

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 77 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 54.2 N	121 12.1 W	29/07/03	1841 UTC	10 m		1210 - 1933 PST	1210 PST	1935 PST	644.6 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	15.38	33.176	24.484	6.52	114.2	1.4	0.54	3.3	0.15	0.52	0.28	74. A	20.8	20.0	20.4	0.31
7	15.29	33.188	24.513	6.57	114.9	1.2	0.53	3.4	0.15	0.71	0.35	34.	31.7	32.7	32.2	0.32
12	12.06	33.389	25.328	6.83	111.9	3.1	0.86	5.7	0.27	1.76	0.55	16.	32.7	34.5	33.6	0.33
20	10.93	33.410	25.551	5.96	88.9	12.7	1.35	15.0	0.34	1.72	0.70	4.6	13.8	19.1	16.4	0.25
26	10.82	33.407	25.568	5.42	86.4	13.8	1.39	15.5	0.36	1.58	0.68	1.8	6.2	6.8	6.5	0.31
38	10.55	33.524	25.707	4.98	79.0	18.2	1.58	17.7	0.34	0.57	0.43	0.29	0.00	0.04	0.02	0.21

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 42.7 N	123 38.1 W	28/07/03	2015 UTC	23 m		1315 - 1940 PST	1220 PST	1947 PST	131.0 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	17.43	32.645	23.607	5.66	102.9	1.6	0.36	0.0	0.00	0.15	0.04	88. A	3.3	3.1	3.2	0.27
13	17.18	32.639	23.662	5.67	102.6	1.6	0.36	0.0	0.00	0.15	0.04	42.	3.2	3.3	3.2	0.30
30	14.34	32.687	24.331	6.18	105.7	2.2	0.38	0.0	0.00	0.16	0.05	14.	1.7	1.5	1.6	0.25
44	14.47	32.983	24.533	6.03	103.6	2.4	0.35	0.0	0.00	0.22	0.10	5.3	1.0	1.1	1.1	0.14
53	14.28	33.087	24.653	5.96	102.0	2.5	0.34	0.0	0.00	0.27	0.19					
62	13.23	32.982	24.787	5.87	98.3	3.2	0.45	0.9	0.08	0.35	0.30	1.6	0.94	0.96	0.95	0.25
67	12.65	32.996	24.911	5.70	94.3	4.0	0.58	2.7	0.21	0.31	0.31					
78	11.21	32.898	25.104	5.62	90.1	6.0	0.79	6.3	0.12	0.17	0.26					
86	10.92	33.004	25.238	5.45	86.9	7.1	0.87	7.8	0.05	0.14	0.19	0.32	-0.02	0.00	-0.01	0.15

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 29.5 N	122 31.6 W	27/07/03	1912 UTC	16 m		1223 - 1942 PST	1217 PST	1943 PST	496.4 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
3	16.16	32.958	24.142	6.02	107.0	3.0	0.57	2.7	0.11	0.41	0.11	75. A	15.2	14.0	14.6	0.29
11	15.01	33.001	24.430	6.10	106.0	2.9	0.60	3.1	0.16	0.41	0.17	35.	17.9	18.0	18.0	0.29
21	13.73	33.014	24.709	6.30	106.6	4.2	0.71	4.8	0.17	0.61	0.32	13.	15.0	15.7	15.4	0.47
32	12.99	33.110	24.932	5.93	98.9	3.1	0.92	6.5	0.20	0.35	0.18	4.6	3.8	3.7	3.8	0.16
39	12.39	33.113	25.051	5.77	95.0	4.5	0.98	7.6	0.28	0.55	0.36					
45	11.88	33.145	25.173	5.62	91.6	6.8	1.10	9.3	0.26	0.32	0.25	1.3	1.5	1.9	1.7	0.29
53	11.70	33.231	25.273	5.60	90.9	8.5	1.19	10.7	0.26	0.25	0.24					
61	11.01	33.324	25.471	5.05	80.8	12.0	1.38	13.6	0.30	0.09	0.15	0.29	-0.01	0.07	0.03	0.17

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 82 47

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 17.2 N	120 1.3 W	26/07/03	1831 UTC	5 m		1208 - 1942 PST	1207 PST	1940 PST	2152.1 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	19.41	33.477	23.754	6.35	120.5	1.0	0.08	0.0	0.01	1.83	0.55	54. A	167.3	201.6	184.5	1.4
3	19.26	33.474	23.791	6.39	120.9	1.1	0.09	0.0	0.02	1.91	0.58	40.	238.6	184.3	211.5	5.6
7	18.88	33.469	23.883	6.39	120.0	1.1	0.11	-0.2	0.22	2.54	0.95	12.	198.6	120.4	159.5	2.1
11	18.47	33.472	23.988	6.47	120.6	1.0	0.13	-0.3	0.34	2.74	0.86	3.4	90.4	90.0	90.2	2.2
15	17.15	33.444	24.286	6.69	121.6	1.0	0.19	-0.4	0.35	4.48	1.53	1.00	19.9	61.0	40.5	2.6
19	15.91	33.467	24.590	6.16	109.2	2.4	0.38	0.1	0.05	2.09	1.01	0.29	1.3	0.09	0.67	1.1

A) INCUBATION LIGHT INTENSITIES WERE 94, 39, 13, 5.0, 1.5, 0.29 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 14.1 N	121 25.8 W	25/07/03	1835 UTC	20 m		1155 - 1935 PST	1210 PST	1934 PST	562.9 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	17.14	32.968	23.923	5.69	103.1	1.5	0.38	0.0	0.00	0.23	0.06	86. A	6.6	6.8	6.7	0.16
12	17.00	32.959	23.950	5.71	103.1	1.5	0.38	0.0	0.00	0.25	0.07	40.	8.6	9.3	8.9	0.13
20	15.23	32.902	24.306	6.13	106.9	1.4	0.45	0.8	0.08	0.67	0.21					
28	13.74	32.817	24.555	6.22	105.1	1.4	0.52	1.6	0.18	0.90	0.31	12.	20.4	21.3	20.8	0.19
38	13.32	32.933	24.730	5.97	100.1	2.3	0.70	3.8	0.30	0.72	0.33	5.4	8.2	8.9	8.6	0.20
47	12.73	33.006	24.903	5.78	95.8	5.1	0.86	6.1	0.31	0.40	0.28					
56	12.14	33.028	25.033	5.59	91.5	6.4	1.01	8.1	0.40	0.20	0.16	1.4	0.48	0.54	0.51	0.22
66	12.61	33.361	25.202	5.48	90.8	6.8	1.02	6.6	0.30	0.08	0.14					
75	11.18	33.260	25.391	5.10	81.9	11.3	1.31	12.6	0.52	0.11	0.15	0.32	-0.02	0.03	0.01	0.15

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 9.3 N	120 1.0 W	23/07/03	1810 UTC	7 m		1215 - 1934 PST	1206 PST	1930 PST	738.9 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	16.84	33.511	24.410	6.02	108.8	0.9	0.31	0.1	0.02	2.09	0.44	64. A	68.5	67.3	67.9	0.51
6	16.74	33.510	24.433	5.99	108.0	0.8	0.32	0.0	0.02	2.12	0.48	27.	60.4	60.4	60.4	0.55
9	16.43	33.524	24.516	5.96	106.8	0.8	0.37	0.4	0.03	2.15	0.64	14.	35.0	35.4	35.2	0.41
15	16.09	33.538	24.604	5.83	103.8	0.9	0.42	1.0	0.05	2.05	0.70	3.7	14.9	16.4	15.7	0.27
19	14.48	33.587	24.996	5.34	92.1	2.7	0.79	4.8	0.13	2.25	1.13	1.6	2.2	2.3	2.3	0.25
27	12.16	33.628	25.495	4.41	72.5	11.5	1.32	12.6	0.23	0.91	0.75	0.27	1.2	1.4	1.3	0.18

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 29.0 N	117 46.1 W	22/07/03	1859 UTC	7 m		1205 - 1937 PST	1200 PST	1931 PST	351.5 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	20.50	33.505	23.491	6.01	116.4	1.1	0.17	0.0	0.00	1.03	0.38	64. A	48.3	52.5	50.4	0.37
4	19.35	33.476	23.769	6.13	116.2	1.2	0.24	0.0	0.00	0.52	0.13	42.	21.0	20.6	20.8	0.34
10	15.74	33.286	24.489	6.65	117.4	1.3	0.31	0.0	0.00	0.65	0.19	11.	12.7	12.5	12.6	0.39
13	14.46	33.299	24.778	6.74	116.0	1.4	0.37	0.0	0.00	0.89	0.32	5.8	6.5	7.2	6.8	0.39
19	13.48	33.276	24.963	6.26	105.6	2.1	0.55	2.1	0.11	1.37	0.58	1.6	4.0	4.5	4.2	0.29
27	12.58	33.317	25.173	5.30	87.7	5.5	0.94	7.4	0.48	1.12	0.57	0.27	0.08	0.12	0.10	0.13

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 25.6 N	119 58.2 W	21/07/03	1632 UTC	9 m		1210 - 1930 PST	1205 PST	1930 PST	636.8 mg C/m ²							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m ³)			
m	DEG C		THETA	mL/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	16.07	33.331	24.449	6.11	108.6	1.1	0.45	0.9	0.06	0.93	0.28	71. A	15.8	30.1	23.0	0.29
5	16.06	33.332	24.452	6.14	109.1	1.1	0.45	0.9	0.06	0.93	0.29	43.	38.8	38.8	38.8	0.27
12	14.47	33.247	24.735	6.15	105.8	1.6	0.57	2.1	0.15	1.45	0.48	13.	32.9	33.4	33.2	0.26
18	14.19	33.303	24.838	5.97	102.2	1.9	0.68	3.1	0.19	1.68	0.63	4.6	15.6	16.1	15.8	0.25
25	13.57	33.282	24.949	5.65	95.5	3.1	0.84	4.7	0.34	1.06	0.50	1.4	4.9	5.9	5.4	0.18
34	13.28	33.373	25.078	5.46	91.7	5.1	1.01	6.1	0.36	0.67	0.42	0.30	0.15	0.12	0.13	0.12

A) INCUBATION LIGHT INTENSITIES WERE 94, 39, 13, 5.0, 1.5, 0.29 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
31 6.0 N	122 40.1 W	20/07/03	1701 UTC	21 m		1215 - 1933 PST	1215 PST	1936 PST	103.3 mg C/m2							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
3	18.30	33.005	23.673	5.50	101.9	1.6	0.36	0.3	0.00	0.10	0.03	80. A	1.8	1.6	1.7	0.10
13	18.28	33.003	23.676	5.50	101.9	1.5	0.37	0.2	0.00	0.10	0.03	39.	2.8	2.7	2.8	0.12
28	18.27	33.001	23.678	5.49	101.7	1.9	0.37	0.2	0.00	0.11	0.03	13.	2.1	2.1	2.1	0.11
40	18.23	32.990	23.680	5.51	101.9	1.8	0.36	0.3	0.00	0.13	0.03	5.4	0.87	0.86	0.87	0.09
57	16.82	33.070	24.079	5.77	103.9	1.9	0.37	0.3	0.00	0.21	0.07	1.6	0.64	0.69	0.67	0.08
68	16.26	33.085	24.219	5.78	103.0	2.0	0.37	0.2	0.00	0.21	0.09					
80	15.13	33.012	24.415	5.87	102.2	1.9	0.40	0.3	0.00	0.26	0.15	0.29	0.03	0.03	0.03	0.05

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 57.3 N	117 18.4 W	17/07/03	1825 UTC	4 m		1140 - 1935 PST	1155 PST	1926 PST	598.6 mg C/m2							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	22.10	33.588	23.119	6.76	134.8	0.8	0.05	0.0	0.01	4.06	0.93	46. A	98.8	101.5	100.2	1.5
4	21.85	33.579	23.182	6.77	134.4	0.6	0.04	0.0	0.01	3.78	0.90	22.	101.3	101.3	101.3	1.1
5	21.79	33.579	23.198	6.80	134.9	0.6	0.04	0.0	0.01	4.00 B	1.06 B	15.	54.4	54.8	54.6	1.1
8	19.13	33.392	23.761	5.95	112.3	1.2	0.21	0.0	0.00	0.85	0.27	4.6	7.0	7.6	7.3	0.56
12	16.76	33.374	24.324	6.33	114.1	1.0	0.27	0.0	0.00	0.74	0.25	1.00	3.0	3.4	3.2	0.38
15	15.34	33.393	24.660	6.60	115.7	1.1	0.28	0.0	0.00	0.78	0.31	0.32	0.06	0.04	0.05	0.35

B) SECOND FLUOROMETER READING NOT RECORDED, CHLOROPHYLL AND PHAEOPIGMENT CALCULATED WITH ASSUMED ACID RATIO INTERPOLATED FROM ADJACENT LEVELS.

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 10.1 N	118 54.3 W	18/07/03	1720 UTC	11 m		1215 - 1933 PST	1210 PST	1933 PST	756.9 mg C/m2							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
1	18.57	33.558	24.028	5.72	106.9	0.8	0.26	0.0	0.00	0.35	0.08	87. A	13.7	14.4	14.0	0.27
6	18.06	33.556	24.153	5.79	107.1	0.8	0.26	0.0	0.00	0.45	0.13	43.	14.6	14.9	14.7	0.37
15	12.80	33.531	25.295	5.47	91.1	4.0	0.90	8.8	0.39	3.58	1.20	12.	44.1	47.0	45.6	0.71
22	11.65	33.539	25.521	4.90	79.6	8.5	1.25	13.6	0.48	3.65	1.18	4.6	22.8	25.5	24.2	0.43
30	11.27	33.530	25.583	4.28	69.0	13.5	1.47	16.9	0.26	2.37	0.95	1.5	6.1	6.2	6.1	0.24
41	10.67	33.598	25.744	3.68	58.6	18.7	1.69	20.4	0.04	0.39	0.24	0.33	0.21	0.06	0.13	0.13

RV NEW HORIZON

CALCOFI CRUISE 0307

STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
30 51.3 N	121 36.0 W	19/07/03	1858 UTC	19 m		1235 - 1928 PST	1210 PST	1939 PST	141.7 mg C/m2							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m3)			
m	DEG C		THETA	ml/L	PCT	uM/L	uM/L	uM/L	uM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
3	17.21	32.739	23.731	5.67	102.7	1.9	0.39	0.1	0.00	0.17	0.04	78. A	3.8	3.8	3.8	0.20
13	17.13	32.739	23.751	5.67	102.5	1.7	0.38	0.1	0.00	0.18	0.04	35.	4.0	3.8	3.9	0.14
24	17.13	32.749	23.759	5.66	102.4	1.8	0.39	0.0	0.00	0.21	0.06	14.	2.8	2.8	2.8	0.20
37	16.98	32.804	23.836	5.70	102.8	1.8	0.38	0.0	0.00	0.30	0.10	5.0	1.8	1.9	1.8	0.09
44	16.74	33.008	24.049	5.76	103.5	1.8	0.38	0.1	0.00	0.34	0.13					
51	16.07	33.086	24.263	5.81	103.1	1.8	0.37	0.1	0.00	0.33	0.18	1.6	0.65	0.71	0.68	0.07
61	15.46	33.073	24.389	5.85	102.6	1.9	0.40	0.0	0.00	0.35	0.26					
72	14.64	33.052	24.551	5.86	101.0	2.2	0.49	0.0	0.00	0.39	0.35	0.30	0.06	0.05	0.05	0.05

A) INCUBATION LIGHT INTENSITIES WERE 94, 39, 13, 5.0, 1.5, 0.29 PERCENT RESPECTIVELY.

