[1]

Table 1: Pacific Cruise Summary

WOCE Leg	No	EXPOCODE	Ship	Date	Sta	DIC	TA	CFC	^{14}C
WOCE									
P17N[a]	1	31DSCGC91_1	Discoverer	2/16 - 2/24/91	12[b]	9	0	10	11[c]
P02	2	49K6KY9401_1	Kaiyo-Maru	1/8 - 2/10/94	63[d]	59	57	59	0[e]
P06	3	316N138/3,4,5	Knorr	5/2 - 7/30/92	258[d]	107[f]	59[f]	156	50[f]
P08S	4	49XK9605	Kaiyo	6/17 - 7/2/96	27[d]	10[d]	2	0	10[d]
P09	5	49RY9407_1	Ryofu Maru	7/7 - 8/25/94	95[d]	22	22[g]	19	10
P10	6	3250TN026/1	Thompson	10/5 - 11/10/93	94[d]	34[h]	34[h]	68	38[d]
P13N	7	31VIC92_0,1,2	Vickers	8/4 - 10/21/92	87[d]	77[i]	79[i]	83	41[d]
P14N	8	325023_1 325024_1	Thompson	7/5 - 9/1/93	193[d]	70	69	135	0
P14S15S	9	31DSCG96_1,2	Discoverer	1/5 - 3/10/96	182[d]	165	157	165	0[j]
P15N	10	18DD9403_1,2	Tulley	9/6 - 11/10/94	122[d]	69	71	0	0[k]
P16S17S	11	31WTTUNES_2	Washington	7/16 - 8/25/91	97[d]	91[l]	85[m]	97[d]	26[d]
P16C	12	31WTTUNES_3	Washington	8/31 - 10/1/91	106[d]	21[n]	21[n]	57[d]	29[d]
P16N	13	31DSCGC91_2	Discoverer	3/7 - 4/8/91	52[d]	40	22	50	19[c]
P16A17A	14	316N138_9	Knorr	10/6 - 11/25/92	127[d]	118[o]	113 m	76	37[d]
P17C	15	31WTTUNES_1	Washington	5/31 - 7/11/91	123[d]	30[p]	30[p]	79	31[d]
P17N	16	325021_1	Thompson	5/15 - 6/26/93	148[d]	75	80	100	25[d]
P17E19S	17	316N138_10	Knorr	12/4/92 - 1/22/93	106[d]	104[o]	96[m]	60	29[q]
P18	18	31DSCG94_1,2,3	Discoverer	2/22 - 4/3/94	193[d]	182	178	138	33[r]
P19C	19	316N138/12	Knorr	2/22 - 4/13/93	189[d]	185[o]	173 m	107	48[d]
P21	20	318MWESTW_4,5	Melville	3/27 - 6/25/94	277[d]	103	108	257	0
P31	21	3250031_1	Thompson	1/25 - 2/19/94	93[d]	27	26	65	0
S4P	22	90KDIOFFE6_1	Ioffe	2/14 - 4/6/92	113[s]	112[t]	112 m	113[s]	30
SR3S4	23	09AR9404_1	Australis	12/20/94 - 2/1/95	106[s]	58	58	79	0[k]
P01	24	49EWMI9905/1	Mirair	5/23 - 6/11/99	76[u]	42	38	0	0[e]
EQPAC spring	25	EQ92SPR	Baldridge	2/27 - 5/15/92	95[v]	87	95	0	0
A21	26	06MT11_5	Meteor	1/23 - 3/8/90	78[w]	77	71	72	18

Table 1: Pacific Cruise Summary

WOCE Leg	No	EXPOCODE	Ship	Date	Sta	DIC	TA	CFC	^{14}C
EQPAC fall	27	EQ92FAL	Discoverer	9/7 - 12/2/92	103[v]	101	100	0	0
P11A	28	09AR9309_1,2	Australis	4/4 - 5/9/93	62[d]	34	0	0	0
P11S	29	09FA693	Franklin	6/24 - 717/93	74[d]	0	0	0	0
P12[x]	30	09AR9601_1	Australis	8/27 - 9/21/96	67[y]	63	59	0	0
P13C	31	49HH915_1,2	Hakuho Maru	8/13 - 10/2/91	69[d]	0	0	0[e]	0
P14C	32	316N138_7	Knorr	9/1-9/15/92	52[d]	0	0	51	12[d]
P01W	33	90BM9316_1	Nesmeyanov	8/30 - 9/21/93	38[d]	37	30	0	0[z]
P24	34	49RY9511_2	Ryofu Maru	11/15 - 11/30/95	26[d]	0	0	9	2
P2E	35	492SSY9310_1,2	Shoyo	10/14 - 11/27/93	131[d]	0	0	0	0
P08N	36	49K6KY9606_1	Kaiyo Maru	6/20 - 7/15/96	25[d]	25	0[aa]	25	0[e]
S5[ab]	37	09FA1094	Franklin	11/12 - 12/5/94	68[ac]	0	0	0	0
SR3	38	09AR9101_1	Australis	9/25 - 10/27/91	26[y]	0	0	24	0
P04	39	32MW893_1,2,3	Moana Wave	2/9 - 5/10/89	216[d]	0	0	159	0
P03	40	31TTTPS24_1,2	Thompson	3/30 - 6/3/85	216[d]	0	0	133[ad]	0
P01	41	31TTTPS47_1	Thompson	8/4 - 9/7/85	115[d]	0	0	63[ad]	0
JGOFS									
KIWI-6	42	RR_KIWI_6	Revelle	10/23 - 11/17/97	21[ae]	11	11	0	0
KIWI-7	43	RR_KIWI_7	Revelle	12/2/97 - 1/3/98	19[ae]	19	19	0	0
NBP96_4	44	NBP-96_4	Palmer	8/30 - 9/24/96	4[ae]	0	0	0	0
NBP97_1	45	NBP-97_1	Palmer	1/13 - 2/11/97	28[ae]	25	0	0	0
NBP97_3	46	NBP-97_3	Palmer	4/4 - 5/12/97	17[ae]	16	16	0	0
Historical/Other									
P16N	47	31WTMARAII	Washington	5/5 - 6/3/84	97[af]	0	0	0	0
GEOSECS	48	GEOSECS_1-10	Melville	8/2573 - 6/9/74	147	75[ag]	75[ag]	0	44[ah]
None[ai]	49	TEW_WST2	Washington	6/6 - 7/5/87	108[af]	0	0	0[aj]	0
P15S	50	??MBCGC90_1,2	Baldridge	2/22 - 4/16/90	63[ak]	49[ak]	0	0	0

a. Not the official WOCE occupation of this line; See cruise #16, this table

b. See footnote [d]; Report for this cruise included with P16N.

c. See Jones, 1994.

d. Final cruise report available *via*: http://whpo.ucsd.edu/data/tables/onetime/1tim_pac.htm

e. Results not yet public

f. See Johnson *et al*., 2001b
g. Calculated via MLR; See Sabine *et al*., 2002.
h. See Sabine *et al*., 1999.
i. See Dickson *et al*., 2000.
j. Spare gas aliquots collected during $\delta^{13}C$ analysis currently being analyzed for $\Delta^{14}C$
k. Analysis not yet completed.
l. See Takahashi *et al*., 1996.
m. Calculated from measured pCO_2 and TCO_2
n. See Goyet *et al*., 1996.
o. See Rubin *et al*., 1998.
p. See Goyet *et al*., 1997.
q. See Key, 1996, 1997.
r. See Key and Quay, 1998.
s. Final cruise report available *via*: http://whpo.ucsd.edu/data/tables/onetime/1tim_sou.htm
t. See Chipman *et al*., 1997
u. Data received from T. Ono.
v. Data downloaded from http://www.aoml.noaa.gov/ocd/oaces/eqpac92.html
w. See listing under Atlantic Ocean cruises
x. Currently listed as SR03 at WHP with repeat hydrography
y. Final cruise report available *via*: http://whpo.ucsd.edu/repeat.htm
z. Samples collected, status unknown
aa. Results not yet reported to WHP
ab. Primary listing with Indian Ocean cruises
ac. See listing with Indian Ocean cruises
ad. See Warner *et al*., 1996.
ae. Data from http://usjgofs.whoi.edu/jg/dir/jgofs/
af. Data received from L. Talley
ag. See Östlund *et al.,* 1987.
ah. See Östlund and Stuiver, 1980.
ai. West Pacific with an average station latitude of 13.8° S
aj. Measurements made, but not in database, See Wisegarver *et al*., 1993, and footnote [ad]. The nutrient and oxygen data from this cruise are far below WOCE standards
ak. See Lamb and Feely, 1995.

Table 2: Pacific Cruise Personnel Summary

WOCE Leg	No	EXPOCODE	Chief Scientist	P.I. Carbon	P.I. CFC	P.I. ^{14}C
WOCE						
P17N	1	31DSCGC91_1	D. Wisegarver	R. Feely	J. Bullister	R. Key
P02	2	49K6KY9401_1	K. Okuda	T. Ono	Y. Watanabe	Y. Watanabe
P06	3	316N138/3,4,5	H. Bryden M. McCartney J. Toole	D. Wallace	R. Fine M. Warner R. Weiss	R. Key
P08S	4	49XK9605	Shitashima	Yoshioka	Yoshioka	Kumamoto
P09	5	49RY9407_1	I. Kaneko S. Kawai	M. Ishii	Tamaki Kaneko	M. Ishii
P10	6	3250TN026/1	M. Hall T. Joyce	C. Sabine	M. Warner	R. Key

Table 2: Pacific Cruise Personnel Summary

WOCE Leg	No	EXPOCODE	Chief Scientist	P.I. Carbon	P.I. CFC	P.I. ^{14}C
P13N	7	31VIC92_0,1,2	J. Bullister B. Taft	A. Dickson P. Guenther C. Keeling	J. Bullister	P. Quay
P14N	8	325023_1 325024_1	G. Roden	F. Millero C. Winn	M. Warner	NA
P14S15S	9	31DSCG96_1,2	J. Bullister R. Feely	R. Feely F. Millero R. Wanninkhof	J. Bullister	P. Quay
P15N	10	18DD9403_1,2	H. Freeland J. Garrett	C. Wong	C. Wong	C.Wong
P16S17S	11	31WTTUNES_2	J. Swift	C. Goyet T. Takahashi	R. Fine	R. Key
P16C	12	31WTTUNES_3	L. Talley	C. Keeling C. Goyet P. Guenther	J. Bullister	R. Key
P16N	13	31DSCGC91_2	J. Bullister	R. Feely R. Byrne	J. Bullister	R. Key
P16A17A	14	316N138_9	J. Reid	T. Takahashi	W. Smethie R. Weiss	R. Key
P17C	15	31WTTUNES_1	M. Tsuchiya	C. Goyet	R. Fine	R. Key
P17N	16	325021_1	D. Musgrave	C. Goyet	R. Fine	R. Key
P17E19S	17	316N138_10	J. Swift	T. Takahashi	W. Smethie R. Weiss	R. Key
P18	18	31DSCG94_1,2,3	J. Bullister R. Feely G. Johnson B. Taft	R. Feely F. Millero	J. Bullister	P. Quay
P19C	19	316N138/12	L. Talley	T. Takahashi	R. Fine	R. Key
P21	20	318MWESTW_4,5	H. Bryden M. McCartney	C. Goyet F. Millero C. Winn	J. Bullister R. Fine	NA
P31	21	3250031_1	D. Roemmich	C. Winn	M. Warner	NA
S4P	22	90KDIOFFE6_1	M. Koshlyakov	T. Takahashi	J. Bullister M. Warner	P. Schlosser
SR3S4	23	09AR9404_1	S. Rintoul	B. Tilbrook	J. Bullister	B. Tilbrook
P01	24	49EWMI9905/1	T. Ono	T. Ono		Fukasawa
EQPAC[a] spring	25	EQ92SPR	D. Atwood R. Feely R. Wanninkhof	R. Feely F. Millero R. Wanninkhof	NA	
A21[b]	26	06MT11_5	W. Roether	T. Takahashi	W. Roether	P. Schlosser

Table 2: Pacific Cruise Personnel Summary

WOCE Leg	No	EXPOCODE	Chief Scientist	P.I. Carbon	P.I. CFC	P.I. ^{14}C
EQPAC[c] fall	27	EQ92FAL	R. Feely P. Murphy R. Wanninkhof	R. Byrne R. Feely F. Millero R. Wanninkhof	NA	R.Toggweiler
P11A	28	09AR9309_1,2	S. Rintoul	B. Tilbrook	NA	B. Tilbrook
P11S	29	09FA693	J. Church S. Rintoul	NA	NA	NA
P12	30	09AR9601_1	S. Rintoul	B. Tilbrook	NA	NA
P13C	31	49HH915_1,2	K. Taira	NA	S. Watanabe	NA
P14C	32	316N138_7	D. Roemmich	J. Downing	M. Warner	R. Key
P01W	33	90BM9316_1	A. Bychkov F. Whitney	A. Bychkov C. Wong	C. Wong	C. Wong
P24	34	49RY9511_2	M. Fujimura	NA	K. Nemoto	M. Aoyama
P2E	35	492SSY9310_1,2	T. Bando	NA	NA	NA
P08N	36	49K6KY9606_1	K. Mizuno	T, Amaoka K. Yamada	K. Kawahara	T. Tokieda
S5[d]	37	09FA1094	M. Tomczak	NA	NA	NA
SR3	38	09AR9101_1	S. Rintoul	NA	J. Bullister	NA
P04	39	32MW893_1,2,3	E. Brady H. Bryden J. Toole	NA	J. Bullister R. Fine R. Weiss	NA
P03	40	31TTTPS24_1,2	D. Roemmich J. Swift	R. Feely	R. Weiss	NA
P01	41	31TTTPS47_1	L. Talley	NA	R. Weiss	NA
JGOFS						
KIWI-6	42	RR_KIWI_6	T. Cowles	F. Millero	NA	NA
KIWI-7	43	RR_KIWI_7	R. Barber	F. Millero	NA	NA
NBP96_4	44	NBP-96_4	R. Anderson	T. Takahashi	NA	NA
NBP97_1	45	NBP-97_1	J. Marra	T. Takahashi	NA	NA
NBP97_3	46	NBP-97_3	H. Ducklow	F. Millero	NA	NA
Historical/Other						
P16N	47	31WTMARAII	R. deSzoeke	NA	NA	NA
GEOSECS	48	GEOSECS_1-10	H Craig W. Broecker T. Takahashi D. Spencer R. Weiss P. Biscaye J. Edmond H. Craig P. Brewer W. Broecker	PACODF	NA	G. Östlund M. Stuiver

Table 2: Pacific Cruise Personnel Summary

WOCE Leg	No	EXPOCODE	Chief Scientist	P.I. Carbon	P.I. CFC	P.I. ^{14}C
None[e]	49	TEW_WST2	S. Hayes	NA	D. Wisegarver	NA
P15S	50	??MBCGC90_1,2	D. Wisegarver	R. Feely R. Wanninkhof	J. Bullister	NA

a. This was a JOGFS cruise and should have been listed accordingly.
b. Primary listing with Atlantic Ocean. Included with this data set to provide closure at the southwestern basin intersection at Drake Passage
c. This was a JOGFS cruise and should have been listed accordingly.
d. Primary listing with Indian Ocean cruises. Included with this data set to provide closure at the southeastern basin intersection south of Africa
e. West Pacific with an average station latitude of 13.8° S

Table 3. Pacific Ocean Correction Factors

Cruise	EXPOCODE	Station Range		Salt[a]	O_2	NO_3	PO_4	SiO_2	DIC	TA
WOCE[b]										
P17N	31DSCG91_1	all		-0.72	1.0147	1.000	0.9870	1.000	-7	-12
P02	49K6KY9401_1	all		0	1.0000	1.0200	0.9620	1.000	-4.0	14
P06	316N138/3,4,5	1	72	0.50	1.0003	1.000	0.9875	1.000	-0.6	0
		75	188	-0.59	1.0036	1.000	0.9914	1.000	-0.6	0
		190	267	-1.17	.9999	1.000	1.000	1.000	-0.6	0
P08S	49XK9605	all		1.82	1.0059	1.0159	1.0335	1.0300	2	6
P09	49RY9407_1	1	53	-0.50	.9923	0.9900	1.000	1.000	1.1	0
		54	105	0.77	.9945	0.9900	1.000	1.000	1.1	0
P10	3250TN026/1	all		-0.50	1.0052	1.0150	1.0074	1.0077	0	0
P13N	31VIC92_0,1,2	1	55	0.77	1.0131	0.9925	1.000	1.000	0	0
		56	88	-0.94	1.0035	1.0450	1.000	.9860	0	0
P14N	325023_1 325024_1	1	130	1.37	1.0087	1.0014	1.0125	.9894	0	0
		131	185	1.12	1.0058	1.0076	1.0125	1.000	0	0
P14S15S	31DSCG96_1,2	1	93	-0.40	1.0041	1.000	1.000	1.000	0	0
		94	182	-1.00	1.0072	1.000	1.000	1.000	0	0
P15N	18DD9403_1,2	1	70	1.91	1.0068	1.0071	1.000	1.0200	0	0
		71	136	-0.37	.9948	1.000	0.9874	1.000	0	0
P16S17S	31WTTUNES_2	all		1.80	1.0008	1.0112	1.000	.9852	1.4	0
P16C	31WTTUNES_3	all		-0.47	.9998	1.000	1.000	.9935	0	0
P16N	31DSCGC91_2	all		-1.21	1.0105	1.000	1.000	.9877	4.0	0
P16A17A	316N138_9	all		-0.39	1.0027	1.000	1.000	.9926	1.3	0
P17C	31WTTUNES_1	all		2.10	1.0017	1.0200	1.0034	1.000	0	-9
P17N	325021_1	all		-0.72	1.0147	1.000	0.9870	1.000	-7	-12
P17E19S	316N138_10	all		-0.61	1.0100	1.000	0.9923	.9940	1.4	0
P18	31DSCG94_1,2,3	1	87	0.37	1.0114	1.000	1.000	1.006	0	0
		88	194	1.46	1.0119	1.000	1.000	1.000	0	0
P19C	316N138/12	all		-0.39	1.0101	0.9920	0.9891	.9918	-0.2	0

Table 3. Pacific Ocean Correction Factors

Cruise	EXPOCODE	Station Range		Salt[a]	O_2	NO_3	PO_4	SiO_2	DIC	TA
P21	318MWESTW_4,5	1	161	-0.63	1.0136	1.000	0.9888	1.000	0	0
		162	294	-.210	.9703	1.0074	0.9950	1.000	0	0
P31	3250031_1	all		0.19	1.0059	1.0164	0.9950	1.000	0	-6
S4P	90KDIOFFE6_1	all		1.72	1.0013	1.0156	0.9900	.9809	-0.9	0
SR3S4	09AR9404_1	all		-3.50	1.0143	1.000	1.000	1.000	0	0
P01	49EWMI9905/1									
EQPAC spring	EQ92SPR									
A21	06MT11_5	See Atlantic								
EQPAC fall	EQ92FAL									
P11A	09AR9309_1,2	all		-6.46	1.0181	1.000	1.000	1.0436	0	0
P11S	09FA693	all		2.08	.9688	0.9270	0.9717	.9950	0	0
P12	09AR9601_1									
P13C	49HH915_1,2	1	30	-2.01	.9730	1.000	1.000	1.000	0	0
		31	68	0.27	.9624	1.000	1.000	1.000	0	0
P14C	316N138_7	all		-1.16	.9989	1.000	1.000	.9830	0	0
P01W	90BM9316_1									
P24	49RY9511_2	all		-0.56	.9986	1.000	1.000	1.000	0	0
P2E	492SSY9310_1,2	35	96	1.09	.9961	-99	-99	1.000	0	0
		97	165	1.83	.9932	-99	-99	1.000	0	0
P08N	49K6KY9606_1	all								
S5	09FA1094	all								
SR3	09AR9101_1	all								
P04	32MW893_1,2,3	1	83	1.57	1.0067	1.000	1.000	1.000	0	0
		84	119	1.35	.9840	1.000	1.000	1.000	0	0
		120	221	-0.92	.9899	1.000	0.9835	0.9969	0	0
P03	31TTTPS24_1,2	1	197	3.34	.9985	0.9890	1.0220	1.000	0	0
		199	408	3.05	0.9971	0.9890	1.0220	1.000	0	0
P01	31TTTPS47_1	all		3.26	.9993	1.000	1.0070	1.000	0	0
JGOFS[c]										
KIWI-6	KIWI-6	all								
KIWI-7	KIWI-7	all								
NBP96_4	NBP96_4	all								
NBP97_1	NBP97_1	all								
NBP97_3	NBP97_3	all								
Historical[d]										
P16N	31WTMARAII	all		-.021	-0.21	0.85	0.23	5.5	0	0

Table 3. Pacific Ocean Correction Factors

Cruise	EXPOCODE	Station Range		Salt[a]	O_2	NO_3	PO_4	SiO_2	DIC	TA
GEOSECS	GEOSECS	201	210	-3.6	0	0	0	0	0	0
		211	218	-3.6	0	0	0	0	0	0
		219	224	-3.6	0	0	0	0	0	0
		225	234	-1.9	-0.042	0.98	-0.050	1.5	0	0
		235	254	-1.9	-0.042	0.98	-0.050	1.5	0	0
		255	278	-1.9	-0.042	0.98	-0.050	1.5	0	0
		279	294	0.1	-0.045	0.41	-0.034	0.9	0	0
		295	314	-1.7	0	0	0	0	0	0
		315	324	0	0	0	0	0	0	0
		325	347	0	0	0	0	0	0	0
None	TEW_WST2	all		2.9	-0.114	0	0	0	0	0
P15S	CGC90	all		2.4	0	0	0	0	0	0

a. Salinity corrections are in parts per million, *i.e.* divide factor by 1000 prior to addition
b. Salinity, DIC and TA factors are additive. Oxygen, nitrate, phosphate and silicate factors are multiplicative. Salinity and oxygen factors are from Johnson *et al.* (2001b). Nitrate, phosphate and silicate factors are from L. Gordon and C. Mordy (2003, personal communication). DIC and TA corrections are from Lamb *et al*. (2003).
c. JGOFS cruises were not included in any of the calibration studies. Therefore, no corrections have been applied.
d. All factors are additive. Taken from Gouretski and Jancke, 2001. Their oxygen factors were/are listed in ml/l and were multiplied by 43.55 to convert to umol/kg prior to application.