159	0.003894	0.008953	0.004514
-0.00153	0.101597	0.03741	0.102919	0.003105	0.000104	0.008802	7.37E-07
-0.02029	0.099841	0.01453	0.118302	0.003355	0.000839	0.008476	0.000485
-0.01355	0.100196	0.019362	0.107313	0.002284	0.000494	0.008541	0.000296
-0.02015	0.103057	0.029477	0.131136	0.002566	0.000831	0.009078	5.01E-05
-0.01728	0.100572	0.027575	0.15855	0.003186	0.000673	0.008611	8.06E-05
-0.0046	0.102488	0.016843	0.159271	0.001826	0.000176	0.00897	0.000388
0.008032	0.113068	0.023452	0.16571	0.001373	4.07E-07	0.011086	0.000172
0.056569	0.117931	0.032407	0.176233	0.002586	0.002294	0.012134	1.72E-05
0.067059	0.121637	0.042693	0.16015	0.001178	0.003409	0.012964	3.77E-05
0.075027	0.122207	0.04247	0.098341	0.000707	0.004403	0.013094	3.5E-05
0.075381	0.123102	0.044449	0.106492	0.002187	0.00445	0.0133	6.24E-05
0.078855	0.129631	0.046069	0.108293	0.001184	0.004926	0.014848	9.06E-05

0.074404	0.133542	0.039539	0.071605	0.002267	0.004321	0.015817	8.92E-06
0.057095	0.113507	0.018559	0.005955	0.001608	0.002345	0.011179	0.000324
0.031917	0.113967	0.007231	0.017625	0.002676	0.00054	0.011276	0.00086
0.050928	0.115859	0.015282	-0.02693	0.002027	0.001786	0.011682	0.000452
0.058777	0.118924	0.017501	-0.00256	0.001608	0.002511	0.012354	0.000363
0.097124	0.141462	0.035314	-0.00761	6.26E-05	0.007824	0.017872	1.53E-06
0.084704	0.076314	0.0197	0.004963	4.69E-05	0.005781	0.004697	0.000284
0.093094	0.083907	0.011753	7.95E-05	8.87E-05	0.007128	0.005796	0.000615
0.044879	0.076485	0.043959	-0.00048	3.62E-05	0.001311	0.004721	5.49E-05
0.044499	0.068445	0.046427	-0.03626	4.92E-05	0.001284	0.003681	9.75E-05
0.043366	0.055239	0.045708	-0.04208	0.000351	0.001204	0.002253	8.38E-05
0.051045	0.049064	0.039809	-0.0678	2.35E-05	0.001796	0.001705	1.06E-05
0.027883	0.049502	0.037165	-0.09956	8.94E-08	0.000369	0.001741	3.75E-07
0.022165	0.052201	0.032261	-0.08954	0.000119	0.000182	0.001973	1.84E-05
0.005871	0.041875	0.018946	-0.08397	0.000484	7.83E-06	0.001163	0.00031
-0.0108	0.0395	0.019629	-0.09416	5.53E-05	0.000379	0.001006	0.000286
-0.0093	0.037514	0.012641	-0.0654	0.000114	0.000323	0.000884	0.000572
-0.0223	0.033707	0.009632	-0.02809	1.29E-06	0.000959	0.000672	0.000725
-0.03346	0.041423	0.013983	-0.03861	2.97E-05	0.001775	0.001132	0.000509
-0.07744	0.02271	-0.01558	-0.10125	3.18E-06	0.007414	0.000223	0.002718
-0.08564	0.030951	-0.00886	-0.07004	0.000162	0.008894	0.000537	0.002063
-0.0799	0.031648	-0.00566	-0.00474	1.22E-05	0.007845	0.00057	0.001782
-0.07966	0.028707	0.000438	0.023686	1.9E-05	0.007802	0.000438	0.001304
-0.10055	0.028439	-0.00215	0.09297	1.1E-06	0.011928	0.000427	0.001498
-0.07851	0.048515	0.012886	0.10422	7.9E-05	0.0076	0.00166	0.00056
-0.10093	0.030505	0.024593	0.103847	9.22E-05	0.012011	0.000517	0.000143
-0.08232	0.035141	0.031801	0.103954	5.34E-05	0.00828	0.000749	2.26E-05
-0.09609	0.02738	0.042231	0.100978	8.74E-06	0.010975	0.000384	3.22E-05
-0.09592	0.030811	0.051677	0.172548	4.49E-05	0.010939	0.000531	0.000229
-0.0902	0.036938	0.069412	0.200235	4.84E-07	0.009775	0.00085	0.00108
-0.09457	0.035478	0.066829	0.178113	0.000435	0.010658	0.000767	0.000917
-0.09003	0.03528	0.051722	0.19859	0.000353	0.009742	0.000756	0.00023
-0.08614	0.029739	0.048563	0.216317	0.000273	0.008989	0.000482	0.000144
-0.08083	0.028121	0.059565	0.23823	0.000543	0.008011	0.000414	0.00053
-0.08409	0.018816	0.056805	0.179443	0.00063	0.008605	0.000122	0.00041
-0.08907	0.009495	0.049473	0.149071	0.000204	0.009553	2.95E-06	0.000167
-0.10571	0.002556	0.035963	0.148492	4.52E-06	0.013083	2.73E-05	3.47E-07
-0.07524	0.013058	0.056653	0.142137	6.86E-06	0.00704	2.79E-05	0.000404
-0.11614	-0.00184	0.053183	0.136576	8.35E-05	0.015577	9.25E-05	0.000277
-0.08464	0.005989	0.064301	0.197838	0.000196	0.008707	3.2E-06	0.00077
-0.05795	0.007187	0.06173	0.170812	4.49E-05	0.004438	3.49E-07	0.000634
-0.06705	0.009534	0.058611	0.181877	0.000141	0.005734	3.09E-06	0.000487
-0.02298	0.021107	0.070536	0.157435	1.08E-06	0.001002	0.000178	0.001155
0.005087	0.025579	0.069338	0.149488	7.07E-05	1.28E-05	0.000317	0.001075
-0.01374	-0.00083	0.060394	0.11148	8.27E-06	0.000502	7.42E-05	0.000568
-0.01162	-0.00229	0.049165	0.106755	4.62E-05	0.000412	0.000101	0.000159
-0.03262	-0.00195	0.054029	0.122283	0.000496	0.001705	9.46E-05	0.000305
-0.02143	0.020122	0.067271	0.148426	9.76E-06	0.000906	0.000152	0.000944
-0.01691	0.026168	0.060319	0.066009	5.16E-06	0.000655	0.000338	0.000565
-0.01295	0.015694	0.03702	0.023817	4.24E-05	0.000467	6.27E-05	2.19E-07

-0.00471	0.017278	0.030596	0.001558	6.93E-05	0.000179	9.03E-05	3.55E-05
-0.00777	0.036228	0.039155	0.031796	8.99E-05	0.00027	0.000809	6.78E-06
-0.01259	0.065284	0.058761	0.015253	1.67E-05	0.000452	0.003307	0.000493
-0.02267	0.072855	0.049239	0.027998	5.47E-05	0.000982	0.004235	0.000161
-0.01264	0.078918	0.050343	0.0521	7.7E-05	0.000454	0.005061	0.00019
-0.0044	0.08221	0.055757	0.084769	3.36E-06	0.000171	0.00554	0.000369
-0.00224	0.101382	0.083124	0.066213	0.000169	0.000119	0.008762	0.002169
-0.00505	0.093302	0.060213	0.046791	0.000301	0.000188	0.007314	0.00056
0.045385	0.096275	0.06665	0.054318	0.000435	0.001348	0.007832	0.000906
-0.00173	0.065813	0.049425	0.001929	0.00044	0.000108	0.003368	0.000166
-0.01339	0.068506	0.060678	0.03428	0.000135	0.000487	0.003688	0.000582
-0.0068	0.073103	0.066007	0.016969	0.000316	0.000239	0.004267	0.000868
-0.03279	0.069578	0.067392	0.007504	0.000288	0.001719	0.003819	0.000951
-0.03133	0.062166	0.068057	-0.03216	0.000165	0.0016	0.002958	0.000993
-0.01053	0.065069	0.075246	0.000161	0.000179	0.000369	0.003282	0.001497
-0.0149	0.067754	0.078502	0.026222	7.27E-05	0.000556	0.003597	0.00176
-0.00121	0.067037	0.073743	0.03464	1.66E-06	9.76E-05	0.003512	0.001383
-0.02901	0.047236	0.049853	0.037303	8.56E-05	0.00142	0.001557	0.000177
-0.06354	0.034972	0.049125	0.067066	0.000274	0.005215	0.00074	0.000158
-0.05122	0.040773	0.056722	0.090176	0.000482	0.003587	0.001089	0.000407
-0.0604	0.059094	0.071214	0.139971	0.000578	0.00477	0.002633	0.001201
-0.05845	0.03282	0.079394	0.119011	0.000438	0.004505	0.000627	0.001835
-0.04778	0.009367	0.0553	0.138577	0.000323	0.003187	2.53E-06	0.000351
-0.03631	0.008922	0.058349	0.112881	0.000214	0.002024	1.31E-06	0.000475
-0.02759	0.011225	0.062617	0.129001	0.000178	0.001315	1.19E-05	0.000679
-0.01038	-0.03282	0.031873	0.10067	1.1E-05	0.000363	0.001648	2.19E-05
-0.00409	-0.07087	0.003696	0.10011	5.05E-05	0.000163	0.006186	0.00108
-0.0041	-0.06029	0.023542	0.174094	1.98E-05	0.000163	0.004633	0.000169
0.004026	-0.06862	0.010708	0.182973	1.1E-05	2.16E-05	0.005836	0.000668
0.043536	-0.04048	0.020337	0.203888	3.37E-05	0.001216	0.002328	0.000263
0.030439	-0.0697	0.03003	0.170885	0.000556	0.000474	0.006003	4.25E-05
0.04866	-0.0449	0.036147	0.173716	0.000159	0.001599	0.002775	1.64E-07
0.041174	-0.06009	0.022331	0.181838	7.61E-06	0.001057	0.004605	0.000202
0.012892	-0.05294	0.0311	0.214085	0.00013	1.78E-05	0.003686	2.97E-05
-0.01831	-0.05159	0.021145	0.209734	0.000151	0.000728	0.003524	0.000237
-0.02402	-0.05059	0.010375	0.190844	6.42E-07	0.001069	0.003406	0.000685
-0.01392	-0.05204	-0.00181	0.149288	1.67E-06	0.00051	0.003579	0.001472
0.00848	-0.06687	-0.02019	0.078237	6.96E-06	3.61E-08	0.005572	0.003219
0.055068	-0.04643	-0.00432	0.084937	0.000232	0.002153	0.002938	0.001671
0.04279	-0.06403	-0.02031	0.058152	6.33E-06	0.001164	0.005156	0.003233
0.03948	-0.07637	-0.03923	0.062062	0.000319	0.000949	0.007081	0.005743
0.060253	-0.07016	-0.05872	0.015144	0.000725	0.002661	0.006075	0.009078
0.061071	-0.06943	-0.03201	-0.07581	3.72E-06	0.002746	0.005961	0.004701
0.049324	-0.08485	-0.0455	-0.15234	5.32E-05	0.001653	0.008581	0.006733
0.029369	-0.0723	-0.03169	-0.1666	6.04E-06	0.000428	0.006412	0.004657
0.015169	-0.02666	0.018392	-0.12273	0.000474	4.22E-05	0.001186	0.00033
0.022458	0.000756	0.029833	-0.09272	0.000675	0.00019	4.93E-05	4.51E-05
0.014128	-0.00582	0.025886	-0.13182	0.000479	2.98E-05	0.000185	0.000114
0.017028	0.01782	0.024441	-0.16299	0.000121	6.99E-05	0.000101	0.000147
0.023771	0.03239	0.038296	-0.13549	8.97E-05	0.000228	0.000606	3.04E-06

0.033036	0.049971	0.022356	-0.1503	0.00087	0.000594	0.00178	0.000202
-0.01255	0.025236	0.028998	-0.11922	0.000573	0.00045	0.000305	5.71E-05
-0.00996	0.04061	0.033953	-0.13491	0.000237	0.000347	0.001078	6.76E-06
-0.00085	0.030184	0.026068	-0.1318	2.15E-05	9.07E-05	0.000502	0.00011
0.001864	0.031365	0.024047	-0.15278	8.83E-05	4.63E-05	0.000556	0.000156
0.004548	0.03895	0.034478	-0.11288	0.000362	1.7E-05	0.000972	4.3E-06
0.005158	0.046364	0.045134	-0.10578	9.02E-05	1.23E-05	0.001489	7.36E-05
0.008903	0.065503	0.074947	-0.05246	4.42E-05	5.47E-08	0.003332	0.001474
-0.00783	0.03192	0.05469	-0.10433	3.73E-05	0.000272	0.000583	0.000329
-0.00357	0.039708	0.044206	-0.07385	0.000126	0.00015	0.00102	5.86E-05
0.015339	0.03218	0.020228	-0.11146	3.68E-05	4.45E-05	0.000595	0.000266
-0.00123	0.044634	0.043631	-0.09841	0.000453	9.81E-05	0.001358	5.01E-05
-0.00779	0.086699	0.024898	-0.00368	3.38E-07	0.000271	0.006229	0.000136
-0.01198	0.086141	0.022316	0.116793	5.07E-05	0.000426	0.006141	0.000203
0.019822	0.08129	0.008971	0.130578	5.72E-06	0.000124	0.005404	0.000761
0.030868	0.090561	-0.00422	0.116696	6.33E-06	0.000493	0.006853	0.001663
0.022223	0.095291	-0.00432	0.109867	2.98E-05	0.000184	0.007659	0.001671
0.015794	0.099953	-0.02464	0.098225	4.61E-05	5.08E-05	0.008496	0.003745
-0.0215	0.049831	-0.04467	0.094323	0.000506	0.00091	0.001768	0.006596
-0.01966	0.055084	-0.03434	0.087827	0.001295	0.000802	0.002238	0.005026
-0.00832	0.066538	-0.02683	0.129628	0.000933	0.000289	0.003453	0.004017
0.018985	0.073956	-0.04157	0.09881	0.000886	0.000106	0.00438	0.006103
0.012219	0.063681	-0.04858	0.10953	0.001615	1.26E-05	0.003125	0.007247
-0.00397	0.048809	-0.06852	0.064554	0.003142	0.00016	0.001684	0.011041
0.008907	0.046992	-0.06776	0.056417	0.001755	5.66E-08	0.001538	0.010882
0.011892	0.03311	-0.08605	-0.0137	0.001778	1.04E-05	0.000642	0.01503
0.008986	0.045061	-0.07276	0.00514	0.001803	9.99E-08	0.00139	0.011948
0.002202	0.041609	-0.09436	0.025611	0.002061	4.18E-05	0.001145	0.017138
0.006795	0.056239	-0.09369	0.053752	0.002999	3.52E-06	0.002349	0.016963
-0.00511	0.067002	-0.07614	0.038007	0.001179	0.00019	0.003508	0.012699
-0.02235	0.082187	-0.0432	0.066349	0.001859	0.000962	0.005537	0.00636
-0.0315	0.082229	-0.04321	0.083385	0.002025	0.001614	0.005543	0.006362
-0.01716	0.038758	-0.02883	0.080418	0.003018	0.000667	0.00096	0.004275
-0.00112	0.052771	-0.00642	0.025066	0.002555	9.58E-05	0.002024	0.001847
-0.01716	0.047818	-0.00949	-0.00424	0.00193	0.000667	0.001603	0.00212
-0.06721	0.020382	-0.02759	-0.01584	0.001251	0.005758	0.000159	0.004114
-0.05866	0.011367	-0.02252	-0.05832	0.000153	0.004533	1.29E-05	0.003489
-0.06792	0.001241	-0.00259	-0.03619	0.000151	0.005867	4.27E-05	0.001532
-0.03746	0.021087	0.009341	-0.03435	3.77E-07	0.002128	0.000177	0.00074
-0.01388	0.025207	0.010247	0.016132	0.000247	0.000509	0.000304	0.000692
-0.00622	0.006299	-0.00073	-0.00289	0.000347	0.000222	2.19E-06	0.00139
-0.00454	-0.01214	0.017011	0.010706	0.000597	0.000174	0.000397	0.000382
0.005481	-0.01673	0.014241	0.039787	0.00128	1.02E-05	0.000601	0.000498
0.017016	0.012715	0.02693	0.076267	0.002628	6.97E-05	2.44E-05	9.26E-05
0.023929	0.007401	0.016268	0.102594	0.002167	0.000233	1.42E-07	0.000411
0.036117	0.009622	0.017233	0.104561	0.002659	0.000753	3.4E-06	0.000373
0.027397	-0.02349	0.006505	0.091107	0.002598	0.000351	0.000978	0.000903
0.037667	-0.04207	0.006918	0.038128	0.001975	0.000841	0.002484	0.000878
0.035421	-0.04744	0.002778	-0.00523	0.00235	0.000716	0.003049	0.001141
0.034417	-0.06	-0.0058	-0.00883	0.003198	0.000663	0.004594	0.001794

0.042601	-0.05297	-0.00787	-0.00119	0.003447	0.001151	0.00369	0.001974
0.065118	-0.05475	-0.00335	-0.01857	0.004306	0.003186	0.00391	0.001592
0.057016	-0.06363	-0.01163	-0.03921	0.00632	0.002337	0.005099	0.002322
0.058377	-0.06213	-0.01983	-0.04247	0.005465	0.002471	0.004888	0.003179
0.06334	-0.06445	-0.01968	-0.03981	0.004423	0.002989	0.005217	0.003162
0.103881	-0.04803	-0.0085	-0.00416	0.00362	0.009065	0.003114	0.00203
0.093635	-0.05347	-0.00243	0.029965	0.001601	0.007219	0.003751	0.00152
0.131038	-0.03708	0.001408	0.013372	0.001572	0.014974	0.002012	0.001235
0.124548	-0.02122	0.02422	0.038504	0.001484	0.013428	0.000841	0.000152
0.093804	-0.03568	0.013236	-0.05875	0.001368	0.007248	0.001888	0.000544
0.0711	-0.03132	0.004691	-0.01994	0.001343	0.003898	0.001529	0.001015
0.067579	-0.01961	-0.00461	-0.03227	0.001397	0.00347	0.00075	0.001695
0.055516	-0.01451	0.00875	-0.05991	0.000981	0.002195	0.000497	0.000773
0.057417	-0.01824	0.016234	-0.06595	0.000981	0.002376	0.000677	0.000413
0.063348	0.007597	0.032469	-0.0936	0.00129	0.00299	3.26E-08	1.67E-05
0.030884	0.010902	0.039692	-0.05296	0.001303	0.000493	9.76E-06	9.86E-06
0.051896	0.023368	0.024151	-0.03888	0.000875	0.001869	0.000243	0.000154
0.036925	0.016744	0.022509	-0.04085	0.001411	0.000798	8.04E-05	0.000197
0.057608	0.028301	0.028702	-0.01721	0.001735	0.002395	0.000421	6.16E-05
0.050266	0.03665	0.027818	-0.02337	0.000902	0.00173	0.000834	7.63E-05
0.062787	0.02553	0.038971	-0.02318	0.00115	0.002929	0.000315	5.85E-06
0.029175	0.014036	0.022914	-0.04539	0.00056	0.00042	3.92E-05	0.000186
0.026197	0.026588	0.016622	-0.04035	0.000323	0.000307	0.000354	0.000397
0.018877	0.056325	0.13559	-0.06114	0.000547	0.000104	0.002357	0.009809
0.000997	0.080598	0.146792	-0.06486	0.000658	5.89E-05	0.005303	0.012153
0.003553	0.090071	0.143946	-0.04889	0.000474	2.62E-05	0.006772	0.011533
0.016303	0.083765	0.133811	-0.10046	0.000763	5.83E-05	0.005774	0.009459
0.003327	0.07868	0.109378	-0.17173	0.000431	2.85E-05	0.005027	0.005304
-0.00661	0.105038	0.116275	-0.15352	0.000414	0.000233	0.00946	0.006356
0.002838	0.111661	0.122969	-0.12455	0.000541	3.4E-05	0.010792	0.007468
-0.01157	0.114485	0.129038	-0.15003	0.00034	0.00041	0.011386	0.008554
-0.00476	0.118471	0.129776	-0.15268	0.000169	0.00018	0.012253	0.008691
0.00412	0.119946	0.120518	-0.16033	0.000442	2.07E-05	0.012582	0.00705
0.006769	0.106716	0.115158	-0.16002	7.97E-05	3.61E-06	0.009789	0.006179
-0.00887	0.084459	0.115163	-0.1058	1.21E-05	0.000308	0.00588	0.00618
0.004859	0.065543	0.119164	-0.14186	3.85E-05	1.45E-05	0.003337	0.006825
-0.01843	0.056699	0.122289	-0.14437	0.000269	0.000734	0.002393	0.007351
-0.00259	0.09252	0.142129	-0.11849	0.000585	0.000127	0.007181	0.011146
-0.0278	0.085223	0.139349	-0.0911	0.001065	0.00133	0.005998	0.010567
-0.01666	0.084736	0.153228	-0.08764	0.00092	0.000641	0.005923	0.013613
-0.02825	0.097218	0.154976	-0.05964	0.000848	0.001363	0.008	0.014024
-0.02209	0.112077	0.172568	-0.04148	0.000515	0.000946	0.010878	0.0185
-0.02416	0.105761	0.198543	-0.0331	0.0005	0.001078	0.009601	0.026241
-0.02769	0.065515	0.082667	-0.01273	0.000843	0.001322	0.003334	0.002127
-0.00616	0.03738	0.071848	-0.00794	0.000405	0.00022	0.000876	0.001246
-0.00463	0.0026	0.049416	-0.07511	0.000111	0.000177	2.68E-05	0.000165
0.013743	0.029287	0.064106	-0.03883	1.96E-05	2.57E-05	0.000463	0.000759
0.00835	0.017337	0.060402	0.024003	2.81E-06	1.02E-07	9.14E-05	0.000569
0.025251	-0.01578	0.019907	-0.00291	5.17E-05	0.000275	0.000555	0.000277
0.019683	-0.02681	0.018487	0.003034	6.09E-05	0.000121	0.001196	0.000326

0.025281	-0.03374	0.025648	0.023285	0.000173	0.000276	0.001724	0.000119
0.029851	-0.04006	0.023476	0.022254	7.34E-05	0.000449	0.002288	0.000171
0.038935	-0.03772	0.028695	0.039285	0.000174	0.000916	0.00207	6.17E-05
0.040717	-0.01152	0.037986	0.082084	1.3E-05	0.001027	0.000372	2.06E-06
0.069955	-0.01313	0.031307	0.078129	8.94E-07	0.003756	0.000437	2.75E-05
0.074385	0.005413	0.023722	0.093719	0.000173	0.004319	5.59E-06	0.000165
0.072513	0.018401	0.041354	0.081963	0.000534	0.004076	0.000113	2.31E-05
0.071727	0.016635	0.036137	0.094437	0.00107	0.003976	7.84E-05	1.72E-07
0.088404	0.036187	0.052329	0.072885	0.001268	0.006358	0.000807	0.000249
0.074234	0.026473	0.052802	0.069921	0.000661	0.004299	0.00035	0.000264
0.069614	0.006964	0.032915	0.034543	0.000726	0.003714	6.61E-07	1.32E-05
0.098907	0.000286	0.01596	0.059186	0.001286	0.008143	5.61E-05	0.000424
0.093092	0.000229	-0.01499	0.030123	0.001112	0.007127	5.7E-05	0.002656
0.09182	-0.02043	-0.01608	0.001514	0.00139	0.006914	0.000795	0.00277
0.066805	-0.01437	-0.00955	-0.01879	0.000868	0.00338	0.000491	0.002125
0.060839	0.009396	0.021156	0.02511	0.000555	0.002722	2.62E-06	0.000237
0.028346	-0.01536	-0.00621	0.008062	4.5E-05	0.000387	0.000536	0.001828
0.026635	0.007049	0.022677	0.04466	0.000447	0.000323	5.31E-07	0.000193
0.010478	0.014209	0.060108	0.038723	0.001543	3.27E-06	4.14E-05	0.000555
0.033656	0.019786	0.057877	0.035325	0.002385	0.000624	0.000144	0.000455
0.038172	0.034828	0.064511	0.010542	0.003071	0.00087	0.000732	0.000782
0.012991	0.029274	0.072397	0.077766	0.003207	1.87E-05	0.000462	0.001285
0.014238	0.028864	0.075159	0.057227	0.002605	3.1E-05	0.000445	0.00149
0.016652	0.009338	0.070521	0.017749	0.001489	6.37E-05	2.44E-06	0.001154
-0.00995	0.020636	0.091473	-0.00907	0.00267	0.000347	0.000165	0.003016
0.005736	0.027595	0.114382	-0.00832	0.002927	8.61E-06	0.000393	0.006058
0.011597	0.02279	0.105458	0.006402	0.002545	8.57E-06	0.000225	0.004748
-0.01378	0.029061	0.093725	0.010744	0.003678	0.000504	0.000453	0.003269
-0.03543	0.01597	0.082772	0.016681	0.003051	0.001944	6.71E-05	0.002136
-0.0014	0.022211	0.086437	0.05557	0.003373	0.000101	0.000208	0.002489
0.024542	0.015085	0.119659	0.066383	0.004279	0.000252	5.34E-05	0.006907
-0.00353	0.011533	0.148287	0.061763	0.00294	0.000149	1.41E-05	0.012485
0.02558	-0.00452	0.150051	0.06168	0.003069	0.000286	0.000151	0.012882
0.042949	0.003161	0.157832	0.062164	0.002859	0.001175	2.13E-05	0.014709
0.046527	0.00532	0.170508	0.095444	0.003785	0.001433	6.04E-06	0.017944
0.060437	-0.01841	0.178351	0.102875	0.002392	0.00268	0.000686	0.020107
0.054166	-0.01344	0.206577	0.105001	0.00155	0.00207	0.00045	0.028909
0.046689	-0.02844	0.199056	0.100196	0.000833	0.001445	0.001312	0.026408
0.072112	-0.02618	0.143488	0.096098	0.000869	0.004025	0.001153	0.011435
0.012421	-0.07517	0.167358	0.088549	0.000586	1.41E-05	0.00688	0.01711
-0.02541	-0.11179	0.122989	0.050957	0.006723	0.001161	0.014297	0.007471
0.026994	-0.06713	0.145977	-0.00728	0.010778	0.000336	0.005611	0.011974
0.012367	-0.08866	0.123086	0.033332	0.013858	1.37E-05	0.009299	0.007488
-0.03188	-0.11633	0.073873	-0.06023	0.014667	0.001644	0.015402	0.001393
-0.02312	-0.1139	0.048108	-0.08497	0.018159	0.00101	0.014806	0.000134
-0.01517	-0.08469	0.060232	-0.06288	0.017718	0.000568	0.00855	0.000561
-0.0114	-0.06963	0.080687	-0.04943	0.01648	0.000403	0.005991	0.001948
0.0346	-0.06774	0.113777	-0.07427	0.019059	0.000672	0.005703	0.005964
0.064459	-0.0356	0.122429	-0.03095	0.018179	0.003112	0.001882	0.007375
0.043922	-0.03437	0.112473	-0.0424	0.016206	0.001243	0.001777	0.005764

0.012804	-0.02953	0.100985	-0.04894		0.022566	1.71E-05	0.001392	0.004152
0.012646	-0.0343	0.084663	-0.05683		0.02631	1.58E-05	0.001771	0.002315
-0.01613	-0.00992	0.089992	0.000809		0.023085	0.000615	0.000313	0.002856
-0.00844	0.025332	0.084868	0.041793		0.016474	0.000293	0.000308	0.002334
0.011569	0.042577	0.082057	0.041619		0.01409	8.4E-06	0.001211	0.002071
-0.01684	0.060246	0.064398	0.004168		0.015539	0.000651	0.002753	0.000775
-0.0226	0.064643	0.050603	-0.00801		0.017837	0.000978	0.003234	0.000197
-0.04236	0.044221	0.028912	-0.06827		0.021516	0.002604	0.001328	5.84E-05
0.00867	0.007778	0.036552	0.014685	Var(X)	0.002228	0.004387	0.004064	0.005067
				Sigma(X)	0.047202	0.066235	0.063748	0.071184

0.130892 0.122005 0.51349 0.130972
7.639904 8.196379 1.947456 7.635236

Goldman	Apple	Amzn	Tesla
0.000842	0.000118	0.000321	-0.00031
0.004387	0.001014	0.000668	0.001294
0.001014	0.004064	0.001219	0.002769
0.000668	0.001219	0.005067	0.001994
0.001294	0.002769	0.001994	0.012571

Průměrnou vynosnost Portfolia?

-0.0005 0.001734 0.001556
0.013034

0.066235 0.063748 0.071184 0.112122

Goldman	Apple	Amzn	Tesla
0.269363	0.039166	0.095581	-0.05839
1	0.240094	0.141578	0.174269
0.240094	1	0.268526	0.387379
0.141578	0.268526	1	0.249808
0.174269	0.387379	0.249808	1

-0.00252 0.2
0.00867 0.2
0.007778 0.2
0.036552 0.2
0.014685 0.2

0.002454
0.004938
0.008257
0.00408
0.00101
0.002314
0.005265
0.0044
0.007066
0.00834
0.001907
0.002542
0.000217
0.001656
0.00044
0.001098
0.004832
0.010641
0.015031
0.043997
0.030786
0.037427
0.02952
0.023627
0.012524
0.014811
0.007977
0.011024
0.010069

0.013869
0.022672
0.020277
0.02299
0.029043
0.031484
0.022794
0.008619
0.010375
0.012363
0.00268
0.003167
0.004081
0.007959
0.00704
0.003583
0.002694
0.002538
0.001304
0.004253
0.002702
8.79E-05
0.000346
0.000143
7.25E-05
7.46E-06
0.001415
0.002985
0.002685
0.001079
0.004073
0.002977
0.002704
0.002328
0.001189
0.003898
0.003991
0.013264
0.010219
0.000873
0.000352
0.000188
0.000245
0.000903
0.001982
0.000583
8.29E-05
0.001084
0.003347
0.00014

0.000194
4.98E-05
0.000747
0.004739
1.64E-05
0.000984
0.000552
0.004288
0.007714
0.000427
0.001859
0.003779
0.006569
0.009655
0.016191
0.013084
0.012032
0.018643
0.013523
0.001416
0.003962
0.012769
0.023882
0.025484
0.039989
0.030472
0.011691
0.006953
0.003322
0.015455
0.010284
0.000288
0.000292
0.000197
0.001075
0.000767
0.000279
0.000664
0.000411
7.8E-05
0.000137
0.003445
0.014544
0.025962
0.02443
0.020317
0.001683
0.000222
0.000596
0.000647

0.002183
4.32E-05
6.8E-06
0.001772
0.007261
0.011306
0.019697
0.030798
0.025636
0.041877
0.033757
0.023334
0.026117
0.047325
0.053777
0.053838
0.048685
0.024964
0.030235
0.028433
0.019596
0.037635
0.024221
0.026299
0.000259
5.39E-05
0.001357
0.000873
0.000746
2.11E-05
0.002834
0.011245
0.005936
0.000103
0.001315
0.001013
0.001312
1.01E-05
0.000492
0.003687
0.005705
0.00849
0.007954
0.00861
0.000101
0.000428
0.0004
7.28E-05
0.00047
0.000447

1.84E-05
0.001508
0.000271
0.005904
0.001564
0.000558
0.001664
0.001586
0.001328
0.000113
0.000688
0.000224
0.000119
0.000373
0.003077
0.002054
0.00468
0.004192
0.005897
0.010635
0.002276
0.010398
0.007141
0.022267
0.021244
0.026558
0.027445
0.020039
0.02938
0.035968
0.044679
0.056693
0.054762
0.045142
0.046402
0.071674
0.056297
0.088238
0.136455
0.124328
0.155339
0.090473
0.106204
0.085922
0.043399
0.036049
0.038957
0.021127
0.013783
0.008628

0.000327
0.000128
0.000118
0.004894
0.000234
0.011245
0.01492
0.047718
0.089643
0.107197
0.116748
0.094054
0.114993
0.106829
0.06743
0.084631
0.102247
0.077622
0.069868
0.041297
0.032457
0.030875
0.027832
0.03318
0.033909
0.032068
0.036542
0.041615
0.065227
0.037704
0.033551
0.029352
0.016048
0.019232
0.012505
0.010494
0.005221
0.00051
0.002531
0.008954
0.008727
0.005598
0.006886
0.007775
0.00366
2.05E-06
0.00129
0.012028
0.036405
0.044172

0.027594
0.037587
0.034796
0.044927
0.043885
0.047683
0.045205
0.041706
0.033622
0.024859
0.024378
0.027923
0.02786
0.022588
0.012168
0.008305
0.008948
0.005066
0.000961
0.000399
0.000137
0.008384
0.011291
0.006157
0.001549
0.001126
0.000283
0.002217
0.000283
0.000182
0.0003
7.6E-07
0.013757
0.015939
0.028174
0.01716
0.013377
0.003399
0.002086
0.000682
0.002072
0.008998
0.010298
0.005054
0.000152
0.000255
0.000397
7.59E-06
1.17E-05
0.001165

0.000106
0.000595
0.009947
0.011893
0.025591
0.016957
0.012008
0.006089
0.007413
0.002102
0.002049
0.001361
0.002605
0.001993
7.33E-05
2.35E-05
5.8E-07
2.09E-07
7.53E-05
0.00031
0.000486
0.001396
1.27E-06
6.14E-06
0.002111
0.001242
0.001657
0.003298
0.006367
0.0066
0.007577
0.006031
0.023486
0.02747
0.015267
0.020143
0.022094
0.025634
0.020653
0.024036
0.020847
0.01501
0.009837
0.010254
0.010058
0.011234
0.008134
0.006049
0.004353
0.003516

0.001518
0.004831
2.02E-06
0.003935
0.000715
0.000332
1.29E-05
1.4E-05
1.99E-06
3.32E-05
0.00012
0.000243
0.003473
0.005861
0.001775
0.00052
0.002585
0.002581
0.00202
0.001004
0.001184
2.8E-06
0.00121
0.00853
0.013762
0.013897
0.007164
0.00211
0.002912
0.001665
0.005356
0.008456
0.003134
0.006619
0.008988
0.013477
0.004699
0.008647
0.01187
0.005108
0.003687
0.002645
0.001165
0.00323
0.000484
0.002293
0.002204
0.001198
0.002865
0.000572

9.12E-06
0.000462
3.17E-05
0.005382
0.004017
0.003238
0.003143
0.005887
0.011856
0.004658
0.003794
0.004459
0.009619
0.017689
0.012233
0.021461
0.026921
0.032466
0.033938
0.024216
0.028879
0.027026
0.026402
0.017579
0.027155
0.025993
0.022025
0.028772
0.020777
0.027673
0.034354
0.026118
0.015694
0.015892
0.01964
0.022482
0.015346
0.007753
0.007785
0.010737
0.00858
0.013561
0.020697
0.020905
0.022809
0.026098
0.02116
0.006998
0.008429
0.008762

0.00324
7.62E-05
8.65E-06
0.001731
0.000297
0.000497
9.45E-05
0.000213
0.00023
0.002596
0.003222
0.006804
0.013051
0.010864
0.009733
0.011847
0.006413
0.00183
0.00284
0.01344
0.007178
0.000377
8.1E-05
0.006129
0.008017
0.00795
0.007969
0.007447
0.024921
0.034429
0.026709
0.033821
0.040655
0.049972
0.027145
0.01806
0.017904
0.016244
0.014858
0.033545
0.024376
0.027953
0.020378
0.018172
0.009369
0.008477
0.011577
0.017887
0.002634
8.34E-05

0.000172
0.000293
3.23E-07
0.000177
0.0014
0.004912
0.002655
0.001031
0.001571
0.000163
0.000384
5.22E-06
5.16E-05
0.002194
0.000211
0.000133
0.000398
0.000512
0.002744
0.005699
0.015697
0.010884
0.015349
0.009642
0.013068
0.007393
0.007297
0.025411
0.028321
0.035798
0.024398
0.025291
0.02794
0.039761
0.038044
0.031032
0.018118
0.004039
0.004935
0.001889
0.002245
2.11E-07
0.008189
0.027897
0.032863
0.018883
0.011535
0.021463
0.031567
0.022552

0.027221
0.01793
0.02238
0.021458
0.028046
0.016273
0.014511
0.004508
0.014165
0.007838
0.015912
0.012791
0.000337
0.010426
0.013431
0.010406
0.00906
0.006979
0.006342
0.00535
0.013212
0.007077
0.008996
0.002487
0.001742
0.000806
9.11E-05
0.000119
0.001526
0.000544
0.002669
0.00472
0.004321
0.000108
0.000358
0.000931
0.00533
0.002588
0.002404
2.09E-06
0.000309
1.58E-05
0.00063
0.003792
0.007728
0.008078
0.00584
0.00055
0.000396
0.000553

0.000252
0.001106
0.002905
0.003267
0.00297
0.000355
0.000233
1.72E-06
0.000567
0.005392
0.001199
0.002205
0.005564
0.006502
0.011725
0.004576
0.00287
0.003084
0.001017
0.001448
0.001434
0.003609
0.003029
0.005749
0.006328
0.004041
0.013257
0.034752
0.028293
0.019386
0.027131
0.028011
0.030631
0.030523
0.014518
0.024506
0.0253
0.017735
0.011191
0.010471
0.005524
0.003155
0.002284
0.000752
0.000512
0.008064
0.002864
8.68E-05
0.00031
0.000136

7.4E-05
5.73E-05
0.000605
0.004543
0.004025
0.006246
0.004526
0.00636
0.003387
0.003051
0.000394
0.00198
0.000238
0.000173
0.00112
0.000109
4.39E-05
0.000899
0.000578
0.000426
1.72E-05
0.003979
0.00181
9.39E-06
0.000564
0.000529
6.86E-05
1.55E-05
3.98E-06
0.001672
0.002673
0.002216
0.002209
0.002254
0.006522
0.007777
0.008157
0.007312
0.006628
0.005456
0.001316
0.000482
0.000348
0.005612
0.009931
0.006016
0.004111
0.007913
0.002082
0.003258

0.004048
0.005114
0.000193
0.000735
0.000725
0.000111
0.000515
0.006881
0.012571
0.112122

0.00731 0.002937

0.013034