IV. CORES FROM BASINS ADJACENT TO THE PACIFIC

SOUTH CHINA SEA

V35-5
V35-6

This study was undertaken to determine the time history of the surface to deep $^{14}C/C$ ratio difference for the Pacific Ocean (see Fig 10; Tables 12, 13).

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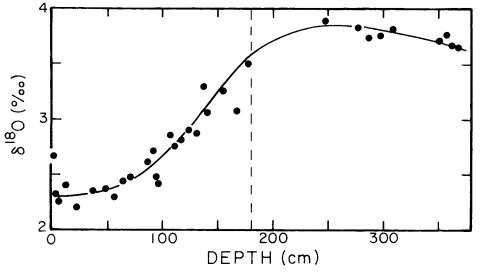

Fig 10. Oxygen isotope record for benthic foraminifera in core V35-05 (Oppo & Fairbanks, 1987)

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TABLE 12

V35-05 South China Sea
Location (07°11.7'N, 112°4.6'E) Depth 1953m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
1- 4TW	1.77	G sacc	32.5	0.52	255	4.1	July 85	690 ± 150	9
0-20TW	1.91	G sacc	31.8	1.19	404	15.1	Sept 85	1930 ± 90	9,15
"	"	G sacc	31.8	1.43	348	15.7	Apr 86	1810 ± 100	9,15
"	"	P obliq	10.5	0.29	376	10.4	Sept 85	2090 ± 90	9,15
"	"	P obliq	10.5	0.34	250	8.1	July 86	2160 ± 120	15
"	"	M benth	9.8	0.21	690	15	Sept 85	3560 ± 100	9
0- 1	2.51	G sacc	9.0	0.24	74	2	-	-	
3- 6	3.86	G sacc	26.7	0.66	303	7.5	Sept 85	1940 ± 120	
"	"	P obliq	8.1	0.17	87	1.8	-	-	
6- 7	3.65	G sacc	27.1	0.60	-	-	-	-	
7- 8	3.44	G sacc	4.9	0.18	-	-	-	-	
0-10	3.36	G sacc	23.2	0.86	387	14.3	Sept 85	2010 ± 90	9,15
"	"	G sacc	23.2	0.74	320	10.2	Apr 86	2100 ± 100	9,15
"	"	P obliq	30.9	0.92	294	8.8	Sept 85	2620 ± 90	9,15
"	"	P obliq	30.9	0.87	269	7.6	July 86	2250 ± 80	15
"	"	M benth	8.8	0.25	472	13.4	Sept 85	3610 ± 100	9
10-15	3.54	G sacc	11.3	0.44	-	-	-	-	
"	"	P obliq	9.6	0.38	-	-	-	-	
25-30	2.72	G sacc w/s	29.8	1.05	165	6.4	Nov 87	3380 ± 120	
"	"	G sacc 0/s	35.1	0.88	196	6.2	Nov 87	1740 ± 110	
"	"	P obliq	14.9	0.48	151	-	-	-	
"	"	M benth	-	-	-	-	-	-	
40-45	2.52	G sacc	23.5	0.87	-	-	-	-	
"	"	P obliq	10.8	0.27	-	-	-	-	
"	"	M benth	-	-	-	-	-	-	
59-70	2.19	G sacc	39.5	1.46	373	13.8	Apr 86	5750 ± 120	9,15
"	"	P obliq	17.2	0.53	253	7.7	"	6500 ± 130	9,15
"	"	M benth	5.7	0.17	232	7.4	"	7240 ± 120	9
60-70	2.41	G sacc	51.2	1.60	433	13.5	Sept 85	5830 ± 110	9,15
"	"	P obliq	12.7	0.37	312	9.1	"	6190 ± 110	9,15
"	"	M benth	7.4	0.12	241	4	"	7110 ± 120	9
65- 70	1.80	G sacc w/s	9.6	0.45	202	9	Nov 87	5750 ± 130	
"	"	G sacc 0/s	10.3	0.46	227	10.2	Nov 87	5400 ± 150	
"	"	P obliq	6.2	-	-	-	-	-	

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TABLE 12 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
70- 75	1.75	G sacc	49.7	1.57	308	9.8	Oct 86	5990 ± 150	15
"	"	P obliq	22.9	0.82	256	9.2	"	6870 ± 150	15
"	"	M benth	4.1	0.09	260	6	-	-	
75- 80	1.81	G sacc	44.9	1.64	309	11.3	Jan 87	6830 ± 190	
"	"	P obliq	28.5	1.11	273	10.6	"	LOST	
"	"	M benth	4.4	0.12	294	7.9	-	-	
80- 85	1.58	G sacc	34.5	1.20	414	14.4	Apr 86	7670 ± 140	9,15
"	"	P.obliq	21.0	0.67	366	11.6	"	8350 ± 150	9,15
"	"	M benth	5.4	0.09	280	4.8	-	-	
85- 90	1.95	G sacc	37.5	0.99	586	14.5	Apr 86	7500 ± 150	9,15
"	"	P obliq	29.5	0.46	481	14.8	"	7910 ± 150	9,15
"	"	M benth	6.0	0.14	475	11.1	"	8870 ± 160	9
90-100	2.20	G sacc	27.7	0.90	407	13.2	Apr 86	8250 ± 140	9,15
"	"	P obliq	19.7	0.79	284	11.4	July 86	9000 ± 130	9
90-100	1.28	G sacc	26.8	0.94	396	14	Apr 86	8130 ± 140	9,15
"	"	P obliq	19.5	0.63	449	14.7	"	8820 ± 150	9,15
90-100	1.61	M benth	4.6	0.09	461	8.8	July 86	10,930 ± 190	
96-104	1.21	G sacc w/s	13.0	0.58	224	8.6	Nov 87	8700 ± 180	
"	"	G sacc 0/s	17.3	0.55	240	7.5	Nov 87	8680 ± 200	
"	"	P obliq	14.0	0.61	155	6.8	-	-	
100-105	1.61	G sacc	35.2	1.22	382	13.3	July 86	9050 ± 130	15
"	"	P obliq	17.6	0.66	320	12.1	"	9520 ± 130	15
105-110	1.33	G sacc	26.3	0.94	424	15.2	July 86	8930 ± 150	15
"	"	P obliq	20.2	0.65	367	11.7	"	9980 ± 140	15
100-110	1.42	M benth	5.1	0.15	304	8.7	July 86	11,430 ± 180	
110-115	1.34	G sacc	27.7	1.05	406	15.4	Apr 86	9050 ± 160	9,15
"	"	P obliq	26.3	0.89	364	12.3	"	9800 ± 180	9,15
"	"	M benth	5.9	0.16	332	9.2	"	10,910 ± 180	9
115-120	1.51	G sacc	29.5	1.11	402	15.1	Oct 86	9610 ± 200	15
"	"	P obliq	22.7	0.87	350	13.4	"	10,400 ± 220	15
"	"	M benth	6.2	0.11	300	5.7	-	-	
120-130	2.11	G sacc	46.8	1.64	405	14.2	July 86	9520 ± 150	15
"	"	P obliq	32.0	1.00	359	11.2	-	-	

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TABLE 12 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
120–126	1.60	G sacc	32.0	1.12	380	13.3	July 86	9550 ± 130	
125–130	1.47	G sacc	35.4	1.34	372	14.1	Jun 86	9910 ± 240	9
120–130	1.74	P obliq	37.3	1.17	319	10	Jun 86	10,350 ± 120	9,15
"	"	M benth	5.4	0.11	446	9.1	"	11,690 ± 130	9
130–135	1.20	G sacc	20.7	0.68	248	8.1	Jun 86	9670 ± 110	9
135–140	1.28	G sacc	25.9	0.84	361	11.7	Jun 86	10,890 ± 130	9
140–145	2.05	G sacc	36.3	1.54	356	15.1	Jun 86	11,300 ± 120	9
130–145	1.61	P obliq	35.8	1.24	331	11.5	Jun 86	11,410 ± 190	9,15
"	"	M benth	4.5	0.10	490	10.8	"	11,960 ± 180	9
150–160	3.11	G sacc	29.7	1.19	388	15.5	Jun 86	11,580 ± 200	9,15
"	"	P obliq	38.3	1.43	399	14.9	"	12,210 ± 190	9,15
"	"	M benth	8.7	0.25	308	8.7	"	12,620 ± 190	9
160–165	1.81	G sacc	20.5	0.72	242	8.5	Nov 87	9820 ± 160	
"	"	P obliq	37.2	1.35	217	7.9	Nov 87	12,920 ± 210	
160–165	1.54	G sacc	14.9	0.61	–	–	–	–	
"	"	P obliq	40.0	1.20	–	–	–	–	
165–170	1.06	G sacc	14.1	0.54	–	–	–	–	
"	"	P obliq	23.3	0.84	–	–	–	–	
170–175	.83	G sacc	13.6	0.45	213	7	Nov 87	11,860 ± 190	
"	"	P obliq	25.8	0.77	331	9.9	Nov 87	13,170 ± 210	
170–175	.98	G sacc	20.1	0.48	–	–	–	–	
"	"	P obliq	30.7	0.86	–	–	–	–	
175–180	.70	G sacc	7.2	0.22	221	7.4	May 88	12,980 ± 210	
"	"	P obliq	16.6	0.43	259	7.6	May 88	13,600 ± 170	
180–195	1.43	G sacc	9.5	0.32	285	9.7	Sept 85	13,240 ± 190	15,16
"	"	P obliq	5.5	0.17	270	8.5	"	15,160 ± 220	15,16
"	"	M benth	1.9	0.11	119	6.7	"	13,710 ± 190	16
180–195	1.35	G sacc	9.6	0.27	337	9.5	Apr 86	13,220 ± 190	15,16
"	"	P obliq	5.8	0.16	232	6.6	"	14,780 ± 210	15,16
205–220	.50	G sacc	6.2	0.15	–	–	–	–	
"	"	P obliq	1.4	0.07	–	–	–	–	

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TABLE 12 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
210-220	.89	G sacc	10.9	0.23	434	9	Sept 85	1,3740 ± 190	15,16
"	"	P obliq	1.9	0.05	214	5.6	"	1,4340 ± 200	15,16
"	"	M benth	2.5	0.11	114	4.8	"	1,6330 ± 250	16
240-255	1.09	G sacc	2.8	0.08	218	6.1	Sept 85	1,4570 ± 600	15
"	"	P obliq	12.4	0.34	444	12	"	1,6010 ± 440	15,16
"	"	M benth	1.3	0.04	-	-	-	-	
240-255	.22	G sacc	3.0	0.07	-	-	-	-	
"	"	P obliq	5.6	0.22	300	11.4	July 86	1,6130 ± 330	16
240-255	.62	M benth	1.6	0.04	287	7.9	July 86	1,7010 ± 230	16
270-285	.45	G sacc	1.9	0.04	-	-	-	-	
"	"	P obliq	7.9	0.22	-	-	-	-	
270-285	.38	sac&30%rub	2.5	0.06	387*	8.8	Aug 86	1,6170 ± 290	15,16
"	"	P obliq	10.4	0.28	498	13.5	"	1,7530 ± 330	15,16
"	"	M benth	2.5	0.05	435	10	"	1,7810 ± 350	16
300-318	1.12	G sacc	2.7	0.09	135	4.6	Sept 85	1,6380 ± 590	15
"	"	P obliq	8.1	0.22	339	9.1	"	1,7300 ± 500	15
"	"	M benth	1.0	0.03	-	-	-	-	
300-319	.24	G sacc	4.2	0.11	293	7.6	Jun 86	1,7540 ± 260	15,16
"	"	P obliq	10.2	0.32	264	8.1	"	1,8440 ± 270	15,16
300-319	.55	M benth	1.8	0.05	367	9.6	Jun 86	1,9280 ± 290	16
318-330	.41	G sacc	5.6	0.12	475	9.8	Oct 86	1,7020 ± 390	15
"	"	P obliq	10.4	0.32	499	15.5	"	1,7840 ± 430	15
"	"	M benth	2.3	0.05	349	7	"	1,9040 ± 460	
330-350	.27	G sacc	4.4	0.11	312	8	Jun 86	2,1110 ± 340	16
"	"	P obliq	10.6	0.32	300	9.1	"	1,8890 ± 280	16
"	"	P obliq	10.6	0.32	472	15.1	Oct 86	1,8770 ± 480	16
"	"	M benth	2.9	0.06	507	10.8	Jun 86	1,6200 ± 220	16

*Publication no. in which radiocarbon date has been published (see References cited).
**30% G ruber added to reach desired size

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TABLE 13

V35-06 South China Sea
Location (07°13'N, 112°09'E) Depth 2030m

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
1- 7TW	.80	G sacc	9.2	0.17	125	2.3	July 85	1170 ± 170	7,9
"	"	P obliq	3.2	0.06	35	0.7	-	-	
7- 8TW	.83	G sacc	9.3	0.15	-	-	-	-	
"	"	P obliq	1.2	-	-	-	-	-	
8- 9TW	.68	G sacc	7.6	0.14	-	-	-	-	
"	"	P obliq	1.3	0.07	-	-	-	-	
9-10TW	.91	G sacc	5.8	0.13	-	-	-	-	
"	"	P obliq	1.2	0.12	-	-	-	-	
7-18TW	1.80	G sacc	2.0	0.07	-	-	-	-	
"	"	P obliq	3.2	0.08	-	-	-	-	
18-22TW	2.45	G sacc	18.4	0.55	-	-	-	-	
"	"	P obliq	4.8	-	-	-	-	-	
37-41TW	2.95	G sacc	23.6	0.91	-	-	-	-	
"	"	P obliq	7.0	0.15	-	-	-	-	
0- 1	2.35	G sacc	2.0	0.29	-	-	-	-	
"	"	P obliq	3.2	-	-	-	-	-	
"	"	M benth	4.4	-	-	-	-	-	
1- 2	3.26	G sacc	16.2	0.51	-	-	-	-	
"	"	P obliq	2.5	-	-	-	-	-	
2- 3	2.28	G sacc	10.1	-	-	-	-	-	
"	"	P obliq	2.2	-	-	-	-	-	
1- 2	2.14	G sacc	33.8	0.24	-	-	-	-	
2- 4	2.22	G sacc	43.1	1.13	347	9.1	July 85	3580 ± 80	7,9
"	"	P obliq	2.7	0.15	32	1.8	-	-	
"	"	M benth	4.9	0.14	58	1.6	-	-	
4- 5	2.04	G sacc	18.2	0.32	52	0.9	-	-	
5- 6	4.30	G sacc	69.2	1.99	251	7.2	-	-	
6- 7	2.37	G sacc	26.4	0.50	64	1.2	-	-	

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TABLE 13 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
8-13	3.07	G.sacc	41.9	-	100	9.4	May 85	4860 ± 90	7,9,15
"	"	G.ruber	-	-	-	-	-	-	
"	"	P.obliq	24.6	-	155	13.4	May 85	5140 ± 90	7,9,15
"	"	N.duter	-	-	-	-	-	-	
"	"	M.benth	7.8	-	271	4.9	May 85	6420 ± 100	7,9
Unknown*	2.16	G.sacc w/s	24.9	1.02	192	7.9	Nov 87	5210 ± 170	
"	"	G.sacc O/s	19.7	0.60	269	8.1	Nov 87	5470 ± 170	
"	"	P.obliq	15.7	0.53	-	-	-	-	
13-16	1.19	G.sacc	15.2	0.47	-	-	-	-	
"	"	P.obliq	19.7	0.51	-	-	-	-	
"	"	M.benth	-	-	-	-	-	-	
16-22	1.84	G.sacc w/s	19.5	0.76	130	5.1	Nov 87	6350 ± 160	
"	"	G.sacc O/s	15.9	0.51	185	5.9	Nov 87	6370 ± 170	
"	"	P.obliq	16.2	0.50	-	-	-	-	
"	"	M.benth	-	-	-	-	-	-	
17-24	2.38	G.sacc	28.9	-	128	10.0	May 85	6040 ± 100	7,9,15
"	"	G.ruber	-	-	-	-	-	-	
"	"	P.obliq	13.7	-	161	12.3	May 85	6060 ± 100	7,9,15
"	"	N.duter	-	-	-	-	-	-	
18-20	-	M.benth	-	-	273	4.0	Jun 85	7200 ± 110	7,9
22-28	-	M.benth	7.6	-	237	4.8	May 85	7660 ± 130	7,9
27-30	2.75	G.sacc	44.0	-	-	10.0	May 85	6420 ± 100	7,9,15
"	"	G.ruber	-	-	-	-	-	-	
"	"	P.obliq	15.0	-	-	12.4	May 85	6810 ± 100	7,9,15
"	"	N.duter	-	-	-	-	-	-	
"	"	M.benth	8.8	-	-	-	-	-	
37-45	2.46	G.sacc	51.0	-	-	10.0	May 85	7890 ± 110	7,9,15
"	"	G.ruber	-	-	-	-	-	-	
"	"	P.obliq	24.0	-	-	13.5	May 85	8030 ± 110	7,9,15
"	"	N.duter	-	-	-	-	-	-	
"	"	M.benth	8.6	-	480	8.4	Jun 85	9210 ± 130	7,9
42-47	1.52	G.sacc	20.9	0.70	-	-	-	-	
"	"	P.obliq	17.7	0.59	-	-	-	-	
"	"	M.benth	-	-	-	-	-	-	
45-53	1.61	G.sacc	29.0	-	-	9.5	May 85	8780 ± 120	7,9,15
"	"	G.ruber	-	-	-	-	-	-	
"	"	P.obliq	23.0	-	-	11.7	May, 85	9020 ± 120	7,9,15
"	"	N.duter	-	-	-	-	-	-	
"	"	M.benth	7.9	-	476	7.0	Jun, 85	9760 ± 130	7,9

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TABLE 13 (cont'd)

Depth (cm)	Coarse fraction (%)	Foram sp	Abund (no./gm)	Abund (mgm/gm)	No. tests analyzed	Weight analyzed (mgm)	Date of AMS analysis	Age (yr)	Ref*
52-60	1.41	G sacc	16.5	0.47	–	–	–	–	
"	"	P obliq	22.6	0.80	–	–	–	–	
"	"	M benth	–	–	–	–	–	–	
54-61	1.79	G sacc w/s	17.7	0.56	267	8.4	Nov 87	9600 ± 210	
"	"	G sacc 0/s	18.5	0.65	216	7.7	Nov 87	9500 ± 90	
"	"	P obliq	28.5	0.95	–	–	–	–	
"	"	M benth	–	–	–	–	–	–	
57-64	0.96	G sacc	24.0	–	–	9.4	May 85	9550 ± 120	7,9,15
"	"	G ruber	–	–	–	–	–	–	
"	"	P obliq	20.0	–	–	11.0	May 85	9630 ± 120	7,9,15
"	"	N duter	–	–	–	–	–	–	
"	"	M benth	6.6	–	362	6.5	Jun 85	1,0810 ± 150	7,9
68-72	1.48	G sacc	20.0	–	–	–	Jun 85	1,0130 ± 120	7,9,15
"	"	G ruber	–	–	–	–	–	–	
"	"	P obliq	51.0	–	–	–	Jun 85	1,0070 ± 120	7,9,15
"	"	N duter	–	–	–	–	–	–	
"	"	M benth	7.5	–	408	7.3	Jun 85	1,1290 ± 150	7,9
78-82	1.72	G sacc	24.0	–	–	–	May 85	9740 ± 130	7,9,15
"	"	G ruber	–	–	–	–	–	–	
"	"	P obliq	30.0	–	–	–	May 85	1,0370 ± 130	7,9,15
"	"	N duter	–	–	–	–	–	–	
"	"	M benth	9.2	–	–	–	May 85	1,1180 ± 140	7,9
89-92	2.17	G sacc	23.0	–	–	–	July 85	1,1590 ± 140	7,9,15
"	"	G ruber	–	–	–	–	–	–	
"	"	P obliq	21.0	–	–	–	July 85	1,1820 ± 140	7,9,15
"	"	N duter	–	–	–	–	–	–	
"	"	M benth	9.2	–	386	5.8	July 85	1,2950 ± 160	7,9
98-102	1.81	G sacc	23.0	–	–	–	July 85	1,2540 ± 160	7,9,15
"	"	G ruber	–	–	–	–	–	–	
"	"	P obliq	50.0	–	–	–	July 85	1,2700 ± 160	7,9,15
"	"	N duter	–	–	–	–	–	–	
"	"	M benth	12.8	–	–	–	July 85	1,3550 ± 170	7,9
103-108	1.03	G sacc	11.0	0.38	–	–	–	–	
"	"	P obliq	30.9	0.95	–	–	–	–	
"	"	M benth	–	–	–	–	–	–	
145-155	1.03	G sacc	4.5	0.18	–	–	–	–	
"	"	P obliq	1.5	–	–	–	–	–	
"	"	M benth	–	–	–	–	–	–	
196-200	0.21	G sacc	0.2	–	–	–	–	–	
"	"	P obliq	0.1	–	–	–	–	–	
"	"	M.benth	–	–	–	–	–	–	

*Publication no. in which radiocarbon date has been published (see References cited).

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