

## PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 77 49

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
35 5.3 N	120 45.8 W	03/11/03	1803 UTC	11 m	1205 - 1738 PST	1147 PST	1736 PST	610.4 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
1	15.75	33.286	24.487	5.85	103.3	1.2	0.29	0.2	0.00	2.61	0.96	87. A	38.8	39.3	39.1	0.26
6	15.73	33.286	24.491	5.83	102.9	1.2	0.29	0.2	0.00	2.62	0.92	43.	44.1	43.8	44.0	0.24
15	15.59	33.282	24.520	5.76	101.4	1.6	0.33	0.4	0.00	2.00	0.74	12.	20.0	17.7	18.8	0.20
22	14.17	33.268	24.815	5.21	89.1	5.1	0.73	4.1	0.16	0.43	0.61	4.6	1.6	1.6	1.6	0.07
29	13.68	33.266	24.915	5.06	85.7	6.2	0.84	5.5	0.21	0.37	0.63	1.7	0.39	0.34	0.37	0.06
36	13.50	33.272	24.956	4.95	83.5	6.9	0.90	6.3	0.22	0.27	0.59					
42	13.16	33.271	25.024	4.84	81.1	7.6	0.97	7.3	0.27	0.26	0.56	0.28	0.04	0.04	0.04	0.06

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 77 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 3.4 N	122 56.7 W	02/11/03	1906 UTC	14 m	1157 - 1744 PST	1156 PST	1743 PST	314.1 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	15.61	33.282	24.515	5.88	103.6	0.9	0.42	0.9	0.07	0.88	0.27	80. A	16.2	15.9	16.1	0.14
9	15.58	33.281	24.521	5.89	103.7	0.9	0.41	0.9	0.07	0.86	0.24	37.	14.9	14.4	14.6	0.15
19	15.56	33.286	24.529	5.87	103.3	1.0	0.42	0.9	0.07	0.80	0.28	12.	7.7	8.2	7.9	0.12
26	15.57	33.307	24.544	5.85	102.9	1.0	0.44	1.2	0.08	0.73	0.28	5.8	2.9	3.1	3.0	0.08
37	13.72	33.412	25.020	4.79	81.2	6.8	1.00	8.7	0.71	0.63	0.30	1.7	0.75	0.25	0.50	0.11
46	11.07	33.545	25.631	3.48	55.9	17.0	1.66	19.6	0.14	0.32	0.30					
54	10.29	33.712	25.898	2.81	44.4	22.6	1.92	23.3	0.11	0.14	0.21	0.27	0.03	0.03	0.03	0.04

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 80 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
34 27.2 N	120 31.5 W	31/10/03	1905 UTC	7 m	1146 - 1743 PST	1146 PST	1739 PST	497.5 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	16.26	33.233	24.331	5.94	105.9	3.1	0.28	0.1	0.01	4.11	0.90	64. A	56.0	59.4	57.7	0.46
4	16.31	33.232	24.319	5.96	106.4	3.1	0.28	0.1	0.01	4.25	0.98	42.	59.3	58.0	58.6	0.47
9	15.77	33.226	24.436	5.77	101.9	3.4	0.34	0.1	0.01	3.12	0.80	14.	20.1	21.4	20.8	0.15
14	14.13	33.158	24.738	5.21	89.0	5.3	0.62	1.3	0.19	1.13	0.38	4.6	2.5	2.5	2.5	0.28
19	13.28	33.139	24.897	5.02	84.2	6.6	0.82	3.7	0.36	0.40	0.23	1.6	0.38	0.47	0.43	0.07
26	13.04	33.113	24.925	5.11	85.3	6.2	0.86	4.7	0.48	0.32	0.28	0.33	0.04	0.06	0.05	0.08

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 80 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 9.8 N	123 12.9 W	01/11/03	1901 UTC	28 m	1158 - 1758 PST	1157 PST	1756 PST	183.9 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
3	18.75	32.801	23.405	5.41	101.0	1.4	0.37	0.1	0.00	0.12	0.04	85. A	1.1	1.1	1.1	0.05
10	18.74	32.801	23.408	5.41	101.0	1.4	0.37	0.1	0.00	0.13	0.04					
18	18.39	32.787	23.484	5.49	101.8	1.5	0.38	0.0	0.00	0.16	0.05	37.	2.1	2.1	2.1	0.06
28	16.99	32.784	23.818	5.69	102.7	1.6	0.40	0.0	0.00	0.27	0.12					
37	16.64	32.801	23.913	5.75	103.0	1.6	0.40	0.1	0.00	0.36	0.15	13.	4.8	4.6	4.7	0.07
46	16.45	32.856	23.999	5.77	103.0	1.6	0.40	0.1	0.00	0.38	0.17					
55	14.16	32.629	24.325	6.17	105.1	2.0	0.41	0.0	0.00	0.26	0.16	4.9	1.5	1.5	1.5	0.04
65	13.15	32.597	24.505	6.17	102.9	2.4	0.47	0.1	0.01	0.29	0.20					
75	12.77	32.672	24.637	5.87	97.1	2.9	0.55	1.0	0.12	0.28	0.23	1.6	0.69	0.85	0.77	0.02
92	11.46	32.859	25.029	5.47	88.1	5.7	0.84	6.4	0.03	0.15	0.20					
108	10.19	32.936	25.311	5.21	81.7	9.9	1.13	11.4	0.02	0.06	0.09	0.27	0.02	0.08	0.05	0.05

A) INCUBATION LIGHT INTENSITIES WERE 89, 38, 13, 4.9, 1.7, 0.27 PERCENT RESPECTIVELY.

## PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 83 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 35.1 N	120 46.2 W	30/10/03	1752 UTC	15 m	1205 - 1736 PST	1147 PST	1736 PST	187.7 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
3	16.07	33.069	24.248	5.77	102.4	1.6	0.38	0.1	0.00	0.40	0.16	74. A	3.2	4.5	3.9	0.09
10	16.07	33.069	24.248	5.78	102.6	1.6	0.38	0.1	0.00	0.39	0.15	36.	8.4	6.4	7.4	0.09
21	15.95	33.076	24.281	5.81	102.9	1.6	0.38	0.1	0.01	0.49	0.17	12.	5.8	5.3	5.6	0.07
29	14.55	33.140	24.636	5.75	99.0	2.6	0.59	2.5	0.22	0.82	0.48					
40	12.11	32.944	24.974	5.50	89.9	5.7	0.91	7.1	0.41	0.44	0.37	1.7	0.65	0.57	0.61	0.03
49	10.99	33.021	25.238	5.12	81.8	9.0	1.19	12.3	0.08	0.26	0.27					
58	10.11	33.158	25.497	4.71	73.8	14.0	1.43	16.4	0.04	0.12	0.15	0.26	0.05	0.04	0.05	0.01

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 83 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 15.1 N	123 30.3 W	29/10/03	1720 UTC	27 m	1200 - 1756 PST	1158 PST	1752 PST	73.0 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	18.84	32.831	23.406	5.41	101.2	1.5	0.36	0.0	0.01	0.12	0.03	89. A	2.5	2.2	2.4	0.04
17	18.71	32.826	23.435	5.42	101.1	1.6	0.36	0.0	0.01	0.11	0.05	38.	1.4	1.5	1.5	0.05
26	18.63	32.825	23.454	5.43	101.1	1.5	0.36	0.0	0.01	0.13	0.04					
36	18.50	32.815	23.479	5.44	101.1	1.6	0.36	0.0	0.01	0.17	0.06	13.	0.82	0.79	0.81	0.05
44	18.33	32.824	23.529	5.46	101.1	1.5	0.36	0.0	0.01	0.16	0.05					
53	18.29	32.849	23.558	5.46	101.0	1.5	0.37	0.0	0.01	0.18	0.06	4.9	0.28	0.28	0.28	0.03
61	17.39	32.867	23.789	5.67	103.1	1.6	0.36	0.0	0.01	0.25	0.12					
72	15.11	32.931	24.357	5.97	103.8	2.1	0.37	0.0	0.01	0.26	0.21	1.7	0.19	0.16	0.18	0.02
82	14.01	32.918	24.580	5.86	99.7	2.6	0.45	0.1	0.05	0.27	0.20					
93	13.25	33.034	24.824	5.59	93.7	3.6	0.56	1.9	0.21	0.20	0.17					
104	12.65	33.025	24.935	5.49	90.8	4.5	0.67	4.0	0.10	0.16	0.19	0.27	0.04	0.03	0.03	0.02

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 87 55

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 9.5 N	120 0.1 W	27/10/03	1759 UTC	17 m	1146 - 1740 PST	1144 PST	1741 PST	292.0 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	16.59	33.024	24.094	5.76	103.3	2.0	0.38	0.1	0.00	0.25	0.09	83. A	5.3	5.9	5.6	0.18
11	15.95	32.993	24.217	5.83	103.2	1.9	0.39	0.1	0.00	0.37	0.18	37.	8.4	8.5	8.4	0.17
24	14.63	32.871	24.412	5.95	102.5	2.3	0.44	0.3	0.02	0.69	0.35	11.	5.4	9.6	7.5	0.12
34	13.03	32.732	24.632	5.98	99.6	3.1	0.56	1.4	0.13	0.73	0.56	4.6	5.0	5.0	5.0	0.08
45	11.82	32.640	24.792	5.83	94.6	4.2	0.71	3.6	0.22	0.49	0.55	1.7	1.2	1.5	1.4	0.04
56	11.17	32.764	25.006	5.53	88.5	6.4	0.95	7.9	0.25	0.27	0.37					
67	10.71	32.828	25.137	5.36	85.0	8.3	1.07	10.2	0.09	0.21	0.32	0.24	0.13	0.10	0.12	0.04

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 59.5 N	122 24.0 W	28/10/03	1727 UTC	32 m	1154 - 1750 PST	1154 PST	1749 PST	159.2 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	18.58	32.876	23.505	5.43	101.1	1.6	0.38	0.0	0.00	0.10	0.03	91. A	2.0	1.8	1.9	0.06
11	18.49	32.880	23.530	5.43	100.9	1.6	0.37	0.0	0.00	0.11	0.02					
19	18.42	32.888	23.554	5.43	100.8	1.6	0.37	0.0	0.00	0.11	0.02	40.	2.3	2.2	2.2	0.07
32	18.28	32.890	23.591	5.44	100.7	1.6	0.37	0.0	0.00	0.10	0.03					
43	18.25	32.880	23.591	5.44	100.6	1.7	0.37	0.0	0.00	0.13	0.04	13.	1.6	1.5	1.5	0.05
53	18.07	32.862	23.622	5.46	100.6	1.7	0.38	0.0	0.00	0.21	0.08					
63	16.40	32.761	23.938	5.86	104.5	1.8	0.38	0.0	0.00	0.23	0.18	4.9	1.5	1.7	1.6	0.04
75	14.64	32.779	24.340	6.03	103.8	2.2	0.39	0.0	0.00	0.23	0.24					
84	13.59	32.708	24.503	5.99	100.9	2.5	0.45	0.0	0.07	0.20	0.26	1.8	0.96	0.87	0.91	0.02
97	13.37	32.935	24.723	5.74	96.3	3.1	0.50	0.6	0.16	0.27	0.28					
111	12.75	33.045	24.931	5.54	91.8	4.3	0.61	2.9	0.14	0.12	0.20					
122	11.44	32.959	25.111	5.35	86.2	6.4	0.87	6.8	0.04	0.10	0.12	0.29	0.08	0.07	0.08	0.00

A) INCUBATION LIGHT INTENSITIES WERE 89, 38, 13, 4.9, 1.7, 0.27 PERCENT RESPECTIVELY.

## PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 90 35

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 14.7 N	118 15.3 W	26/10/03	1801 UTC	18 m	1138 - 1737 PST	1137 PST	1736 PST	294.4 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	19.74	33.317	23.547	5.48	104.5	1.6	0.24	0.1	0.00	0.42	0.15	84. A	12.2	12.0	12.1	0.18
11	19.31	33.292	23.639	5.59	105.8	1.7	0.24	0.1	0.00	0.42	0.15	39.	10.2	10.6	10.4	0.12
18	17.05	33.163	24.095	5.96	107.9	1.9	0.31	0.1	0.00	0.45	0.21					
24	15.66	33.071	24.342	6.11	107.6	2.0	0.40	0.1	0.00	0.42	0.24	13.	4.4	4.5	4.4	0.06
34	13.99	33.041	24.677	5.99	101.9	3.1	0.51	0.6	0.05	0.87	0.70	5.5	3.8	4.0	3.9	0.08
42	13.07	33.118	24.923	5.36	89.5	4.8	0.78	4.6	0.42	0.46	0.41					
47	12.45	33.158	25.075	5.04	83.1	6.5	0.94	7.9	0.13	0.29	0.33	1.8	0.29	0.35	0.32	0.03
57	11.54	33.182	25.264	4.76	77.0	9.0	1.12	11.2	0.07	0.15	0.20					
69	11.09	33.323	25.456	4.32	69.3	11.7	1.30	14.1	0.03	0.08	0.11	0.28	0.02	0.03	0.03	0.01

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 90 53

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 39.9 N	119 29.4 W	25/10/03	1730 UTC	27 m	1148 - 1738 PST	1142 PST	1736 PST	262.3 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	18.78	33.286	23.768	5.41	101.3	1.5	0.32	0.0	0.00	0.15	0.04	89. A	3.7	3.7	3.7	0.08
10	18.75	33.286	23.776	5.41	101.3	1.4	0.32	0.0	0.00	0.15	0.03					
17	18.70	33.286	23.789	5.41	101.2	1.4	0.32	0.0	0.00	0.17	0.05	38.	3.1	3.2	3.1	0.13
26	18.58	33.283	23.817	5.44	101.5	1.4	0.32	0.0	0.00	0.22	0.07					
36	15.02	33.121	24.521	6.01	104.5	2.7	0.48	1.0	0.07	0.74	0.30	13.	6.1	7.7	6.9	0.08
43	13.61	33.064	24.773	5.71	96.4	3.8	0.66	3.5	0.29	0.64	0.43					
53	12.46	33.062	24.999	5.34	88.0	5.7	0.88	7.3	0.12	0.44	0.43	4.9	2.2	2.2	2.2	0.05
61	12.02	33.066	25.086	5.23	85.4	6.7	0.96	8.9	0.07	0.36	0.39					
72	11.21	33.088	25.251	5.02	80.6	8.8	1.12	11.6	0.03	0.23	0.29	1.7	0.39	0.45	0.42	0.05
87	10.35	33.181	25.475	4.81	75.8	11.6	1.25	14.0	0.02	0.12	0.14					
103	10.03	33.395	25.696	4.18	65.5	16.0	1.49	18.0	0.01	0.03	0.05	0.29	0.00	0.01	0.01	0.02

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 90 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 26.0 N	122 0.0 W	24/10/03	1721 UTC	27 m	1157 - 1754 PST	1152 PST	1752 PST	133.8 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	19.44	33.006	23.387	5.30	100.3	1.5	0.36	0.1	0.00	0.12	0.03	89. A	1.6	1.6	1.6	0.09
17	19.43	33.006	23.391	5.30	100.3	1.6	0.37	0.1	0.00	0.13	0.03	38.	2.7	2.6	2.6	0.05
26	19.43	33.007	23.392	5.31	100.5	1.6	0.36	0.1	0.00	0.12	0.04					
35	19.43	33.010	23.394	5.31	100.5	1.6	0.36	0.1	0.00	0.13	0.03	14.	1.4	1.4	1.4	0.05
43	18.65	33.080	23.645	5.46	101.9	1.4	0.36	0.1	0.00	0.20	0.08					
53	15.55	32.825	24.178	6.07	106.5	1.9	0.39	0.1	0.00	0.28	0.15	4.9	1.4		1.4	0.07
61	13.78	32.690	24.450	6.07	102.6	2.3	0.44	0.0	0.00	0.31	0.24					
72	12.91	32.777	24.691	5.75	95.5	3.3	0.62	2.4	0.26	0.43	0.32	1.7	1.0	0.90	0.97	0.04
82	12.36	32.844	24.850	5.52	90.7	4.5	0.77	5.2	0.14	0.13	0.13					
95	11.81	33.107	25.157	5.12	83.2	7.3	1.05	10.2	0.02	0.32	0.26					
103	10.60	33.066	25.342	5.13	81.2	9.2	1.08	11.0	0.02	0.09	0.10	0.29	0.01	0.03	0.02	0.03

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 90 120

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 24.6 N	123 59.7 W	23/10/03	1937 UTC	22 m	1231 - 1801 PST	1200 PST	1801 PST	85.4 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
4	18.79	32.939	23.501	5.40	101.0	1.7	0.38	0.2	0.00	0.12	0.02	76. A	1.3	1.3	1.3	0.13
13	18.78	32.939	23.504	5.41	101.1	1.6	0.38	0.2	0.00	0.11	0.03	40.	2.2	2.1	2.2	0.08
30	18.72	32.935	23.516	5.41	101.0	1.6	0.37	0.1	0.00	0.13	0.03	12.	1.3	1.3	1.3	0.18
42	18.37	32.860	23.546	5.44	100.8	1.7	0.37	0.1	0.00	0.16	0.05	5.3	0.89	0.95	0.92	0.08
59	17.97	32.864	23.648	5.56	102.3	1.7	0.38	0.1	0.00	0.24	0.10	1.6	0.57	0.47	0.52	0.07
68	16.03	32.800	24.052	5.98	105.9	2.0	0.38	0.1	0.00	0.25	0.14					
77	15.65	32.969	24.268	5.89	103.6	2.1	0.37	0.1	0.00	0.26	0.20					
85	14.50	32.779	24.370	6.00	103.0	2.2	0.41	0.1	0.00	0.30	0.24	0.27	0.17	0.18	0.18	0.03

A) INCUBATION LIGHT INTENSITIES WERE 89, 38, 13, 4.9, 1.7, 0.27 PERCENT RESPECTIVELY.

## PRIMARY PRODUCTIVITY CASTS

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 93 26.7

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 57.0 N	117 18.0 W	20/10/03	1907 UTC	1 m	1211 - 1541 PST	1134 PST	1735 PST	2120.1 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	20.49	33.284	23.326	10.57	204.4	2.4	0.20	0.4	0.03	55.25	2.21	22. A 584.5	669.4	626.9	25.0	
2	20.31	33.281	23.371	10.69	206.0	2.4	0.19	0.4	0.07	50.54	3.10	4.6	948.3	948.3	17.2	
3	20.21	33.280	23.397	11.13	214.1	2.6	0.26	0.4	0.06	66.11	10.66	1.00	233.8	216.6	225.2	10.9
4	19.37	33.273	23.609	9.13	172.9	2.6	0.11	0.4	0.04	16.45	1.83	0.22	5.5	6.8	6.2	2.5
5	18.61	33.239	23.775	7.32	136.6	3.0	0.15	0.4	0.03	0.70	0.26	0.05	0.09	-0.01	0.04	0.47

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 93 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 10.5 N	118 54.6 W	21/10/03	1820 UTC	22 m	1146 - 1749 PST	1141 PST	1743 PST	221.1 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
3	18.60	33.238	23.776	5.45	101.7	1.3	0.35	0.1	0.01	0.16	0.03	81. A	3.7	5.8	4.8	0.13
14	18.53	33.233	23.791	5.45	101.6	1.3	0.35	0.0	0.01	0.16	0.03	38.	3.7	3.5	3.6	0.19
21	18.28	33.197	23.825	5.51	102.2	1.3	0.35	0.0	0.01	0.16	0.04					
30	14.78	32.977	24.462	6.03	104.2	1.9	0.42	0.0	0.01	0.39	0.21	12.	3.8	4.7	4.2	0.13
36	14.52	32.973	24.514	5.94	102.1	2.2	0.43	0.1	0.05	0.51	0.28					
43	13.91	32.993	24.657	5.79	98.3	2.7	0.54	1.4	0.29	0.58	0.41	5.0	3.7	3.5	3.6	0.09
51	12.96	33.059	24.899	5.40	89.9	4.3	0.79	5.9	0.05	0.33	0.33					
59	12.19	33.048	25.040	5.33	87.3	5.7	0.91	7.8	0.04	0.25	0.23	1.6	0.51	0.67	0.59	0.06
71	11.46	33.126	25.236	4.99	80.5	8.3	1.13	11.5	0.02	0.13	0.14					
84	10.73	33.230	25.447	4.65	73.9	11.7	1.33	14.7	0.02	0.07	0.07	0.28	0.41	0.62	0.52	0.04

RV NEW HORIZON

CALCOFI CRUISE 0310

STATION 93 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
30 51.2 N	121 35.6 W	22/10/03	1901 UTC	24 m	1210 - 1753 PST	1151 PST	1752 PST	97.9 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
3	19.82	32.954	23.250	5.28	100.6	1.5	0.36	0.0	0.00	0.10	0.03	83. A	1.7	1.9	1.8	0.19
15	19.81	32.955	23.254	5.28	100.6	1.6	0.36	0.0	0.00	0.10	0.03	38.	1.9	1.9	1.9	0.11
32	19.41	33.004	23.395	5.36	101.4	1.5	0.36	0.0	0.00	0.13	0.04	13.	1.3	1.5	1.4	0.09
40	19.05	33.094	23.555	5.40	101.5	1.4	0.37	0.0	0.00	0.17	0.05					
47	17.97	33.036	23.779	5.65	104.0	1.5	0.36	0.0	0.00	0.24	0.11	4.9	1.2	1.2	1.2	0.11
57	15.48	32.789	24.166	6.05	105.9	1.8	0.39	0.0	0.00	0.28	0.17					
63	14.63	32.698	24.280	6.11	105.1	2.0	0.41	0.0	0.00	0.28	0.22	1.8	0.59	0.49	0.54	0.11
73	13.62	32.684	24.478	6.01	101.2	2.3	0.47	0.1	0.08	0.45	0.32					
82	12.69	32.738	24.704	5.75	95.0	3.5	0.63	2.6	0.31	0.30	0.31					
91	12.02	32.942	24.990	5.38	87.8	5.6	0.87	7.2	0.07	0.16	0.15	0.30	0.11	0.08	0.09	0.02

A) INCUBATION LIGHT INTENSITIES WERE 89, 38, 13, 4.9, 1.7, 0.27 PERCENT RESPECTIVELY.