

RV DAVID STARR JORDAN			CALCOFI CRUISE 9804								STATION 67 60					
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
36 27.1 N	122 46.2 W	21/ 4/98	1843 UTC	9 m	04	1211 - 1918 PST	1211 PST	1918 PST	273.5 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	13.33	31.965	23.979	6.48	108.1	1.0	0.19	0.1	0.00	1.54	0.38	71. A	17.4	16.7	17.1	0.21
7	13.28	31.976	23.997	6.48	107.9	1.0	0.17	0.0	0.00	1.49	0.46	30.	20.7	21.4	21.1	0.18
14	13.26	32.506	24.411	6.28	104.9	0.9	0.24	0.0	0.00	0.75	0.21	9.2	8.3	7.7	8.0	0.13
19	13.23	32.652	24.530	6.20	103.6	0.9	0.27	0.0	0.00	0.58	0.15	3.9	2.8	3.1	3.0	0.15
25	13.21	32.764	24.621	6.15	102.8	0.9	0.31	0.1	0.00	0.38	0.11	1.4	0.73	0.69	0.71	0.11
34	13.18	32.843	24.688	6.10	101.9	1.3	0.33	0.1	0.00	0.26	0.09	0.30	0.03	0.03	0.03	0.08
RV DAVID STARR JORDAN			CALCOFI CRUISE 9804								STATION 70 60					
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
35 53.3 N	122 23.0 W	20/ 4/98	1824 UTC	11 m	04	1208 - 1912 PST	1208 PST	1912 PST	231.5 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	12.98	32.384	24.372	6.41	106.4	0.5	0.21	0.0	0.00	1.07	0.39	76. A	6.6	9.2	7.9	0.20
9	12.97	32.384	24.374	6.42	106.5	0.5	0.21	0.0	0.00	1.04	0.35	28.	10.8	10.3	10.6	0.21
17	12.97	32.383	24.373	6.43	106.7	0.5	0.21	0.0	0.00	0.95	0.32	9.3	8.3	10.7	9.5	0.25
24	12.96	32.397	24.386	6.41	106.3	0.5	0.21	0.0	0.00	1.07	0.49	3.5	4.2	4.3	4.2	0.19
30	12.97	32.753	24.660	6.18	102.8	1.1	0.30	0.0	0.00	0.50	0.19	1.5	1.2	1.0	1.1	0.12
41	13.00	32.847	24.727	6.01	100.1	1.5	0.34	0.0	0.01	0.49	0.23	0.33	0.12	0.12	0.12	0.06
RV DAVID STARR JORDAN			CALCOFI CRUISE 9804								STATION 73 80					
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 39.7 N	123 23.3 W	19/ 4/98	1802 UTC	18 m	01	1210 - 1918 PST	1212 PST	1918 PST	110.9 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	14.33	33.199	24.727	5.94	101.9	2.0	0.32	0.0	0.00	0.20	0.05	84. A	2.2	2.1	2.1	0.07
14	14.32	33.202	24.732	5.95	102.0	2.0	0.32	0.0	0.00	0.20	0.05	30.	3.6	3.7	3.7	0.07
27	14.31	33.198	24.732	5.94	101.8	2.0	0.32	0.0	0.00	0.21	0.05	10.	2.5	2.5	2.5	0.07
39	14.32	33.199	24.731	5.94	101.9	1.9	0.32	0.0	0.00	0.20	0.05	3.6	1.1	1.2	1.1	0.07
50	14.32	33.197	24.729	5.95	102.0	1.9	0.32	0.0	0.00	0.19	0.05	1.4	0.16	0.16	0.16	0.07
59	14.21	33.214	24.766	5.91	101.1	2.0	0.33	0.0	0.01	0.41	0.20					
70	13.94	33.250	24.850	5.74	97.7	2.9	0.39	0.6	0.10	0.75	0.42	0.26	0.15	0.15	0.15	0.04
RV DAVID STARR JORDAN			CALCOFI CRUISE 9804								STATION 73 55					
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
35 28.6 N	121 36.4 W	18/ 4/98	1843 UTC	12 m	05	1205 - 1908 PST	1205 PST	1908 PST	701.9 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	12.63	32.883	24.826	6.16	101.8	1.7	0.36	0.5	0.10	3.28	1.01	77. A	33.9	30.9	32.4	0.28
9	12.62	32.883	24.828	6.16	101.8	1.7	0.36	0.6	0.10	3.06	1.15	32.	43.6	43.3	43.4	0.31
17	12.57	32.927	24.872	5.85	96.6	2.6	0.44	1.6	0.15	1.68	0.74	11.	20.4	18.1	19.3	0.16
26	12.41	33.016	24.972	5.51	90.7	4.2	0.58	3.6	0.15	0.49	0.36	3.6	3.0	3.4	3.2	0.07
32	12.02	33.267	25.241	4.96	81.1	7.8	0.83	7.9	0.06	0.43	0.31	1.7	0.95	0.94	0.94	0.06
39	11.84	33.316	25.313	4.78	77.9	9.1	0.95	9.5	0.06	0.43	0.31					
46	11.77	33.420	25.407	4.53	73.7	10.4	1.04	11.3	0.05	0.40	0.37	0.28	0.09	0.11	0.10	0.04
RV DAVID STARR JORDAN			CALCOFI CRUISE 9804								STATION 77 60					
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 43.2 N	121 32.8 W	17/ 4/98	1930 UTC	17 m	03	1216 - 1904 PST	1206 PST	1904 PST	201.2 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
2	13.85	32.870	24.573	6.10	103.4	1.1	0.28	0.0	0.00	0.33	0.12	83. A	5.0	3.5	4.2	0.10
12	13.84	32.870	24.575	6.09	103.2	1.1	0.28	0.0	0.00	0.34	0.12	34.	6.2	5.7	6.0	0.09
24	13.75	32.883	24.604	6.10	103.2	1.1	0.28	0.0	0.00	0.37	0.14	11.	5.0	4.6	4.8	0.09
36	13.73	32.898	24.620	6.10	103.1	1.1	0.27	0.0	0.00	0.44	0.17	3.9	2.7	3.2	2.9	0.12
47	13.75	32.914	24.629	6.09	103.0	1.1	0.28	0.0	0.00	0.46	0.18	1.4	1.0	0.93	0.97	0.10
56	14.20	33.114	24.691	5.92	101.2	1.6	0.30	0.0	0.00	0.53	0.19					
64	14.10	33.173	24.757	5.86	100.0	2.2	0.34	0.1	0.02	0.69	0.32	0.31	0.15	0.14	0.15	0.07
RV DAVID STARR JORDAN			CALCOFI CRUISE 9804								STATION 77 100					
LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 23.2 N	124 19.9 W	16/ 4/98	1858 UTC	28 m	01	1217 - 1911 PST	1217 PST	1911 PST	81.9 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
1	15.22	33.424	24.710	5.81	101.6	2.4	0.25	0.0	0.00	0.09	0.02	95. A	1.1	1.1	1.1	0.06
21	15.20	33.430	24.720	5.81	101.6	2.4	0.24	0.0	0.00	0.09	0.02	32.	1.7	1.7	1.7	0.07
30	15.21	33.435	24.722	5.80	101.4	2.4	0.23	0.0	0.00	0.09	0.02					
40	15.22	33.438	24.722	5.81	101.6	2.4	0.23	0.0	0.00	0.10	0.02	11.	1.1	1.0	1.1	0.08
49	15.24	33.451	24.728	5.79	101.3	2.4	0.23	0.0	0.00	0.10	0.02					
60	15.37	33.503	24.740	5.77	101.2	2.4	0.23	0.0	0.00	0.12	0.03	3.7	0.51	0.56	0.53	0.09
68	15.35	33.500	24.742	5.78	101.4	2.4	0.23	0.0	0.00	0.12	0.04					
76	15.36	33.501	24.741	5.78	101.4	2.4	0.23	0.0	0.00	0.14	0.04	1.6	0.22	0.22	0.22	0.07
87	15.37	33.503	24.741	5.77	101.2	2.4	0.23	0.0	0.00	0.15	0.05					
97	15.40	33.514	24.743	5.76	101.1	2.4	0.22	0.0	0.00	0.18	0.06					
106	15.49	33.557	24.756	5.73	100.8	2.4	0.22	0.0	0.00	0.28	0.11	0.30	0.04	0.04	0.04	0.03

RV DAVID STARR JORDAN

CALCOFI CRUISE 9804

STATION 80 70

LATITUDE 33 48.8 N LONGITUDE 121 51.0 W DAY/MO/YR 15/ 4/98 CAST TIME 1834 UTC SECCHI 19 m FOREL 03 INCUBATION TIME 1207 - 1904 PST LAN 1207 PST CIVIL TWILIGHT 1904 PST INTEGRATED VALUE 275.7 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
2	14.23	33.094	24.667	5.99	102.5	1.9	0.30	0.0	0.00	0.32	0.09	85. A	3.1	3.0	3.0	0.11
15	14.18	33.096	24.680	5.99	102.4	1.9	0.30	0.0	0.00	0.32	0.10	30.	6.2	6.2	6.2	0.12
27	14.19	33.109	24.688	5.98	102.2	1.9	0.30	0.0	0.00	0.34	0.09	11.	4.9	4.9	4.9	0.12
41	14.18	33.106	24.688	5.98	102.2	1.9	0.30	0.0	0.00	0.41	0.13	3.6	3.0	3.2	3.1	0.10
46	14.36	33.221	24.740	5.87	100.7	1.8	0.31	0.0	0.03	0.85	0.38					
53	14.23	33.279	24.812	5.82	99.7	2.2	0.35	0.2	0.15	1.13	0.60	1.4	4.3	4.3	4.3	0.06
61	14.01	33.315	24.885	5.65	96.3	2.7	0.41	1.1	0.30	0.80	0.58					
72	13.70	33.437	25.044	5.24	88.8	4.7	0.58	4.0	0.11	0.44	0.44	0.30	0.22	0.22	0.22	0.03

RV DAVID STARR JORDAN

CALCOFI CRUISE 9804

STATION 83 40.6

LATITUDE 34 13.8 N LONGITUDE 119 24.7 W DAY/MO/YR 14/ 4/98 CAST TIME 1830 UTC SECCHI 12 m FOREL 05 INCUBATION TIME 1158 - 1857 PST LAN 1158 PST CIVIL TWILIGHT 1857 PST INTEGRATED VALUE 1510.1 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	12.73	33.625	25.382	5.34	88.8	8.4	0.89	8.2	0.18	3.57	0.82	88. A	51.3	52.4	51.9	0.31
5	12.66	33.634	25.402	5.32	88.4	8.3	0.88	8.3	0.17	3.64	0.82					
9	12.48	33.625	25.430	5.19	85.9	9.0	0.93	8.8	0.17	4.13	0.94	32.	78.2	72.0	75.1	0.29
17	12.39	33.632	25.453	5.01	82.8	9.7	0.99	9.7	0.17	3.35	0.86	11.	65.7	65.8	65.7	0.17
26	12.30	33.667	25.498	4.68	77.2	12.2	1.20	12.4	0.14	2.92	0.82	3.6	20.0	20.7	20.3	0.14

RV DAVID STARR JORDAN

CALCOFI CRUISE 9804

STATION 83 70

LATITUDE 33 14.5 N LONGITUDE 121 26.4 W DAY/MO/YR 13/ 4/98 CAST TIME 1823 UTC SECCHI 32 m FOREL 02 INCUBATION TIME 1207 - 1857 PST LAN 1207 PST CIVIL TWILIGHT 1857 PST INTEGRATED VALUE 215.6 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	14.59	33.219	24.688	5.87	101.2	2.1	0.30	0.0	0.00	0.22	0.06	91. A	2.4	2.4	2.4	0.06
13	14.58	33.217	24.689	5.89	101.6	2.0	0.30	0.0	0.00	0.22	0.06					
23	14.57	33.218	24.692	5.88	101.4	2.0	0.30	0.0	0.00	0.21	0.06	33.	3.3	3.2	3.2	0.07
34	14.57	33.218	24.692	5.89	101.5	2.0	0.30	0.0	0.00	0.22	0.06					
46	14.57	33.219	24.694	5.88	101.4	1.9	0.30	0.0	0.00	0.22	0.06	11.	2.5	2.4	2.4	0.07
57	14.57	33.221	24.695	5.88	101.3	1.9	0.30	0.0	0.00	0.23	0.06					
68	14.57	33.217	24.693	5.87	101.2	1.9	0.30	0.0	0.00	0.23	0.06	3.8	1.1	1.2	1.1	0.06
77	14.56	33.220	24.697	5.87	101.1	1.8	0.30	0.0	0.01	0.27	0.10					
88	14.38	33.284	24.785	5.75	98.8	2.5	0.33	0.3	0.15	0.56	0.35	1.5	1.4	1.4	1.4	0.03
96	14.03	33.365	24.921	5.46	93.1	3.8	0.46	2.4	0.06	0.34	0.31					
103	13.71	33.384	25.002	5.33	90.3	4.5	0.55	3.8	0.03	0.26	0.24					
112	12.76	33.437	25.233	4.96	82.5	7.0	0.77	7.2	0.03	0.18	0.18					
122	11.79	33.496	25.464	4.57	74.5	10.4	1.02	11.0	0.02	0.09	0.11	0.29	0.02	0.01	0.02	0.03

RV DAVID STARR JORDAN

CALCOFI CRUISE 9804

STATION 83 100

LATITUDE 32 14.7 N LONGITUDE 123 29.2 W DAY/MO/YR 12/ 4/98 CAST TIME 1850 UTC SECCHI 29 m FOREL 01 INCUBATION TIME 1215 - 1902 PST LAN 1215 PST CIVIL TWILIGHT 1902 PST INTEGRATED VALUE 154.0 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	15.25	33.383	24.672	5.81	101.6	2.3	0.28	0.1	0.00	0.16	0.03	90. A	1.3	1.3	1.3	0.07
11	15.22	33.382	24.678	5.81	101.6	2.3	0.28	0.1	0.00	0.16	0.04					
21	15.23	33.381	24.675	5.82	101.8	2.3	0.28	0.1	0.00	0.16	0.04	33.	2.5	2.5	2.5	0.07
31	15.22	33.385	24.681	5.81	101.6	2.3	0.28	0.1	0.00	0.16	0.04					
40	15.21	33.380	24.680	5.82	101.7	2.3	0.28	0.1	0.00	0.17	0.04	12.	2.0	1.8	1.9	0.08
52	15.21	33.385	24.684	5.81	101.5	2.3	0.28	0.1	0.00	0.17	0.04					
61	15.20	33.380	24.682	5.81	101.5	2.3	0.27	0.1	0.00	0.19	0.06	4.0	0.96	1.1	1.0	0.07
68	15.17	33.380	24.689	5.81	101.5	2.3	0.29	0.1	0.00	0.23	0.09					

79	15.06	33.388	24.720	5.77	100.5	2.3	0.28	0.1	0.01	0.40	0.22	1.5	1.3	1.4	1.3	0.03
89	14.90	33.412	24.773	5.68	98.7	2.8	0.33	0.6	0.04	0.43	0.25					
101	13.77	33.426	25.022	5.37	91.2	4.4	0.50	3.0	0.14	0.36	0.31					
111	12.32	33.440	25.320	4.81	79.2	8.4	0.89	8.9	0.05	0.24	0.30	0.28	0.10	0.11	0.10	0.01

RV DAVID STARR JORDAN

CALCOFI CRUISE 9804

STATION 87 100

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
31 39.5 N	123 4.2 W	11/ 4/98	1938 UTC	29 m	01	1232 - 1905 PST	1213 PST	1905 PST	60.0 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
3	15.51	33.409	24.635	5.77	101.5	1.8	0.28	0.0	0.00	0.08	0.02	85. A	0.02	0.02	0.02	0.03
10	15.49	33.408	24.639	5.78	101.6	1.8	0.23	0.0	0.00	0.10	0.01					
21	15.50	33.409	24.637	5.77	101.5	1.8	0.24	0.0	0.00	0.09	0.01	33.	1.1	1.4	1.2	0.05
31	15.48	33.411	24.644	5.78	101.6	1.8	0.24	0.0	0.00	0.09	0.02					
40	15.48	33.409	24.643	5.78	101.6	1.8	0.24	0.0	0.00	0.09	0.02	12.	1.3	1.3	1.3	0.04
52	15.47	33.410	24.646	5.77	101.4	1.9	0.23	0.0	0.00	0.09	0.02					
61	15.45	33.414	24.654	5.79	101.7	1.9	0.24	0.0	0.00	0.11	0.02	4.0	0.39	0.43	0.41	0.05
70	15.41	33.437	24.681	5.80	101.8	1.9	0.23	0.0	0.00	0.13	0.04					
78	15.44	33.477	24.705	5.76	101.2	1.9	0.22	0.0	0.00	0.18	0.06	1.6	0.12	0.12	0.12	0.05
89	15.58	33.561	24.739	5.69	100.3	2.0	0.21	0.0	0.00	0.28	0.15					
100	15.14	33.624	24.885	5.51	96.3	2.8	0.28	0.8	0.08	0.41	0.29					
110	14.68	33.641	24.998	5.40	93.5	3.5	0.37	1.8	0.10	0.37	0.23	0.30	0.10	0.00	0.05	0.05

RV DAVID STARR JORDAN

CALCOFI CRUISE 9804

STATION 87 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 0.0 N	120 21.8 W	10/ 4/98	1836 UTC	36 m	01	1202 - 1856 PST	1202 PST	1856 PST	268.7 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
1	15.26	33.402D	24.684	5.80	101.5	1.8	0.28	0.0	0.00	0.17	0.05	96. A	2.2	2.2	2.2	0.08
15	15.18	33.401	24.701	5.83	101.9	1.8	0.28	0.0	0.00	0.19	0.05					
26	15.10	33.380	24.703	5.83	101.7	1.9	0.28	0.0	0.00	0.29	0.08	33.	3.6	3.6	3.6	0.12
38	14.97	33.356	24.713	5.84	101.6	1.9	0.29	0.0	0.00	0.28	0.09					
51	14.89	33.338	24.717	5.85	101.6	1.9	0.29	0.0	0.00	0.25	0.07	11.	2.8	2.7	2.8	0.13
60	14.89	33.335	24.715	5.86	101.7	2.0	0.29	0.0	0.00	0.28	0.08					
69	14.88	33.338	24.720	5.83	101.2	2.0	0.29	0.0	0.00	0.34	0.12					
76	14.88	33.336	24.719	5.83	101.2	2.0	0.29	0.0	0.01	0.40	0.12	3.9	2.2	2.3	2.2	0.04
87	14.83	33.343	24.735	5.61	97.3	2.2	0.26	0.0	0.02	0.33	0.15					
97	14.29	33.371	24.872	5.56	95.4	3.3	0.39	1.5	0.14	0.33	0.23	1.6	0.87	0.91	0.89	0.05
108	13.25	33.457	25.151	5.19	87.2	5.7	0.61	5.2	0.03	0.19	0.23					
117	12.45	33.476	25.323	5.07	83.8	7.1	0.71	6.9	0.03	0.15	0.19					
127	11.52	33.514	25.528	4.80	77.8	9.9	0.91	10.1	0.02	0.11	0.14					
138	10.90	33.547	25.665	4.39	70.2	13.5	1.19	14.0	0.01	0.09	0.10	0.28	0.03	0.05	0.04	0.02

RV DAVID STARR JORDAN

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STATION 87 35

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
33 49.4 N	118 37.7 W	9/ 4/98	1848 UTC	10 m	03	1157 - 1847 PST	1157 PST	1847 PST	2108.3 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
1	14.98	33.645	24.933	5.79	100.9	3.9	0.55	2.7	0.21	4.65	1.08	86. A	110.8	96.6	103.7	0.34
7	14.65	33.636	24.997	5.80	100.4	4.0	0.57	2.7	0.22	5.21	1.14	34.	123.1	121.1	122.1	0.60
14	14.49	33.634	25.030	5.66	97.7	4.4	0.60	3.1	0.22	6.41	1.42	12.	97.9	89.7	93.8	0.29
20	14.38	33.635	25.054	5.31	91.4	5.2	0.67	4.7	0.26	5.20	1.43	4.6	30.8	36.9	33.9	0.14
27	14.27	33.637	25.079	5.07	87.1	6.0	0.76	5.8	0.29	3.84	1.50	1.6	8.0	6.6	7.3	0.13
39	13.29	33.667	25.304	3.94	66.3	11.0	1.16	11.5	0.19	0.62	0.74	0.25	0.05	0.08	0.07	0.13

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CALCOFI CRUISE 9804

STATION 90 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE
32 5.0 N	120 37.8 W	7/ 4/98	1858 UTC	33 m	01	1205 - 1850 PST	1205 PST	1850 PST	112.3 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	15.58	33.466	24.663	5.75	101.3	2.4	0.27	0.1	0.00	0.09	0.02	91. A	1.2	1.2	1.2	0.05
12	15.58	33.457	24.656	5.75	101.3	2.4	0.27	0.1	0.00	0.09	0.02					
25	15.57	33.456	24.658	5.75	101.3	2.3	0.28	0.1	0.00	0.10	0.01	31.	1.8	1.8	1.8	0.07
37	15.62	33.478	24.665	5.74	101.2	2.3	0.27	0.1	0.00	0.10	0.02					
47	15.69	33.497	24.664	5.74	101.4	2.3	0.26	0.1	0.00	0.10	0.02	11.	1.3	1.2	1.2	0.08
58	15.89	33.575	24.679	5.68	100.7	2.2	0.24	0.1	0.00	0.12	0.03					
70	15.93	33.592	24.684	5.68	100.8	2.2	0.23	0.1	0.00	0.15	0.05	3.9	0.67	0.70	0.69	0.08
78	15.92	33.586	24.682	5.69	101.0	2.2	0.24	0.0	0.00	0.15	0.04					
89	15.90	33.589	24.689	5.68	100.8	2.1	0.23	0.0	0.00	0.20	0.06	1.6	0.44	0.43	0.44	0.07
98	15.88	33.593	24.697	5.67	100.6	2.1	0.23	0.0	0.00	0.27	0.13					
108	15.25	33.606	24.847	5.53	96.8	3.0	0.31	0.7	0.06	0.47	0.38					
116	14.18	33.537	25.023	5.38	92.2	4.2	0.46	2.7	0.11	0.35	0.33					

125 13.30 33.498 25.174 5.23 88.0 5.5 0.64 4.7 0.06 0.26 0.37 0.30 0.11 0.11 0.11 0.02  
 RV DAVID STARR JORDAN CALCOFI CRUISE 9804 STATION 90 110

LATITUDE LONGITUDE DAY/MO/YR CAST TIME SECCHI FOREL INCUBATION TIME LAN CIVIL TWILIGHT INTEGRATED VALUE  
 30 46.1 N 123 20.9 W 6/ 4/98 1852 UTC 45 m 01 1215 - 1857 PST 1215 PST 1857 PST 137.9 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
2	16.48	33.679	24.623	5.63	101.1	1.9	0.23	0.0	0.00	0.07	0.01	93. A	0.85	0.86	0.85	0.05
19	16.47	33.684	24.630	5.64	101.3	1.9	0.23	0.0	0.00	0.07	0.01					
34	16.42	33.679	24.638	5.65	101.3	1.9	0.23	0.0	0.00	0.07	0.01	31.	1.1	1.2	1.2	0.08
48	16.36	33.663	24.640	5.64	101.0	2.0	0.22	0.0	0.00	0.07	0.01					
64	16.28	33.653	24.651	5.66	101.2	2.0	0.22	0.0	0.00	0.09	0.02	11.	0.99	0.96	0.98	0.08
80	16.09	33.610	24.662	5.66	100.8	1.9	0.23	0.0	0.00	0.09	0.04					
96	16.07	33.606	24.664	5.68	101.1	2.1	0.23	0.0	0.00	0.14	0.04	3.8	0.64	0.72	0.68	0.05
105	16.10	33.621	24.669	5.67	101.0	2.0	0.22	0.0	0.00	0.16	0.04					
114	15.99	33.621	24.694	5.67	100.8	2.0	0.22	0.0	0.00	0.27	0.17					
123	16.24	33.724	24.717	5.60	100.1	2.0	0.21	0.0	0.01	0.26	0.11	1.5	0.88	0.88	0.88	0.03
135	15.68	33.747	24.862	5.48	96.9	2.6	0.27	0.7	0.07	0.28	0.24					
148	14.35	33.622	25.054	5.27	90.6	4.1	0.48	2.9	0.06	0.21	0.22					
160	12.73	33.584	25.354	5.16	85.8	5.5	0.61	4.8	0.04	0.16	0.18					
172	11.75	33.473	25.455	4.82	78.4	9.3	0.95	9.7	0.02	0.12	0.13	0.28	0.06	0.06	0.06	0.01

RV DAVID STARR JORDAN CALCOFI CRUISE 9804 STATION 93 110

LATITUDE LONGITUDE DAY/MO/YR CAST TIME SECCHI FOREL INCUBATION TIME LAN CIVIL TWILIGHT INTEGRATED VALUE  
 30 10.7 N 122 55.5 W 5/ 4/98 1848 UTC 46 m 01 1215 - 1859 PST 1215 PST 1859 PST 216.9 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
1	16.84	33.656	24.521	5.60	101.3	2.1	0.25	0.0	0.00	0.07	0.02	97. A	0.58	0.60	0.59	0.05
2	16.84	33.660	24.525													
19	16.84	33.663	24.527	5.59	101.1	2.1	0.24	0.0	0.00	0.08	0.02					
34	16.84	33.664	24.529	5.60	101.3	2.1	0.24	0.0	0.00	0.08	0.02	32.	1.1	1.2	1.2	0.06
49	16.83	33.666	24.533	5.60	101.2	2.0	0.24	0.0	0.00	0.09	0.02					
65	16.82	33.664	24.535	5.60	101.2	2.1	0.24	0.0	0.00	0.11	0.03	11. B		1.4	1.4	0.04
81	16.79	33.655	24.535	5.60	101.1	2.1	0.24	0.0	0.00	0.13	0.04					
98	16.34	33.606	24.603	5.63	100.8	2.2	0.25	0.0	0.00	0.25	0.12	3.8	1.8		1.8	0.03
107	16.38	33.627	24.610	5.63	100.9	2.2	0.24	0.0	0.00	0.17	0.05					
115	16.28	33.623	24.630	5.62	100.5	2.1	0.24	0.0	0.00	0.23	0.10					
125	14.44	33.442	24.896	5.45	93.8	3.5	0.45	1.6	0.08	0.35	0.36	1.5	1.7		1.7	0.01
126	14.50	33.448	24.888													
138	13.12	33.445	25.169	5.09	85.2	5.8	0.70	5.3	0.06	0.28	0.32					
151	12.16	33.506	25.403	4.78	78.5	8.0	0.87	8.3	0.03	0.17	0.21					
164	11.45	33.543	25.564	4.59	74.2	10.9	1.05	11.4	0.01	0.10	0.14					
179	10.65	33.641	25.783	4.08	64.9	15.7	1.33	16.0	0.01	0.04	0.05	0.25	0.03	0.02	0.02	0.01

\*\*\*B) Missing light bottle samples are due to torn filters.

RV DAVID STARR JORDAN CALCOFI CRUISE 9804 STATION 93 70

LATITUDE LONGITUDE DAY/MO/YR CAST TIME SECCHI FOREL INCUBATION TIME LAN CIVIL TWILIGHT INTEGRATED VALUE  
 31 30.8 N 120 15.1 W 4/ 4/98 1836 UTC 34 m 01 1204 - 1850 PST 1204 PST 1850 PST 135.1 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	15.99	33.535	24.624	5.68	100.9	2.1	0.26	0.0	0.00	0.10	0.03	91. A	0.97	1.1	1.0	0.01
14	15.95	33.535	24.634	5.69	101.0	2.1	0.26	0.0	0.00	0.11	0.03					
25	15.93	33.535	24.638	5.68	100.8	2.1	0.26	0.0	0.00	0.11	0.03	32.	1.8	1.8	1.8	0.08
36	15.92	33.533	24.640	5.69	101.0	2.1	0.25	0.0	0.00	0.12	0.03					
47	15.90	33.528	24.641	5.69	100.9	2.1	0.25	0.0	0.00	0.12	0.03	12.	1.5	1.4	1.5	0.08
59	15.89	33.525	24.641	5.69	100.9	2.1	0.25	0.0	0.00	0.13	0.03					
72	15.85	33.516	24.644	5.70	101.0	2.1	0.26	0.0	0.00	0.14	0.04	3.9	0.88	0.87	0.88	0.06
83	15.73	33.492	24.652	5.71	100.9	2.1	0.26	0.0	0.00	0.23	0.07					
93	15.66	33.477	24.657	5.71	100.7	2.1	0.27	0.0	0.00	0.27	0.09	1.5	0.84	0.86	0.85	0.02
100	15.64	33.473	24.658	5.70	100.5	2.0	0.27	0.0	0.00	0.26	0.10					
112	14.88	33.470	24.823	5.52	95.9	2.9	0.38	1.2	0.12	0.35	0.34					
119	13.97	33.443	24.995	5.32	90.7	4.4	0.54	3.4	0.07	0.22	0.25					
131	12.80	33.454	25.239	4.84	80.5	7.7	0.85	8.0	0.01	0.06	0.08	0.27	0.03	0.03	0.03	0.02

RV DAVID STARR JORDAN CALCOFI CRUISE 9804 STATION 93 45

LATITUDE LONGITUDE DAY/MO/YR CAST TIME SECCHI FOREL INCUBATION TIME LAN CIVIL TWILIGHT INTEGRATED VALUE  
 32 20.8 N 118 33.1 W 3/ 4/98 1846 UTC 21 m 02 1159 - 1842 PST 1157 PST 1841 PST 605.7 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
1	15.22	33.403	24.694	5.96	104.2	2.2	0.30	0.0	0.00	0.30	0.17	93. A	9.1	9.2	9.1	0.19
8	15.13	33.412	24.721	5.95	103.9	2.2	0.30	0.0	0.00	0.30	0.18					
16	14.72	33.391	24.793	5.95	103.0	2.3	0.31	0.0	0.01	0.61	0.44	31.	16.8	13.5	15.2	0.22
22	14.71	33.397	24.800	5.88	101.8	2.3	0.31	0.0	0.03	0.75	0.49					

30	14.76	33.429	24.814	5.91	102.4	2.3	0.31	0.0	0.02	0.96	0.76	11.	12.6	13.2	12.9	0.17
38	14.77	33.438	24.819	5.90	102.2	2.3	0.31	0.0	0.02	0.88	0.64					
45	14.79	33.457	24.830	5.90	102.3	2.3	0.31	0.0	0.02	0.88	0.58	3.7	5.9	5.7	5.8	0.13
58	14.81	33.466	24.833	5.86	101.6	2.3	0.32	0.0	0.03	0.89	0.59	1.4	2.4	2.1	2.2	0.11
68	14.82	33.489	24.849	5.85	101.5	2.3	0.33	0.0	0.04	0.85	0.70					
80	14.71	33.505	24.885	5.72	99.0	2.7	0.37	0.4	0.10	0.61	0.44	0.29	0.11	0.10	0.11	0.08