

## Supplementary Material accompanying the manuscript

### Black shale deposition during Toarcian super-greenhouse driven by sea level

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*Submitted to Climate of the Past*

#### Numerical dataset

**Table S1: New isotopic ratios, carbonate and Total Organic Carbon contents measured for the present study.**

Depth (m)	$\delta^{13}\text{C}_{\text{carb}}$ (‰VPDB)	$\delta^{18}\text{O}_{\text{carb}}$ (‰VPDB)	%Carbonate	%TOC
313.30	0.88	-5.89	18.47	2.25
313.50	0.52	-5.31		
313.70			20.85	2.25
314.00	0.72	-5.26	19.85	2.70
314.30			20.47	2.85
314.50	0.55	-5.36		
314.70			19.83	2.96
315.00	0.46	-5.82	17.54	2.95
315.30			21.06	2.10
315.50	0.20	-6.39		
315.70			21.73	2.21
316.00	0.49	-6.64	24.32	1.98
316.30			21.93	1.81
316.50	0.39	-6.54		
316.70			19.22	2.42
317.00	0.63	-6.44	21.62	3.24
317.30			20.80	2.86
317.50	0.28	-5.69		
317.70			18.84	2.64
318.00	0.91	-6.31	18.71	2.90
318.30			16.58	2.24
318.50	0.91	-5.95		
318.70			17.01	2.20
319.00	0.82	-6.59	20.18	1.99
319.30			14.36	2.43
319.50	0.75	-6.84		
319.70			16.25	2.41
320.00	1.01	-6.51	19.47	2.41
320.30			17.53	2.52
320.50	0.84	-5.94		

320.70			19.58	2.32
321.00	1.05	-6.21	21.91	2.34
321.30			22.26	3.00
321.50	0.87	-5.98		
321.70			19.67	3.20
322.00	1.20	-7.09	18.36	2.83
322.30	1.05	-6.90	20.10	2.77
322.50	0.52	-5.61		
322.70	0.66	-6.24	17.93	3.97
323.00	1.15	-5.67	18.01	3.20
323.30	0.93	-5.61	13.62	4.00
323.50	0.47	-5.16		
323.70	0.63	-5.65	17.14	3.14
324.00	1.23	-6.31	18.03	3.08
324.30	0.81	-5.39	13.59	3.24
324.50	-0.26	-4.73		
324.70	0.15	-5.27	14.73	3.09
325.00	0.92	-5.60	11.99	2.88
325.30	0.24	-5.40	14.96	3.63
325.50	-0.60	-4.74		
325.70	0.39	-5.47	16.56	4.28
326.00	0.95	-5.46	18.09	2.28
326.30	1.21	-5.20	15.68	2.49
326.50	-0.08	-5.21		
326.70	0.38	-5.36	17.45	2.84
327.00	-0.51	-4.93	15.61	2.27
327.30	1.23	-5.13	13.33	1.85
327.50	1.09	-5.00		
327.70	1.37	-4.86	15.20	2.55
328.00	0.86	-5.67	13.84	2.88
328.30	1.07	-5.82	21.87	3.76
328.50	0.92	-4.56		
328.70	1.21	-4.98	15.07	2.20
329.00	1.08	-5.69	23.80	6.08
329.30	0.86	-5.44	17.40	5.80
329.70	0.99	-5.10	16.10	4.80
330.00	0.73	-4.63	31.76	4.04
330.30	1.12	-5.98	30.41	4.06
330.50	0.34	-4.46		
330.70	0.71	-5.50	25.07	4.16
331.00	1.22	-4.88	27.03	7.02
331.30	1.27	-5.48	34.03	3.65
331.50	0.84	-4.99		
331.70	0.81	-5.27	35.21	4.71
332.00	1.71	-4.91	39.99	1.86
332.30			33.68	6.90
332.50	1.49	-4.72		
332.70			46.03	5.96
333.00	1.29	-5.12	37.20	3.55
333.30			37.43	1.97
333.50	1.41	-5.06		
333.70			48.06	0.86
334.00	1.57	-5.07	45.08	8.54
334.30			48.78	1.69
334.50	1.99	-5.05		
334.70			41.54	1.63
335.00	1.86	-5.06	45.53	0.46
335.30			41.40	2.20
335.50	2.13	-4.74		
335.70			42.20	4.20
336.00	1.96	-4.76	26.70	7.60

336.30			50.11	1.91
336.70			27.99	7.44
337.00	2.12	-4.66	28.08	5.56
337.80			46.00	5.33
338.00	2.52	-4.71	34.55	7.38
338.10			48.00	1.91
338.50	2.52	-4.59	29.46	4.48
339.00	2.10	-4.99	45.66	4.35
339.20			53.00	2.27
339.50	2.43	-4.88	37.21	5.37
339.70				4.97
339.90				4.74
340.20			41.00	6.36
340.50	3.11	-4.85	38.45	3.50
341.00			35.05	7.73
342.00			37.76	3.71
342.10			46.00	4.10
342.50			49.72	4.06
343.00			59.00	
343.10			61.00	
343.30			46.18	4.39
343.60	3.19	-5.23		
343.70	2.62	-5.10	40.90	1.00
344.10	1.87	-4.70	54.70	0.70
345.10			41.00	
345.50			28.00	
347.20			25.00	
348.00	-0.72	-4.44	16.78	
352.20	1.41	-4.34	30.00	0.20
353.20			32.50	0.40
353.70			26.00	
354.20			33.24	0.33
354.50	0.40	-3.57		
354.60			35.00	0.30
354.90				
355.00			46.73	0.53
355.20			45.60	0.58
355.40			30.58	0.56
355.50	0.29	-4.29		
355.60			29.69	0.53
355.70	0.61	-3.83		0.28
355.80			38.58	0.28
356.00	0.09	-3.95		
356.20			50.57	0.44
356.50	0.27	-4.21		
356.60			53.04	0.41
356.70	0.07	-4.39		0.25
357.00	0.19	-2.69	27.19	0.49
357.10	0.24	-2.63	26.00	
357.20	0.25	-3.42	39.27	0.60
357.40	0.31	-3.37	33.50	0.60
357.50	0.43	-2.92		
357.60	0.22	-3.05	32.74	0.61
358.00	0.36	-3.95	63.34	0.44
358.20	-0.21	-4.23	62.92	0.50
358.40	0.06	-3.02	34.00	0.60
358.50	0.05	-2.78		
358.60	0.22	-3.00	20.29	0.69
359.00	0.38	-3.04	56.29	0.47
359.20	0.07	-3.08	16.45	0.76
359.50	0.18	-2.64		

359.60	0.20	-4.40	46.68	0.49
360.00	0.23	-2.89	69.54	0.43
360.20	-0.23	-3.21	25.57	0.72
360.40	0.46	-3.67	26.60	1.00
360.60	0.39	-3.68	28.87	0.91
361.00	0.54	-3.39	23.42	0.91
361.20	0.40	-3.67	21.16	0.81
361.60	0.11	-3.85	32.19	0.84
362.00	0.07	-3.79	35.68	0.78
362.20	0.04	-3.51	18.72	0.83
362.60	0.29	-3.46	19.29	1.00
363.00	0.34	-3.44	13.80	0.90
363.20	0.10	-3.52	11.02	0.75
363.40	0.03	-3.88	18.30	0.90
363.60	0.15	-3.75	21.10	0.83
364.00	0.84	-3.69	19.57	1.06
364.20	-0.22	-5.24	56.63	0.94
364.40	0.26	-3.52	17.30	0.80
364.60	0.59	-4.04	10.90	0.67
364.80			19.90	0.70
365.00	0.40	-5.64	56.51	0.58

**Table S2: Quantification of all clay and quartz minerals (using the peak area from XRD spectra).**

Depth (m)	% All Clay	%Quartz
313.3	64	19
315	73	15
317	71	20
319	74	15
321	74	16
323	68	18
325	71	16
327	67	19
329	61	19
330	47	31
331	42	35
332	49	32
333	49	29
334	45	29
335	43	32
335	49	33
336	40	41
337	54	31
338	49	34
339	36	43
340	44	41
341	35	44
342	29	49
343	40	45
344	44	40
345	39	42
346	46	39
347.4	53	25
348	55	27
348.25	52	28
348.3	48	37

349	51	32
349.5	64	21
350	64	17
350.5	69	20
351	73	17
351.2	69	19
352	60	28
353	62	27
354.2	65	23
354.6	60	27
355	47	35
355.4	55	29
356.2	52	32
356.6	48	37
357.2	64	24
357.6	56	33
358	49	32
359	54	28
359.6	43	42
360	33	49
360.6	64	24
361	57	29
362	58	29
363	70	20
364	63	22
365	51	34

**Table S3: XRF data.**

Note there was a problem with the helium purge of the XRF device for the measurements in the 343 – 341.50 m interval, preventing light elements (Al, Si) to be detected.

Depth (m)	Al (ppm)	Fe (ppm)	Mo (ppm)	Si (ppm)	Ti (ppm)	V (ppm)	Zr (ppm)
313.30	125949	33302	4	191598	4102	275	114
313.40	110415	36945		174019	3850	248	116
313.50	99999	30185		169179	4002	195	111
313.60	90532	30427		159448	3866	290	112
313.70	118629	31054		183996	4092	249	107
313.80	122479	28831		189967	4002	311	110
313.90	119725	28591		183566	3870	266	106
314.00	114767	28144	5	180584	3823	257	104
314.10	106824	26870	7	165201	3534	268	107
314.20	111409	28092		177606	3889	276	107
314.30	105710	26740	4	166828	3678	263	106
314.40	104028	28065	7	172138	3708	306	98
314.50	118975	26464	5	186247	3960	258	105
314.60	119850	28036	8	186669	3931	264	104
314.70	116747	28729	6	181912	4032	242	106
314.80	129304	33103	8	192693	3995	292	108
314.90	116522	28149	6	182735	4060	273	109
315.00	107545	30573	4	168957	3832	270	113
315.10	117193	29600		180748	4195	318	112
315.20	123999	30240		190687	4349	263	109
315.30	127333	29899		189149	4197	319	111
315.40	118891	29493		174746	3929	251	112
315.50	99074	29199		149905	3482	241	101
315.60	101566	25154		154347	3519	249	98
315.70	105571	28588		162135	3720	275	112
315.80	91196	26069		137840	3266	241	105

315.90	114397	26836		178832	4105	298	101
316.00	123002	30347	4	186170	4116	350	111
316.10	123762	30803		192048	4284	279	114
316.20	115513	29640		180863	4158	274	114
316.30	112006	27928		177448	3996	262	114
316.50	122697	27724		186177	4195	279	105
316.60	67978	21038	4	100173	2525	213	99
316.70	106791	28668		173869	4115	232	108
316.80	104216	27245		175062	4111	249	108
316.90	109018	27895	7	169984	3613	249	106
317.00	113556	26931	9	181882	3922	201	96
317.10	112243	28653	14	180636	3815	268	91
317.20	137034	27335	12	210113	3845	299	95
317.30	107911	24850	7	162263	3382	240	101
317.40	116988	26348	7	182624	4055	272	107
317.50	125686	27291	6	192793	4181	280	107
317.60	125045	29471		192085	4120	282	110
317.70	125481	27708		191446	4210	258	111
317.80	115244	28340	7	166951	3772	280	111
317.90	116810	30068	5	180601	4074	224	110
318.00	102484	28099		163445	3804	221	110
318.10	117011	28592		185716	4160	276	117
318.20	118657	30586		187004	4350	322	124
318.30	106083	30809		178655	4526	261	119
318.40	122101	32408		191459	4440	290	119
318.50	121086	30139		193326	4528	267	121
318.60	117136	29968		185323	4303	280	120
318.70	108072	30345		177841	4345	301	118
318.80	113864	27457	4	166081	3901	270	111
318.90	110604	27859		172241	4056	239	114
319.00	133682	31330		202353	4693	381	124
319.10	117339	28277		183360	4361	279	114
319.20	66785	17048		95292	2325	158	87
319.30	110305	28977		181543	4326	281	111
319.40	87873	21690		124760	3109	221	107
319.50	63253	16267	4	85041	2055	142	103
319.60	118210	31223	4	178240	4190	311	120
319.70	107490	29570		161906	3930	265	109
319.80	97952	28579	4	151894	3667	228	113
319.90	104318	30145	5	153599	3448	259	110
320.00	95252	29023		137156	3272	217	110
320.10	114466	29465		179768	4187	276	106
320.20	112468	29228	4	179765	4124	291	115
320.30	110740	29240		176874	3962	286	111
320.40	116934	31701		177551	4030	313	107
320.50	95513	28493		154801	3822	276	106
320.60	93637	26332		146906	3293	236	104
320.70	116678	29755		178959	3983	270	109
320.80	96350	25187		143390	3277	246	92
320.90	97388	22633		142946	3205	242	101
321.00	106939	25335		162146	3529	230	105
321.10	108153	28090		164382	4021	263	104
321.20	123324	27532	7	192164	4100	268	104
321.30	100127	23233	6	152749	3442	218	89
321.40	105223	24855		162082	3492	239	96
321.50	112764	29300	6	175554	3804	254	102
321.60	91215	25985	7	141957	3437	214	102
321.70	109431	29047	9	178117	3983	285	100
321.80	113554	26692	6	174354	3856	219	115
321.90	105577	26898	7	166001	3679	249	104
322.00	126672	27201	5	194448	4487	289	120

322.10	135053	31504	8	199236	4031	289	109
322.20	126821	28873	4	183184	4058	258	110
322.30	116484	29129	5	175356	3798	258	121
322.40	109637	24377	15	159281	3463	247	84
322.50	106672	27457	13	162328	3622	228	102
322.60	102324	26905	15	158912	3347	223	90
322.70	100917	28683	17	159208	3218	251	98
322.80	125653	28920	15	191215	4209	272	110
322.90	130714	32522	23	192748	3813	268	103
323.00	109948	30083	16	169890	3618	239	107
323.10	90477	26775	9	136504	3128	225	117
323.20	123589	31946	19	188524	4130	245	115
323.30	124975	32664	18	189620	4128	268	106
323.40	132468	32043	19	195426	4229	288	108
323.50	123526	29446	13	185662	4081	254	111
323.60	94229	27131	11	140855	3079	251	98
323.70	102538	25637	7	161140	3466	253	112
323.80	100365	31211	28	153853	3413	285	89
323.90	120693	31553	9	186505	4137	278	105
324.00	110283	30661	10	174782	3948	231	120
324.10	111602	30592	15	168368	3700	291	110
324.20	112574	33888	11	172421	3958	221	113
324.30	118188	31292	11	189156	4465	335	114
324.40	98166	32322	7	170166	4159	336	118
324.50	109966	33097	12	174851	3915	281	109
324.60	106517	28691	11	167620	3698	268	117
324.70	98069	31969	14	163236	3863	275	109
324.80	101028	30368	9	167612	3963	294	118
324.90	106907	31944	11	175077	4221	315	120
325.00	106077	35443	16	154378	3504	252	120
325.10	131168	33279	11	196167	4374	360	110
325.20	115816	38039	11	174954	3474	312	118
325.30	104101	33745	12	171351	3893	316	102
325.40	115347	27204	8	174738	3719	288	106
325.50	105272	27255		174078	3874	315	110
325.60	99984	32309	27	157904	3197	266	90
325.70	112820	34642	19	175918	3601	328	95
325.80	103348	38396	21	160788	3553	228	98
325.90	91148	39398	26	145788	4401		89
326.00	109362	32434	6	172254	3792	298	111
326.10	95941	36827	9	159129	3645	315	111
326.20	107775	41598	15	165040	3507	265	95
326.30	137862	35953	5	207705	4289	361	118
326.40	90580	34635		142656	3113	306	101
326.50	127677	29282		196563	4152	331	111
326.60	108199	34583	6	182569	4145	277	105
326.70	123751	33787	5	191641	3957	297	101
326.80	111993	33769	5	178170	3829	243	112
326.90	117873	33866	5	184538	3847	347	109
327.00	116170	33727		184389	3875	290	115
327.10	105042	28531		171382	3919	312	127
327.20	127832	36226		202481	4387	319	123
327.30	119671	34488		197115	4414	319	123
327.40	118857	31606		188270	4247	308	126
327.50	84674	30796		129310	3008	258	112
327.60	116794	34678	5	188900	4226	344	118
327.70	109512	36195		183744	4225	261	110
327.80	104875	34289		171999	4131	316	113
327.90	94366	29091		152345	3622	245	112
328.00	127150	38096	5	197304	4248	343	108
328.10	116919	36207		182208	3970	271	113

328.20	105567	41997	13	168081	3569	229	95
328.30	78452	38163	18	118295	2571	211	91
328.40	95140	40917	15	148794	3126	286	103
328.50	79105	40392	11	128164	2882	268	96
328.60	118239	34889	7	190885	3970	382	110
328.70	122854	33596		191178	4083	325	122
328.80	87246	36250	32	130563	2744	272	83
328.90	73058	35306	40	111734	2400	272	77
329.00	79562	36329	48	127974	2624	304	76
329.10	67259	35205	37	110754	2540	261	94
329.20	79552	40148	35	138073	3342	367	103
329.30	64925	33470	32	104300	2496	294	83
329.40	107427	39016	21	173760	3512	399	104
329.50	69397	31362	34	123423	2848	350	98
329.60	98743	37338	62	163406	3115	325	88
329.70	102131	37574	23	179128	3733	439	107
329.80	97209	39192	59	163019	3324	407	99
329.90	88486	39332	32	145596	2854	375	90
330.00	64504	28872	54	111959	2295	280	81
330.10	96325	33174	53	159915	3144	383	80
330.20	63125	39680	44	106618	2465	280	83
330.30	42756	25967	16	76143	1749	269	58
330.40	61654	30017	32	99311	2186	313	90
330.50	59080	33309	41	105275	2242	332	79
330.60	81020	29906	33	134736	2698	357	94
330.70	56743	28165	34	94267	2084	260	79
330.80	67637	30027	40	108520	2175	244	73
330.90	90150	30301	25	156238	2793	268	80
331.00	59827	30096	46	110510	2201	280	82
331.10	86324	35007	40	149290	2722	351	79
331.20	81259	34230	36	138418	2488	320	80
331.30	61522	28491	29	107386	2078	271	80
331.40	61758	35369	36	106902	1834	261	61
331.50	69415	32343	58	127842	2428	300	75
331.60	63540	34985	62	116074	2256	314	78
331.70	42031	26604	62	77373	1776	248	79
331.80	61662	31501	52	109214	2169	247	71
331.90	59839	30021	50	120751	2503	290	88
332.00	42063	27893	14	80586	2280	232	91
332.10	57877	26447	11	110056	2482	241	86
332.20	35403	22303	8	65517	1582	184	73
332.30	41923	22563	13	77031	1623	156	66
332.40	68591	28323	32	125571	2332	274	70
332.50	58990	29804	33	116428	2301	235	76
332.60	68477	29454	38	130948	2537	306	89
332.70	28325	20679	26	51696	1352	169	77
332.80	71960	22791	18	138040	2584	298	88
332.90	71956	27666	25	131311	2338	236	77
333.00	75402	27463	31	137811	2517	233	81
333.10	45106	23196	30	89167	1975	209	77
333.20	54566	24102	22	109775	1992	187	68
333.30	80918	26563	6	160716	2922	284	93
333.40	65192	28034	18	119972	2311	170	83
333.50	55906	23259	33	103182	1839	260	70
333.60	53845	27711	29	102160	1948	281	71
333.70	31347	22732	45	64870	1516	228	73
333.80	45721	22127	26	89818	1782	179	57
333.90	54361	22929	20	113909	2164	265	67
334.00	64214	28920	30	130490	2529	301	74
334.10	54314	26206	21	107708	2013	256	79
334.20	55113	24300	21	110086	2037	246	59

334.30	40379	23588	27	88630	1805	227	66
334.40	38966	22958	14	79854	1943	215	82
334.50	40676	23841	12	85427	1640	163	71
334.60	47506	24045	12	97183	2026	175	91
334.70	56069	24617	18	112979	2189	234	84
334.80	47482	25455	19	110582	2282	294	85
334.90	54977	28068	29	110423	2169	255	84
335.00	70137	32829	21	142927	2598	264	88
335.10	71646	24819	7	150064	2733	261	86
335.20	73488	21196	5	146998	2562	183	81
335.30	60769	23184	6	125914	2475	198	87
335.40	75302	26584		158697	2893	192	86
335.50	48981	23285	4	99815	2198	155	93
335.60	68369	24373	4	147424	2825	247	97
335.70	72344	23456	7	150521	2559	282	81
335.80	61418	31079	18	135123	2541	275	81
335.90	62828	20531	4	131795	2672	208	109
336.00	66323	24967	5	139328	2832	270	109
336.10	88229	27577		171869	3117	248	109
336.20	90345	27455	4	171229	3110	330	105
336.30	75096	26957	8	161807	2971	275	100
336.40	34315	19376	11	69845	1559	151	84
336.60	75901	26207		162980	3661	289	131
336.70	88003	28171	4	185498	3695	277	117
337.00	74869	25338	11	150438	2851	297	99
337.10	51600	30738	27	126299	2797	270	99
337.20	61784	29669	12	151395	3394	232	134
337.30	60019	32829	22	143254	3012	281	113
337.40	45282	24876	19	107353	2089	251	79
337.70	66847	31378	13	150359	2868	270	102
337.80	66580	28593	21	151721	3049	305	109
337.90	47783	34906	35	113961	2417	303	100
338.00	54067	33242	33	138201	2984	284	91
338.10	57022	26879	20	149432	2928	257	86
338.20	49687	25155	9	118116	2644	186	97
338.30	45872	22411	11	100719	2231	159	89
338.40	61566	25195	9	142041	2881	176	91
338.50	56463	26625	14	151885	3147	232	115
338.60	70211	25396	15	155908	2889	224	99
338.70	83203	27458	9	179557	3452	211	113
338.80	51076	26676	18	110873	2709	208	117
338.90	65974	35145	46	161546	3308	343	117
339.00	59114	33532	57	137497	2767	335	112
339.10	49767	23664	28	114288	2188	219	79
339.20	69491	23248	14	153886	2797	249	94
339.30	57104	21667	9	130666	2639	235	95
339.40	61752	31104	33	136744	2685	281	96
339.50	41406	25390	48	81118	1725	230	84
339.60	56664	30825	41	127401	2512	338	90
339.70	74952	32348	15	154587	3049	278	111
339.80	39059	28458	29	88698	1921	224	75
339.90	53489	19660		109173	2494	154	108
340.10	48072	26137	14	112426	2434	208	101
340.20	48334	23316	12	108071	2394	184	99
340.30	27308	15631		52294	1559	108	107
340.40	50712	19839		109638	2507	151	97
340.50	48712	19766		99992	2330	122	104
340.60	19306	13982		43384	1301	114	82
340.70	34228	17402		78936	1942	116	85
340.80	43523	27114	10	98100	2257	197	83
340.90	80949	23161		179673	3146	235	88

341.00	72302	24541		168058	3216	181	96
341.10	75654	19916		169293	3393	238	109
341.20	53200	19774		122739	2742	189	94
341.30		27299			3361	219	114
341.40		28978			3539	232	123
341.50	77006	27005	15	146089	2024	143	95
341.60		27864	12		2807	186	105
341.70		28009	12		2440	173	91
341.80		24115	9		2623	200	98
341.90		22237	9		2433	195	110
342.00	57844	22937	9	112136	2355	154	81
342.10		24909			2446	195	109
342.20		18918			2709	205	105
342.30		18793			1932	149	106
342.40		18583			2732	154	97
342.60		17637			2302	168	86
342.70		17500			1716	119	89
342.80		13674			1423	122	76
342.90		14179			1029	62	80
343.00	37555	16018		74459	1771	123	65
343.10	48913	16614		102370	1851	121	63
343.20	51468	17998		110237	2266	150	68
343.30	82918	26470		151579	2794	210	86
343.40	80557	23286		151782	2834	168	98
343.50	67387	21051		136680	2875	210	102
343.60	64077	20610		140272	2746	140	96
343.70	76585	23375		154253	3128	194	102
343.80	83442	20554		156643	2882	182	95
343.90	82046	24663		161903	3280	242	115
344.00	107562	23595		201010	4199	226	134
344.10	59770	19854		116834	2230	172	83
344.20	61866	18946		135612	2712	151	85
344.30	81734	16548		153390	3003	200	96
344.40	58128	23268		123203	2562	159	82
344.50	63176	28997		130750	2525	182	106
344.60	85394	19052		158951	3066	242	102
344.70	69759	19306		132935	2580	181	87
344.80	74597	19790		147651	2945	153	93
344.90	71885	23784		147843	3259	199	120
345.00	48956	14852		99275	2143	140	102
345.10	66041	20408		141272	2895	169	97
345.20	65110	25415		141244	3230	168	117
345.30	90344	25613		172068	3900	184	143
345.40	62646	23182		147007	3422	179	125
345.50	75699	24071		153858	3681	215	133
345.60	69489	30019		141638	2951	216	114
345.70	75574	26612		165758	3556	258	125
345.80	54510	22533		118064	2458	163	106
345.90	82995	25111		174446	3515	232	129
346.00	111663	33294	6	207268	4503	298	150
346.10	30841	21361	10	65638	1420	168	53
346.20	81774	30165	13	163972	3756	454	126
346.30	72246	28752	10	163178	3775	446	148
346.40	77527	34133		171509	4156	381	168
346.50	82119	40505	17	162753	4211	406	155
346.60	85171	36232	13	176828	4482	564	163
346.70	95840	41638	43	192353	4473	590	168
346.80	89029	31426	27	188222	4288	603	149
346.90	105261	34331	16	207032	4963	458	201
347.00	98730	28047		200687	4233	343	166
347.10		39633	11		4194	343	170

347.20	114940	33706	12	209798	4596	541	160
347.30		37835	16		2805	403	139
347.40	109764	33697	16	208634	4526	638	170
347.50		43068	8		4096	303	192
347.60	112189	30139	7	208494	4530	487	170
347.70		33528	9		3866	376	171
347.80	114783	38653	8	213471	4538	407	164
347.90		28238			3592	265	166
348.00	109721	30990		208322	4525	329	174
348.10	118628	31576		242866	5465	319	181
348.20	117594	39178		242773	5505	327	206
348.30		32573			4440	297	139
348.40	114557	37366		198309	3980	284	131
348.50	102042	32251		187133	3888	203	132
348.60	76436	28173		147633	3767	264	158
348.70	120200	34933		224480	5278	288	195
348.80	102192	31999		197212	4842	265	191
348.90	41041	18854		73600	2038	171	129
349.00	74223	23809		142063	3328	256	112
349.10	58348	23339		107569	2624	202	106
349.20	84499	37273		147815	3134	246	109
349.30	63303	29261		142874	3397	204	112
349.40	104221	38783		191077	4440	276	139
349.50	109218	33920		202830	4025	278	124
349.60	75742	35296		145489	3333	241	85
349.80	40934	35116		81863	2167	132	71
349.90	85716	46561		152748	3446	232	111
350.00	107819	38230		189134	3932	248	127
350.10	112260	35936		198166	4255	295	135
350.20	98410	33709		197211	4111	251	113
350.30	89305			146228	3078	227	112
350.40	55566	22570		119232	3065	216	97
350.50	72814	21458		130501	3177	238	147
350.60	133318	28787		248185	5311	362	161
350.70	105921	25123		214973	4675	324	145
350.80	110069	28564		220873	4728	327	151
350.90	115061	25552		230603	4817	305	144
351.00	122801	27122		233568	4804	335	153
351.10	117084	35085		217819	4947	335	155
351.20	123127	27553		232673	4832	305	147
351.30	120453	29410		224023	5000	316	164
351.40	78427	26668		144960	3920	241	153
351.50	96726	26412		177215	4092	251	147
351.60	102401	28140		188885	4412	278	155
351.70	114522	28015		214109	4730	249	155
351.80	93311	29785		175972	4043	270	140
351.90	118507	28686		221894	4758	308	148
352.00	106690	26071		198599	4283	265	129
352.10	118612	29627		224038	4981	368	145
352.20	99773	30800		210554	5085	335	154
352.30	91364	26530		177778	3992	311	126
352.40	117071	28080		222329	4757	303	141
352.50	103927	29146		194102	4833	273	158
352.60	105598	33015		212143	4802	335	148
352.70	98856	30507		211388	5302	314	170
352.80	123680	33396		232092	5037	322	154
352.90	104905	27879		214610	4430	335	132
353.00	102131	31891		216759	4777	351	150
353.10	103151	30117		208351	4808	316	151
353.20	93912	24693		185680	3948	276	130
353.30	97507	28247		189744	4348	254	142

353.40	99076	26131		198752	4348	222	123
353.50	70029	26297		145575	3619	224	135
353.60	97394	28934		200356	4757	259	141
353.70	87242	27606		190067	4344	270	172
353.80	87202	26100		192628	4352	222	147
353.90	109372	30739		213209	4898	316	159
354.00	76421	26375		143218	3430	273	130
354.10	59998	22223		117856	2776	176	101
354.20	92057	26536		169216	3858	254	140
354.30	80497	28468		173947	4285	295	137
354.50	100964	26375		197721	4460	249	140
354.60	79855	25185		160554	3600	214	113
354.70	52970	22475		107287	2816	186	102
354.80	62272	21768		125176	2747	186	104
354.90	98629	31718		189643	4468	254	155
355.00	81309	28915		147992	3246	222	111
355.10	47092	23595		89132	2621	159	114
355.20	29492	14889		56565	1317	57	119
355.30	16013	18038		36458	1421	132	127
355.40	46668	22864		86474	2504	165	144
355.50	56341	24316		99493	2534	173	107
355.60	30534	16774		51283	1360	95	80
355.70	68186	24795		127583	3002	208	116
355.80	111377	32600		211374	4436	251	144
355.90	114335	32374		223045	4504	278	158
356.00		30767			4208	224	154
356.10	70753	18765		125590	2252	149	79
356.20	60280	17823		126340	2413	149	93
356.30	43175	19692		81886	2261	186	103
356.40	46184	20813		87971	2305	168	97
356.50	66961	18739		125656	2555	211	108
356.60	99649	27751		192200	4275	241	144
356.70	56848	17635		118000	2158	130	84
356.80	63868	21082		135257	2837	173	103
356.90	70068	20761		129213	2955	195	125
357.00	97803	29992		198796	4564	292	142
357.10	38492	19503		71621	1963	127	130
357.20	14936	14898		33599	1301	76	103
357.30	57714	25444		124064	2653	149	110
357.40	83813	25307		165476	3915	284	124
357.50	73502	26919		159057	3764	238	127
357.60	86118	27409		162615	3672	246	123
357.70	59852	28096		116352	3216	208	129
357.80	75211	26224		150851	3462	216	131
357.90	61584	22285		130432	2646	151	91
358.00	38098	21976		77903	1647	108	66
358.10	41360	17742		83553	1842	95	75
358.20	45405	18135		98356	2128	103	74
358.30	56445	18237		115985	2365	151	86
358.40	69720	19912		135918	2641	181	94
358.50	94822	27104		193803	3841	273	159
358.60	99905	31669		209312	4852	305	192
358.70	95358	28605		191751	4288	265	149
358.80	82700	24774		183671	4152	254	146
358.90	89739	30315		178817	4230	289	141
359.00	47373	17555		96587	2252	124	126
359.10	50397	17765		107624	2335	157	109
359.20	90968	26792		165554	4370	276	163
359.30	113974	27955		203521	5069	324	157
359.40	123988	29120		232411	5117	314	170
359.50	100878	27517		193630	4202	222	154

359.60	57160	18871		123464	2604	119	112
359.70	36985	16752		74705	1889	124	125
359.80	33397	14871		80574	1567		104
359.90	57798	18864		118921	2137	151	118
360.00	38169	15130		79565	1657	92	84
360.10	43014	18640		87520	1945	105	164
360.20	102435	26776		193249	4441	222	162
360.30	105707	31512		202002	4381	214	176
360.40	85163	25445		168302	3940	232	161
360.50	64728	33198		143456	3884	192	145
360.60	104218	26238		193097	4459	257	153
360.70	113704	28149		209275	4709	241	149
360.80	109769	27672		200603	4636	257	151
360.90	81207	27112		142112	3949	243	148
361.00	62330	24002		112336	3234	189	113
361.10	97176	28183		169939	4345	265	149
361.20	102271	28356		174090	4489	249	152
361.30	62803	25072		111669	3201	192	147
361.40	106179	26413		192508	4442	241	140
361.50	55529	24358		110054	3528	235	141
361.60	89839	22000		154456	3571	224	131
361.70	109859	29702		203393	4276	241	138
361.80	101784	25895		186824	4260	211	140
361.90	101997	26100		189216	4247	254	147
362.00	64699	26204		110153	2864	203	112
362.10	50828	22760		91683	2924	195	133
362.20	121164	31398		204593	4770	305	139
362.30	132284	31202		224321	5267	330	164
362.40	94046	27853		172055	4069	262	141
362.50	99568	29895		173935	4259	249	149
362.60	97887	30038		162708	3885	268	126
362.70	65194	23572		114465	3267	211	142
362.90	56555	26510		99440	3392	227	148
363.00	136492	35049		241058	5516	335	151
363.10	152090	34671		258523	5779	381	159
363.20	148534	36875		246097	5450	359	157
363.30	151543	40088		255253	5519	338	150
363.40	117527	31132		193034	4265	251	135
363.60	112710	29488		199734	4636	297	142
363.70	145072	31556		240675	5202	314	147
363.80	123991	32082		220685	4740	341	144
363.90	128450	33108		223868	4950	368	149
364.00	56132	30907		104802	3456	278	138
364.20	63178	19658		116517	2464	181	82
364.30	43140	17285		76100	1951	132	84
364.40	108859	26123		193803	4008	251	131
364.50	125060	33576		213559	4785	295	141
364.60	150294	36256		246106	5378	351	154
364.70	131424	33760		229937	5160	297	147
364.80	122215	32962		226216	4835	262	149
364.90	100522	28921		180948	4213	276	148
365.00	73481	20844		118961	2751	157	94