

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 77 51

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
35 1.3 N	120 55.2 W	15/ 4/99	1915 UTC	9 m		1203 - 1903 PST	1204 PST	1903 PST	1490.2 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	µM/L	µM/L	µM/L	µM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
1	12.38	33.448	25.312	6.86	113.2	1.0	0.46	2.9	0.20	4.69	0.64	84. A	64.1	57.5	60.8	1.0
7	12.01	33.462	25.394	6.77	110.8	1.6	0.53	3.8	0.22	5.37	0.52	30.	74.2	70.2	72.2	1.4
14	11.69	33.473	25.462	6.68	108.6	1.6	0.55	4.5	0.21	6.35	1.75	9.2	62.5	67.3	64.9	0.72
20	11.65	33.470	25.467	6.60	107.2	1.6	0.58	4.6	0.21	6.62	2.04	3.3	37.9	36.5	37.2	0.45
26	11.56	33.475	25.488	6.50	105.4	2.6	0.62	5.3	0.22	6.75	1.35	1.2	14.8	15.6	15.2	0.26
37	11.15	33.507	25.587	6.05	97.2	8.9	0.94	9.2	0.23	5.64	1.41	0.18	0.60	0.66	0.63	0.16

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 77 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 43.3 N	123 38.0 W	14/ 4/99	1924 UTC	21 m		1214 - 1906 PST	1215 PST	1906 PST	461.1 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	µM/L	µM/L	µM/L	µM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	12.42	33.233	25.138	6.23	102.7	4.0	0.51	2.2	0.09	0.49	0.12	86. A	6.1	5.0	5.6	0.06
15	12.26	33.228	25.165	6.26	102.9	4.1	0.48	2.2	0.09	0.45	0.11	33.	9.7	10.8	10.3	0.12
31	12.06	33.281	25.244	6.24	102.1	4.3	0.55	3.1	0.13	0.60	0.17	10.	9.2	10.2	9.7	0.10
44	11.98	33.284	25.262	6.22	101.6	4.3	0.57	3.4	0.14	0.60	0.18	4.0	5.6	5.8	5.7	0.04
52	11.99	33.290	25.265	6.21	101.5	4.4	0.57	3.4	0.15	0.55	0.21					
59	11.94	33.304	25.285	6.11	99.8	4.8	0.61	3.9	0.17	0.53	0.28	1.3	2.1	2.0	2.1	0.09
68	11.64	33.396	25.413	5.63	91.4	7.9	0.83	7.4	0.27	0.27	0.14					
77	11.24	33.447	25.525	5.15	82.9	11.5	1.04	11.0	0.27	0.20	0.11					
85	10.61	33.542	25.711	4.31	68.5	17.2	1.39	16.6	0.08	0.15	0.10	0.20	0.05	0.05	0.05	0.05

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 80 80

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 29.1 N	122 31.8 W	13/ 4/99	1909 UTC	15 m		1211 - 1907 PST	1211 PST	1907 PST	773.8 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	µM/L	µM/L	µM/L	µM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	12.28	33.490 D	25.364	6.22	102.4	5.6	0.65	5.0	0.19	1.50	0.31	81. A	20.6	18.6	19.6	0.31
10	12.25	33.489	25.369	6.24	102.7	5.6	0.67	5.0	0.19	1.37	0.32	36.	30.8	27.1	29.0	0.25
22	12.24	33.489	25.371	6.22	102.3	5.6	0.66	5.1	0.19	1.39	0.30	11.	20.6	20.1	20.3	0.27
33	12.20	33.494	25.383	6.19	101.7	5.7	0.67	5.2	0.20	1.12	0.31	3.4	8.9	9.2	9.1	0.12
44	12.08	33.575	25.469	6.13	100.6	6.3	0.74	6.1	0.26	0.91	0.38	1.1	2.4	2.3	2.3	0.08
53	11.86	33.634	25.556	5.78	94.4	8.6	0.92	8.7	0.34	0.37	0.17					
61	11.89	33.657 D	25.569	5.88	96.1	8.7	0.93	8.6	0.27	0.28	0.15	0.19	0.04	0.06	0.05	0.05

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 82 47

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
34 17.0 N	120 1.5 W	12/ 4/99	1848 UTC	5 m		1201 - 1857 PST	1201 PST	1857 PST	1938.6 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	µM/L	µM/L	µM/L	µM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	11.37	33.726	25.717	7.61	123.1	1.1	0.30	0.1	0.06	20.21	6.10	54. A,B	85.9	77.0	81.5	0.81
7	11.26	33.730	25.740	7.38	119.1	1.4	0.34	0.5	0.07	18.37	7.06	12.	150.8	189.6	170.2	1.6
11	11.22	33.754	25.766	6.79	109.5	2.5	0.51	2.7	0.10	19.50	5.93	3.4	117.7	107.7	112.7	0.42
21	11.17	33.783	25.798	6.27	101.0	4.2	0.68	4.9	0.14	19.50	5.75	0.16	3.4	3.4	3.4	0.35

B) A VERY LOW SECCHI DUE TO VERY HIGH CHLOROPHYLL RESULTED IN THE NEAR SURFACE SAMPLE CALCULATION OF 54 PERCENT LIGHT. DUE TO VERY CLOSE SPACING OF LIGHT LEVELS, SAMPLES NORMALLY TAKEN AT 36 AND 1.3 PERCENT WERE OMITTED.

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 83 70

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 13.7 N	121 25.8 W	11/ 4/99	1802 UTC	14 m		1208 - 1856 PST	1207 PST	1856 PST	286.9 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	µM/L	µM/L	µM/L	µM/L	ug/L	ug/L	PCT	1	2	MEAN	DARK
2	12.54	33.154	25.053	6.16	101.8	3.4	0.40	1.1	0.06	0.74	0.16	80. A	2.3	1.8	2.1	0.06
10	12.54	33.153	25.053	6.17	101.9	3.4	0.40	1.1	0.06	0.61	0.14	33.	10.1	9.8	9.9	0.07
21	12.51	33.169	25.071	6.13	101.2	3.6	0.42	1.4	0.08	0.63	0.16	10.	9.8	9.7	9.7	0.08
31	12.23	33.331	25.251	5.94	97.6	5.5	0.62	4.3	0.19	0.56	0.17	3.3	4.0	4.6	4.3	0.05
41	12.12	33.441	25.357	5.92	97.1	6.4	0.70	5.6	0.21	0.59	0.21	1.1	2.4	2.5	2.5	0.05
48	12.12	33.480	25.388	5.97	98.0	6.7	0.73	5.9	0.21	0.70	0.25					
57	12.03	33.538	25.450	6.00	98.3	6.8	0.77	6.6	0.24	1.37	0.28	0.19	0.33	0.40	0.36	0.06

A) INCUBATION LIGHT INTENSITIES WERE 92, 36, 10, 3.6, 1.3, 0.19 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 83 110

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
31 54.9 N	124 10.7 W	10/ 4/99	1805 UTC	24 m		1218 - 1906 PST	1218 PST	1906 PST	101.5 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	14.42	33.467	24.915	5.88	101.2	2.8	0.25	0.0	0.00	0.23	0.05	88. A	1.7	1.6	1.7	0.05
17	14.42	33.465	24.914	5.88	101.2	2.7	0.25	0.0	0.00	0.22	0.06	34.	2.5	2.6	2.5	0.08
26	14.41	33.462	24.914	5.86	100.8	2.6	0.24	0.0	0.00	0.23	0.05					
37	14.42	33.464	24.914	5.87	101.0	2.6	0.25	0.0	0.00	0.23	0.05	9.4	1.6	1.6	1.6	0.05
53	14.42	33.466	24.916	5.87	101.0	2.6	0.25	0.0	0.00	0.23	0.05	3.4	0.64	0.66	0.65	0.05
68	14.43	33.464	24.913	5.88	101.2	2.6	0.25	0.0	0.00	0.21	0.06	1.3	0.11	0.11	0.11	0.06
78	14.45	33.477	24.919	5.86	100.9	2.6	0.24	0.0	0.00	0.24	0.05					
88	14.47	33.481	24.918	5.87	101.1	2.4	0.25	0.0	0.00	0.25	0.05					
100	14.52	33.493	24.917	5.85	100.9	2.4	0.25	0.0	0.00	0.26	0.06	0.17	0.01	0.01	0.01	0.03

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 87 50

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 19.5 N	119 39.8 W	8/ 4/99	1825 UTC	8 m		1201 - 1851 PST	1201 PST	1851 PST	1172.6 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
1	12.23	33.691	25.529	5.92	97.5	10.3	0.77	7.3	0.12	3.70	0.52	83. A	55.1	54.2	54.7	0.21
6	12.23	33.694	25.532	6.04	99.5	10.3	0.78	7.3	0.13	3.94	0.39	32.	76.4	93.3	84.8	0.45
13	12.19	33.691	25.537	5.87	96.6	10.3	0.78	7.5	0.12	4.01	0.55	8.3	50.2	53.8	52.0	0.50
18	12.18	33.692	25.540	5.86	96.4	10.3	0.79	7.5	0.12	3.70	0.54	3.2	19.4	18.3	18.8	0.13
24	12.14	33.695	25.550	5.83	95.8	10.4	0.81	7.9	0.13	3.96	0.51	1.00	7.7	7.0	7.3	0.16
33	12.01	33.707	25.584	5.68	93.1	11.3	0.89	8.9	0.14	4.20	0.73	0.18	0.53	0.43	0.48	0.18

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 87 90

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
31 59.7 N	122 23.2 W	9/ 4/99	1913 UTC	25 m		1214 - 1856 PST	1212 PST	1900 PST	221.5 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	13.04	33.049	24.875	6.10	101.8	2.7	0.34	0.0	0.01	0.31	0.10	88. A	1.5	1.6	1.5	0.04
18	13.02	33.049	24.879	6.11	101.9	2.6	0.32	0.0	0.00	0.31	0.09	33.	4.8	4.5	4.6	0.07
27	13.01	33.045	24.878	6.08	101.4	2.7	0.32	0.0	0.00	0.33	0.10					
36	13.03	33.051	24.879	6.09	101.6	2.6	0.35	0.0	0.00	0.31	0.09	11.	3.3	3.7	3.5	0.08
54	13.01	33.045	24.879	6.09	101.5	2.5	0.33	0.0	0.00	0.14	0.05	3.6	2.3	2.2	2.2	0.05
73	13.01	33.046	24.880	6.09	101.5	2.6	0.32	0.0	0.00	0.33	0.10	1.1	0.97	0.95	0.96	0.11
82	13.01	33.047	24.881	6.08	101.4	2.6	0.32	0.0	0.00	0.35	0.10					
91	13.03	33.058	24.886	6.05	100.9	2.6	0.33	0.1	0.01	0.30	0.10					
102	12.60	33.148	25.040	5.74	94.9	3.5	0.42	1.4	0.06	0.25	0.13	0.19	0.14	0.07	0.11	0.03

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 90 28

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
33 28.6 N	117 45.9 W	7/ 4/99	1837 UTC	8 m		1157 - 1846 PST	1155 PST	1846 PST	1622.8 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
1	13.02	33.598	25.304	6.37	106.6	1.0	0.26	0.9	0.05	5.10	1.39	83. A	85.8	84.7	85.3	0.65
6	12.99	33.608	25.317	6.36	106.4	1.0	0.27	0.9	0.05	5.37	1.13	32.	105.3	108.4	106.8	0.55
13	12.94	33.599	25.320	6.36	106.3	1.0	0.26	0.9	0.05	5.37	1.90	8.3	74.0	74.1	74.1	0.32
18	12.94	33.598	25.320	6.31	105.4	1.0	0.28	0.9	0.05	4.96	1.59	3.2	31.4	27.0	29.2	0.39
24	12.93	33.605	25.327	6.29	105.1	1.1	0.30	1.0	0.05	5.23	0.98	1.00	9.6	8.9	9.2	0.22
34	12.57	33.605	25.398	6.00	99.5	2.1	0.41	2.4	0.11	6.17	1.15	0.15	0.93	0.94	0.93	0.20

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 90 60

LATITUDE	LONGITUDE	DAY/MO/YR	CAST TIME	SECCHI	FOREL	INCUBATION TIME	LAN	CIVIL TWILIGHT	INTEGRATED VALUE							
32 25.3 N	119 57.3 W	6/ 4/99	1817 UTC	17 m		1206 - 1843 PST	1203 PST	1843 PST	293.4 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
2	13.09	33.421	25.153	6.10	102.1	4.6	0.46	1.8	0.08	0.63	0.12	83. A	4.3	4.1	4.2	0.05
11	12.99	33.422	25.173	6.10	101.9	4.6	0.46	1.8	0.08	0.69	0.14	37.	8.7	9.2	8.9	0.09
18	12.92	33.419	25.185	6.10	101.8	4.7	0.47	2.0	0.08	0.73	0.14					
26	12.79	33.456	25.240	6.05	100.7	5.2	0.52	2.7	0.10	0.58	0.14	9.6	6.8	7.5	7.1	0.07
37	12.63	33.533	25.331	6.01	99.7	6.4	0.63	4.4	0.17	0.68	0.19	3.5	4.0	3.7	3.8	0.03
48	12.44	33.572	25.398	5.99	99.0	7.5	0.73	5.7	0.22	0.51	0.14	1.3	1.5	1.3	1.4	0.05
58	12.24	33.617	25.472	5.97	98.3	8.8	0.83	7.4	0.30	0.60	0.23					
70	12.23	33.638	25.490	5.90	97.1	8.9	0.85	7.7	0.30	0.68	0.29	0.18	0.18	0.20	0.19	0.04

A) INCUBATION LIGHT INTENSITIES WERE 92, 36, 10, 3.6, 1.3, 0.19 PERCENT RESPECTIVELY.

PRIMARY PRODUCTIVITY CASTS

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 90 100

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	SECCHI	FOREL				INCUBATION TIME		LAN	CIVIL TWILIGHT	INTEGRATED VALUE			
31	5.1 N	122	39.6 W	5/ 4/99	1811 UTC	27 m						1214 - 1851 PST	1214 PST	1851 PST	143.7 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	33.323	24.844	5.93	101.6	2.6	0.29	0.0	0.00	0.23	0.07	89. A	0.44	0.40	0.42	0.02		
19	14.22	33.323	24.847	5.92	101.4	2.6	0.29	0.0	0.00	0.23	0.07	34.	2.5	2.8	2.6	0.03		
30	14.22	33.323	24.847	5.91	101.2	2.6	0.29	0.0	0.00	0.24	0.07							
41	14.22	33.323	24.847	5.91	101.2					0.22	0.07	9.7	2.4	2.4	2.4	0.03		
50	14.22	33.322	24.847	5.90	101.0	2.5	0.29	0.0	0.00	0.23	0.07							
59	14.22	33.323	24.848	5.89	100.9	2.6	0.28	0.0	0.00	0.24	0.07	3.5	1.4	1.3	1.3	0.01		
67	14.23	33.324	24.847	5.91	101.2	2.5	0.30	0.0	0.00	0.23	0.08							
78	14.23	33.323	24.846	5.90	101.0	2.4	0.29	0.0	0.00	0.23	0.07	1.2	0.58	0.58	0.58	0.02		
87	14.23	33.323	24.847	5.90	101.0	2.4	0.29	0.0	0.00	0.23	0.08							
99	13.96	33.374	24.943	5.73	97.6	2.9	0.37	0.9	0.08	0.31	0.25							
111	13.03	33.283	25.061	5.68	94.9	4.0	0.50	2.7	0.02	0.23	0.13	0.18	0.09	0.09	0.09	0.01		

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 93 50

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	SECCHI	FOREL				INCUBATION TIME		LAN	CIVIL TWILIGHT	INTEGRATED VALUE			
32	11.0 N	118	53.5 W	2/ 4/99	1934 UTC	15 m						1215 - 1841 PST	1200 PST	1843 PST	301.3 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	13.23	33.505	25.190	6.00	100.8	5.9	0.50	2.3	0.08			90. A	7.4	6.8	7.1	0.13		
11	13.23	33.505	25.190	6.01	101.0	5.7	0.49	2.3	0.08			32.	10.8	11.0	10.9	0.07		
22	13.17	33.505	25.202	6.00	100.7	5.7	0.50	2.4	0.08	0.83	0.18	11.	7.9	7.6	7.7	0.11		
31	13.11	33.512	25.220	6.07	101.7	5.7	0.51	2.6	0.09	0.92	0.21	4.2	4.1	4.0	4.1	0.02		
42	13.08	33.513	25.227	5.86	98.1	5.8	0.52	2.7	0.09	0.65	0.19	1.4	1.7	1.7	1.7	0.06		
52	12.94	33.516	25.257	5.84	97.5	6.3	0.58	3.7	0.13	0.63	0.21							
61	12.60	33.509	25.319	5.53	91.7	7.5	0.72	5.7	0.16	0.50	0.19	0.19	0.08	0.09	0.08	0.04		

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 93 80

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	SECCHI	FOREL				INCUBATION TIME		LAN	CIVIL TWILIGHT	INTEGRATED VALUE			
31	10.4 N	120	56.2 W	3/ 4/99	1827 UTC	20 m						1207 - 1849 PST	1207 PST	1851 PST	167.3 mg C/m2 B			
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	13.27	33.171	24.923	6.08	102.0	3.2	0.36	0.2	0.02	0.31	0.07	86. A,B	0.02U	0.02U	0.02U	0.02		
14	13.23	33.165	24.927	6.09	102.1	3.0	0.35	0.2	0.02	0.32	0.09	34.	2.6	2.4	2.5	0.10		
23	13.23	33.165	24.927	6.08	101.9	3.0	0.36	0.2	0.02	0.33	0.09							
30	13.23	33.177	24.937	6.08	101.9	3.0	0.35	0.2	0.03	0.33	0.09	10.	4.8	5.2	5.0	0.08		
36	13.25	33.231	24.975	6.11	102.5	3.2	0.35	0.3	0.03	0.34	0.10							
44	13.23	33.243	24.988	6.10	102.3	3.2	0.35	0.3	0.03	0.37	0.11	3.4	2.3	2.3	2.3	0.10		
51	13.23	33.246	24.991	6.09	102.1	3.2	0.35	0.3	0.03	0.36	0.11							
58	13.33	33.299	25.012	6.03	101.4	3.2	0.36	0.5	0.05	0.22	0.08	1.2	0.59	0.60	0.59	0.07		
71	12.60	33.370	25.211	5.87	97.2	5.0	0.56	3.2	0.32	0.31	0.16							
91	11.21	33.468	25.547	4.88	78.5	12.5	1.10	12.5	0.03	0.07	0.07	0.09	-0.01	0.01	0.00	0.07		

B) INTEGRATED VALUE CALCULATED USING A SURFACE VALUE DERIVED FROM THE SECOND DEPTH UPTAKE AND THE CRUISE MEAN RATIO OF THE SURFACE AND SECOND DEPTH UPTAKES.

RV DAVID STARR JORDAN

CALCOFI CRUISE 9904

STATION 93 120

LATITUDE		LONGITUDE		DAY/MO/YR	CAST TIME	SECCHI	FOREL				INCUBATION TIME		LAN	CIVIL TWILIGHT	INTEGRATED VALUE			
29	51.1 N	123	34.8 W	4/ 4/99	2010 UTC	26 m						1305 - 1902 PST	1217 PST	1902 PST	57.2 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		
3	16.11	33.947	24.914	5.69	101.6	2.7	0.22	0.0	0.00	0.17	0.03	84. A	1.2	1.1	1.2	0.03		
17	16.10	33.946	24.916	5.67	101.2	2.7	0.21	0.0	0.00	0.16	0.04	37.	1.4	1.4	1.4	0.04		
39	16.11	33.949	24.917	5.66	101.1	2.7	0.21	0.0	0.00	0.16	0.05	10.	0.76	0.75	0.76	0.05		
56	16.11	33.947	24.916	5.67	101.2	2.5	0.21	0.0	0.00	0.15	0.04	3.7	0.21	0.22	0.21	0.05		
75	16.11	33.949	24.918	5.65	100.9	2.5	0.21	0.0	0.00	0.14	0.04	1.2	0.05	0.06	0.05	0.05		
83	16.11	33.953	24.921	5.65	100.9	2.5	0.21	0.0	0.00	0.15	0.05							
95	16.12	33.951	24.918	5.67	101.3	2.5	0.21	0.0	0.00	0.16	0.05							
106	16.12	33.952	24.919	5.64	100.7	2.4	0.21	0.0	0.00	0.16	0.10	0.19	0.02	0.00	0.01	0.03		

A) INCUBATION LIGHT INTENSITIES WERE 92, 36, 10, 3.6, 1.3, 0.19 PERCENT RESPECTIVELY.

