

Electronic Supplementary Information: Changes in Light Absorption and Composition of Chromophoric
Marine-Dissolved Organic Matter Across a Microbial Bloom

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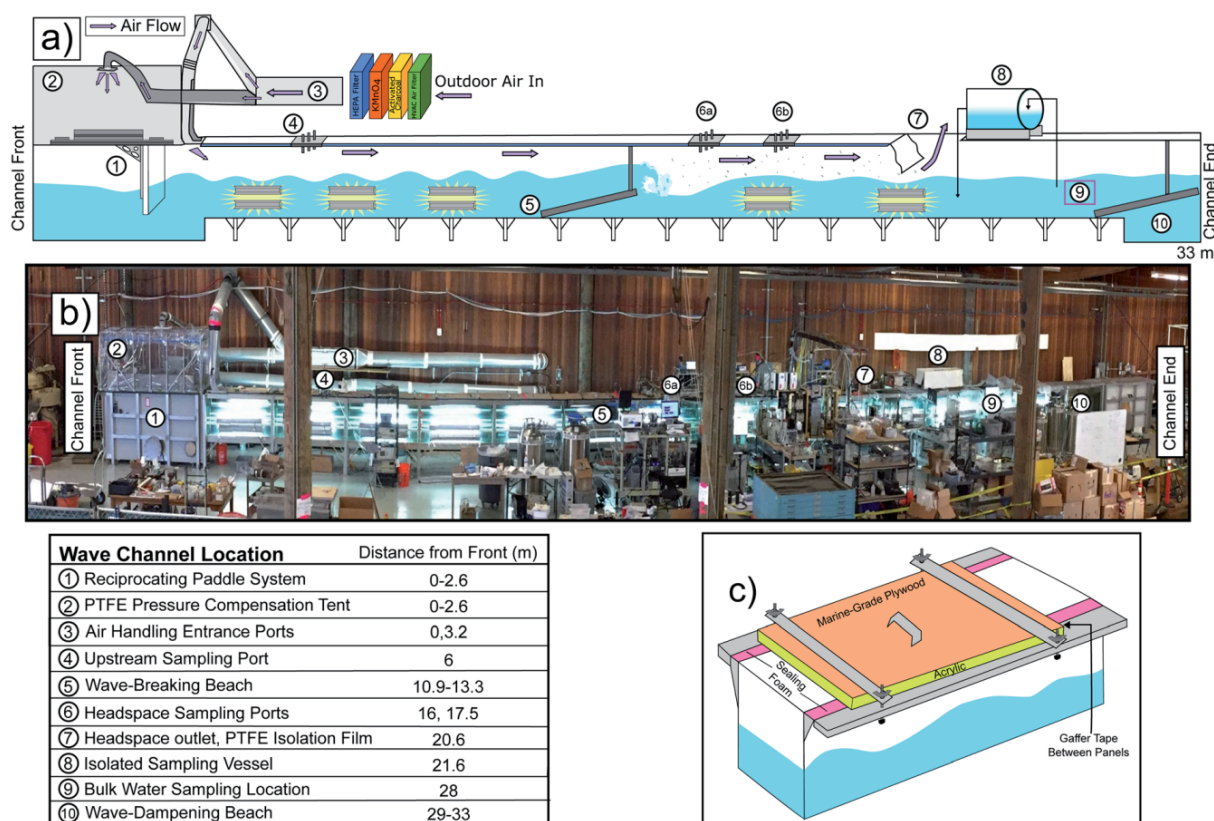
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Supplemental Schemes:



Scheme S1. (a) Schematic of the SIO Ocean-Atmosphere Interaction Facility (OAIF) wave channel with key points labeled by number and described in the table, (b) photograph of the SIO OAIF channel with key points marked, (c) cross sectional view of wave channel lids which were used to seal the channel headspace. Republished with permission from J. S. Sauer, K. J. Mayer, C. Lee, M. R. Alves, S. Amiri, C. J. Bahaveolos, E. B. Franklin, D. R. Crocker, D. Dang, J. Dinasquet, L. A. Garofalo, C. P. Kaluarachchi, D. B. Kilgour, L. E. Mael, B. A. Mitts, D. R. Moon, A. N. Moore, C. K. Morris, C. A. Mullenmeister, C. M. Ni, M. A. Pendergraft, D. Petras, R. M. C. Simpson, S. Smith, P. R. Tumminello, J. L. Walker, P. J. Demott, D. K. Farmer, A. H. Goldstein, V. H. Grassian, J. S. Jaffe, F. Malfatti, T. R. Martz, J. H. Slade, A. V. Tivanski, T. H. Bertram, C. D. Cappa and K. A. Prather, The Sea Spray Chemistry and Particle Evolution study (SeaSCAPE): Overview and experimental methods, *Environ. Sci. Process. Impacts*, 2022, **24**, 290–315, with permission from the Royal Society of Chemistry.

Supplemental Figures:

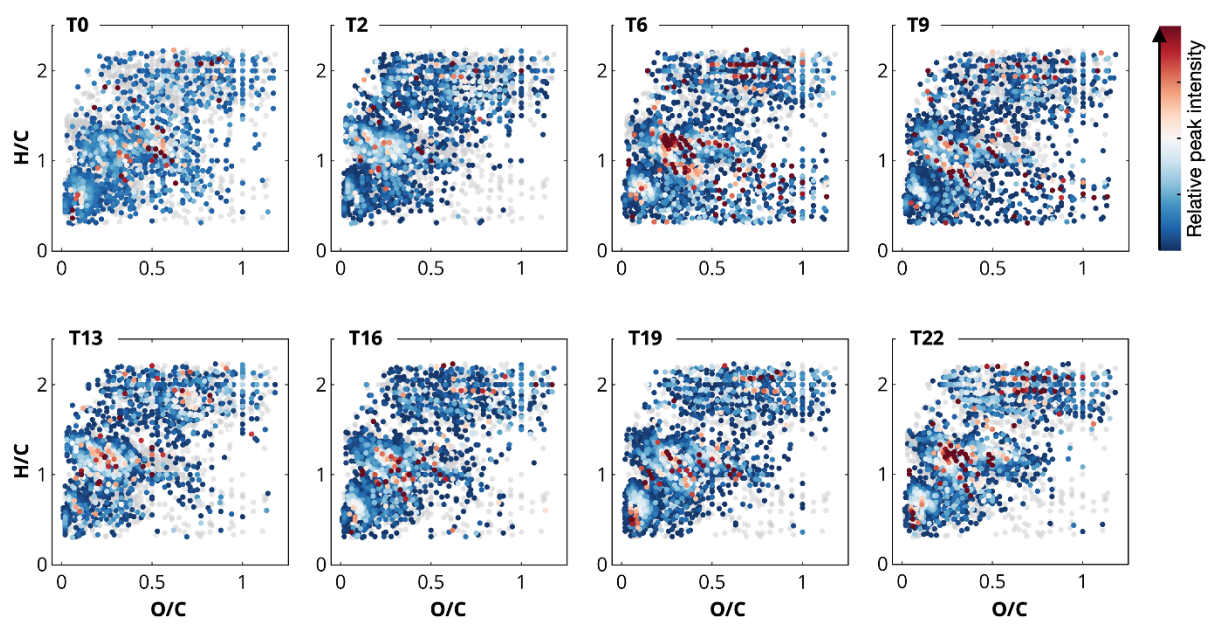


Figure S1. Van Krevelen diagrams of m-DOM samples collected throughout the bloom, colored by their normalized relative peak intensity.

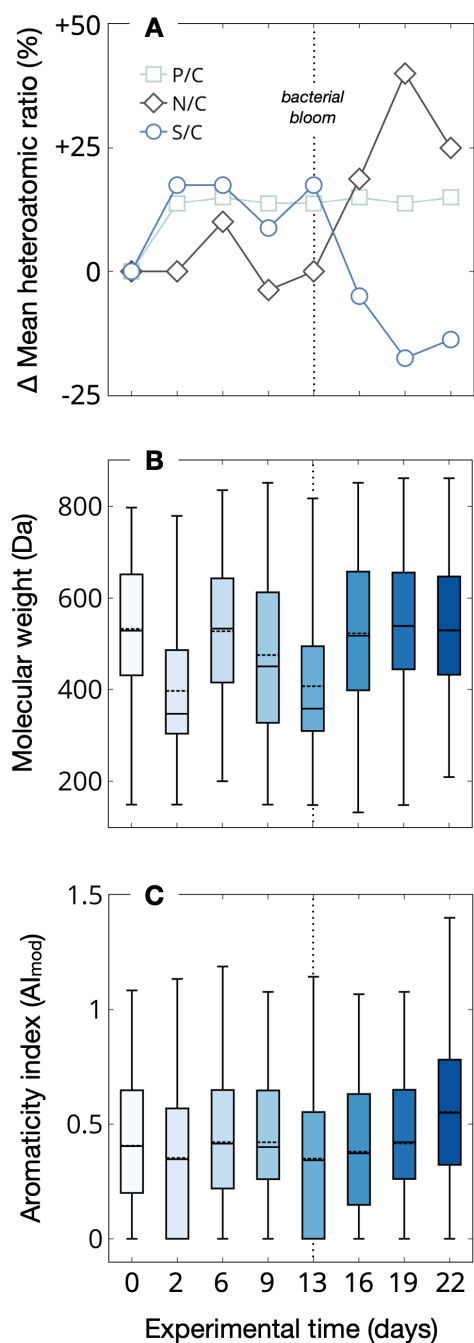


Figure S2. (A) Percent change in mean heteroatomic ratios of nitrogen (N), sulfur (S), and phosphorous (P) atoms per carbon (C) atom. (B) Molecular weight (Da) distributions, and (C) aromaticity index AI_{mod} distributions of all assigned formulae over experimental sampling time. Medians and means in box plots (B) and (C) are denoted by solid and dashed lines, respectively.

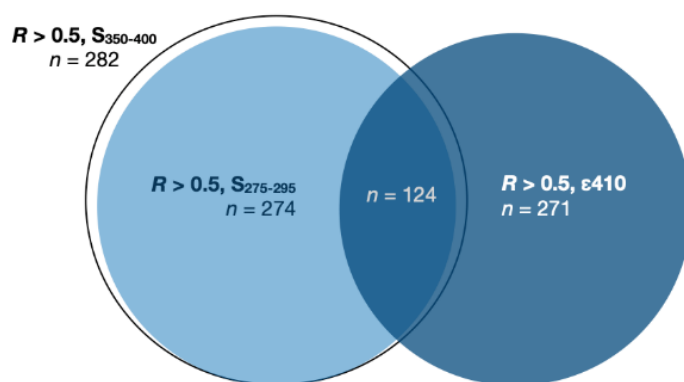


Figure S3. Changes in dissolved organic matter formulae parameters over experimental time.

Supplemental Tables:

Table S1. Summary of data analysis of the T0-22 samples.

	T0	T2	T6	T9	T13	T16	T19	T22
Formula count (n)	1598	2343	2463	2441	1780	2168	2289	2090
<i>Compound class abundance, %</i>								
Polycyclic Aromatics	22.71%	16.76%	22.76%	23.44%	16.60%	20.81%	20.40%	21.87%
Highly Aromatic	15.14%	11.84%	16.47%	14.27%	11.78%	14.47%	16.32%	15.62%
Highly Unsaturated	40.70%	42.43%	38.35%	40.46%	42.30%	40.15%	37.97%	39.71%
Unsaturated Aliphatic-no N	9.51%	9.38%	11.27%	8.45%	11.34%	9.69%	11.73%	11.45%
Unsaturated Aliphatic-N	8.84%	14.84%	9.18%	10.07%	11.78%	12.51%	11.73%	9.96%
Saturated	3.09%	4.75%	1.97%	3.30%	6.19%	2.37%	1.85%	1.39%
<i>Mean population parameters</i>								
H:C	1.11	1.23	1.11	1.11	1.25	1.18	1.18	1.18
O:C	0.39	0.32	0.39	0.35	0.35	0.35	0.36	0.36
DBE	15.6	14.9	15.8	17.2	14.4	15.5	15.0	14.9
MW (Da)	552	601	593	621	583	580	566	567
Al _{mod}	0.42	0.36	0.45	0.45	0.38	0.43	0.42	0.44

Table. S2. List of identified molecular formulae with an $R \geq 0.5$ with one or more datasets

Mol. weight (Da)	O/C	H/C	R; $\epsilon(410\text{ nm})$	R; S350-400	R; S275-295
148.04	0.25	0.88	-0.09	0.9	0.84
149.02	0.38	0.75	-0.74	-0.57	-0.64
162.09	0.1	1.3	0.5	-0.92	-0.96
165.13	0.09	1.64	-0.56	-0.51	-0.96
195.04	0.5	1	-0.77	0.98	0.32
200.07	0.17	0.92	0.01	0.29	0.14
211.11	0.07	1.07	-0.91	1	1
215.14	0.07	1.33	0.02	-0.99	-0.97
221.03	0.27	0.91	-0.81	0.27	-0.34
225.02	0.4	1	-0.56	-1	-1
230.05	0.33	0.75	-0.88	-0.37	-0.25
235.04	0.25	1	-0.61	-0.36	-0.32
241	0.89	0.67	-0.52	0.72	0.54
241.09	0.2	0.93	0.56	0.97	0.97
247.03	0.27	0.82	0.1	0.23	0.82
251.06	0.27	1.18	0.48	-0.34	0.11
253.07	0.27	1.36	0.08	-0.72	-0.5
257.01	0.25	0.58	0.46	0.47	0.61
258.01	0.27	0.55	-0.97	-0.1	0.02
259.03	0.25	0.75	0.61	0.52	0.95
260.02	0.27	0.73	0.64	1	1
263.02	0.36	0.82	0.93	0.97	0.83
265.04	0.36	1	0.98	1	0.98
267.09	0.25	1.42	0.42	-0.87	-0.79
269.01	0.23	0.54	-0.21	0.17	0.31
270.01	0.25	0.5	0.95	0.51	0.7
272.02	0.25	0.67	0.25	0.69	0.73
273.01	0.33	0.58	-0.62	0.44	0.25
274.04	0.25	0.83	0.82	0.68	0.92
275.02	0.33	0.75	0.42	0.86	0.75
277	0.45	0.64	-0.38	0.59	-0.32
277.04	0.33	0.92	0.4	-0.06	-0.13
277.05	0.29	1	0.67	0.74	0.99

279	0.27	0.82	-1	0.99	0.6
279.13	0.42	2	0.67	0.08	0.64
281.01	0.21	0.5	-0.13	0.34	0.38
281.03	0.45	1	-0.24	-1	-1
283.06	0.88	2	-0.94	-0.99	-0.88
284.02	0.23	0.62	0.07	-0.64	-0.3
285.01	0.31	0.54	0.07	0.39	0.4
286	0.33	0.5	0.39	0.48	0.59
286.06	0.73	1.18	-0.21	1	1
287.02	0.31	0.69	0.09	0.65	0.67
288.02	0.33	0.67	-0.89	-1	-1
289.04	0.31	0.85	0.27	0.28	0.06
290.07	0.23	1.08	0.37	-0.45	0.47
292.09	0.23	1.23	0.98	1	1
293.01	0.2	0.47	0.32	0.07	0.21
293.02	0.25	0.92	0.93	-0.77	-0.89
293.11	0.21	1.36	0.56	-0.39	-0.51
295.03	0.2	0.6	0.51	0.04	0.65
295.06	0.78	1.78	-0.56	-0.67	-1
295.09	0.31	1.31	0.81	-1	-1
295.12	0.21	1.5	1	1	1
296.02	0.21	0.57	-0.67	-0.65	-0.55
297.01	0.29	0.5	-0.42	-0.24	-0.24
297.04	1	1.75	-0.49	-0.61	-0.47
298.04	0.21	0.71	0.5	1	1
298.08	0.38	1.31	-0.13	1	0.99
299.02	0.29	0.64	0.29	0.44	0.55
299.06	1	2	-0.75	-0.56	-0.98
299.09	0.21	1.5	-0.09	0.94	0.58
300.02	0.31	0.62	0.48	-0.1	0.26
300.05	0.21	0.86	0.69	0.36	0.77
301	0.38	0.54	-0.55	0.99	0.59
301.98	0.25	0.5	0.68	0.46	0.79
302.03	0.31	0.77	0.72	0.93	0.96
303.02	0.38	0.69	-0.38	-1	1
304.05	0.31	0.92	0.9	0.88	0.82

305.03	0.38	0.85	0.04	0.63	0.45
307.03	0.19	0.56	0.1	0.08	0.41
307.03	0.55	1.45	-0.95	-0.35	-0.46
307.05	0.73	1.45	-0.6	0.1	0.06
309.01	0.27	0.47	-0.38	-0.33	-0.09
309.04	0.19	0.69	0.37	0.88	0.68
309.06	0.38	1.15	0.9	0.5	0.97
310	0.29	0.43	-0.63	-0.94	-0.96
310.04	0.2	0.67	0.96	-1	-1
311.01	0.27	0.53	-0.95	-0.57	-0.44
311.02	1.13	1.5	0.39	-0.45	0.26
311.02	0.27	0.6	-0.14	0.12	-0.07
312.02	0.29	0.57	0.3	0.03	0.63
312.05	0.2	0.8	0.84	0.54	0.93
313	0.36	0.5	0.35	0.13	0.06
313.03	1.13	1.75	-0.46	-0.74	-1
313.07	0.89	2	-0.48	-0.62	-0.95
314.03	0.29	0.71	-0.09	0.35	0.85
314.05	0.55	1.27	-0.51	-0.28	-0.08
314.07	0.2	0.93	0.77	0.82	0.84
315.02	0.36	0.64	0.46	0.44	0.55
315.09	0.45	1.55	0.27	1	1
315.12	0.2	1.67	0.74	-1	-1
316.05	0.29	0.86	0.74	0.49	0.79
317.03	0.36	0.79	0.5	0.66	0.96
317.97	0.33	0.5	0.12	0.54	0.54
318.06	0.29	1	0.66	0.33	0.81
318.1	0.2	1.2	0.8	0.09	0.67
319	0.64	1.18	-0.98	-0.44	-0.94
319.03	0.18	0.53	-0.32	-0.33	-0.48
319.05	0.36	0.93	-0.79	0.17	0.13
319.05	0.67	1.33	0.69	0.64	0.92
319.12	0.19	1.31	0.55	-0.42	0.34
320.08	0.29	1.14	0.89	0.59	0.67
321.01	0.31	0.85	-0.65	-0.51	-0.1
321.04	0.18	0.65	0.65	0.67	0.7

321.1	0.27	1.27	-0.17	0.72	0.55
323.02	0.25	0.56	0.62	0.7	0.69
323.04	0.82	1.45	0.86	0.31	0.37
323.06	0.18	0.76	0.54	1	1
325	0.33	0.47	-0.67	-0.99	-0.97
325.04	0.25	0.69	-0.29	-0.06	-0.64
326.03	0.27	0.67	0.98	1	1
326.07	0.19	0.88	0.98	0.14	0.03
327.02	0.33	0.6	-0.14	0.43	0.26
327.05	0.25	0.81	0.55	0.37	0.26
328.05	0.27	0.8	0.85	0.68	0.66
328.09	0.19	1	0.8	-0.11	0.02
329.03	0.33	0.73	0.5	0.53	0.89
329.08	0.5	1.36	-0.22	0.02	-0.51
330.06	0.27	0.93	0.78	0.45	0.42
331.05	0.62	1.23	-0.7	0.28	0.19
331.08	1	2.22	-0.99	0.27	-0.86
331.12	0.18	1.24	0.91	-0.3	-0.01
332.08	0.27	1.07	0.67	0.06	0.64
332.12	0.19	1.25	-0.62	-1	-1
333.04	0.17	0.61	0.95	1	1
335.04	0.43	0.93	0.88	-1	-1
335.04	0.75	1.33	-0.3	-0.1	-0.05
336.08	0.5	1.07	1	0.54	0.62
336.97	0.45	0.55	-0.93	1	1
337.04	0.24	0.65	-0.37	-0.21	-0.84
339.05	0.24	0.76	0.99	1	1
341.03	0.31	0.69	0.11	0.17	0.02
341.05	0.91	1.64	0.79	0.62	0.6
342.06	0.25	0.88	0.85	0.22	0.07
343.11	0.25	1.56	-0.99	1	-1
344.04	0.33	0.8	-1	-1	-1
344.08	0.25	1	0.5	-0.04	-0.32
344.12	0.18	1.18	-0.67	-0.59	-0.87
345.03	0.4	0.73	-0.95	1	0.78
346.06	0.33	0.93	0.99	1	1

346.1	0.25	1.13	0.95	0.3	0.45
346.13	0.18	1.29	-0.88	-0.97	-0.97
347.04	0.4	0.87	-0.07	-0.08	0.13
347.12	0.24	1.24	-0.47	-0.44	-0.4
347.12	0.35	1.18	0.88	0.41	0.27
348.08	0.33	1.07	0.97	1	1
349.06	0.4	1	0.43	-0.38	0
349.1	0.31	1.19	0.66	0.62	0.52
353.07	0.22	0.83	0.93	-0.92	-0.02
353.2	0.17	1.72	-0.01	-0.88	-0.97
355.01	0.38	0.56	-0.59	-0.18	-0.3
355.05	0.29	0.76	-0.18	-0.37	-0.68
355.08	0.31	1.31	-0.13	1	1
355.15	0.17	1.61	0.69	0.44	0.73
356.08	0.24	0.94	-0.09	-0.15	-0.67
357.03	0.38	0.69	-0.39	0.05	-0.55
357.06	0.29	0.88	0.25	-0.3	-0.24
357.09	0.31	1.44	0.63	0.95	0.96
357.13	0.24	1.59	0.32	0.78	0.87
357.14	0.16	1.21	0.52	0.1	0.56
358.1	0.24	1.06	0.1	-0.51	-0.54
359.04	0.38	0.81	0.09	0.11	-0.12
360.08	0.31	1	-0.18	-0.24	-0.47
361.06	0.38	0.94	0.26	-0.37	-0.84
361.07	0.5	0.88	0.67	0.95	0.56
361.1	0.41	1.06	0.28	0.88	0.48
361.13	0.44	1.63	0.96	0.1	-0.5
362.09	0.31	1.13	0.9	0.85	1
363.01	0.38	0.81	0.88	1	1
363.04	0.47	0.87	0.35	0.4	0.61
363.08	0.38	1.06	0.32	0.13	0.09
363.11	0.29	1.24	0.94	-1	-1
365.05	0.47	1	0.6	-1	-1
367.05	0.28	0.72	-0.78	0.6	-0.11
367.12	0.15	1.05	0.61	0.65	0.27
369.14	0.15	1.15	0.48	1	1

371.04	0.35	0.76	-0.04	-0.63	-0.09
371.09	0.18	1.47	-0.36	-1	-1
371.15	0.15	1.25	0.63	-0.4	-0.43
372.08	0.29	0.94	-0.27	0.4	0.31
372.11	0.22	1.11	0.26	-0.84	-0.68
373.06	0.35	0.88	0.28	-0.11	-0.17
373.13	0.21	1.21	0.9	-0.5	-0.45
374.09	0.29	1.06	-0.46	0.94	0.98
375.06	0.69	1.31	0.91	-0.32	-0.64
375.11	0.28	1.17	-0.47	-0.04	-0.04
377.05	0.44	0.94	0.28	-0.15	-0.23
377.09	0.35	1.12	0.55	0.94	0.91
379.07	0.44	1.06	0.73	-1	-1
384.11	0.21	1.05	0.35	-1	1
385.06	0.33	0.83	-0.75	0.75	0.82
385.12	0.28	1.5	-0.68	0.48	-0.25
386.13	0.21	1.16	0.69	-1	-1
387.04	0.41	0.76	0.45	0.76	1
388.14	0.21	1.26	0.87	-1	-1
389.05	0.41	0.88	0.05	-1	-1
390.08	0.67	1.5	-0.87	-0.99	-0.96
393.04	0.15	0.7	0.25	0.86	0.8
395.06	0.91	1.55	-0.3	0.6	0.51
397.06	0.32	0.79	0.11	-0.2	0.09
397.16	0.2	1.55	-1	-0.85	-1
397.17	0.14	1.23	0.24	0.8	0.74
398.09	0.26	0.95	0.06	0	0.03
399.04	0.39	0.72	-0.2	-1	-1
399.11	0.44	1.33	-0.32	-0.77	-0.66
399.12	0.75	2	-0.82	-0.35	-0.91
399.18	0.14	1.32	-0.84	-0.58	-0.92
401.05	0.39	0.83	-0.84	-0.31	-0.4
401.09	0.53	1.29	-0.97	-0.7	-0.92
403.07	0.39	0.94	0.23	-1	1
405.13	0.42	1.16	-0.78	0.6	-0.11
405.23	0.29	2.06	-0.49	-0.92	-0.97

408.08	0.25	0.8	0.49	1	1
409.17	0.33	2.07	-0.26	0.79	-0.24
410.09	0.25	0.9	0.49	0.2	0.48
411.08	0.3	0.85	-0.07	0.1	-0.16
412.11	0.25	1	0.62	-0.9	-0.97
413.05	0.37	0.79	-0.42	0.51	0.62
413.09	0.5	1.22	-0.9	0.42	-0.12
413.13	0.13	1.17	-0.89	0.74	0.08
415.07	0.37	0.89	0.08	-0.99	-0.98
415.08	0.59	1.24	0.37	0.4	0.19
415.11	0.18	1.14	-0.95	0.98	0.57
415.14	0.24	1.19	0.78	-0.15	-0.38
416.1	0.73	2.18	-0.03	-0.98	-0.91
417.23	0.28	1.94	0.11	-0.83	-0.89
419.06	0.44	0.94	0.13	-1	-1
419.11	0.47	1.05	-0.08	-0.67	-0.77
420.07	0.32	1.05	0.96	-1	-1
420.09	0.69	1.54	-0.09	-0.97	-0.64
421.05	0.29	0.67	-0.7	0.5	-0.24
421.1	0.14	1.24	0.78	0.78	0.91
421.23	0.18	1.59	-0.7	-0.09	-0.41
422.09	0.24	0.86	0.66	0.84	0.74
424.2	0.47	2.13	-0.85	-0.5	-0.92
425.13	0.5	1.93	0.64	1	-1
426.07	0.71	1	0.08	0.52	0.55
426.09	0.3	0.9	0.18	-0.2	-0.67
426.12	0.24	1.05	0.79	0.22	0.82
427.05	0.76	0.94	-0.2	0.47	0.39
427.07	0.35	0.85	0.24	-0.99	-0.97
427.08	0.56	1.17	0.91	1	1
428.06	0.82	1.82	1	-1	1
428.14	0.24	1.14	0.99	1	-1
429.05	0.91	1.73	0.46	-0.95	-0.85
429.07	1.09	1.73	0.51	0.5	0.88
429.09	0.19	1.05	-0.84	0.12	-0.8
429.1	0.56	1.28	0.74	0.7	0.61

429.16	0.23	1.23	0.56	0.6	0.69
430.08	0.82	2	0.81	-0.75	-0.89
430.12	0.67	2.17	0.43	-0.79	-0.62
431.06	0.42	0.89	0.01	-0.77	-0.94
431.18	0.09	1.39	0.5	0.96	1
432.07	0.3	1	-0.83	-1	1
432.1	0.82	2.18	0.71	-0.67	-0.59
432.11	1	2.18	-0.96	0.93	0.93
435.03	0.17	0.39	-0.64	0.43	-0.31
435.08	0.24	0.76	-0.81	0.87	-0.24
435.19	0.04	1.5	0.91	0.08	0.43
436.09	0.58	1	-0.18	1	1
436.21	0.15	2	-0.54	0.22	0.26
436.98	1	1	-0.18	0.42	0.93
437.08	0.61	1	0.78	-0.98	-0.9
439.07	0.33	0.81	0.88	-0.17	0.47
439.14	0.47	1.93	0.66	0.17	0.28
440.08	0.92	1.67	-0.85	0.95	0.2
440.1	0.29	0.95	0.97	0.99	1
440.14	0.23	1.09	-0.96	-0.3	-0.74
441.09	0.33	0.9	-0.94	-0.83	-0.88
441.12	0.61	1.22	0.82	-0.26	0.35
441.19	0.38	2.19	-0.65	-0.79	-0.84
442.08	0.75	1.83	0.86	-0.55	-0.73
443	0.09	0.52	0.17	0.79	0.52
443.06	0.83	1.75	-0.87	0.6	0.7
444.06	0.91	1.82	-0.84	-1	-1
444.1	0.75	2	0.44	-0.23	-0.22
444.13	0.62	2.15	0.92	-0.19	0.04
445.04	1	1.73	0.25	0.05	0.63
445.06	0.1	0.33	-0.99	-0.34	-0.77
445.08	0.4	0.95	-0.88	0.57	0.67
446.08	0.91	2	0.63	-0.78	-0.72
446.17	0.26	1.3	-0.25	-0.59	-0.99
448.09	1.08	1.92	-0.77	0	-0.87
449.25	0.32	2.05	-0.87	-0.09	-0.98

450.01	0.83	1.17	-0.4	-0.43	0.17
450.23	0.14	2	-0.43	-0.12	-0.11
453.05	0.93	1.29	0.99	-1	-1
453.09	0.32	0.86	-0.22	-1	-1
453.16	0.44	1.94	0.57	1	1
453.19	0.35	2.06	0.9	0.22	0.2
453.25	0.39	2.17	-0.77	-0.25	-1
454.06	0.72	0.94	-0.77	-0.52	-0.41
454.08	0.69	1.69	-0.51	0.96	0.48
454.12	0.27	1	0.48	-0.96	-0.74
455.05	0.78	0.89	0.49	0.2	0.37
455.06	0.3	0.52	-0.91	-0.47	-0.34
455.14	0.26	1.09	-0.98	-0.03	-0.71
456.1	0.69	1.85	-0.13	-0.61	-0.38
456.13	0.57	2	0.86	1	-1
456.13	0.27	1.09	-0.04	-0.83	-0.77
457.04	0.57	0.67	0.78	0.36	0.9
457.06	0.1	0.32	-0.53	0.25	0.24
457.15	0.53	2.07	-0.98	-0.55	-0.99
457.15	0.26	1.17	-0.96	-0.58	-0.95
457.19	0.44	2.19	0.99	0.8	0.94
458.08	0.83	1.83	0.83	1	1
458.09	0.27	1.05	0.21	0.62	0.99
458.1	0.36	1	-0.59	0.82	0.41
458.11	0.69	2	0.98	0.19	0.25
459.08	1.08	1.75	-0.71	0.64	0.99
459.08	0.1	0.39	-0.21	1	1
459.24	0.3	1.85	-0.77	-0.26	-1
460.15	0.85	2.15	0.48	0.66	0.31
461.25	0.3	1.95	-0.1	-0.7	-0.95
462.12	0.27	1.23	0.27	0.7	0.17
462.16	0.08	1.38	0.13	1	0.95
463.04	0.22	0.7	0.5	-1	-1
465.12	0.41	1.18	-0.1	0.59	0.59
467.07	0.55	1	-0.67	-1	-1
467.1	0.3	0.91	-0.86	-0.28	-0.78

467.14	0.5	1.81	-0.67	1	1
467.17	0.41	1.94	-0.15	-0.01	0.04
468.1	0.64	1.71	0.75	1	1
468.13	0.26	1.04	0.46	-0.56	-0.42
469.08	0.71	1.64	-0.55	-0.98	-0.77
469.19	0.41	2.06	0.91	0.79	0.71
470.11	0.64	1.86	-0.16	-0.49	-0.22
470.17	0.24	1.2	-0.29	0.77	-0.28
470.2	0.56	2.13	0.95	0.85	0.8
471.06	0.16	0.68	0.94	0.1	0.78
471.08	0.3	0.96	-0.03	-0.95	-0.59
471.1	0.36	0.95	-0.96	-0.8	-0.95
471.13	0.3	1.09	-0.99	0.23	0.35
472.09	0.77	1.85	0.17	-0.96	-0.98
472.11	0.26	1.09	-0.65	1	0.49
472.11	0.92	1.85	0.01	0.5	0.19
472.13	0.64	2	0.82	-1	-1
472.18	0.67	2.13	0.24	0.64	0.28
473.07	0.85	1.77	0.18	-1	-0.99
473.09	0.3	1.04	-0.68	1	0.45
474.12	0.26	1.17	0.78	0.85	0.98
474.13	1.08	1.92	-0.69	0.15	0.27
474.16	0.79	2.14	0.68	0.75	0.42
474.17	0.29	1.25	-0.87	-1	-1
475.04	0.43	0.52	0.44	-1	-1
475.09	0.85	1.92	0.05	-0.91	-0.95
476.19	0.69	2.19	0.91	-0.19	0.54
477.06	0.44	1.38	0.23	0.34	-0.07
477.12	0.17	1.25	0.26	0.82	0.83
477.12	1	2.08	0.13	1	1
479.1	0.22	1.22	-0.37	0.4	0.16
479.14	0.39	1.22	-0.35	0.37	0.37
479.17	0.19	1.12	0.79	0.94	0.96
481.12	0.29	0.96	-0.62	-0.58	-0.56
482.09	0.25	0.96	-0.65	0.58	0.98
483.06	0.93	1.33	-0.13	0.01	0.46

483.1	0.67	1.67	0.85	-1	-1
483.17	0.47	1.94	0.94	0.96	0.92
484.11	0.25	1.04	0.43	0.9	0.95
484.13	0.6	1.87	0.94	0.88	0.95
485.24	0.5	2.17	-0.7	-0.8	-0.96
486.14	0.6	2	0.92	-0.52	-0.42
486.16	0.08	1.27	0.41	1	0.42
486.2	0.63	2.13	-0.46	1	1
487.09	0.79	1.79	-0.17	-0.99	-0.87
487.13	0.67	1.93	0.11	-0.46	-0.41
488.11	0.03	0.56	0.23	-0.84	-0.37
488.14	0.25	1.21	0.95	1	-1
488.15	0.33	1.17	-0.94	0.33	-0.65
488.15	1	1.93	-0.85	-0.25	-0.14
488.16	0.24	0.92	0.33	-0.78	-0.27
488.18	0.73	2.13	0.73	-0.59	-0.9
488.18	0.28	1.28	-0.27	-0.76	-0.83
489.09	0.13	0.44	0.29	-0.46	-0.28
489.11	0.79	1.93	0.08	-0.94	-0.99
489.14	0.67	2.07	0.26	-1	-1
490.14	0.29	0.88	0.63	-1	-1
491.09	0.26	1.13	0.04	-1	-1
491.18	0.12	1.38	-0.08	0.96	0.79
493.06	0.32	1.09	0.64	-0.84	-0.31
493.19	0.19	1.15	0.99	-1	-1
495.1	0.93	2	-0.92	0.89	0.06
495.12	0.35	1.26	0.59	0.48	0.97
495.17	0.44	1.83	0.79	0.68	0.61
495.2	0.37	1.95	0.94	0.99	0.98
495.26	0.4	2.05	0.45	-0.89	-0.87
496.11	0.24	1	-0.47	0.39	0.91
496.11	1.15	2.08	0.13	1	1
497.15	0.53	1.82	-0.34	-0.9	-0.84
497.22	0.37	2.05	0.99	1	1
498.14	0.56	1.88	0.89	-1	-1
498.2	0.59	2	-0.37	0.32	-0.09

499.07	1	1.5	-0.02	0.48	0.7
499.09	0.73	1.67	0.01	-1	-1
499.25	0.47	2.16	-0.67	-0.88	-0.97
500.1	0.93	1.71	-0.29	-1	-1
500.13	0.47	1.88	0.52	-0.99	-0.61
500.14	0.12	1.19	-0.05	0.93	0.39
500.18	0.07	1.3	0.7	0.93	0.71
500.18	0.69	2	0.85	1	1
501.09	0.33	1	-0.69	1	0.44
501.11	0.73	1.8	-0.12	-0.89	-0.97
501.14	0.63	1.94	0.19	-0.28	-0.51
501.18	0.53	2.06	0.92	-1	-1
502.12	0.29	1.13	0.96	-0.07	0.17
502.16	0.24	1.24	1	-1	-1
502.16	0.93	1.93	-0.97	-1	-1
503.09	0.25	1.08	-0.06	-1	-1
503.1	0.2	1.12	-0.18	0.87	0.86
503.1	0.12	0.48	-0.81	-1	-1
503.12	0.73	1.93	0.13	-0.93	-0.98
503.16	0.63	2.06	0.33	-0.99	-1
503.21	0.65	2.18	-0.58	0.97	0.98
504.15	0.81	1.94	0.33	-0.94	-0.77
504.19	0.71	2.06	-0.36	1	0.32
505.1	0.25	1.17	0.05	-0.89	-0.97
505.12	0.2	1.2	-0.53	0.99	0.61
505.14	0.73	2.07	-0.06	-1	-1
505.15	0.15	1.31	-0.45	0.98	0.68
505.19	0.11	1.41	-0.8	-0.99	-0.77
506.17	0.56	1.67	0.7	-0.94	0.08
507.08	0.3	1.13	0.25	-1	-1
507.12	0.25	1.25	-0.15	-1	-1
507.21	0.31	1.38	1	1	1
508.18	0.03	1.21	-0.5	0.27	-0.46
508.18	0.56	1.78	-0.71	-0.94	-0.99
509.11	0.59	1.59	-0.44	0.97	0.69
509.15	0.27	1.04	-0.24	-0.94	-0.89

509.18	1	2.13	-0.12	0.84	0.89
509.18	0.42	1.84	0.94	0.98	1
509.22	0.35	1.95	0.6	1	1
509.26	0.29	2.05	-0.16	0.22	0.09
510.12	1.07	2.07	-0.97	1	0.9
510.2	0.03	1.28	0.3	-0.95	-0.7
510.98	0.67	0.67	-0.99	-0.24	-0.45
511.07	0.71	0.95	0.64	0.59	0.99
511.13	0.59	1.71	-0.27	-0.87	-0.97
511.16	1.13	2.13	-0.99	0.46	0.11
511.16	0.5	1.83	0.67	-0.69	-0.14
511.27	0.29	2.14	0.36	0.52	0.42
512.14	0.23	1.12	0.6	0.91	0.98
512.18	0.07	1.25	-0.12	-0.77	-0.9
512.97	0.88	0.59	-0.99	-0.21	-0.41
513.11	0.69	1.69	-0.18	-0.96	-1
513.14	0.59	1.82	-0.2	-0.76	-0.8
514.11	0.48	0.91	1	1	1
514.12	0.15	1.12	1	-0.62	0.38
514.12	0.28	1.08	-0.26	0.44	0.08
514.15	0.11	1.22	0.52	0.62	0.3
514.19	0.07	1.32	0.12	-0.98	-0.98
514.97	0.76	0.71	-1	-0.03	-0.24
515.08	0.36	0.64	-0.79	0.35	-0.01
515.12	0.69	1.81	0.21	-0.84	-0.57
515.16	0.59	1.94	0.21	-0.94	-0.71
515.25	0.03	1.47	-0.65	-0.42	-0.99
516.13	0.28	1.16	-0.58	0.11	-0.28
517.1	0.24	1.12	-0.13	-0.97	-0.98
517.14	0.69	1.94	0.21	-0.95	-0.99
518.1	0.09	0.53	-0.11	0.24	-0.36
519.12	0.24	1.2	-0.06	-1	-1
519.13	0.19	1.23	0.65	0.17	0.94
519.15	0.69	2.06	0.1	-1	-1
520.15	0.61	1.56	-0.52	-0.95	-0.9
520.18	0.53	1.68	1	-1	-0.75

521.15	0.4	1.2	0.14	0.11	-0.16
521.15	0.19	1.31	-0.57	-1	-1
521.19	0.35	1.31	1	0.48	0.8
521.27	0.36	1.95	-0.33	-0.83	-0.9
522.16	0.61	1.67	0.44	0.97	1
522.2	0.03	1.23	-0.99	-0.81	-1
523.13	0.46	1.17	-1	1	1
523.16	0.26	1.07	0.03	0.55	0.64
523.2	0.4	1.85	0.61	0.98	1
523.27	0.27	2.05	-0.55	-1	-1
524.1	0.27	0.96	-0.26	-0.66	-0.25
524.14	1	2.07	-0.27	-0.11	0
524.18	0.07	1.21	0.36	0.57	0.08
524.18	0.61	1.78	-0.13	-1	-1
525.11	0.65	1.59	0.49	1	1
525.14	0.56	1.72	0.26	-0.62	-0.67
525.18	0.47	1.84	0.98	-1	-1
525.22	0.4	1.95	0.77	1	1
526.12	0.27	1.04	-0.34	0.27	0.38
526.19	0.07	1.28	-0.32	-1	-1
527.12	0.65	1.71	-0.16	-0.99	-0.97
528.13	0.15	1.15	0.41	0.75	0.65
528.17	0.11	1.25	0.97	-0.94	-0.93
528.95	0.82	0.59	-0.87	0.4	0.19
529.1	0.35	0.69	-0.93	0.88	0.02
529.14	0.65	1.82	0.06	-1	-0.95
530.15	0.15	1.22	-0.98	0.33	0.44
531.12	0.23	1.15	0.01	-0.92	-0.97
531.15	0.65	1.94	0.08	-1	-1
531.25	0.21	1.43	-0.69	0.27	-0.15
532.11	0.09	0.57	0.15	-1	-1
533.13	0.23	1.23	-0.04	-1	-1
534.16	0.48	1.16	0.57	-1	-1
535.11	0.28	1.2	-0.13	-1	-1
535.13	0.19	0.78	0.38	-1	-1
535.16	0.38	1.23	-0.28	-0.76	-0.47

535.2	0.33	1.33	0.75	0.49	0.84
535.24	0.32	1.86	-0.68	0.81	0.88
536.18	0.58	1.68	-0.36	0.31	0.42
537.14	0.44	1.2	-0.54	-0.81	-0.99
537.18	0.25	1.11	0.57	-1	-1
538.15	0.1	1.14	0.55	-0.99	-0.59
538.19	0.58	1.79	0.99	0.95	0.98
539.12	0.88	2	0.08	-0.85	-0.85
539.16	0.53	1.74	0.11	-0.92	-0.96
539.19	0.45	1.85	0.98	1	1
540.17	0.21	1.18	0.32	0.99	0.99
541.14	0.61	1.72	-0.04	-1	-1
541.17	1.13	2.13	0.44	-0.17	0
541.28	0.13	1.19	-0.88	0.19	-0.76
542.15	0.14	1.18	-0.68	-0.42	-0.96
542.19	0.1	1.28	0.34	-1	-0.35
543.12	0.33	0.74	-0.89	0.92	0.11
543.12	0.22	1.11	-0.14	-0.96	-1
543.24	0.06	1.42	-0.56	-1	-1
544.12	0.88	1.69	0.09	-1	-1
545.1	0.38	0.69	-0.06	-0.99	-0.92
545.13	0.22	1.19	0.66	-0.48	-0.58
546.13	0.08	0.61	0.93	-1	-1
546.16	0.46	1.12	-1	-0.23	-0.45
547.13	0.22	1.19	1	-0.69	0.28
547.13	0.14	0.57	-0.05	1	1
547.15	0.22	1.26	0.11	-0.98	-0.83
547.17	0.18	1.29	0.63	-1	-0.51
548.18	0.5	2	0.41	-1	-0.28
548.93	0.88	0.69	-0.99	-0.21	-0.42
549.13	0.27	1.23	-0.26	-1	-1
550.16	0.21	1.07	0.89	-0.85	-0.98
550.93	1.13	0.6	-1	-0.22	-0.42
551.07	0.5	0.67	0.22	-1	-1
551.19	0.63	2.11	0.41	0.91	0.91
551.23	0.36	1.86	0.85	0.83	0.93

551.27	0.3	1.96	0.17	1	1
552.21	0.06	1.26	0.22	-0.31	0.41
553.08	0.5	0.75	0.35	-1	-1
553.17	1.06	2	-0.6	0.63	-0.07
553.17	0.5	1.75	0.44	-1	-1
553.21	0.94	2.11	0.59	0.47	0.27
553.21	0.43	1.86	1	1	0.98
553.28	0.12	1.15	-0.92	0.29	-0.69
554.12	0.18	1.07	-0.87	-0.76	-1
555.12	0.21	1.07	-0.19	-0.97	-0.99
555.15	0.28	0.83	-0.97	0.81	-0.1
555.19	0.23	0.93	-0.9	0.91	0.1
555.19	1.06	2.12	0.68	-0.56	-0.19
557.1	0.26	1.04	0.77	-1	-1
557.24	0.19	1.1	0.99	0.23	0.75
557.26	0.06	1.44	0.99	0.87	0.91
557.28	0.16	1.19	-0.25	-0.96	-0.91
559.26	0.19	1.16	0.8	1	1
561.14	0.21	1.21	0.16	0.66	0.98
561.18	0.17	1.31	0.25	-0.9	-0.82
563.16	0.7	1.39	0.62	-1	-1
563.31	0.35	1.88	-0.56	0.24	0.25
564.14	0.56	1.08	0.97	1	1
565.17	0.28	1.07	-0.36	-0.02	-0.39
565.25	0.35	1.87	0.82	1	1
566.15	0.24	1.07	0.72	0.37	0.54
566.19	0.1	1.19	0.82	0.5	0.45
567.15	0.78	2	-0.98	0.33	0.45
567.19	1	2	0.13	0.1	0.14
567.23	0.89	2.11	0.82	1	0.99
567.26	0.15	1.09	-0.98	0.48	-0.52
568.17	0.13	1.17	0.57	-0.58	0
569.13	0.21	1.1	-0.39	-0.99	-0.9
569.17	0.27	0.87	-0.74	0.86	0.23
569.17	1.12	2	0.2	-0.9	-0.95
569.2	1	2.11	0.85	0.18	0.2

569.24	0.19	1.06	0.9	0.86	0.93
569.28	0.15	1.15	0.95	-0.21	-0.95
570.18	0.13	1.23	-0.11	1	-1
571.18	1.12	2.12	0.23	-1	-1
571.22	0.26	2	0.93	1	1
573.27	0.19	1.19	1	1	1
575.12	0.25	1.14	0.98	-0.43	0.33
575.16	0.21	1.24	-0.06	-0.73	-0.96
575.23	0.3	1.33	-0.5	-1	-1
575.25	0.19	1.42	0.79	1	1
576.96	0.78	0.83	-0.71	-0.84	-0.94
577.08	0.17	0.53	-0.54	-0.61	-0.81
577.21	0.34	1.31	-0.24	1	1
578.19	0.19	1.13	0.58	0.62	0.71
579.19	0.27	1.1	-1	-1	-1
579.21	0.05	0.68	-0.73	-0.09	-0.45
579.28	0.42	1.88	0.31	0.36	0.47
581.13	0.55	1.95	-0.81	0.97	0.27
581.21	0.45	1.77	0.99	-1	-1
581.24	0.85	2.1	0.92	1	1
581.28	0.15	1.12	-0.1	0.75	0.68
583.11	0.24	1.03	-0.66	0.01	0.01
583.15	0.2	1.13	-0.13	-0.96	-0.99
583.18	1.06	2	0.44	-0.39	-0.14
583.22	0.95	2.11	0.83	0.05	-0.06
583.26	0.18	1.09	1	-0.24	0.52
583.29	0.15	1.18	0.99	1	1
585.11	0.16	0.49	-0.54	-0.97	-0.88
585.2	1.06	2.11	0.64	-1	-1
585.24	0.25	2	0.99	1	1
585.27	0.18	1.15	0.94	0.92	0.87
587.14	0.43	1.81	-0.22	-1	-1
587.18	0.08	0.73	0.01	-0.53	-0.23
587.2	0.16	1.29	-0.5	-0.35	-0.99
587.29	0.31	1.38	0.89	-0.92	-0.11
587.29	0.18	1.21	0.89	-1	-1

589.14	0.16	0.59	0.91	1	1
589.18	0.2	1.27	0.15	-0.85	-0.88
590.15	0.52	1.07	0.28	-1	-1
591.16	0.36	1.21	-0.79	-0.99	-0.69
591.19	0.13	0.74	-0.22	-1	-1
592.88	0.62	0.38	-0.99	-0.23	-0.44
593.21	0.43	1.7	-0.88	-0.87	-0.9
595.18	1	1.89	-0.86	0.42	0.22
595.22	0.43	1.78	0.85	-1	-1
595.26	0.81	2.1	0.34	-0.56	-0.47
597.11	0.32	0.96	0.31	-1	-1
597.13	0.23	1.07	0.14	-0.99	-0.99
597.16	1.11	1.89	0.09	-1	-1
597.2	1	2	0.63	-0.87	-0.68
597.24	0.21	1.03	-0.27	0.81	0.32
597.27	0.18	1.12	0.23	-0.06	-0.47
599.11	0.28	1.03	1	-1	-1
599.13	0.68	1.12	-0.88	-1	-1
599.25	0.24	2	0.46	-1	-1
599.29	0.18	1.18	1	1	1
600.39	0.05	1.41	-0.35	0.55	0.47
601.12	0.38	0.76	-0.98	-0.99	-1
601.14	0.34	1.1	-0.88	-0.37	-0.25
601.19	0.07	0.76	-1	-1	-0.99
601.21	0.16	1.31	-0.64	-0.18	-0.94
601.23	0.22	1.31	-0.26	-0.21	-0.09
601.25	0.22	1.38	-0.15	0.99	1
601.27	0.18	1.39	-0.81	0.27	-0.34
603.1	0.16	0.55	-0.41	-0.94	-0.98
603.14	0.38	0.83	-0.14	-1	-1
603.16	0.34	1.17	-0.38	1	1
603.19	0.19	1.29	0.17	-0.87	-0.86
603.19	0.13	0.72	0.06	-0.23	-0.56
603.23	0.16	1.38	0.94	0.92	0.92
603.28	0.18	1.45	0.39	1	1
604.17	0.07	0.56	-0.83	-0.33	-0.5

605.12	0.16	0.61	-0.38	-0.86	-0.99
605.17	0.34	1.24	-0.32	1	1
606.96	0.69	0.31	-0.8	0.34	0.08
607.19	0.29	1.06	0.96	-1	-1
607.22	0.86	1.9	-0.91	-0.06	-0.42
609.16	1.05	1.79	-0.93	-0.95	-0.98
609.2	0.95	1.9	-0.31	-0.69	-0.77
609.24	0.86	2	0.45	0.24	-0.36
609.27	0.77	2.09	0.24	-1	-1
609.29	0.06	1.39	0.97	-0.99	-0.62
611.14	0.23	1.1	0.62	1	1
611.18	0.28	0.88	-0.71	-0.53	-0.67
611.22	0.95	2	0.5	-1	-1
611.25	0.18	1.29	-0.85	0.9	0.36
613.16	0.1	0.66	0.33	1	1
613.27	0.18	1.35	-0.7	0.43	-0.17
615.14	0.37	0.8	-0.92	-0.94	-0.97
615.25	0.21	1.33	0.87	1	1
615.26	0.36	2	0.85	0.61	0.76
617.12	0.15	0.59	0.11	-0.73	-0.81
617.15	0.1	0.52	-0.91	0.86	0.98
617.19	0.1	0.76	0.14	-1	-1
619.1	0.18	0.55	0.41	-1	-1
619.13	0.15	0.64	0.13	-1	-1
619.22	0.29	1.35	-0.46	-1	-1
620.99	0.65	0.38	0.12	-0.36	-0.9
621.29	0.05	1.35	-0.04	-0.74	-0.95
621.29	0.58	2.08	0.64	0.68	0.76
622.99	0.08	0.31	-0.78	0.01	-0.86
623.18	1	1.8	-0.7	-1	-1
623.25	0.2	1.03	-0.7	0.17	0.07
625.11	0.34	0.93	-0.48	-0.99	-0.97
625.16	0.1	0.64	-0.21	1	0.69
625.19	0.07	0.72	0.11	1	1
625.19	0.27	0.91	-0.71	-0.74	-0.82
625.29	0.48	1.88	0.93	0.84	0.89

627.17	0.1	0.69	-0.35	-0.91	-0.95
627.28	0.17	1.37	0.68	0.99	1
628.2	0.35	1.16	0.98	-1	-0.68
629.03	0.35	0.61	-0.87	1	1
629.12	0.15	0.58	-0.19	-1	-1
629.23	0.07	0.81	0.73	-0.29	0.08
629.24	0.15	1.35	0.02	-0.78	-0.93
629.26	0.21	1.35	0.73	-1	-1
629.28	0.26	1.35	-0.66	-0.15	-0.93
631.13	0.55	0.97	-0.77	0.98	0.33
631.13	0.15	0.63	0.16	-0.89	-0.96
631.17	0.35	0.9	0.09	-0.59	-0.24
631.22	0.12	0.78	-0.51	1	1
633.11	0.18	0.59	0	-0.63	-0.86
633.2	0.15	0.75	0.83	1	1
633.24	0.34	1.31	-0.45	-1	-1
635.27	0.04	0.8	-0.2	1	1
635.31	0.05	1.37	-0.79	-0.22	-1
636.94	0.54	0.67	-0.7	-1	-1
637.18	0.12	0.62	-0.68	-0.92	-0.98
637.23	0.86	1.91	0.89	-0.42	-0.72
637.27	0.19	1.06	-0.81	0	-0.1
637.29	0.04	0.84	0.52	1	1
638.94	0.95	0.43	-0.57	-1	-1
639.17	1.05	1.8	0.97	1	1
639.21	0.26	0.94	-0.54	-0.58	-0.67
639.28	0.78	2.09	-0.9	-0.92	-0.96
641.15	0.12	0.64	0.39	-0.98	-0.92
641.19	0.09	0.72	0.09	-1	-1
641.3	0.21	2	0.55	1	1
643.13	0.15	0.61	0.34	-0.52	-0.21
643.17	0.34	0.88	-0.91	-0.93	-0.97
643.19	0.21	1.21	-0.16	-0.66	-0.98
643.2	0.09	0.77	0.74	-1	-1
645.11	0.18	0.58	0.89	-1	-1
645.15	0.15	0.66	0.35	-0.82	-0.87

646.12	1.05	1.45	-0.02	-0.99	-0.96
646.18	0.14	1.06	0.58	0.65	1
647.13	0.18	0.63	0.17	-1	-1
647.19	0.23	1.06	-0.27	-0.51	-0.27
647.23	0.07	0.71	-0.99	0.27	0.38
647.25	0.33	1.33	-0.97	-0.01	-0.7
648.18	0.22	0.86	0.81	0.75	0.88
649.19	0.2	0.73	-0.56	-1	-1
649.21	0.48	1.23	0.24	-0.18	0.19
649.3	0.16	1.11	-0.82	1	1
651.21	0.91	1.82	0.83	-0.17	0.44
651.25	0.83	1.91	0.95	-1	-1
651.3	0.04	0.87	-0.33	1	1
653.14	0.64	1.07	0.07	-1	-1
653.23	0.07	0.78	-0.02	0.47	0.49
653.26	0.22	1.06	-0.5	1	1
653.3	0.54	2.12	-0.94	1	1
655.17	0.12	0.67	-0.24	0.64	0.03
655.19	0.14	0.67	-0.87	-1	-1
655.2	0.09	0.75	0.27	-1	-1
655.24	0.07	0.82	0.99	1	1
655.28	0.19	1.33	-0.39	-1	-1
657.26	0.38	1.24	0.12	0.97	0.66
657.29	0.34	1.31	-0.95	0.09	-0.15
659.13	0.17	0.61	-0.32	-0.96	-0.92
659.16	0.52	1.03	-0.07	0.98	0.82
659.22	0.21	1.29	0.14	-0.85	-0.88
659.22	0.59	1.38	0.24	1	1
659.27	0.38	1.29	0.33	1	1
661.14	0.57	1	0.28	0.86	0.97
661.18	0.52	1.1	0.85	-0.19	0.41
661.2	0.17	0.73	-0.34	-1	-1
661.27	0.32	1.35	0.76	0.73	0.64
662.19	0.21	0.89	0.01	0.39	0.22
663.18	0.13	0.62	-0.71	-1	-1
664.19	0.83	1.74	0.99	-0.54	0.67

664.2	0.2	0.76	-0.77	0.34	-0.27
665.23	0.87	1.83	0.93	-1	-1
665.24	0.22	1.22	0.31	0.6	0.7
665.3	0.18	1.11	-0.99	-0.5	-0.59
666.3	0.55	1.69	-0.38	1	0.92
666.96	0.77	0.31	-0.67	-0.45	-0.33
667.21	0.95	1.82	0.66	1	1
667.24	0.25	1	-0.49	0.11	-0.29
669.15	0.14	0.63	0.48	0.23	-0.53
669.18	0.29	1.12	-0.94	0.08	-0.94
669.2	0.14	0.7	-0.76	1	1
669.22	0.09	0.78	0.59	-0.29	-0.4
669.28	0.22	1.33	-0.3	1	1
671.16	0.14	0.67	-0.05	-1	-1
671.2	0.11	0.75	0.37	-1	-1
671.24	0.26	1.26	0.88	1	1
671.31	0.1	1.26	0.05	-1	-1
673.14	0.17	0.64	-0.47	-1	-1
673.18	0.33	1.15	0.25	-0.85	-0.78
673.21	0.45	1.15	-0.99	-0.23	-0.75
675.12	0.2	0.61	0.66	-1	-1
675.23	0.45	1.21	0.99	1	1
675.3	0.15	1.28	-0.16	-0.98	-0.69
677.21	0.11	0.67	-0.97	-0.56	-0.93
679.29	0.63	1.96	-0.04	-0.74	-0.95
681.15	1.1	1.62	-0.5	-0.82	-0.92
681.24	0.25	1.22	-0.92	-1	-1
681.26	0.24	1.03	-0.33	-0.38	-0.49
681.28	0.22	1.3	-0.07	0.92	1
681.31	0.18	1.37	-0.33	-0.89	-0.47
683.16	0.14	0.66	-0.83	-0.7	-0.77
683.2	0.11	0.73	-0.37	-1	-1
683.22	0.29	1.2	-0.35	0.14	-0.04
683.29	0.69	2.04	-0.06	-0.73	-0.96
683.29	0.13	1.37	0.53	0.57	0.66
683.31	0.18	1.37	-0.86	0.18	-0.42

685.14	0.53	0.94	0.02	0.96	0.87
685.18	0.14	0.7	-0.18	-1	-1
685.27	0.25	1.33	0.69	0.73	0.81
685.29	0.13	1.21	-0.86	-0.09	-0.19
687.16	0.53	1	0.91	0.7	0.98
687.19	0.14	0.75	0.16	-0.99	-0.98
687.23	0.44	1.18	0.85	-0.88	-0.65
687.27	0.4	1.26	1	0.66	0.88
687.3	0.15	1.25	-0.48	-0.73	-1
689.3	0.48	1.9	-0.45	0.65	0.47
691.19	0.13	0.62	-0.89	0.12	-0.47
691.22	0.11	0.7	-0.85	-1	-1
691.28	0.18	1.23	-0.91	0.62	-0.12
693.2	0.13	0.67	-0.92	-0.97	-0.82
693.24	0.24	1.19	0.3	0.27	0.42
693.31	0.61	1.96	0.27	-0.91	-0.81
693.31	0.18	1.33	-0.16	-0.1	0.01
695.24	0.09	0.79	0.61	-0.44	-0.55
697.16	0.35	1.06	-0.02	-0.95	-0.59
697.18	1.05	1.73	0.13	-0.76	-0.83
697.21	0.11	0.76	0.55	-1	-1
697.23	0.28	1.22	-0.18	0.41	0.82
697.25	0.09	0.83	0.59	-1	-1
697.32	0.54	2.11	-0.57	-0.56	-0.64
699.16	0.16	0.66	-0.17	-0.9	-0.85
699.27	0.39	1.22	-0.91	-0.93	-0.97
699.29	0.24	1.35	-0.51	-1	-1
699.3	0.35	1.3	-0.03	-1	-1
701.26	0.28	1.33	-0.29	-0.24	-0.13
701.3	0.64	1.79	-0.51	-0.71	-1
701.32	0.15	1.27	-0.41	-0.78	-0.99
703.19	0.52	1.09	0.03	-0.44	-0.81
705.26	0.06	0.8	0.72	-1	-1
705.28	0.21	1.23	0.06	0.11	0.22
705.31	0.18	1.3	-0.77	0.8	0.74
707.31	0.52	1.97	-0.97	1	1

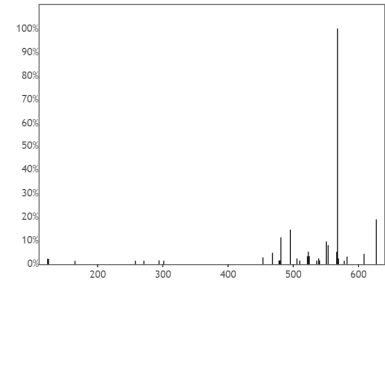
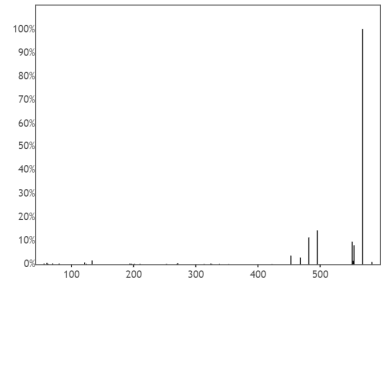
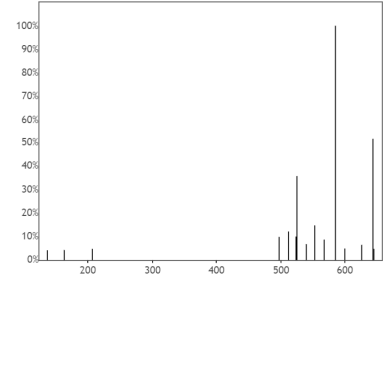
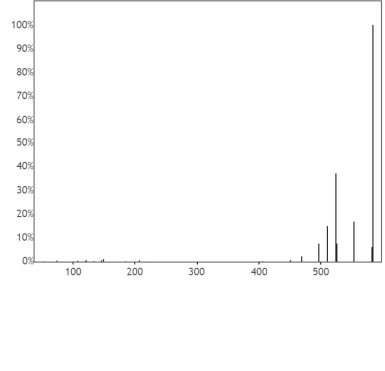
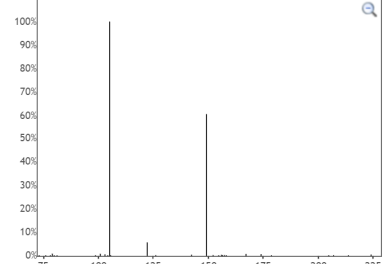
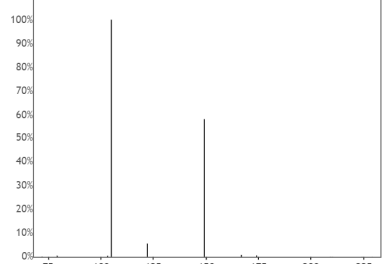
708.22	0.19	1.19	0.54	-1	-1
709.18	1	1.65	0.94	1	1
709.22	0.92	1.75	0.85	0.9	0.46
709.25	0.08	0.81	0.8	1	1
709.31	0.21	1.33	-0.84	-1	-1
711.18	0.02	0.43	-0.29	-0.48	-0.27
711.19	1	1.74	0.63	-0.57	-0.15
711.21	0.31	1.17	-0.98	-1	-1
711.27	0.08	0.85	0.9	1	1
713.17	0.16	0.69	-0.96	-0.97	-0.99
713.21	0.13	0.76	0.62	-0.71	-0.59
713.25	0.42	1.17	-0.74	0.38	-0.22
713.32	0.34	1.32	-0.91	-0.53	-0.86
715.21	0.34	1.2	-0.56	-0.93	-0.65
715.24	0.06	0.87	-0.12	-0.89	-0.99
715.28	0.32	1.3	0.11	-0.36	-0.9
715.3	0.06	0.8	-0.29	0.61	0.52
715.33	0.34	1.37	-0.3	-1	-1
717.22	0.02	0.54	-0.5	-0.96	-0.89
717.28	0.2	1.2	-0.74	0.38	-0.23
717.31	0.38	1.35	-0.58	-1	-1
719.25	0.23	1.18	-0.43	-0.38	-0.27
719.29	0.2	1.25	0.76	0.27	0.63
719.48	0.12	1.74	0.41	0.27	0.64
721.25	0.81	1.77	-0.42	-0.91	-0.91
721.29	0.06	0.86	-0.87	-0.82	-0.95
721.31	0.2	1.3	-0.98	1	1
723.21	0.81	1.73	-0.99	0.72	-0.24
723.23	0.41	1.08	-0.7	0.44	-0.17
723.25	0.26	1.21	-0.57	0.06	0.18
723.27	0.37	1.16	-0.64	1	0.5
725.17	0.15	0.67	-0.97	-0.44	-0.64
725.19	0.09	0.74	-0.36	-0.89	-0.57
725.21	0.13	0.74	-0.53	-0.57	-0.66
725.25	0.41	1.14	-0.68	1	0.44
725.25	0.1	0.81	0.27	-0.05	-0.62

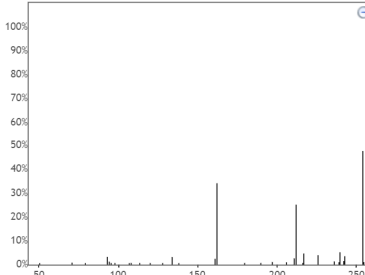
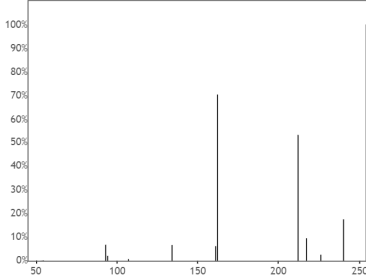
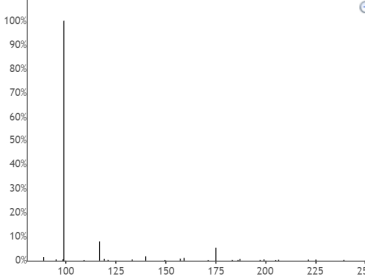
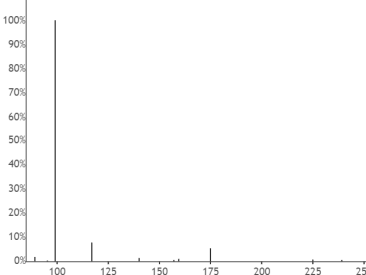
725.28	0.23	1.28	1	1	1
725.3	0.28	1.28	0.07	-0.81	-0.91
727.26	0.41	1.19	0.05	-0.69	-0.76
727.3	0.37	1.26	-0.85	0.21	-0.4
729.22	0.02	0.53	0.83	-0.11	0.81
729.28	0.41	1.24	0.99	1	1
729.31	0.06	0.82	0.6	0.55	0.45
731.29	0.2	1.22	-0.68	-0.63	-0.9
733.23	0.26	1.13	-1	-0.99	-0.97
733.27	0.23	1.2	-0.12	-0.07	0.05
735.3	0.33	1.2	-0.97	0.02	-0.7
735.32	0.12	1.33	-0.83	1	-1
737.19	0.02	0.45	-0.69	-0.12	-0.92
737.21	0.13	0.73	-0.3	1	1
737.25	0.26	1.18	-0.42	0.63	0.99
737.28	0.08	0.86	-0.27	-1	-1
739.21	0.32	1.14	0.62	-1	-1
739.23	0.13	0.77	0.5	-0.34	-0.55
739.28	0.26	1.28	-0.81	1	1
741.2	0.15	0.74	0.43	-1	-1
741.22	0.08	0.81	-0.79	-0.87	-0.99
741.26	0.06	0.88	-0.9	-0.04	0.08
741.28	0.39	1.21	0.82	-1	-1
741.31	0.36	1.28	-0.67	-1	-1
743.28	0.15	0.85	-0.27	1	1
745.25	0.02	0.59	-0.27	-0.32	-0.21
747.18	0.56	1.06	-0.44	-1	-1
747.32	0.19	1.29	-0.13	1	1
751.21	0.02	0.47	-0.73	0.03	-0.86
751.24	0.06	0.82	-0.99	-0.37	-0.68
751.26	0.1	0.82	-0.55	-0.2	-0.54
751.28	0.17	1.27	-0.82	0.2	0.32
751.32	0.63	1.9	0.62	0.9	0.98
753.19	0.03	0.45	-0.44	-0.32	-0.24
753.21	0.96	1.68	0.99	1	1
753.24	0.12	0.8	0.78	1	1

753.26	0.2	1.25	-0.06	-0.01	0.11
753.28	0.38	1.18	-0.88	-0.04	-0.79
757.31	0.38	1.28	-0.25	1	-1
761.26	0.24	1.17	-0.89	-0.56	-0.82
761.3	0.21	1.24	-0.72	1	1
763.21	0.02	0.47	-0.89	0.21	-0.74
763.24	0.06	0.8	-0.97	-0.96	-0.91
763.32	0.61	1.84	-1	-1	1
765.26	0.2	1.22	-0.72	-0.68	-0.59
765.3	0.67	1.83	-0.16	-0.98	-0.69
765.31	0.34	1.22	-0.74	-1	-1
767.22	0.92	1.69	0.99	-1	-1
767.27	0.04	0.75	-0.37	-0.48	-1
767.31	0.21	1.14	-0.25	-0.58	-1
769.25	0.08	0.86	-0.61	-1	-1
769.31	0.38	1.25	-0.83	-0.24	-0.24
771.22	0.34	1.16	1	-1	-1
771.23	0.03	0.54	0.05	-0.43	0.2
771.25	0.12	0.71	-0.97	-0.38	-0.82
771.29	0.21	1.16	-0.98	-0.14	-0.69
773.23	0.49	1.14	0.15	-0.99	-0.99
773.26	0.24	1.14	-0.93	0.02	-0.56
773.3	0.26	1.16	-0.73	-0.31	-1
773.3	0.21	1.21	-0.07	0.77	0.7
777.22	0.02	0.49	-0.95	0.4	-0.45
779.2	0.1	0.74	0.36	-0.56	-0.09
781.25	0.02	0.56	-0.2	0.26	0.33
789.22	0.51	1.14	-0.19	-1	-1
789.33	0.58	1.79	-0.53	0.38	0.28
791.31	0.63	1.78	-0.44	-0.66	-0.47
793.25	0.08	0.83	-0.83	-0.59	-0.86
793.29	0.04	0.76	-0.51	-0.33	-0.98
793.33	0.28	1.26	-0.72	-0.84	-0.98
795.23	0.03	0.52	-0.5	-0.83	-1
797.25	0.03	0.56	-0.98	-0.29	-0.75
797.28	0.02	0.61	0.2	0.99	0.73

801.26	0.13	0.73	-0.58	-1	-0.99
803.24	0.02	0.51	-0.87	-0.16	-0.5
807.31	0.3	1.21	0.91	-0.95	-0.49
817.29	0.64	1.67	0.49	-0.22	-0.2
821.29	0.2	1.23	-0.93	-1	-1
823.23	0.05	0.52	0.85	-1	-1
825.24	0.05	0.55	0.99	0.85	1
833.25	0.03	0.53	-0.58	0.65	-0.03
835.26	0.03	0.56	-0.91	-0.83	-0.93
835.3	0.05	0.77	-0.97	-0.45	-0.94
839.26	0.05	0.57	-0.45	-0.97	-1
851.3	0.03	0.62	0.88	0.75	0.99

Table S3. Fragmentation mass spectra with library matches of the tentatively identified structures using the GNPS molecular networking system. Experimental spectra were collected from representative days between T0 and T22. Universal spectrum identifiers (USI) can be used to access the data on the GNPS community website at <https://gnps.ucsd.edu/>

Tentatively Identified Molecule Name	Experimental MS/MS	Library MS/MS	Universal Spectrum Identifier (USI)
coproporphyrin I			mzspec:MSV00084741:20190808_DOM_2.mzXML:scan:3659
coproporphyrin III			mzspec:MassIVE:TASK-9d2cd83d90d34de49af97280fbc6a25e-spectra/spectra_ms.mgf:scan:28813
N-phenethylcinnamide			mzspec:MSV00084741:20190813_DOM_1.mzXML:scan:1898

<p>1,9-hydroxyisorhodop tilometrin</p>			<p>mzspec:MSV0 00084741:20 190812_DOM _2.mzXML:sc an:3124</p>
<p>5,7-dihydroxyisoflavo ne</p>			<p>mzspec:MSV0 00084741:20 190806_DOM _2.mzXML:sc an:2916</p>