

## PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON		CALCOFI CRUISE 0504										STATION 77 80				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 3.4 N	122 56.8 W	29/04/05	1734 UTC	20 m		1209 - 1216 PST	1209 PST	1917 PST	248.3 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
1	15.24	33.012	24.388	5.93	103.5					0.19	0.04	93. A	4.1	4.2	4.1	0.11
12	15.05	33.003	24.423	5.94	103.3	2.5	0.33	0.0	0.00	0.20	0.03	40.	5.9	5.7	5.8	0.12
27	14.87	33.007	24.465	6.00	103.9	1.9	0.33	0.0	0.00	0.21	0.04	13.	5.0	4.8	4.9	0.13
42	14.05	33.068	24.686	6.13	104.4	1.2	0.33	0.0	0.00	0.28	0.10	4.0	3.3	3.2	3.2	0.12
48	13.94	33.086	24.723	6.04	102.7	1.5	0.34	0.0	0.00	0.41	0.17	2.5	2.1	1.8	2.0	0.12
52	13.78	33.081	24.752	6.09	103.2	1.4	0.37	0.2	0.01	0.74	0.27					
58	13.65	33.103	24.796	6.06	102.4	1.1	0.40	0.3	0.02	0.96	0.37					
68	13.40	33.116	24.856	5.88	98.9	2.6	0.49	1.1	0.05	0.43	0.40					
78	13.23	33.116	24.891	5.81	97.3	3.5	0.55	1.7	0.06	0.28	0.49	0.25	0.20	0.22	0.21	0.05

RV NEW HORIZON		CALCOFI CRUISE 0504										STATION 80 60				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 8.8 N	121 9.0 W	27/04/05	1841 UTC	11 m		1205 - 1915 PST	1202 PST	1916 PST	455.9 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
2	13.94	33.163	24.781	6.51	110.7	0.9	0.26	0.1	0.01	1.65	0.49	76. A	18.1	16.4	17.2	0.50
7	13.87	33.177	24.806	6.52	110.8	0.8	0.26	0.1	0.01	1.57	0.52	38.	24.1	23.8	24.0	0.53
15	12.61	33.230	25.099	5.91	97.8	3.6	0.67	3.7	0.10	1.84	0.84	12.	17.6	16.4	17.0	0.34
18	12.59	33.235	25.107	5.92	98.0	3.5	0.67	3.7	0.10	1.95	0.82					
23	12.37	33.258	25.167	5.86	96.5	4.8	0.78	4.7	0.12	1.28	0.86	4.0	8.5	8.8	8.6	0.16
26	12.34	33.260	25.175	5.85	96.3	4.8	0.78	4.9	0.12	1.17	0.98	2.7	3.0	3.4	3.2	0.17
34	11.95	33.333	25.305	5.76	94.1	6.5	0.87	6.4	0.14	1.42	1.50					
44	11.64	33.338	25.367	5.80	94.1	6.4	0.87	6.3	0.14	1.36	1.37	0.22	0.59	0.64	0.62	0.19

RV NEW HORIZON		CALCOFI CRUISE 0504										STATION 80 90				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 8.8 N	123 13.6 W	28/04/05	1653 UTC	24 m		1215 - 1925 PST	1210 PST	1924 PST	229.9 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
2	15.10	32.986	24.399	5.90	102.7	2.5	0.34	0.0	0.00	0.14	0.03	88. A	2.3	2.3	2.3	0.12
15	14.99	32.995	24.430	5.90	102.4	2.4	0.34	0.0	0.00	0.15	0.03	38.	3.9	4.2	4.1	0.09
24	14.54	33.013	24.540	5.93	102.0	2.4	0.34	0.0	0.00	0.21	0.07					
33	14.43	33.022	24.571	5.96	102.3	2.5	0.33	0.0	0.00	0.26	0.08	12.	4.1	4.4	4.3	0.13
42	14.35	33.033	24.596	6.00	102.8	2.6	0.34	0.0	0.00	0.32	0.10					
52	14.31	33.032	24.604	6.01	102.9	2.6	0.33	0.0	0.00	0.30	0.10	3.6	2.5	2.5	2.5	0.13
58	14.27	33.037	24.617	5.95	101.8	2.6	0.34	0.0	0.00	0.37	0.17	2.4	1.6	1.5	1.5	0.08
70	12.88	33.037	24.899	5.69	94.6	4.2	0.57	2.8	0.08	0.67	0.38					
82	11.61	33.096	25.185	5.24	84.8	7.0	0.87	7.8	0.16	0.29	0.34					
94	10.46	33.205	25.475	4.69	74.1	11.3	1.20	13.5	0.09	0.16	0.30	0.24	0.25	0.26	0.25	0.03

RV NEW HORIZON		CALCOFI CRUISE 0504										STATION 83 42				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 10.8 N	119 30.4 W	26/04/05	1945 UTC	9 m		1222 - 1915 PST	1156 PST	1906 PST	899.2 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	14.27	33.340	24.849	6.84	117.3	0.8	0.30	0.3	0.02	3.02	0.49	84. A	46.0	46.5	46.3	0.40
5	13.40	33.376	25.056	6.60	111.2	2.5	0.44	1.6	0.06	2.90	0.73	43.	56.0	56.0	56.0	0.70
12	13.23	33.378	25.092	6.47	108.6	2.5	0.45	1.8	0.06	3.42	1.10	13.	40.9	45.5	43.2	0.42
19	12.98	33.377	25.141	6.16	102.9	3.1	0.55	3.1	0.07	4.16	1.15	3.9	19.9	20.2	20.1	0.27
22	12.59	33.382	25.221	5.70	94.4	4.9	0.73	5.5	0.09	3.00	0.91	2.3	6.2	5.8	6.0	0.19
28	11.13	33.501	25.586	4.19	67.3	13.4	1.37	14.1	0.15	1.11	0.96					
35	10.68	33.564	25.715	3.75	59.7	17.2	1.58	17.1	0.16	0.45	0.55	0.26	0.20	0.23	0.22	0.08

A) INCUBATION LIGHT INTENSITIES WERE 92, 39, 12, 4.0, 2.5, 0.25 PERCENT RESPECTIVELY.

## PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON		CALCOFI CRUISE 0504										STATION 83 70				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 14.7 N	121 26.6 W	23/04/05	1751 UTC	14 m		1209 - 1915 PST	1204 PST	1913 PST	608.3 mg C/m <sup>2</sup>							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m <sup>3</sup> )			
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	14.45	33.116	24.638	6.06	104.1	1.8	0.32	0.1	0.01	1.02	0.37	80. A	32.1	28.2	30.1	0.27
9	14.44	33.115	24.640	6.07	104.3	1.7	0.31	0.0	0.01	0.94	0.36	37.	23.6	22.1	22.8	0.22
20	13.95	33.128	24.752	6.26	106.5	1.2	0.31	0.1	0.01	1.37	0.57	11.	12.7	11.5	12.1	0.23
29	13.42	33.153	24.880	6.43	108.2	0.4	0.35	0.3	0.02	3.91	1.37	4.2	9.4	11.6	10.5	0.35
34	13.30	33.156	24.906	6.40	107.4	0.6	0.38	0.6	0.04	4.19	1.41	2.4	3.0	3.2	3.1	0.31
44	12.71	33.163	25.029	6.08	100.8	2.4	0.56	2.9	0.08	3.91	1.39					
55	12.25	33.178	25.129	5.78	94.9	4.8	0.72	5.1	0.11	2.21	1.10	0.24	0.34	0.19	0.26	0.10

RV NEW HORIZON		CALCOFI CRUISE 0504										STATION 83 110				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
31 54.1 N	124 10.2 W	24/04/05	1650 UTC	27 m		1216 - 1913 PST	1215 PST	1913 PST	152.8 mg C/m <sup>2</sup>							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m <sup>3</sup> )			
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	14.90	32.950	24.414	5.88	101.9	2.1	0.35	0.0	0.00	0.12	0.02	89. A	0.88	0.90	0.89	0.06
17	14.89	32.949	24.416	5.89	102.0	2.1	0.35	0.0	0.00	0.12	0.02	38.	3.0	3.1	3.1	0.08
26	14.77	32.941	24.436	5.89	101.8	2.1	0.35	0.0	0.00	0.12	0.03					
37	14.68	32.938	24.453	5.91	101.9	2.1	0.35	0.0	0.00	0.13	0.03	12.	2.4	2.3	2.4	0.08
47	14.66	32.941	24.460	5.91	101.9	2.1	0.35	0.0	0.00	0.17	0.06					
58	14.64	32.940	24.464	5.91	101.8	2.1	0.35	0.0	0.00	0.20	0.07	3.7	2.0	1.9	1.9	0.10
65	14.64	32.949	24.471	5.87	101.1	2.1	0.35	0.0	0.00	0.11	0.02	2.5	0.35	0.36	0.36	0.07
75	14.60	32.941	24.474	5.90	101.6	2.1	0.35	0.0	0.00	0.29	0.11					
86	12.94	33.024	24.877			3.3	0.51	2.1	0.04	0.45	0.23					
95	12.25	33.067	25.044	5.56	91.2	4.3	0.65	4.2	0.07	0.31	0.25					
105	11.34	33.134	25.265	5.15	82.9	7.4	0.92	8.8	0.10	0.22	0.24	0.26	0.32	0.26	0.29	0.04

RV NEW HORIZON		CALCOFI CRUISE 0504										STATION 87 45				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 29.0 N	119 19.5 W	22/04/05	1833 UTC	7 m		1200 - 1903 PST	1156 PST	1902 PST	1112.6 mg C/m <sup>2</sup>							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m <sup>3</sup> )			
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	12.70	33.318	25.150	6.77	112.3	1.2	0.40	2.3	0.10	4.08	1.35	64. A	51.4	62.1	56.7	0.57
5	12.68	33.321	25.156	6.77	112.3	1.3	0.42	2.3	0.11	4.07	1.32	33.	95.3	102.0	98.7	1.1
10	12.63	33.319	25.164	6.74	111.7	1.3	0.41	2.5	0.10	4.40	1.35	11.	65.0	50.5	57.8	1.8
16	12.50	33.330	25.198	6.62	109.4	1.4	0.46	3.1	0.10	5.13	1.76	3.0	32.5	33.6	33.0	0.52
18	12.47	33.346	25.216	6.51	107.5	1.6	0.46	3.5	0.10	5.74	1.90	1.9	10.0	11.6	10.8	0.43
28	11.98	33.410	25.359	5.68	92.9	5.6	0.80	7.1	0.11	5.51	1.90	0.22	1.1	0.73	0.93	0.30

RV NEW HORIZON		CALCOFI CRUISE 0504										STATION 87 80				
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 19.2 N	121 42.5 W	25/04/05	1650 UTC	33 m		1210 - 1905 PST	1205 PST	1905 PST	158.2 mg C/m <sup>2</sup>							
DEPTH	TEMP	SALINITY	SIGMA	OXYGEN	OXY	SI03	P04	N03	N02	CHL-A	PHAE0	LIGHT	UPTAKE (mg C/m <sup>3</sup> )			
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	15.73	33.101	24.349	5.75	101.4	1.7	0.33	0.0	0.00	0.08	0.02	91. A	0.87	0.73	0.80	0.05
11	15.72	33.101	24.351	5.76	101.5	1.7	0.33	0.0	0.00	0.10	0.01					
20	15.70	33.101	24.356	5.84	102.9	1.7	0.33	0.0	0.00	0.09	0.02	39.	1.9	1.8	1.8	0.07
33	15.88	33.181	24.378	5.73	101.4	1.7	0.32	0.0	0.00	0.09	0.02					
46	15.93	33.218	24.396	5.72	101.3	1.7	0.32	0.0	0.00	0.10	0.03	12.	1.6	1.6	1.6	0.08
58	15.90	33.230	24.412	5.74	101.6	1.6	0.33	0.0	0.00	0.14	0.05					
70	15.77	33.206	24.423	5.74	101.3	1.6	0.32	0.0	0.00	0.17	0.05	3.9	1.3	1.4	1.3	0.07
82	13.65	33.033	24.742	5.96	100.7	2.4	0.39	0.1	0.01	0.43	0.23	2.2	1.4	1.7	1.5	0.05
91	12.77	33.039	24.922	5.71	94.7	3.8	0.57	2.8	0.08	0.40	0.29					
104	11.59	33.139	25.223	5.20	84.2	6.8	0.86	7.8	0.11	0.28	0.19					
116	10.20	33.263	25.565	4.57	71.8	12.9	1.28	14.9	0.05	0.14	0.17					
129	9.71	33.394	25.749	4.29	66.8	16.0	1.44	17.6	0.03	0.09	0.09	0.25	0.09	0.10	0.09	0.02

A) INCUBATION LIGHT INTENSITIES WERE 92, 39, 12, 4.0, 2.5, 0.25 PERCENT RESPECTIVELY.

## PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0504

STATION 90 30

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 25.0 N	117 54.1 W	21/04/05	1851 UTC	19 m		1200 - 1857 PST	1150 PST	1856 PST	483.4 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
2	15.69	33.294	24.506	6.44	113.6	0.7	0.28	0.0	0.01	0.35	0.21	85. A	9.3	9.7	9.5	0.23
12	13.92	33.336	24.919	7.08	120.5	0.9	0.30	0.0	0.01	0.54	0.22	38.	21.1	21.1	21.1	0.26
19	13.31	33.331	25.039	6.75	113.5	1.1	0.36	0.2	0.02	0.80	0.29					
26	12.21	33.314	25.241	4.42	72.6	9.8	1.12	10.2	0.31	0.40	0.30	12.	8.3	7.9	8.1	0.10
33	11.50	33.391D	25.434	3.90	63.1	13.8	1.37	14.6	0.23	0.46	0.36					
40	11.20	33.437	25.524	3.72	59.8	15.2	1.47	16.3	0.17	0.44	0.29	3.9	3.1	3.1	3.1	0.07
46	11.00	33.462	25.579	3.64	58.3	16.1	1.52	17.1	0.15	0.40	0.27	2.4	1.1	1.2	1.1	0.06
55	10.72	33.532	25.684	3.44	54.8	18.0	1.62	18.7	0.11	0.22	0.24					
60	10.50	33.556	25.741	3.41	54.1	18.6	1.66	19.4	0.11	0.14	0.18					
74	10.26	33.675	25.875	3.13	49.4	21.3	1.78	21.1	0.07	0.09	0.16	0.25	0.05	0.03	0.04	0.03

RV NEW HORIZON

CALCOFI CRUISE 0504

STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 25.1 N	119 58.1 W	20/04/05	1814 UTC	26 m		1158 - 1856 PST	1158 PST	1856 PST	165.2 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
2	14.96	33.059	24.485	5.83	101.2	2.4	0.36	0.0	0.00	0.18	0.05	89. A	0.94	1.0	0.99	0.06
16	14.89	33.055	24.498	5.86	101.6	2.4	0.36	0.0	0.00	0.19	0.05	39.	3.3	3.3	3.3	0.10
26	14.88	33.055	24.500	5.86	101.5	2.4	0.35	0.0	0.00	0.19	0.06					
35A	14.88	33.055	24.501	5.84	101.2	2.3	0.35	0.0	0.00	0.20	0.06	13.	2.9	3.0	3.0	0.07
46	14.87	33.055	24.503	5.86	101.5	2.3	0.36	0.0	0.00	0.20	0.06					
55	14.87	33.055	24.503	5.85	101.3	2.4	0.35	0.0	0.00	0.21	0.06	3.9	1.9	1.8	1.9	0.06
62	14.87	33.054	24.503	5.85	101.3	2.4	0.36	0.0	0.00	0.22	0.07	2.6	0.72	0.62	0.67	0.06
73	14.68	33.051	24.542	5.85	100.9	2.4	0.37	0.0	0.01	0.29	0.09					
81	12.69	33.069	24.961	5.56	92.1	4.6	0.64	3.9	0.10	0.48	0.32					
91	11.50	33.193	25.281	4.84	78.2	9.3	1.04	10.3	0.10	0.25	0.21					
100	11.16	33.271	25.403	4.54	72.9	11.4	1.20	12.7	0.06	0.17	0.18	0.27	0.12	0.17	0.14	0.03

RV NEW HORIZON

CALCOFI CRUISE 0504

STATION 90 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 6.0 N	122 39.9 W	19/04/05	1640 UTC	30 m		1210 - 1910 PST	1210 PST	1902 PST	110.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
2	15.74	33.098	24.344	5.74	101.2	1.6	0.34	0.0	0.00			90. A	0.42	0.41	0.41	0.04
18	15.74	33.091	24.339	5.72	100.9	1.6	0.34	0.0	0.00			40.	1.8	1.8	1.8	0.05
30	15.74	33.091	24.340	5.75	101.4	1.6	0.34	0.0	0.00							
42	15.74	33.091	24.340	5.75	101.4	1.6	0.34	0.0	0.00			12.	1.3	1.4	1.4	0.04
52	15.74	33.093	24.342	5.74	101.2	1.7	0.34	0.1	0.00							
63	15.51	33.212	24.485	5.79	101.7	1.8	0.34	0.0	0.00			4.0	1.2	1.2	1.2	0.04
72	15.29	33.371	24.656	5.74	100.5	2.0	0.34	0.0	0.00			2.5	0.64	0.63	0.64	0.04
84	14.44	33.278	24.768	5.72	98.4	2.4	0.42	0.6	0.02							
94	12.80	33.114	24.974	5.55	92.2	3.8	0.61	3.5	0.07							
105	12.66	33.276	25.127	5.37	89.0	4.7	0.67	5.0	0.09							
117	11.98	33.255	25.241	5.20	84.9	6.1	0.80	7.1	0.08			0.25	0.13	0.15	0.14	0.03

RV NEW HORIZON

CALCOFI CRUISE 0504

STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.5 N	117 18.3 W	15/04/05	1821 UTC	6 m		1155 - 1848 PST	1149 PST	1843 PST	555.0 mg C/m2

DEPTH m	TEMP DEG C	SALINITY	SIGMA THETA	OXYGEN mL/L	OXY PCT	SI03 uM/L	P04 uM/L	N03 uM/L	N02 uM/L	CHL-A ug/L	PHAE0 ug/L	LIGHT PCT	UPTAKE (mg C/m3)			
													1	2	MEAN	DARK
1	15.54	33.389	24.613	8.69	152.9	1.4	0.15	0.0	0.01	3.08	0.49	77. A	36.4	38.2	37.3	0.96
5	14.88	33.385	24.754	8.57	148.8	1.7	0.18	0.1	0.01	2.42	0.46	28.	31.0	32.2	31.6	1.2
8	14.52	33.381	24.828	8.26	142.4	2.0	0.20	0.1	0.01	2.41	0.48	13.	20.9	22.1	21.5	1.2
13	12.53	33.414	25.257	6.18	102.3	1.9	0.42	0.1	0.01	10.32	3.40	3.6	40.2	45.6	42.9	1.4
14	12.37	33.408	25.283	5.50	90.7	2.8	0.53	0.1	0.02	12.75	3.90	2.8	24.0	22.6	23.3	1.3
23	10.89	33.537	25.657	3.18	50.8	17.6	1.67	19.1	0.27	0.85	1.48	0.28	0.26	0.30	0.28	0.11

A) INCUBATION LIGHT INTENSITIES WERE 92, 39, 12, 4.0, 2.5, 0.25 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON														CALCOFI CRUISE 0504				STATION 93 45	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE										
32 20.7 N	118 33.3 W	16/04/05	1745 UTC	17 m		1155 - 1856 PST	1154 PST	1854 PST	439.7 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			
2	15.24	33.182	24.519	5.99	104.6	1.0	0.31	0.0	0.00	0.28	0.09	83. A	7.3	6.9	7.1	0.19			
10	14.44	33.143	24.661	6.08	104.5	0.9	0.30	0.0	0.00	0.41	0.15	41.	8.5	8.2	8.3	0.48			
16	14.27	33.110	24.672	6.08	104.1	1.1	0.30	0.0	0.00	0.47	0.22								
23	14.24	33.121	24.687	6.07	103.9	1.2	0.30	0.0	0.00	0.67	0.25	13.	8.9	8.7	8.8	0.21			
31	13.87	33.131	24.771	5.90	100.2	1.9	0.39	0.5	0.03	1.67	0.65								
36	13.36	33.111	24.860	5.74	96.4	3.0	0.52	1.8	0.07	1.84	0.80	3.9	12.7	12.8	12.8	0.26			
42	12.86	33.098	24.949	5.51	91.6	4.9	0.66	3.6	0.13	1.45	0.81	2.3	4.6	4.7	4.7	0.14			
49	12.12	33.116	25.105	5.20	85.1	7.5	0.86	6.7	0.18	1.15	0.63								
58	10.94	33.169	25.362	4.79	76.5	11.0	1.12	11.5	0.18	0.55	0.50								
67	10.51	33.410	25.625	4.03	63.8	16.3	1.47	16.8	0.08	0.36	0.50	0.24	0.11	0.08	0.09	0.04			

RV NEW HORIZON														CALCOFI CRUISE 0504				STATION 93 80	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE										
31 12.3 N	120 57.8 W	17/04/05	1925 UTC	16 m		1227 - 1901 PST	1203 PST	1903 PST	138.8 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	14.84	33.064	24.515	5.90	102.2	1.4	0.35	0.0	0.00	0.34	0.12	83. A	5.0	5.0	5.0	0.21			
10	14.84	33.067	24.518	5.89	102.0	1.2	0.35	0.0	0.00	0.31	0.14	38.	5.0	5.4	5.2	0.22			
16	14.86	33.064	24.511	5.88	101.9	1.4	0.35	0.0	0.00	0.33	0.11								
22	14.83	33.064	24.518	5.88	101.8	1.3	0.34	0.0	0.00	0.34	0.10	12.	3.6	3.6	3.6	0.16			
34	14.81	33.063	24.522	5.92	102.4	1.3	0.34	0.0	0.00	0.31	0.14	3.8	1.2	1.3	1.3	0.21			
38	14.80	33.066	24.526	5.89	101.9	1.2	0.34	0.0	0.00	0.34	0.13	2.6	0.17	0.13	0.15	0.22			
44	14.80	33.065	24.526	5.89	101.9	1.2	0.33	0.0	0.00	0.35	0.16								
48	14.77	33.060	24.528	5.89	101.8	1.2	0.32	0.0	0.00	0.41	0.17								
62	14.58	33.054	24.565	5.88	101.3	1.2	0.33	0.0	0.00	0.69	0.35	0.26	0.10	0.07	0.09	0.09			

RV NEW HORIZON														CALCOFI CRUISE 0504				STATION 93 120	
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE										
29 51.1 N	123 35.7 W	18/04/05	1930 UTC	25 m		1232 - 1915 PST	1213 PST	1907 PST	52.9 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			
2	16.71	33.413	24.365	5.62	101.2	1.9	0.30	0.0	0.00	0.13	0.00	88. A	0.53	0.40	0.46	0.02			
15	16.70	33.413	24.368	5.62	101.2	1.9	0.30	0.0	0.00	0.15	0.00	40.	1.3	1.5	1.4	0.04			
25	16.70	33.412	24.368	5.63	101.4	1.9	0.30	0.1	0.00	0.13	0.02								
35	16.69	33.413	24.371	5.62	101.2	1.8	0.30	0.0	0.00	0.00	0.25	12.	0.94	0.99	0.97	0.05			
43	16.69	33.412	24.371	5.62	101.2	1.8	0.30	0.0	0.00	0.13	0.03								
53	16.69	33.412	24.371	5.63	101.4	1.8	0.30	0.0	0.00	0.14	0.01	3.9	0.36	0.42	0.39	0.05			
61	16.69	33.414	24.373	5.62	101.2	1.8	0.30	0.0	0.00	0.14	0.00	2.4	0.10	0.12	0.11	0.06			
67	16.69	33.411	24.371	5.62	101.2	1.8	0.30	0.0	0.00	0.13	0.00								
79	16.69	33.412	24.372	5.62	101.2	1.8	0.29	0.0	0.00	0.13	0.00								
89	16.63	33.442	24.409	5.62	101.1	1.8	0.29	0.0	0.00	0.21	0.00								
97	16.24	33.515	24.555	5.64	100.7	1.9	0.29	0.0	0.00	0.28	0.04	0.26	0.01	0.00	0.00	0.04			

A) INCUBATION LIGHT INTENSITIES WERE 92, 39, 12, 4.0, 2.5, 0.25 PERCENT RESPECTIVELY.