Intermediate Season

FIELD SURVEY REPORT ON TRANSITIONAL SEASON FOR THE STUDY ON THE IMPROVEMENT OF MARINE ENVIRONMENTAL MONITORING SYSTEM FOR THE PEARL RIVER ESTUARY

SOUTH CHINA SEA ENVIRONMENTAL MONITORING CENTRE
OF
STATE OCEANIC ADMINISTRATION
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CONTENT

Introduction

The field survey in transitional season of the Study on Improvement of Marine Environmental Monitoring System for the Pearl River Estuary is a supplement to the rainy season as well as dry season survey and to provide the hydrology, water quality, sediment quality and aquatic biota data for developing a water quality and an ecological simulation model. The participators counted 39, among which 1 professor, 6 senior engineers, 20 engineers, 9 assistant engineers and 3 others. Thanks to the experience of rainy season and dry season survey, the transitional season survey was accomplished smoothly under the endeavor of both sides of China and Japan. The following is the returns of field survey operation.

1 Survey Points

In the study area, there were 25-point locations for hydrology, water quality, and aquatic biota survey, all of them were intensive points and 1 point was set up for ADCP observation in addition.

2 Information of Vessels Employed

During the survey, 2 vessels were employed. They were Haijian 73 and a civil boat. Haijian 73 was in charge of the points survey in deeper water and the civil boat was responsible for points survey in shallower water.

3 Operation Time

The survey was conducted from 4 Mar to 7 Mar 2001 fully in accordance with original schedule.

4 Field Survey

4.1 Water Quality Sampling in Site

The collected water samples counted 1661 at 25 point locations in transitional season survey. The samples were collected in accordance with sampling regulations and in order. There were no samples contaminated during water collected. The samples' pre-treatment and storage were based on the specification of marine survey. There was no sample missing and breaking.

4.2 CTD

CTD was tested on-board Haijian 73. Before and after the survey, the water temperature, salinity and turbidity were tested respectively. Water temperature micro-

sensor was tested with reversing thermometer, conductivity and turbidity were tested with salinometer and turbidity meter. The above results showed tow methods results of testing were basically the same.

4.3 ADCP Observation

The observation point was set up near P16. At 1630 on 4 Mar, ADCP was deployed completely and began working. Having worked 48 hours in succession, ADCP fulfilled the observation at 1710 on 6 Mar and was retrieved. The ADCP recorder worked well during observation.

4.4 Meteorological Observation

The meteorological observation was conducted at 25 points and 125 parameters were obtained.

4.5 Phytoplankton, Zooplankton and Benthos

Phytoplankton, zooplankton and benthos survey were carried out at 25 points, and 122 samples were collected. The sampling was carried out in accordance with the specification of marine survey

4.6 Light Quantum

During light quantum observation, the scientific worker avoided the sheltered umbra on-board civil boat to observe light quantum.

5 Samples Delivering, Analyzing and Data Processing

During the survey, the civil boat delivering sample could carry the samples collected to Haijian 73 on time for analysis. After the field survey, all samples were transported safely to the laboratory. Each lot of samples with delivering note was checked and signed on the note during delivering. There were no samples confused, damaged and missed when lots of samples delivered.

Before or after each lot or group of 30 samples analyzed, an additional test sample would be analyzed. At the same time, over-all recovery would be analyzed to attest the analysis procedure and quality control in laboratory jobs in order to ensure the data reliable.

The procedure of data processing strictly observed ISO9000, and data processing such as calculation, check, examining, data format, Excel table and document compiling met the requirement of quality control.

6 Statistics Results

During the transitional season survey, 1261 analysis data of water quality were obtained, 244 parameters of aquatic biota, 15983 variables/parameters of light quantum and hydrometeorology. The enclosed table presents the statistics results.

7 Conclusions

In a common effort of both sides of China and Japan, the transitional season survey was succeeded. The survey commanding and scheduling were well-knitted and functioning smoothly thanks to thoughtful preparation as well as the experience of rainy season and dry season survey.

8 Table Statistic Data Results on the Transitional Season Survey

No	Water quality items	Data numbers	No	Sediment quality items	Data numbers	No	Aquatic biota items	Data numbers	No	Hydrometeorological items	Data numbers
1	DO	72	**21**	Hg	26	**27**	Chl-a	72	**32**	Water temperature	469
2	pH	72	**22**	Cd	26	**28**	Coli.	50	**33**	Salinity	469
3	BOD_5	72	**23**	Pb	26	**29**	Zooplankton	72	**34**	Water depth (sounding)	469
4	COD_{Mn}	72	**24**	Cu	26	**30**	Phytoplankton	25	**35**	Turdity	469
5	TOC	72	**25**	Zn	26	**31**	Benthos	25	**36**	Water color (China)	25
6	NO_3-N	72	**26**	As	26				**37**	Water color (Japan)	25
7	NO_2-N	72							**38**	Transparency	25
8	NH_3-N	72							**39**	Weather	25
9	PO_4-P	72							**40**	Water depth (lead weight)	25
10	SiO_2-Si	72							**41**	Air temperature	25
11	T-N	72							**42**	Air pressure	25
12	T-P	72							**43**	Wind speed	25
13	Oils	25							**44**	Wind direction	25
14	SS	72							**45**	Light quantum	544
15	Hg	50							**46**	ADCP Current speed	6669
16	Cd	50							**47**	ADCP Current direction	6669
17	Pb	50									
18	Cu	50									
19	Zn	50									
20	As	50									
total		1261			156			244			15983

HYDROLOGICAL DATA SHEET ON TRANSITIONAL SEASON FOR SINO-JAPAN JOINT STUDY ON THE PEARL RIVER ESTUARY

(Intensive point in neap tide)

Total page 1

No	Point No	Sampling time					Position		Water depth (m)	Transparency (m)	Water color (No)	Japan water color	Weather	Air temperature (°C)	Air pressure (hPs)	Wind speed (m/s)	Wind direction (°)	Remark
		Y	M	D	H	Min	Latitude	Longitude										
1	P01	2001	03	04	12	40	22 ° 43 ′ 51 ″	113 ° 40 ′ 06 ″	24.0	1.0	16	5GY5/8	Fog	21.0	1021.5	1.3	20	
2	P02	2001	03	06	07	25	22 ° 38 ′ 30 ″	113 ° 44 ′ 32 ″	8.0	0.9	19	5GY6/4	Fog	19.6	1017.6	0.6	100	
3	P03	2001	3	05	09	30	22 ° 36 ′ 42 ″	113 ° 39 ′ 28 ″	4.8	0.6	20	0.5Y7/5	Fog	18.9	1020.9	3.9	50	
4	P04	2001	03	05	13	19	22 ° 33 ′ 30 ″	113 ° 37 ′ 47 ″	9.4	0.7	20	0.5Y7/5	Fog	19.9	1018.0	2.3	180	
5	P05	2001	03	06	09	20	22 ° 32 ′ 42 ″	113 ° 44 ′ 52 ″	5.0	0.8	19	5.5Y4/4	Fog	19.8	1018.3	1.3	60	
6	P06	2001	03	06	08	58	22 ° 32 ′ 31 ″	113 ° 47 ′ 58 ″	6.8	0.9	16	5GY6/4	Fog	19.9	1018.2	2.1	120	
7	P07	2001	3	05	12	05	22 ° 28 ′ 07 ″	113 ° 38 ′ 42 ″	6.9	0.8	20	0.5Y7/5	Fog	19.4	1019.2	1.6	150	
8	P08	2001	03	06	10	30	22 ° 28 ′ 16 ″	113 ° 44 ′ 13 ″	6.5	1.0	20	2.5Y4/4	Fog	21.2	1018.6	0.8	60	
9	P09	2001	03	06	10	31	22 ° 27 ′ 00 ″	113 ° 53 ′ 00 ″	15.8	1.1	15	5G5/4	Fog	20.5	1018.8	1.5	270	
10	P10	2001	03	06	12	00	22 ° 30 ′ 11 ″	113 ° 58 ′ 58 ″	2.4	0.6	21	5.5Y6/2	Fog	23.6	1017.7	2.8	110	
11	P11	2001	03	06	11	15	22 ° 24 ′ 28 ″	113 ° 44 ′ 59 ″	7.0	1.3	17	5GY6/4	Fog	21.2	1018.2	0.0	C	
12	P12	2001	03	06	07	40	22 ° 24 ′ 32 ″	113 ° 52 ′ 34 ″	9.5	1.0	18	5GY6/4	Fog	19.3	1016.8	1.8	70	
13	P14	2001	03	05	17	11	22 ° 19 ′ 47 ″	113 ° 37 ′ 58 ″	5.0	0.9	19	5GY6/4	Fog	23.1	1015.6	1.8	210	
14	P15	2001	03	05	17	00	22 ° 19 ′ 51 ″	113 ° 42 ′ 59 ″	7.2	1.5	17	5GY6/4	Fog	20.1	1015.1	6.0	80	
15	P16	2001	03	06	13	35	22 ° 19 ′ 49 ″	113 ° 47 ′ 59 ″	13.0	1.5	13	10GY4.5/7	Fog	21.0	1015.7	1.0	60	
16	P17	2001	03	05	16	10	22 ° 15 ′ 29 ″	113 ° 40 ′ 59 ″	7.2	1.6	17	5GY6/4	Fog	19.1	1015.3	3.3	20	
17	P18	2001	03	06	12	45	22 ° 15 ′ 25 ″	113 ° 47 ′ 31 ″	13.0	2.0	13	10GY4.5/7	Fog	21.5	1016.6	1.0	60	
18	P19	2001	03	05	15	20	22 ° 11 ′ 56 ″	113 ° 42 ′ 02 ″	5.6	1.9	15	5GY6/4	Fog	19.2	1015.5	8.5	10	
19	P20	2001	03	05	07	50	22 ° 11 ′ 56 ″	113 ° 47 ′ 59 ″	18.0	3.0	13	10GY4.5/7	Fog	17.0	1019.8	3.0	10	
20	P21	2001	03	05	14	40	22 ° 08 ′ 57 ″	113 ° 40 ′ 40 ″	7.0	1.9	15	5GY5/8	Fog	19.4	1016.3	8.3	10	
21	P22	2001	03	05	08	55	22 ° 05 ′ 06 ″	113 ° 47 ′ 01 ″	12.0	4.0	13	10GY4.5/7	Fog	17.0	1020.3	4.8	50	
22	P23	2001	03	05	09	55	22 ° 04 ′ 58 ″	113 ° 42 ′ 45 ″	11.0	3.5	13	10GY4.5/7	Fog	19.0	1020.7	3.5	60	
23	P24	2001	03	05	12	30	22 ° 00 ′ 03 ″	113 ° 30 ′ 00 ″	4.9	1.8	15	5GY6/4	Fog	19.2	1019.7	7.0	60	
24	P25	2001	03	05	11	15	21 ° 56 ′ 25 ″	113 ° 38 ′ 28 ″	20.0	2.8	13	10GY4.5/7	Fog	19.0	1019.9	8.0	20	
25	P27	2001	03	05	13	45	22 ° 04 ′ 58 ″	113 ° 37 ′ 41 ″	7.0	2.5	14	5GY6/4	Fog	19.3	1017.4	6.8	60	

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LIGHT QUANTUM DATA SHEET ON TRANSITIONAL SEASON FOR SINO-JAPAN JOINT STUDY ON THE PEARL RIVER ESTUARY

(Intensive point in neap tide)

Total Page 6

Unit: umol/m2/s .

No	Point No	SAMPLING TIME					Depth / Position	0m	0.5m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m
		Y	M	D	H	Min													
1	P01	2001	03	04	13	08	deck	1439	1529	1603	1566	1565	1581	1564	1572	1570	1572	1580	1581
2							water	29.02	26.04	23.81	15.58	15.26	5.614	2.429	1.014	0.4656	0.2254	0.1039	0.09606
3	P02	2001	03	06	07	20	deck	78.62	79.40	79.84	80.02	80.86	81.67	82.38	83.20	84.00			
4							water	38.89	28.70	13.72	4.631	1.507	0.7167	0.3673	0.06919	0.007582			
5	P03	2001	03	05	09	05	deck	912.6	918.2	916.9	993.3	935.7	958.5						
6							water	952.3	274.5	16.62	1.476	0.1393	0.07582						
7	P04	2001	03	05	15	10	deck	1476	1458	1454	1449	1447	1440	1437	1432	1434	1426	1412	
8							water	1041	154.6	126.2	18.64	4.266	0.7061	0.3962	0.1317	0.05791	0.007852	0	
9	P05	2001	03	06	09	40	deck	800.4	814.3	820.6	804.1	806.2	803.5	802.2					
10							water	667.9	237.4	103.4	39.18	3.938	0.3049	0.1568					
11	P06	2001	03	06	08	55	deck	270.2	272.4	270.1	269.6	272.6	266.9	273.3	269.9				
12							water	170.0	108.8	65.41	29.44	12.08	3.169	0.4189	0.03791				
13	P07	2001	03	05	11	58	deck	1397	1391	1396	1400	1401	1408	1418	1429				
14							water	1178	475.3	124.4	17.99	4.102	1.134	0.2635	0.06160				
15	P08	2001	03	06	10	45	deck	1065	1089	987.2	927.5	863.4	863.4	850.2	890.2				
16							water	738.7	288.0	190.0	69.54	28.41	10.23	3.723	0.9322				
17	P09	2001	03	06	10	30	deck	1025	1054	1103	1006	1005	1048	1067	1066	1023	1038	1074	1070

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No	Point No	SAMPLING TIME					Depth / Position	0m	0.5m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m
		Y	M	D	H	Min													
18							water	725.4	454.5	306.4	139.3	54.45	21.03	8.179	2.144	1.243	0.6910	0.2559	0.07677
19	P10	2001	03	06	12	00	deck	615.2	686.6	729.6	615.6								
20							water	322.4	106.7	31.11	3.372								
21	P11	2001	03	06	11	29	deck	1276	1246	1275	1315	1331	1356	1371	1370				
22							water	523.4	297.8	113.4	47.31	14.13	6.698	2.420	2.065				
23	P12	2001	03	06	07	56	deck	240.3	240.1	239.2	239.1	238.8	239.6	240.0	241.0	244.0	249.0	252.0	
24							water	226.6	61.64	31.54	4.814	0.1834	0.02353	0.01662	0.01656	0.02354	0.041	0.03137	
25	P14	2001	03	05	17	10	deck	306.0	299.4	314.4	303.4	310.2	303.0						
26							water	133.7	60.22	30.95	16.76	1.717	0.8530						
27	P15	2001	03	05	17	16	deck	277.4	286.2	280.8	279.7	260.1	258.3	278.8	256.9				
28							water	70.42	51.58	32.99	19.63	11.60	6.593	3.827	2.307				
29	P16	2001	03	06	13	50	deck	1365	1362	1353	1386	1388	1355	1366	1379	1382	1374	1347	1382
30							water	1142	412.5	363.1	181.4	85.80	42.74	22.31	11.23	4.998	1.689	0.8842	0.3048
31	P17	2001	03	05	16	14	deck	449.4	466.4	440.9	430.5	439.5	452.1	450.8					
32							water	115.4	69.94	36.06	18.49	6.078	2.243	1.013					
33	P18	2001	03	06	13	02	deck	1531	1534	1533	1526	1521	1528	1531	1531	1528.0	1513	1504	1510
34							water	1127	510.7	488.8	318.2	185.1	91.98	55.00	27.50	16.68	7.600	3.894	1.762

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(Intensive point in neap tide)

Unit: umol/m2/s .

Total Page 6

No	Point No	SAMPLING TIME					Depth / Position	0m	0.5m	1m	2m	3m	4m	5m	6m	7m	8m	9m	10m
		Y	M	D	H	Min													
35	P19	2001	03	05	14	50	deck	822.1	819.0	812.8	813.6	812.8	818.6	812.7	815.4	815.4			
36							water	119.6	90.60	54.51	35.49	22.29	11.71	5.081	1.407	0.4097			
37	P20	2001	03	05	07	40	deck	89.70	92.30	94.55	92.30	88.63	89.83	88.72	90.60	106.9	109.2	110.4	110.2
38							water	49.16	29.30	23.82	23.20	18.43	13.60	9.042	6.036	4.539	2.563	1.849	1.036
39	P21	2001	03	05	14	42	deck	1051	1032	1055	1059	1061	1059	1078	1072	1075			
40							water	137.9	96.48	46.85	46.33	31.25	22.03	16.48	4.841	1.615			
41	P22	2001	03	05	09	02	deck	452.0	449.0	445.3	445.2	445.2	432.2	441.2	426.4	439.4	459.6	457.8	495.4
42							water	153.1	123.2	104.0	69.84	54.87	33.98	22.08	21.98	16.59	13.61	12.20	9.822
43	P23	2001	03	05	10	08	deck	467.2	457.2	516.6	445.3	505.3	536.8	514.8	488.8	472.7	474.9	471.8	491.5
44							water	195.3	116.5	80.51	41.04	30.90	20.56	15.71	11.22	7.773	6.06	3.753	1.849
45	P24	2001	03	05	12	45	deck	1461	1456	1463	1445	1433	1442	1456					
46							water	262.6	149.0	90.05	51.36	26.64	7.824	1.053					
47	P25	2001	03	05	11	30	deck	1363	1415	1400	1381	1372	1395	1385	1413	1399	1397	1380	1386
48							water	242.0	156.6	109.4	86.82	58.12	47.22	35.92	28.07	25.24	24.03	21.26	19.16
49	P27	2001	03	05	14	03	deck	1241	1247	1246	1218	1219	1256	1261	1268	1253			
50							water	245.8	206.6	102.9	72.04	54.30	38.35	36.95	7.903	2.259			

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LIGHT QUANTUM DATA SHEET ON TRANSITIONAL SEASON FOR SINO-JAPAN JOINT STUDY ON THE PEARL RIVER ESTUARY

(Intensive point in neap tide)

Total Page 6

Unit: umol/m2/s

No	Point No	SAMPLING TIME					Depth / Position	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m	B-1m	Remark
		Y	M	D	H	Min													
1	P01	2001	03	04	13	08	deck	1581	1582	1554	1586	1563	1556	1552	1536	1541	1531	1529	
2							water	0.05587	0.04803	0.02353	0.08037	0.04803	0.06371	0.06371	0.05587	0.09606	0.03137	0.02353	
3	P02	2001	03	06	07	20	deck												
4							water												
5	P03	2001	03	05	09	05	deck												
6							water												
7	P04	2001	03	05	15	10	deck												
8							water												
9	P05	2001	03	06	09	40	deck												
10							water												
11	P06	2001	03	06	08	55	deck												
12							water												
13	P07	2001	03	05	11	58	deck												
14							water												
15	P08	2001	03	06	10	45	deck												
16							water												
17	P09	2001	03	06	10	30	deck	1066	1074	1087	1087								

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No	Point No	SAMPLING TIME					Depth / Position	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m	B-1m	Remark
		Y	M	D	H	Min													
18							water	0.02275	0.007825	0	0								
19	P10	2001	03	06	12	00	deck												
20							water												
21	P11	2001	03	06	11	29	deck												
22							water												
23	P12	2001	03	06	07	56	deck												
24							water												
25	P14	2001	03	05	17	10	deck												
26							water												
27	P15	2001	03	05	17	16	deck												
28							water												
29	P16	2001	03	06	13	50	deck	1389	1394	1384									
30							water	0.1039	0.04806	0.03145									
31	P17	2001	03	05	16	14	deck												
32							water												
33	P18	2001	03	06	13	02	deck	1513	1513	1531									
34							water	0.8767	0.5381	0.2088									

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Total Page 6

Unit: umol/m2/s .

No	Point No	SAMPLING TIME					Depth / Position	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m	B-1m	Remark
		Y	M	D	H	Min													
35	P19	2001	03	05	14	50	deck												
36							water												
37	P20	2001	03	05	07	40	deck	112.1	113.1	114.5	115.2	115.4	115.5	115.8	104.3				
38							water	0.6666	0.4656	0.2568	0.1598	0.1171	0.07151	0.03912	0.01568				
39	P21	2001	03	05	14	42	deck												
40							water												
41	P22	2001	03	05	09	02	deck	523.8	536.8										
42							water	5.272	2.932										
43	P23	2001	03	05	10	08	deck												
44							water												
45	P24	2001	03	05	12	45	deck												
46							water												
47	P25	2001	03	05	11	30	deck	1413	1401	1382	1418	1449	1435	1363	1390	1427	1424		
48							water	16.51	15.05	13.86	11.14	9.457	7.405	4.958	3.408	2.195	1.206		
49	P27	2001	03	05	14	03	deck												
50							water												

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WATER QUALITY DATA SHEET ON TRANSITIONAL SEASON FOR SINO-JAPAN JOINT STUDY ON THE PEARL RIVER ESTUARY

(Intensive point in neap tide)

Total page : 6

No.	Point No.	Sampling time					Depth	Sampling depth (m)	Water temperature (°C)	Salinity	DO (mg/dm^3)	COD_{Mn} (mg/dm^3)	BOD_5 (mg/dm^3)	pH	TOC (mg/dm^3)	TN (ug/dm^3)	TP (ug/dm^3)	PO_4-P (ug/dm^3)	SiO_2-Si (ug/dm^3)	NO_2-N (ug/dm^3)	NO_3-N (ug/dm^3)	NH_3-N (ug/dm^3)	Hg (ug/dm^3)
											Detection limit												
		Y	M	D	H	Min					0.12	0.10	0.20	0.10	0.18	14	1.6	1.0	14	0.5	6.0	5.0	0.0064
1	P01	2001	03	04	12	56	S	1.0	18.42	5.875	5.95	1.92	2.14	7.44	4.64	1114	60.4	32.4	3369	204.9	525.5	48.6	0.0114
2							M	12.0	18.30	17.659	6.16	1.02	2.41	7.79	3.20	827	38.0	34.5	1735	123.4	487.5	105.8	
3							B	23.0	18.16	20.777	6.38	0.90	2.46	7.90	3.63	789	34.1	30.5	1448	97.8	540.9	82.7	0.0142
4	P02	2001	03	06	07	20	S	1.0	18.68	14.187	6.35	1.72	0.75	7.75	3.96	1001	90.6	32.9	2012	140.9	584.5	130.7	0.0090
5							M	4.1	18.64	18.631	6.25	1.66	0.74	7.74	4.09	974	89.1	34.8	2402	135.4	559.2	85.9	
6							B	7.2	18.76	20.953	6.62	1.10	0.60	7.82	3.69	793	116.2	38.3	1338	109.7	535.3	103.9	0.0032*
7	P03	2001	03	05	09	05	S	1.0	17.72	1.380	8.15	2.40	1.98	8.02	5.23	1684	23.2	9.7	2487	53.8	642.1	108.6	0.0079
8							B	3.5	17.69	5.033	7.84	3.00	3.04	7.99	6.42	1582	59.6	21.0	2730	66.2	706.7	68.8	0.0142
9	P04	2001	03	05	13	10	S	1.0	18.88	0.277	7.97	1.48	0.96	8.05	3.56	914	43.4	29.7	2407	139.2	532.5	20.8	0.0032*
10							M	4.8	17.82	4.225	7.84	1.58	0.85	8.02	3.29	1020	49.6	21.8	2699	99.6	498.8	64.7	
11							B	8.5	18.08	13.126	7.61	1.68	0.80	7.89	2.98	1027	53.4	42.1	2504	87.5	519.8	96.3	0.0068
12	P05	2001	03	06	09	23	S	1.0	18.72	16.788	7.51	1.10	1.27	7.91	3.09	963	32.5	32.4	1701	118.0	542.3	133.2	0.0108
13							M	2.8	18.63	18.712	7.47	0.85	1.69	7.90	3.69	925	54.2	28.9	1408	108.7	552.2	133.2	
14							B	4.5	18.58	20.465	7.46	1.03	1.37	7.95	3.20	918	45.7	24.0	1576	103.0	501.6	133.2	0.0160
15	P06	2001	03	06	08	55	S	1.0	19.13	20.826	7.81	1.80	2.67	8.01	4.30	944	55.0	38.0	1408	107.1	529.7	64.4	0.0032*
16							M	3.5	19.14	23.569	7.43	1.59	1.57	8.00	4.23	891	40.3	29.9	1228	104.8	524.1	88.7	
17							B	6.0	19.20	24.367	7.41	1.18	0.70	8.03	3.92	785	72.8	29.9	1020	91.9	413.1	93.8	0.0144
18	P07	2001	03	05	11	58	S	1.0	18.11	8.827	8.23	1.90	0.98	7.90	4.47	710	47.3	23.5	2275	137.0	483.3	46.4	0.0087
19							M	3.5	18.09	16.115	8.07	1.92	0.98	7.91	3.80	876	82.1	36.7	2425	82.1	671.6	54.9	
20							B	6.0	18.20	19.463	8.26	2.99	1.02	7.90	5.47	929	58.9	25.1	2270	58.7	726.4	84.9	0.0150
21	P08	2001	03	06	10	35	S	1.0	18.81	19.790	6.84	1.14	0.10*	8.05	3.22	1273	24.8	16.2	1299	101.2	515.6	110.2	0.0100
22							M	3.3	18.78	22.817	6.68	1.14	0.10*	8.08	3.69	925	48.0	18.9	1495	99.7	507.2	124.4	
23							B	5.5	18.94	27.094	6.67	0.65	0.39	8.18	3.03	948	24.8	17.3	637	53.3	234.6	84.0	0.0105
24	P09	2001	03	06	10	26	S	1.0	19.31	29.267	7.17	0.80	2.04	8.10	3.44	514	66.6	32.1	536	60.3	248.7	117.5	0.0069
25							M	7.8	18.99	30.241	7.06	0.73	1.20	8.12	2.84	438	38.7	32.1	760	52.6	178.4	106.4	
26							B	14.5	18.88	30.719	6.90	0.76	0.38	8.14	3.19	419	38.7	25.1	394	46.4	68.8	85.3	0.0032*

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WATER QUALITY DATA SHEET ON TRANSITIONAL SEASON FOR SINO-JAPAN JOINT STUDY ON THE PEARL RIVER ESTUARY

(Intensive point in neap tide)

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No.	Point No.	Sampling time					Depth	Sampling depth (m)	Water temperature (°C)	Salinity	DO (mg/dm^3)	COD_{Mn} (mg/dm^3)	BOD_5 (mg/dm^3)	pH	TOC (mg/dm^3)	TN (ug/dm^3)	TP (ug/dm^3)	PO_4-P (ug/dm^3)	SiO_2-Si (ug/dm^3)	NO_2-N (ug/dm^3)	NO_3-N (ug/dm^3)	NH_3-N (ug/dm^3)	Hg (ug/dm^3)
											Detection limit												
		Y	M	D	H	Min					0.12	0.10	0.20	0.10	0.18	14	1.6	1.0	14	0.5	6.0	5.0	0.0064
27	P10	2001	03	06	11	55	S	1.0	20.02	24.517	5.25	2.13	2.63	7.79	4.85	816	429.9	314.2	1176	199.6	290.8	101.4	0.0101
28							B	2.0	19.52	25.173	4.99	1.86	2.39	7.76	4.47	933	416.7	304.7	1186	200.8	285.2	92.2	0.0032*
29	P11	2001	03	06	11	19	S	1.0	19.31	22.262	7.92	1.05	1.19	8.17	3.07	755	32.5	16.7	1402	83.9	453.8	112.4	0.0076
30							M	3.5	18.97	25.134	7.96	0.83	0.84	8.19	3.61	699	41.1	17.3	923	81.0	389.2	130.7	
31							B	5.9	18.96	28.640	7.31	0.52	0.34	8.18	2.84	472	25.6	24.3	583	42.0	172.8	72.6	0.0032*
32	P12	2001	03	06	07	46	S	1.0	19.02	27.989	7.26	0.69	0.88	8.17	2.86	1273	30.2	26.7	712	54.7	191.1	114.3	0.0092
33							M	5.6	18.90	28.955	7.15	0.64	0.63	8.18	2.95	680	41.1	27.5	659	53.0	153.1	111.1	
34							B	9.5	18.81	29.368	7.02	0.87	0.77	8.18	3.22	283	38.7	21.3	601	40.2	150.3	80.2	0.0157
35	P14	2001	03	05	17	05	S	1.0	18.94	14.022	8.43	2.09	1.30	7.94	4.00	929	34.9	25.9	1407	153.2	498.8	38.5	0.0114
36							M	2.5	18.39	16.143	9.07	2.09	1.10	8.08	4.81	755	27.9	25.4	1822	139.3	425.7	23.4	
37							B	4.0	18.14	20.124	7.48	1.22	0.86	7.99	3.31	1069	51.1	25.1	1518	75.0	567.6	86.5	0.0076
38	P15	2001	03	05	17	07	S	1.0	18.95	25.776	9.46	1.22	1.55	8.37	3.38	853	31.0	12.1	1443	87.0	532.5	91.3	0.0095
39							M	3.0	18.74	27.383	9.59	1.00	1.57	8.40	3.45	971	28.7	10.2	1273	73.2	449.6	88.7	
40							B	5.0	18.59	28.035	8.30	0.64	1.16	8.34	2.62	536	16.3	8.4	954	50.7	300.7	80.2	0.0032*
41	P16	2001	03	06	13	38	S	1.0	20.69	26.221	9.05	0.90	1.59	8.32	3.21	785	11.6	9.4	783	47.6	179.8	30.9	0.0075
42							M	6.5	19.08	29.931	8.18	0.62	1.26	8.31	4.26	412	14.7	8.9	442	38.6	160.2	44.5	
43							B	12.0	18.97	30.302	7.25	0.33	0.32	8.26	2.46	291	28.7	12.7	312	22.2	81.5	37.3	0.0152
44	P17	2001	03	05	16	11	S	1.0	19.23	22.310	9.13	1.10	1.43	8.43	3.16	631	14.7	8.1	997	64.7	373.7	72.6	0.0109
45							M	2.8	18.50	26.076	7.69	0.80	0.78	8.38	2.65	548	19.4	9.2	1116	61.6	335.8	81.1	
46							B	4.5	18.55	28.090	8.23	0.47	1.18	8.28	2.51	472	21.7	9.4	730	43.0	314.7	77.4	0.0140
47	P18	2001	03	06	12	51	S	1.0	21.03	22.914	8.40	0.36	1.41	8.27	3.11	427	13.2	6.5	620	49.5	272.6	63.8	0.0096
48							M	6.5	18.75	30.267	7.64	0.53	0.43	8.27	2.80	415	9.3	7.8	736	33.2	147.5	56.2	
49							B	12.0	18.73	30.371	7.19	0.85	0.10*	8.31	2.93	306	10.1	7.3	277	16.8	59.0	16.4	0.0068
50	P19	2001	03	05	15	27	S	1.0	19.43	23.951	8.63	0.47	1.72	8.28	2.90	661	20.9	6.2	852	50.0	303.5	48.6	0.0164
51							M	3.5	18.62	28.353	8.08	0.35	1.02	8.29	2.92	608	26.3	9.4	500	27.4	186.9	57.8	
52							B	5.9	18.59	28.815	7.45	0.80	0.48	8.36	3.19	385	15.5	9.2	371	23.3	134.9	59.0	0.0082

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No.	Point No.	Sampling time					Depth	Sampling depth (m)	Water temperature (°C)	Salinity	DO (mg/dm^3)	COD_{Mn} (mg/dm^3)	BOD_5 (mg/dm^3)	pH	TOC (mg/dm^3)	TN (ug/dm^3)	TP (ug/dm^3)	PO_4-P (ug/dm^3)	SiO_2-Si (ug/dm^3)	NO_2-N (ug/dm^3)	NO_3-N (ug/dm^3)	NH_3-N (ug/dm^3)	Hg (ug/dm^3)
											Detection limit												
		Y	M	D	H	Min					0.12	0.10	0.20	0.10	0.18	14	1.6	1.0	14	0.5	6.0	5.0	0.0064
53	P20	2001	03	05	07	30	S	1.0	18.60	29.628	7.82	0.28	0.85	8.27	2.69	370	11.6	4.6	1284	18.9	118.0	30.3	0.0081
54							M	9.0	18.67	30.767	7.88	0.26	0.61	8.27	3.06	279	11.6	5.7	748	11.1	79.4	34.4	
55							B	17.0	18.66	30.815	7.90	0.30	0.77	8.29	2.93	313	10.8	4.9	601	11.7	56.9	33.5	0.0032*
56	P21	2001	03	05	14	42	S	1.0	18.93	23.308	9.04	0.71	2.13	8.29	2.89	684	38.7	7.0	1089	60.1	390.6	67.6	0.0067
57							M	3.7	18.60	29.633	8.25	0.65	1.24	8.35	2.91	529	28.5	6.7	565	38.9	265.5	78.0	
58							B	6.3	18.60	29.644	7.84	1.10	1.10	8.42	2.99	465	20.9	7.8	671	29.7	245.9	72.9	0.0129
59	P22	2001	03	05	08	50	S	1.0	18.71	30.408	7.66	0.61	0.48	8.34	2.67	249	6.2	5.9	606	15.3	81.5	17.7	0.0079
60							M	6.0	18.70	30.451	7.72	0.77	0.35	8.36	2.64	317	10.8	10.2	860	14.5	73.8	38.5	
61							B	11.0	18.83	31.253	7.50	0.88	0.37	8.39	2.33	189	10.1	7.0	512	10.1	68.1	20.5	0.0032*
62	P23	2001	03	05	09	53	S	1.0	18.41	22.177	8.25	0.20	0.10*	8.27	3.48	831	14.7	12.4	1205	67.5	347.7	94.1	0.0032*
63							M	5.0	18.56	28.865	8.23	0.69	0.78	8.28	3.24	536	13.2	8.9	1142	55.6	305.6	75.5	
64							B	9.0	18.77	31.060	7.31	0.30	0.39	8.29	2.84	208	7.0	5.9	807	11.7	73.8	26.2	0.0106
65	P24	2001	03	05	12	37	S	1.0	18.29	20.085	8.17	0.20	0.69	8.19	3.29	755	27.1	12.4	1535	71.9	480.5	85.6	0.0032*
66							B	3.9	18.10	24.499	7.97	0.55	1.00	8.20	3.19	661	23.2	12.1	1344	68.8	343.5	60.9	0.0088
67	P25	2001	03	05	11	23	S	1.0	18.71	29.574	7.66	0.32	0.47	8.29	2.73	264	15.5	5.9	524	17.8	140.5	53.0	0.0110
68							M	10.0	19.17	31.317	7.70	0.30	0.85	8.34	4.13	363	12.4	11.1	418	13.4	79.4	48.0	
69							B	19.0	19.32	31.741	7.18	0.30	0.36	8.34	3.08	378	8.5	6.7	359	6.5	34.4	36.6	0.0032*
70	P27	2001	03	05	13	52	S	1.0	18.75	24.641	8.97	0.80	1.34	8.35	3.03	551	21.7	7.0	1060	60.6	362.5	79.9	0.0085
71							M	3.5	18.69	24.797	8.95	0.81	1.81	8.37	3.09	491	17.0	7.8	1118	60.3	353.4	44.5	
72							B	6.0	18.36	30.161	7.26	0.39	0.61	8.31	2.86	351	17.8	8.9	553	22.3	146.8	48.0	0.0143

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No.	Point No.	Sampling time					Depth	Cu (ug/dm^3)	Zn (ug/dm^3)	Pb (ug/dm^3)	Cd (ug/dm^3)	As (ug/dm^3)	Oil (UV) (mg/dm^3)	SS (kg/m^3)	Chl-a (mg/m^3)	Coliform ($ind/100cm^3$)	Remark
								Detection limit									
		Y	M	D	H	Min		0.2	3.1	0.03	0.01	0.05	0.010	0.0015	0.10	2	
1	P01	2001	03	04	12	56	S	4.0	35.5	5.74	0.42	1.50	0.061	0.0229	5.00	308	*: Half value of detection limit
2							M							0.0357	0.43		
3							B	3.9	49.1	0.89	0.66	1.58		0.0190	0.69	16	
4	P02	2001	03	06	07	20	S	2.8	26.8	5.64	0.25	1.30	0.030	0.0098	2.32	172	
5							M							0.0138	1.36		
6							B	1.5	15.5	1.54	0.15	2.04		0.0338	1.31	36	
7	P03	2001	03	05	09	05	S	1.9	22.0	4.62	0.17	1.23	0.047	0.0047	24.85	36	
8							B	2.7	27.1	4.27	0.17	1.78		0.0200	15.32	36	
9	P04	2001	03	05	13	10	S	3.9	42.1	0.71	0.13	2.19	0.031	0.0158	10.27	116	
10							M							0.0110	7.71		
11							B	4.4	24.3	1.15	0.20	3.21		0.0146	7.15	84	
12	P05	2001	03	06	09	23	S	1.5	16.1	1.00	0.26	1.26	0.027	0.0090	4.86	36	
13							M							0.0162	2.92		
14							B	1.9	38.5	1.23	0.19	1.49		0.0206	1.76	12	
15	P06	2001	03	06	08	55	S	1.2	15.5	1.75	0.18	1.82	0.022	0.0074	18.85	16	
16							M							0.0083	10.16		
17							B	1.2	24.4	1.31	0.20	1.83		0.0233	2.48	20	
18	P07	2001	03	05	11	58	S	2.6	10.9	0.55	0.18	1.79	0.028	0.0209	6.56	16	
19							M							0.0164	5.66		*: Half value of detection limit
20							B	3.7	18.6	0.26	0.36	1.83		0.0186	5.72	44	
21	P08	2001	03	06	10	35	S	1.4	11.7	1.93	0.11	1.23	0.022	0.0052	7.45	4	
22							M							0.0103	5.81		
23							B	0.7	15.3	1.87	0.26	1.29		0.0111	1.70	1*	
24	P09	2001	03	06	10	26	S	1.2	30.2	1.24	0.21	1.43	0.017	0.0080	5.13	100	
25							M							0.0109	1.68		
26							B	1.0	15.2	2.91	0.23	1.81		0.0137	1.36	336	

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No.	Point No.	Sampling time					Depth	Cu (ug/dm^3)	Zn (ug/dm^3)	Pb (ug/dm^3)	Cd (ug/dm^3)	As (ug/dm^3)	Oil (UV) (mg/dm^3)	SS (kg/m^3)	Chl-a (mg/m^3)	Coliform (ind/100cm^3)	Remark
								Detection limit									
		Y	M	D	H	Min		0.2	3.1	0.03	0.01	0.05	0.010	0.0015	0.10	2	
27	P10	2001	03	06	11	55	S	0.8	24.5	1.09	0.21	1.71	0.051	0.0373	8.32	1960	
28							B	1.7	31.7	1.15	0.23	1.29		0.0240	5.91	1536	
29	P11	2001	03	06	11	19	S	1.2	10.6	3.76	0.21	1.21	0.017	0.0072	5.51	8	
30							M							0.0081	5.73		
31							B	0.8	10.0	3.56	0.21	1.19		0.0137	0.41	1*	
32	P12	2001	03	06	07	46	S	0.5	21.4	1.40	0.41	1.32	0.020	0.0188	2.95	44	
33							M							0.0229	2.98		
34							B	0.7	16.3	0.78	0.16	1.43		0.0638	2.35	648	
35	P14	2001	03	05	17	05	S	2.3	15.5	1.71	0.28	1.96	0.020	0.0080	10.48	16	
36							M							0.0056	7.27		
37							B	1.9	32.8	1.72	0.34	2.55		0.0234	4.77	24	*: Half value of detection limit
38	P15	2001	03	05	17	07	S	1.3	21.8	4.54	0.41	1.22	0.024	0.0026	11.00	1*	
39							M							0.0054	6.98		
40							B	1.3	26.9	2.12	0.18	1.10		0.0053	3.52	1*	
41	P16	2001	03	06	13	38	S	1.0	22.6	1.40	0.09	1.09	0.021	0.0047	6.50	1*	
42							M							0.0106	6.21		
43							B	0.9	16.0	0.86	0.04	1.12		0.0169	1.21	1*	
44	P17	2001	03	05	16	11	S	1.3	24.8	3.55	0.20	1.08	0.029	0.0048	9.48	4	
45							M							0.0103	5.34		
46							B	0.9	25.5	2.87	0.10	1.12		0.0079	2.10	4	
47	P18	2001	03	06	12	51	S	0.9	18.6	3.62	0.06	1.72	0.022	0.0024	7.75	4	
48							M							0.0041	3.37		
49							B	0.9	14.4	3.57	0.12	1.55		0.0114	1.09	1*	
50	P19	2001	03	05	15	27	S	0.2	11.2	3.03	0.13	1.04	0.026	0.0068	6.68	80	
51							M							0.0054	3.10		
52							B	0.6	14.6	3.37	0.10	1.13		0.0071	1.33	28	

Printer:Yu Han Sheng,Xu Zhi Bing
Checker:Kuang Zheng Chang
Examiner:Zhong Si Sheng,Cai Jian Dong

WATER QUALITY DATA SHEET ON TRANSITIONAL SEASON FOR SINO-JAPAN JOINT STUDY ON THE PEARL RIVER ESTUARY

(Intensive point in neap tide)

Total page : 6

No.	Point No.	Sampling time					Depth	Cu (ug/dm^3)	Zn (ug/dm^3)	Pb (ug/dm^3)	Cd (ug/dm^3)	As (ug/dm^3)	Oil (UV) (mg/dm^3)	SS (kg/m^3)	Chl-a (mg/m^3)	Coliform ($ind/100cm^3$)	Remark
								Detection limit									
		Y	M	D	H	Min		0.2	3.1	0.03	0.01	0.05	0.010	0.0015	0.10	2	
53	P20	2001	03	05	07	30	S	0.4	14.2	2.29	0.22	1.09	0.034	0.0057	1.16	56	
54							M							0.0047	1.14		
55							B	1.0	19.3	2.06	0.62	0.95		0.0059	1.61	28	*: Half value of detection limit
56	P21	2001	03	05	14	42	S	0.4	12.7	4.32	0.15	1.12	0.015	0.0063	2.95	40	
57							M							0.0096	5.00		
58							B	0.2	8.8	2.23	0.15	1.16		0.0068	3.23	20	
59	P22	2001	03	05	08	50	S	1.0	20.4	5.06	0.21	1.12	0.016	0.0036	1.06	32	
60							M							0.0046	1.19		
61							B	3.3	21.7	3.60	0.47	1.06		0.0027	1.06	20	
62	P23	2001	03	05	09	53	S	1.2	20.4	1.88	0.30	1.15	0.005*	0.0021	2.04	20	
63							M							0.0024	2.41		
64							B	0.4	21.7	2.68	0.22	1.06		0.0057	1.66	8	
65	P24	2001	03	05	12	37	S	0.9	26.9	3.34	0.07	1.12	0.017	0.0071	2.48	44	
66							B	1.1	28.1	3.29	0.22	1.18		0.0065	1.51	36	
67	P25	2001	03	05	11	23	S	1.0	12.2	0.53	0.04	0.98	0.005*	0.0052	1.82	28	
68							M							0.0039	1.57		
69							B	1.5	16.1	0.70	0.16	0.99		0.0053	0.93	20	
70	P27	2001	03	05	13	52	S	0.9	19.5	2.20	0.43	1.31	0.018	0.0015	3.89	56	
71							M							0.0035	4.70		
72							B	1.6	28.3	2.23	0.65	1.14		0.0116	1.75	28	

Printer:Yu Han Sheng,Xu Zhi Bing
Checker:Kuang Zheng Chang
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Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season — 1

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P01			P02			P03		P04			P05			P06			P07		
			U	M	B	U	M	B	U	B	U	M	B	U	M	B	U	M	B	U	M	B
1	CYANOPHYTA	*Anabaena sp.*													250							
2		*Aphanizomenon sp.*			369																	
3		*Coelosphaerium sp.*	141																			
4		*Cyanophyceae*																	246	643	971	1110
5		*Gloeothca sp.*		95						1520	1420											
6		*Hammatodea sinensis*									2270	779	1140									277
7		*Lyngbva contarta*	2840	190	184	1900	736										495					
8		*Lyngbva sp.*																				
9		*Merismopedia elegans*	284			190																
10		*Merismopedia punctata*												551								
11		*Merismopedia sinica*							217													
12		*Merismopedia tenuissima*																				
13		*Merismopedia sp. I*				1140				1010		260	286									554
14		*Merismopedia sp. II*				190																
15		*Merismopedia sp.*																				
16		*Microcystis sp.*	284	284			147				1420	1560	571									
17		*Rhabdoderma lineare*																				
18		*Richelia intracellularis*																				
19		*Trichodesmium thiebautii*												551								
20	CRYPTOPHYTA	*Cryptomonas sp.*				190																
21	DINOPHYTA	*Ceratium furca*																				
22		*Ceratium gravidum*																				
23		*Ceratium macroceros*																				
24		*Ceratium massiliense*																				
25		*Diplopsalopsis globula*																				
26		*Diplopsalopsis orbiculata*																				
27		*Glenodinium sp.*																				
28		*Gonyaulax polygramma*																				
29		*Gonyaulax turbynaii*																				
30		*Gonyaulax sp.*																				
31		*Gymnodinium sanguineum*																				
32		*Gymnodinium sp.*																				
33		*Gymnodinium viridescens*																				
34		*Gyrodinium sp. I*													750	2020						
35		*Gyrodinium sp. II*												6060								
36		*Noctiluca scintillans*												276								
37		*Peridinium achromaficum*																				
38		*Peridinium cerasus*																				
39		*Peridinium globulus*																				
40		*Peridinium marukawai*																				
41		*Peridinium trochoideum*																				
42		*Peridinium sp. I*																				
43		*Peridinium sp. II*																				
44		*Peridinium sp.*																				
45		*Phalacroma sp.*																				
46		*Prorocentrum micans*														405						
47	CHRYSOPHYTA	*Dictyocha fibula*																				
48		*Distephanus speculus*																				
49		*Distephanus speculus v. octonarium*																				
50		*Ebria tripartita*																				

Remark : * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season －2

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P01			P02			P03		P04			P05			P06			P07		
			U	M	B	U	M	B	U	B	U	M	B	U	M	B	U	M	B	U	M	B
51	CHRYSOPHYTA	*Mesocena polymorpha v. bioctonaria*																				
52	BACILLARIOPHY	*Achnanthes sp.*																				
53		*Actinocyclus crassus*																				
54		*Actinocyclus Ehrenberyi*																				
55		*Actinoptychus undulatas*																				
56		*Amphiprora alata*																				
57		*Amphora sp.*																				
58		*Asterionella japonica*																				
59		*Asteromphalus cleveanus*																				
60		*Bacteriastrum elongatum*																				
61		*Bacteriastrum hyalinum*																				
62		*Bacteriastrum mediterraneum*																				
63		*Bacteriastrum minus*																				
64		*Bacteriastrum varians*																				
65		*Biddulphia sinensis*																				
66		*Caloneis bacillaris*																				
67		*Campylodiscus Brightwellii*																				
68		*Cerataulina compacta*																				
69		*Chaetoceros affinis*																				
70		*Chaetoceros atlanticus*																				
71		*Chaetoceros borealis*																				
72		*Chaetoceros brevis*																				
73		*Chaetoceros castracanei*																				
74		*Chaetoceros compressum*																				
75		*Chaetoceros convolutus*																				
76		*Chaetoceros costatus*																				
77		*Chaetoceros curvisetus*																				
78		*Chaetoceros danicus*																				
79		*Chaetoceros debilis*																				
80		*Chaetoceros decipiens*																				
81		*Chaetoceros densus*																				
82		*Chaetoceros denticulatus*																				
83		*Chaetoceros denticulatus f. angusta*																				
84		*Chaetoceros holsaticus*																				
85		*Chaetoceros indicum*																				
86		*Chaetoceros lauderi*																				
87		*Chaetoceros lorenzianus*																				
88		*Chaetoceros pseudocurvisetus*																				
89		*Chaetoceros radianus*																				
90		*Chaetoceros rostratus*																				
91		*Chaetoceros siamense*																				
92		*Chaetoceros socialis*												1650								
93		*Chaetoceros subsecundus*																				
94		*Chaetoceros weissflogii*																				
95		*Chaetoceros sp.*						2480														
96		*Corethron hyserix*																				
97		*Corethron sp.*					294															
98		*Coscinodiscus anguste-lineatus*					*															
99		*Coscinodiscus asteronphalus*																				
100		*Coscinodiscus bipartitus*																				

Remark: * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season －3

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P01			P02			P03		P04			P05			P06			P07		
			U	M	B	U	M	B	U	B	U	M	B	U	M	B	U	M	B	U	M	B
101	BACILLARIOPHY	*Coscinodiscus excentricus*													250							
102		*Coscinodiscus gigas*																				
103		*Coscinodiscus jonesianus*																				
104		*Coscinodiscus lineatus*					*															
105		*Coscinodiscus marginatus*																				
106		*Coscinodiscus oculatus*																				
107		*Coscinodiscus oculus-iridis*																				
108		*Coscinodiscus thorii*																				
109		*Coscinodiscus wailesii*																				
110		*Coscinodiscus sp.*	284	1140	553	380	147	1650	434	*	852					405			246			
111		*Cyclotella antiqua*																				
112		*Cyclotella comta*																				
113		*Cyclotella stelligera*																				
114		*Cyclotella striata*												1100								
115		*Cyclotella stylorum*												827	1500	10900						
116		*Cyclotella sp.*	141		369		147			1270		779	1710									
117		*Cymbella tumida*																				
118		*Cymbella sp.*								253		260										
119		*Dactyliosolen mediterraneus*		95																		
120		*Diatoma hylina*														405						
121		*Diploneis bombus*																				
122		*Donkinia recta v. intermedia*																				
123		*Epithemia turgida*							217													
124		*Epithemia sp.*								253												
125		*Fragilaria oceanica*																				
126		*Fragilaria sp.*								253		260										
127		*Gomphonema sp.*	141							1270												
128		*Grammatophora marina*																				
129		*Grammatophora undulata*																				
130		*Gyrosigma acuminatum*							4560	22500		1040	571									
131		*Gyrosigma sp.*	141								1140	260										
132		*Hyalodiscus sutilis*																				
133		*Lauderia borealis*																				
134		*Lauderia glacialis*																				
135		*Leptocylindrus danicus*									14500	8310	4850			4050					1210	
136		*Licmophora abbreviata*												551								
137		*Melosira borreri*																				
138		*Melosira granulata*	5247			1140	589		651		7100	2600					495					
139		*Melosira italica*					294															
140		*Melosira moniliformis*							1950	1270		2600	1140									
141		*Melosira nummuloides*	3400			570	1180		1300	506	4260	2340	571									
142		*Melosira sulcata*	6240	190		759	294		651	2280	11600	14800	6850							482	729	831
143		*Melosira varians*	7091	474		1520	736		434		5680	1560	2850									554
144		*Melosira sp.*			1480	190												941				
145		*Navicula distans*																				
146		*Navicula membranacea*																				
147		*Navicula parva*																				
148		*Navicula salinarum*																				
149		*Navicula transitrans f. delicatula*					147		651	1770		779	2000									277
150		*Navicula transitrans v. derasa*								3290			285									

Remark: * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season －4

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P01			P02			P03		P04			P05			P06			P07		
			U	M	B	U	M	B	U	B	U	M	B	U	M	B	U	M	B	U	M	B
151	BACILLARIOPHY	*Navicula sp. I*																				
152		*Navicula sp. II*													250							
153		*Navicula sp.*					147		3910	13700	3120	4420	8840				248		246		971	
154		*Nitzschia closterium*								54400	8520	12700	12000					377		964	971	2220
155		*Nitzschia delicatissma*									568											
156		*Nitzschia distans*									284	520										
157		*Nitzschia frigida*																				
158		*Nitzschia lanceolata*														405						
159		*Nitzschia longissima*								37500	4550	6230	17700	276	1250	14200		941	1470	12100	9230	13300
160		*Nitzschia longissima f. reversa*											285									
161		*Nitzschia lorenziana*																	246			
162		*Nitzschia panduriformis*							868	1520	568	1040	1140									
163		*Nitzschia paradoxa*							651				571		500							
164		*Nitzschia pungens*											571									
165		*Nitzschia scalaris*																				
166		*Nitzschia seriata*												551								
167		*Nitzschia sigma*																				
168		*Nitzschia sigma v. intermedia*																				
169		*Nitzschia sp.*		284			147	413	217	2030	10500	13000					248	188			486	
170		*Phaeodactylum tricornutum*																	246			
171		*Pleurosigma affine*																				
172		*Pleurosigma formosum*																				
173		*Pleurosigma intermedium*																				
174		*Pleurosigma pelagicum*																				
175		*Rhizosolenia crassispina*																				
176		*Rhizosolenia delicatula*																				
177		*Rhizosolenia stolterfothii*																				
178		*Rhizosolenia styliformis*																				
179		*Schroederella delicatula*																				
180		*Skeletonema costatum*	1764000	9190	42600	395000	367000	111000	11700000	10900000	1090000	1790000	1260000	250000	390000	372000	394000	277000	134000	1070000	1070000	1040000
181		*Streptotheca thamesis*																				
182		*Surirella sp.*																				
183		*Synedra acus*	1280	95			441		2170	5060		520	285									
184		*Synedra sp.*											285									
185		*Tabellaria fenestrata*																				
186		*Tabellaria sp.*	284																			
187		*Thalassionema nitzschioides*				380			434	506		260							491			
188		*Thalassiosira gravida*															248	377				
189		*Thalassiosira hyalina*	18860	948		6840	3970	826									495	188				
190		*Thalassiosira rotula*																				
191		*Thalassiosira subtilis*													250							
192		*Thalassiosira sp.*							651			1560							491		971	831
193		*Thalassiothrix frauenfeldii*																				
194		*Thalassiothrix longissima*																				
195		*Triceratium formosum*																				
196	RAPHIDOPHYTA	*Chattonella antiqua*																				
197	EUGLENOPHYTA	*Euglena caudata*	284																			
198		*Euglena proxima*																				
199		*Euglena sp.*	284	379		190			217	253		520		276			248					
200		*Eutreptia viridis*																				

Remark: * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season －5

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P01			P02			P03		P04			P05			P06			P07		
			U	M	B	U	M	B	U	B	U	M	B	U	M	B	U	M	B	U	M	B
201	CHLOROPHYTA	*Actinastrum hantzschii*	27200				1180				3410	6750	1710									
202		*Ankistrodesmus falcatus*																				
203		*Ankistrodesmus sp.*							3690	2280							248	188				
204		*Chlamydononas sp.*																				
205		*Chlorella sp.*	284		369	1520	883		434	506	568	779	286									
206		*Chroococcopsis sp.*	425	95	184						568	520	286									
207		*Chroococcus turgidus*																				
208		*Chroococcas sp.*	284	190			294	413	434	506	4830	520										
209		*Closterium sp.*		95																		
210		*Cosmarium sp.*		95																		
211		*Crucigenia apiculata*	2270																			
212		*Crucigenia puadrata*																				
213		*Crucigenia quadrata*								5060	13600	8310	13700							2570		
214		*Crucigenia sp.*											2280									
215		*Dactylococcopsis acicularis*				190	147	413	651	253	284			827			248					
216		*Gloeocystis sp.*																753				
217		*Hantzschia sp.*										520	285									
218		*Oocystis sp.*				6080	883		217			260										
219		*Pediastrum sp.*							1300													
220		*Raphidonema nivale*		95																		
221		*Raphidonema sp.*			184	1140																
222		*Scenedesmus bijuga*																				
223		*Scenedesmus denticulatus*																				
224		*Scenedesmus denticulatus var. linearis*	6240																			
225		*Scenedesmus dimorphus*	14700			1520	441					2080	2280									
226		*Scenedesmus quadricauda*	6240			1520	2650		868	3040	5680	2080	1710					753			971	
227		*Scenedesmus sp.*				759					568	2080										
228		*Schroederia nitzschioides*			369																	
229		*Selenastrum sp.*	284			2090	1320		434	1010		260	9410									
230		*Tetradesmus sp.*	3400																			
231		*Tetraedron sp.*					147															
232		*Westellopsis linearis*				2280	883															
233		*Halosphaera viridis*																				
234		Chlorophyceae																	737			

Remark: * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season －6

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P08			P09			P10		P11			P12			P14			P15			P16			P17		
			U	M	B	U	M	B	U	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B
1	CYANOPHYTA	*Anabaena sp.*		216																								
2		*Aphanizomenon sp.*																										
3		*Coelosphaerium sp.*																										
4		*Cyanophyceae*									282	209														398	331	156
5		*Gloeothca sp.*																										
6		*Hammatodea sinensis*																										
7		*Lyngbya contarta*																										
8		*Lyngbya sp.*																				257						
9		*Merismopedia elegans*															168											
10		*Merismopedia punctata*																										
11		*Merismopedia sinica*																										
12		*Merismopedia tenuissima*		216																								
13		*Merismopedia sp. I*																										
14		*Merismopedia sp. II*																										
15		*Merismopedia sp.*																										
16		*Microcystis sp.*																										
17		*Rhabdoderma lineare*				278																						
18		*Richelia intracellularis*																				257						
19		*Trichodesmium thiebautii*							371																			
20	CRYPTOPHYTA	*Cryptomonas sp.*																										
21	DINOPHYTA	*Ceratium furca*																										
22		*Ceratium gravidum*																										
23		*Ceratium macroceros*						237															316					
24		*Ceratium massiliense*																										
25		*Diplopsalopsis globula*																										
26		*Diplopsalopsis orbiculata*				1110																						
27		*Glenodinium sp.*																										
28		*Gonyaulax polygramma*			880				742																			
29		*Gonyaulax turbynaii*																										
30		*Gonyaulax sp.*																										
31		*Gymnodinium sanguineum*																										
32		*Gymnodinium sp.*																										
33		*Gymnodinium viridescens*																										
34		*Gyrodinium sp. I*																				2570	52200	7280				
35		*Gyrodinium sp. II*	24600	7760	660	16700	1280			299				560	242					3750	18600	513						
36		*Noctiluca scintillans*	586	1290	220	557										266			283		573		316				165	
37		*Peridinium achromaficum*																										
38		*Peridinium cerasus*																										
39		*Peridinium globulus*																										
40		*Peridinium marukawai*																										
41		*Peridinium trochoideum*																										
42		*Peridinium sp. I*				557																						
43		*Peridinium sp. II*				557																						
44		*Peridinium sp.*																										
45		*Phalacroma sp.*			220																							
46		*Prorocentrum micans*				1110			371															202				
47	CHRYSOPHYTA	*Dictyocha fibula*																										
48		*Distephanus speculus*																										
49		*Distephanus speculus v. octonarium*																										
50		*Ebria tripartita*	293			557	213																					

Remark : * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season －7

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P08			P09			P10		P11			P12			P14			P15			P16			P17		
			U	M	B	U	M	B	U	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B
51	CHRYSOPHYTA	*Mesocena polymorpha v. bioctonaria*																										
52	BACILLARIOPHYTA	*Achnanthes sp.*																										
53		*Actinocyclus crassus*																		700								
54		*Actinocyclus Ehrenberyi*																										
55		*Actinoptychus undulatas*				278																						
56		*Amphiprora alata*						237							242	266												
57		*Amphora sp.*			220																							
58		*Asterionella japonica*																										
59		*Asteromphalus cleveanus*																										
60		*Bacteriastrum elongatum*																										
61		*Bacteriastrum hyalinum*					2130																					
62		*Bacteriastrum mediterraneum*																										
63		*Bacteriastrum minus*																										
64		*Bacteriastrum varians*																										
65		*Biddulphia sinensis*																										
66		*Caloneis bacillaris*													242													
67		*Campylodiscus Brightwellii*																										
68		*Cerataulina compacta*																										
69		*Chaetoceros affinis*											1680									2570						
70		*Chaetoceros atlanticus*																										
71		*Chaetoceros borealis*																										
72		*Chaetoceros brevis*																										
73		*Chaetoceros castracanei*				278																						
74		*Chaetoceros compressum*																										
75		*Chaetoceros convolutus*																										
76		*Chaetoceros costatus*												1680														
77		*Chaetoceros curvisetus*																										
78		*Chaetoceros danicus*																										
79		*Chaetoceros debilis*																										
80		*Chaetoceros decipiens*																										467
81		*Chaetoceros densus*																										
82		*Chaetoceros denticulatus*																				513						
83		*Chaetoceros denticulatus f. angusta*																										
84		*Chaetoceros holsaticus*																						607				
85		*Chaetoceros indicum*																										
86		*Chaetoceros lauderi*																										
87		*Chaetoceros lorenzianus*																										
88		*Chaetoceros pseudocurvisetus*																										
89		*Chaetoceros radianus*																										
90		*Chaetoceros rostratus*																										
91		*Chaetoceros siamense*																										
92		*Chaetoceros socialis*			1100										1450			4530		2100	2580							
93		*Chaetoceros subsecundus*																										
94		*Chaetoceros weissflogii*																										
95		*Chaetoceros sp.*								598																		
96		*Corethron hyserix*																										
97		*Corethron sp.*																										
98		*Coscinodiscus anguste-lineatus*																										
99		*Coscinodiscus asteronphalus*																										
100		*Coscinodiscus bipartitus*													242		335											

Remark: * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season — 8

Unit: cells/L

No.	DIVISION	Species name \ Stn. / Layer	P08			P09			P10		P11			P12			P14			P15			P16			P17		
			U	M	B	U	M	B	U	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B
101	BACILLARIOPHYTA	*Coscinodiscus excentricus*							371																			
102		*Coscinodiscus gigas*																							147			
103		*Coscinodiscus jonesianus*														532												
104		*Coscinodiscus lineatus*																										
105		*Coscinodiscus marginatus*														266												
106		*Coscinodiscus oculatus*					639								485													
107		*Coscinodiscus oculus-iridis*													242													
108		*Coscinodiscus thorii*																										
109		*Coscinodiscus wailesii*								299																		
110		*Coscinodiscus sp.*	293	216		278							335			532		283	283									
111		*Cyclotella antiqua*	586																									
112		*Cyclotella comta*	879																									
113		*Cyclotella stelligera*																283										
114		*Cyclotella striata*		647	440	1110	639							840	485	532	503	1700	565	1050	573							
115		*Cyclotella stylorum*	1460	431		835	1920	1660	1110	598				1960	1210	5590								202				
116		*Cyclotella sp.*							1110	598																		
117		*Cymbella tumida*																										
118		*Cymbella sp.*																										
119		*Dactyliosolen mediterraneus*																						606				
120		*Diatoma hylina*																						202				
121		*Diploneis bombus*																										
122		*Donkinia recta v. intermedia*				278																						
123		*Epithemia turgida*																										
124		*Epithemia sp.*																										
125		*Fragilaria oceanica*																										
126		*Fragilaria sp.*																										
127		*Gomphonema sp.*																										
128		*Grammatophora marina*					31900																					
129		*Grammatophora undulata*																										
130		*Gyrosigma acuminatum*																										
131		*Gyrosigma sp.*																										
132		*Hyalodiscus sutilis*													242													
133		*Lauderia borealis*																	1130									
134		*Lauderia glacialis*	2640																									
135		*Leptocylindrus danicus*											168					566										
136		*Licmophora abbreviata*																										
137		*Melosira borreri*			880			2130																				
138		*Melosira granulata*									565																	
139		*Melosira italica*																										
140		*Melosira moniliformis*																		2100								
141		*Melosira nummuloides*																										
142		*Melosira sulcata*									847						839								1610			
143		*Melosira varians*																		700								
144		*Melosira sp.*											335														331	
145		*Navicula distans*																										
146		*Navicula membranacea*																										
147		*Navicula parva*																	283									
148		*Navicula salinarum*							371	299																		
149		*Navicula transitrans f. delicatula*											168															
150		*Navicula transitrans v. derasa*																										

Remark: * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season —9

Unit: cells/L

No.	DIVISION	Species name \ Stn. / Layer	P08			P09			P10		P11			P12			P14			P15			P16			P17		
			U	M	B	U	M	B	U	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B
151	BACILLARIOPHY	*Navicula sp. I*																										
152		*Navicula sp. II*	586		220			711	742	897								566	283									
153		*Navicula sp.*										209	168	560		266												
154		*Nitzschia closterium*		647									168															
155		*Nitzschia delicatissma*									565			560	242													623
156		*Nitzschia distans*																										
157		*Nitzschia frigida*			1980																							
158		*Nitzschia lanceolata*	293														108											
159		*Nitzschia longissima*	29600	12900	1320	1110			371	598	847	209	168	840	485	798	1510	9330	4240	350	286					398	331	312
160		*Nitzschia longissima f. reversa*																										
161		*Nitzschia lorenziana*						474																				
162		*Nitzschia panduriformis*																										
163		*Nitzschia paradoxa*				2230	2130									798		1410	1410		859				147			
164		*Nitzschia pungens*						1180																				779
165		*Nitzschia scalaris*																										
166		*Nitzschia seriata*		431		1110		1890		598					970	1330	671					1030		202				
167		*Nitzschia sigma*				278																						
168		*Nitzschia sigma v. intermedia*																										
169		*Nitzschia sp.*					426						168					283					633					
170		*Phaeodactylum tricornutum*																										
171		*Pleurosigma affine*																										
172		*Pleurosigma formosum*																										
173		*Pleurosigma intermedium*								299																		
174		*Pleurosigma pelagicum*							371					280														
175		*Rhizosolenia crassispina*																										312
176		*Rhizosolenia delicatula*						474	1110						242													
177		*Rhizosolenia stolterfothii*													242													
178		*Rhizosolenia styliformis*																										
179		*Schroederella delicatula*																										
180		*Skeletonema costatum*	942000	782000	75900	30100	25500	6630	27500	53800	225000	205000	12700	45400	20100	33000	1160000	3230000	98700	1690000	526000	2430000	34200	6070		1810000	708000	486000
181		*Streptotheca thamesis*																										
182		*Surirella sp.*																										
183		*Synedra acus*																										
184		*Synedra sp.*																										
185		*Tabellaria fenestrata*	293																									
186		*Tabellaria sp.*																										
187		*Thalassionema nitzschioides*														798			1130						293			156
188		*Thalassiosira gravida*																										
189		*Thalassiosira hyalina*																										
190		*Thalassiosira rotula*																										
191		*Thalassiosira subtilis*					1490		3710							798	335		565		573							
192		*Thalassiosira sp.*									565	209																
193		*Thalassiothrix frauenfeldii*																										
194		*Thalassiothrix longissima*																										
195		*Triceratium formosum*																										
196	RAPHIDOPHYTA	*Chattonella antiqua*																				513						
197	EUGLENOPHYTA	*Euglena caudata*																										
198		*Euglena proxima*																										
199		*Euglena sp.*																										
200		*Eutreptia viridis*								598																		

Remark: * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season －10

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P08			P09			P10		P11			P12			P14			P15			P16			P17		
			U	M	B	U	M	B	U	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B
201	CHLOROPHYTA	*Actinastrum hantzschii*		2160																								
202		*Ankistrodesmus falcatus*		647	440																							
203		*Ankistrodesmus sp.*																1700										
204		*Chlamydononas sp.*																										
205		*Chlorella sp.*																										
206		*Chroococcopsis sp.*																										
207		*Chroococcus turgidus*																										
208		*Chroococcus sp.*																										
209		*Closterium sp.*	586																									
210		*Cosmarium sp.*																										
211		*Crucigenia apiculata*																										
212		*Crucigenia puadrata*															1340											
213		*Crucigenia quadrata*																										
214		*Crucigenia sp.*																										
215		*Dactylococcopsis acicularis*	586																									
216		*Gloeocystis sp.*																										
217		*Hantzschia sp.*																										
218		*Oocystis sp.*																										
219		*Pediastrum sp.*																										
220		*Raphidonema nivale*																										
221		*Raphidonema sp.*																										
222		*Scenedesmus bijuga*		863																								
223		*Scenedesmus denticulatus*															671											
224		*Scenedesmus denticulatus var. line*																										
225		*Scenedesmus dimorphus*	4390														671											
226		*Scenedesmus quadricauda*																										
227		*Scenedesmus sp.*																										
228		*Schroederia nitzschioides*																										
229		*Selenastrum sp.*																										
230		*Tetradesmus sp.*																										
231		*Tetraedron sp.*																										
232		*Westellopsis linearis*																										
233		*Halosphaera viridis*		216																								
234		Chlorophyceae									282		168														331	

Remark: * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season －11

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P18			P19			P20			P21			P22			P23			P24		P25			P27		
			U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	B	U	M	B	U	M	B
1	CYANOPHYTA	*Anabaena sp.*																				1740						
2		*Aphanizomenon sp.*																										
3		*Coelosphaerium sp.*																										
4		*Cyanophyceae*																										
5		*Gloeothca sp.*																										
6		*Hammatodea sinensis*																										
7		*Lyngbya contarta*																										
8		*Lyngbya sp.*																										
9		*Merismopedia elegans*																										
10		*Merismopedia punctata*																										
11		*Merismopedia sinica*																										
12		*Merismopedia tenuissima*																										
13		*Merismopedia* sp. I																										
14		*Merismopedia* sp. II																										
15		*Merismopedia sp.*																										
16		*Microcystis sp.*																										
17		*Rhabdoderma lineare*																										
18		*Richelia intracellularis*																										
19		*Trichodesmium thiebautii*															188					696		272				
20	CRYPTOPHYTA	*Cryptomonas sp.*																										
21	DINOPHYTA	*Ceratium furca*										337		216	261					621							1330	
22		*Ceratium gravidum*													130													
23		*Ceratium macroceros*																										
24		*Ceratium massiliense*																						272				
25		*Diplopsalopsis globula*																2220										
26		*Diplopsalopsis orbiculata*																										
27		*Glenodinium sp.*										674												272				
28		*Gonyaulax polygramma*							258	260	301								472					272	573			
29		*Gonyaulax turbynaii*	547			516																						
30		*Gonyaulax sp.*																								305	667	
31		*Gymnodinium sanguineum*	821																									
32		*Gymnodinium sp.*										337			391													
33		*Gymnodinium viridescens*																					413					
34		*Gyrodinium* sp. I									602	30300	12400	1950												5490	8670	
35		*Gyrodinium* sp. II	38300	4650		11600		485									188	222	944				207					
36		*Noctiluca scintillans*										674		216	130	183	376	222	236	310					287			
37		*Peridinium achromaficum*																889										
38		*Peridinium cerasus*																	236									
39		*Peridinium globulus*																	944									
40		*Peridinium marukawai*				258																						
41		*Peridinium trochoideum*																1780										
42		*Peridinium* sp. I																										
43		*Peridinium* sp. II																										
44		*Peridinium sp.*	274								903					183	188											
45		*Phalacroma sp.*																										
46		*Prorocentrum micans*				258			258									222	236								333	
47	CHRYSOPHYTA	*Dictyocha fibula*													130	366												
48		*Distephanus speculus*																										
49		*Distephanus speculus v. octonarium*										337																
50		*Ebria tripartita*																										

Remark : * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season －12

Unit: cells/L

No.	DIVISION	Species name \ Stn. / Layer	P18			P19			P20			P21			P22			P23			P24		P25			P27		
			U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	B	U	M	B	U	M	B
51	CHRYSOPHYTA	*Mesocena polymorpha v. bioctonari*		274																								
52	BACILLARIOPHYTA	*Achnanthes sp.*				258																						
53		*Actinocyclus crassus*																										
54		*Actinocyclus Ehrenberyi*												216									207					
55		*Actinoptychus undulatas*											277															
56		*Amphiprora alata*			245															1240								
57		*Amphora sp.*																										
58		*Asterionella japonica*			1220		2940	1210		3120	15700		1110		521					931					1720			
59		*Asteromphalus cleveanus*														183												
60		*Bacteriastrum elongatum*						485																				
61		*Bacteriastrum hyalinum*																		931	622		413					
62		*Bacteriastrum mediterraneum*																		621								
63		*Bacteriastrum minus*					2940																					
64		*Bacteriastrum varians*					5880																	3540	7450	1220		314
65		*Biddulphia sinensis*									602																	
66		*Caloneis bacillaris*																										
67		*Campylodiscus Brightwellii*			245																							
68		*Cerataulina compacta*																			311							
69		*Chaetoceros affinis*					1310			780				649		366			1650		933				1150			
70		*Chaetoceros atlanticus*																							287			
71		*Chaetoceros borealis*						485																				
72		*Chaetoceros brevis*										1010																
73		*Chaetoceros castracanei*					327	727									565						620	1360	573			627
74		*Chaetoceros compressum*																	3540	7760							4000	
75		*Chaetoceros convolutus*																		621								
76		*Chaetoceros costatus*																										
77		*Chaetoceros curvisetus*													1040										1720			
78		*Chaetoceros danicus*								160			277		261	366												
79		*Chaetoceros debilis*									4220							2440										
80		*Chaetoceros decipiens*												216		1280												
81		*Chaetoceros densus*													1170									544				
82		*Chaetoceros denticulatus*													130					1240								
83		*Chaetoceros denticulatus f. angusta*																						817				
84		*Chaetoceros holsaticus*																										
85		*Chaetoceros indicum*									903			433											1430			
86		*Chaetoceros lauderi*													391													
87		*Chaetoceros lorenzianus*									2110										3420	1390						
88		*Chaetoceros pseudocurvisetus*																1780	944					1090				
89		*Chaetoceros radianus*								520																		
90		*Chaetoceros rostratus*																		1240								
91		*Chaetoceros siamense*																	1420									
92		*Chaetoceros socialis*	2190	1090	490	3870	21900	160000		1820	151000							1780	1890	41900	1560		826	9260	6880		3330	
93		*Chaetoceros subsecundus*																	944		1240							
94		*Chaetoceros weissflogii*																	1890					6530				
95		*Chaetoceros sp.*	1090																									
96		*Corethron hyserix*					327																207				333	
97		*Corethron sp.*																										
98		*Coscinodiscus anguste-lineatus*																										
99		*Coscinodiscus asteronphalus* .	274	547					258	260								222										
100		*Coscinodiscus bipartitus*				1290								433					236									

Remark: * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season — 13

Unit: cells/L

No.	DIVISION	Stn. / Species name / Layer	P18			P19			P20			P21			P22			P23			P24		P25			P27		
			U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	B	U	M	B	U	M	B
101	BACILLARIOPHYTA	*Coscinodiscus excentricus*											277												287			
102		*Coscinodiscus gigas*																										
103		*Coscinodiscus jonesianus*																										
104		*Coscinodiscus lineatus*																										
105		*Coscinodiscus marginatus*																										
106		*Coscinodiscus oculatus*																										
107		*Coscinodiscus oculus-iridis*																										
108		*Coscinodiscus thorii*									903																	
109		*Coscinodiscus wailesii*																										
110		*Coscinodiscus sp.*			245					260					261								207					157
111		*Cyclotella antiqua*																										
112		*Cyclotella comta*																										
113		*Cyclotella stelligera*																										
114		*Cyclotella striata*	821			1550		485	773	260							565	1560	944			2090			860			
115		*Cyclotella stylorum*			245					260	602		553				565			310								
116		*Cyclotella sp.*												216	130													
117		*Cymbella tumida*						242																				
118		*Cymbella sp.*																										
119		*Dactyliosolen mediterraneus*																										
120		*Diatoma hylina*									602														287			
121		*Diploneis bombus*									602																	
122		*Donkinia recta v. intermedia*																										
123		*Epithemia turgida*																										
124		*Epithemia sp.*																										
125		*Fragilaria oceanica*					980						553													1220		
126		*Fragilaria sp.*																										
127		*Gomphonema sp.*																										
128		*Grammatophora marina*																										
129		*Grammatophora undulata*							258	2860																		
130		*Gyrosigma acuminatum*																										
131		*Gyrosigma sp.*																										
132		*Hyalodiscus sutilis*																	236									
133		*Lauderia borealis*																			3420							
134		*Lauderia glacialis*																										
135		*Leptocylindrus danicus*																										
136		*Licmophora abbreviata*																				348						
137		*Melosira borreri*																										
138		*Melosira granulata*						2420																				
139		*Melosira italica*																										
140		*Melosira moniliformis*																										
141		*Melosira nummuloides*																										
142		*Melosira sulcata*													130													627
143		*Melosira varians*																										
144		*Melosira sp.*																										
145		*Navicula distans*														183												
146		*Navicula membranacea*									602		277															
147		*Navicula parva*																										
148		*Navicula salinarum*																										
149		*Navicula transitrans f. delicatula*																		621								
150		*Navicula transitrans v. derasa*																										

Remark: * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season —14

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P18			P19			P20			P21			P22			P23			P24		P25			P27		
			U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	B	U	M	B	U	M	B
151	BACILLARIOPHYTA	*Navicula sp. I*									301										311				287			
152		*Navicula sp. II*						21800		2080	301		277										207	1630				
153		*Navicula sp.*				516									391		1690		236	2790		348						
154		*Nitzschia closterium*																										
155		*Nitzschia delicatissma*	821	547			653								261	733	565			621								314
156		*Nitzschia distans*																										
157		*Nitzschia frigida*	1920				980												708									
158		*Nitzschia lanceolata*			245						301																	
159		*Nitzschia longissima*	2740	78000	245		327	727		1300	903	674				183	188	2000	1180	2790	5600	11100	207		573	305	667	157
160		*Nitzschia longissima f. reversa*																										
161		*Nitzschia lorenziana*																										
162		*Nitzschia panduriformis*																										
163		*Nitzschia paradoxa*	2190	547	735		1960	3880														2430	3100				1670	
164		*Nitzschia pungens*			245		1630		773	1300	2710		830	216					1420	3410	4040		207	817	4870		1000	
165		*Nitzschia scalaris*																		621								
166		*Nitzschia seriata*	2740	1090	1220	258			1550		1510	337					941	667		3410	2490	5220		272			3670	
167		*Nitzschia sigma*															1320											
168		*Nitzschia sigma v. intermedia*																		621								
169		*Nitzschia sp.*																		310					573			
170		*Phaeodactylum tricornutum*																										
171		*Pleurosigma affine*			245															310				272	287			
172		*Pleurosigma formosum*					653																					
173		*Pleurosigma intermedium*												216														
174		*Pleurosigma pelagicum*		274																								
175		*Rhizosolenia crassispina*																										
176		*Rhizosolenia delicatula*							258			674					376										1330	
177		*Rhizosolenia stolterfothii*																	236								1330	
178		*Rhizosolenia styliformis*															188							544				
179		*Schroederella delicatula*											277															
180		*Skeletonema costatum*	1450000	192000	3430	64500	10800		1550		5420	326000	104000	28100	4170	1830		557000	167000		231000	141000				94600	219000	14700
181		*Streptotheca thamesis*																							287			
182		*Surirella sp.*																		310								
183		*Synedra acus*																										
184		*Synedra sp.*										337																
185		*Tabellaria fenestrata*																										
186		*Tabellaria sp.*																										
187		*Thalassionema nitzschioides*			245			485		520	1200	337						222	2600		3420		826		287			
188		*Thalassiosira gravida*																										
189		*Thalassiosira hyalina*													130													
190		*Thalassiosira rotula*								520																		
191		*Thalassiosira subtilis*			490			485	258		903						188								287			
192		*Thalassiosira sp.*		547												366				621	3110							
193		*Thalassiothrix frauenfeldii*																						544				
194		*Thalassiothrix longissima*														183												
195		*Triceratium formosum*																	236									
196	RAPHIDOPHYTA	*Chattonella antiqua*										337																
197	EUGLENOPHYTA	*Euglena caudata*																										
198		*Euglena proxima*											553														1330	
199		*Euglena sp.*				258																						
200		*Eutreptia viridis*																										

Remark : * Show qualitative analysis .

Species and cell number of Phytoplankton in Pearl River Estuary : Intermediate Season — 15

Unit: cells/L

No.	DIVISION	Species name / Stn. / Layer	P18			P19			P20			P21			P22			P23			P24		P25			P27		
			U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	M	B	U	B	U	M	B	U	M	B
201	CHLOROPHYTA	*Actinastrum hantzschii*																										
202		*Ankistrodesmus falcatus*																										
203		*Ankistrodesmus sp.*																										
204		*Chlamydononas sp.*										1350																
205		*Chlorella sp.*																										
206		*Chroococcopsis sp.*																										
207		*Chroococcus turgidus*																									333	
208		*Chroococcus sp.*																										
209		*Closterium sp.*																										
210		*Cosmarium sp.*																										
211		*Crucigenia apiculata*																										
212		*Crucigenia puadrata*																										
213		*Crucigenia quadrata*																										
214		*Crucigenia sp.*																										
215		*Dactylococcopsis acicularis*																									667	
216		*Gloeocystis sp.*																										
217		*Hantzschia sp.*																										
218		*Oocystis sp.*																										
219		*Pediastrum sp.*																										
220		*Raphidonema nivale*																										
221		*Raphidonema sp.*																										
222		*Scenedesmus bijuga*																										
223		*Scenedesmus denticulatus*																										
224		*Scenedesmus denticulatus var. linear*																										
225		*Scenedesmus dimorphus*																										
226		*Scenedesmus quadricauda*																										
227		*Scenedesmus sp.*																										
228		*Schroederia nitzschioides*																										
229		*Selenastrum sp.*																										
230		*Tetradesmus sp.*																										
231		*Tetraedron sp.*																										
232		*Westellopsis linearis*																										
233		*Halosphaera viridis*																										
234		Chlorophyceae																										

Remark: * Show qualitative analysis .

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—1

Unit : ind/m^3

No.		Stn. No. / Species name	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10
1	DINOPHYTA	*Noctiluca scintillans*	174894.36	527230.67	1576.67		7172.73	597158.14		952897.13	42734.52	15852.00
2	CILIOPHORA	*Tintinnopsis sp.*	4.31	22.67	56.67	19.12	96.97	62.79	25.00	50.24	20.24	76.00
3		*Favella sp.*	2.87		73.33	19.12	69.70	41.86	19.23	45.45	14.29	92.00
4	CNIDARIA	*Euphysora bigelowi*										
5		*Eirene sp.*					3.03					
6		*Malayazzia sp.*	2.87	25.33	30.00	23.53			21.15			
7		*Liriope tetraphylla*										
8		*Aglaura hemistoma*										
9		*Leptomedusae sp.*										36.00
10		*Bougainvillia ramosa*	2.16	16.00					3.85			
11		*Muggiae atlantica*										
12		*Diphyes chamissonis*										
13		*Lensia subtiloides*										
14	CTENOPHORA	*Pleurobrachia globosa*	2.16	17.33	6.67	4.41	36.36	27.91	13.46	11.96	7.14	36.00
15		*Beroe cucumis*	0.72	4.00								
16	MOLLUSCA	*Atlanta sp.*			56.67	10.29	21.21	27.91	23.08		8.33	52.00
17	ANNELIDA	Polychaeta larvae	5.39	4.00	1340.00	405.88	496.97	81.40	34.62	62.20	10.71	72.00
18	ARTHROPODA	*Penilia avirostris*				48.53						
19		*Podon schmackeri*			160.00	55.88						
20		*Cypridina acuminata*						9.30			7.14	
21		*Euconchoecia aculeata*										
22		*Halocypria globosa*										
23		*Canthocalanus pauper*										
24		*Neocalanus gracilis*			3.33	4.41	45.45	23.26	3.85	9.57	109.52	
25		*Acrocalanus gracilis*	7.19	8.00				9.30			4.76	
26		*Acrocalanus longicornis*										
27		*Paracalanus aculeatus*			3.33		318.18	125.58	3.85	81.34	45.24	60.00
28		*Paracalanus crassirostris*	13600.43	404.00	3150.00	2907.35	454.55	74.42	357.69	100.48	28.57	1820.00
29		*Paracalanus nanus*										
30		*Paracalanus parvus*	10.78	28.00	13.33		484.85	37.21	30.77	52.63	54.76	180.00
31		*Paracalanus serrulus*					30.30					
32		*Clausoculanus farrani*					15.15					
33		*Clausoculanus furcatus*										
34		*Euchaeta concinna*										
35		*Euchaeta plana*										

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—2

Unit : ind/m^3

No.		Stn. No. / Species name	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10
36	ARTHROPODA	*Temora discaudata*										
37		*Temora turbinata*									2.38	
38		*Canthocalanus tenuiremis*					15.15	37.21		19.14	66.67	20.00
39		*Schmackeria laeyidactylus*			6.67							
40		*Schmackeria inopinus*				26.47						
41		*Schmackeria poplesia*	9464.61	88.00	10.00	352.94		65.12		86.12		60.00
42		*Labidocera bipinuata*										
43		*Pantellopsis regalis*										
44		*Acartia erythraea*		8.00			121.21	18.60			9.52	1500.00
45		*Acartia spinicanda*	28.75	40.00			530.30	134.88	23.08	14.35	57.14	1780.00
46		*Acartiella sinensis*	21.56		33.33	8.82	30.30	13.95				
47		*Tortanus dextrilobatus*	14.37	4.00		123.53						
48		*Tortanus spinicaudatus*				8.82						
49		*Oithona attenutus*									16.67	
50		*Oithona brevicornis*	50.31	24.00			757.58	93.02	23.08	43.06	130.95	1140.00
51		*Oithona decipians*									7.14	
52		*Oithona fallax*	7.19									
53		*Oithona nana*						13.95				
54		*Oithona rigida*										
55		*Oithona simlis*	86.24	76.00	13.33		1181.82	116.28	53.85	71.77	266.67	800.00
56		*Oithona simplex*										
57		*Oithona tennis*										
58		*Oncaea conifera*										
59		*Oncaea dentipes*										
60		*Oncaea media*										
61		*Oncaea mediterranea*					30.30					
62		*Oncaea minuta*										
63		*Oncaea simlis*			3.33		30.30					
64		*Oncaea venusta*						4.65				
65		*Corycaeus affinis*		16.00	6.67		106.06	32.56		4.78	45.24	
66		*Corycaeus dahli*								4.78		
67		*Corycaeus erythraeus*								9.57		
68		*Corycaeus giesbrechti*										
69		*Corycaeus longicaudis*								4.78		
70		*Corycaeus lubbocki*		4.00	3.33		15.15		7.69		33.33	

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—3

Unit : ind/m^3

No.		Stn. No. / Species name	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10
71	ARTHROPODA	*Corycaeus robustus*										
72		*Corycaeus rostratus*						13.95				
73		*Corycaeus subtilis*					30.30	18.60				
74		*Microsetella norvegica*					15.15	9.30			64.29	20.00
75		*Microsetella rosea*									4.76	
76		*Euterpina acutirons*						18.60			7.14	
77		*Clytemnestra rostrata*										
78		*Clytemnestra scutillata*										
79		*Setella gracilis*										
80		Copepoda larvae	2723.68	728.00	813.33	648.53	6242.42	1269.77	150.00		1678.57	8400.00
81		*Eupronoe minuta*										
82		*Lycaea pulex*										
83		*Euphausia nana*										
84		*Euphausia pacifica*										
85		*Euphausia sanzoi*										
86		*Pseudeuphausia latifrons*					21.21	6.98				
87		*Pseudeuphausia larvae*	1.80				18.18	4.65				
88		*Exopalaemon sp.*	0.72									
89		Macrura larvae	2.52	5.33	56.67	23.53	54.55	27.91	7.69	9.57	14.29	28.00
90		Brachyura larvae	1.08	4.00	70.00	4.41	36.36	11.63	3.85	28.71	4.76	228.00
91	CHAETOGNATHA	*Sagitta bedoti*								9.57	3.57	
92		*Sagitta enflata*		1.33			9.09	2.33			9.52	
93		*Sagitta nagae*					6.06			4.78	2.38	
94		*Sagitta neglecta*										
95		*Sagitta regularis*										
96		Chaetognata larvae	0.36				27.27	23.26		28.71	30.95	4.00
97	PROTOCHORDATA	*Oikopleura albicans*					36.36	9.30		19.14	33.33	84.00
98		*Oikopleura fusiformis*						41.86			26.19	
99		*Oikopleura intermedia*						13.95		21.53	29.76	148.00
100		*Oikopleura longicauda*					18.18	9.30			17.86	68.00
101		*Oikopleura rufescen*					42.42	18.60		38.28	61.90	128.00
102		*Fritillarva formica*						30.23				
103		*Althoffia tumida*									15.48	
104		*Dolioleta gegenbauri*										
105		*Doliolum denticaulatum*										

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—4

Unit : ind/m^3

No.		Stn. No. / Species name	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10
106	PROTOCHORDATA	*Brooksia rostrata*										
107	VERTEBRATA	Fish egg		2.67			6.06					
108		Fish larvae									2.38	

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—5

Unit : ind/m^3 .

No.		Stn. No. / Species name	P11	P12	P14	P15	P16	P17	P18	P19	P20	P21	P22
1	DINOPHYTA	*Noctiluca scintillans*	231938.50			20937.06		500.00	4286.01	4256.92	5534.27	122433.47	144735.00
2	CILIOPHORA	*Tintinnopsis sp.*	58.82	21.51	60.00	45.45		21.82	16.34	11.86	12.59	33.47	19.61
3		*Favella sp.*	58.82	11.73	57.50	31.47	18.18	18.18	18.39	21.74	7.69	21.07	15.45
4	CNIDARIA	*Euphysora bigelowi*										1.24	
5		*Eirene sp.*											
6		*Malayazzia sp.*			10.00								
7		*Liriope tetraphylla*										1.24	
8		*Aglaura hemistoma*							2.04			1.24	2.38
9		*Leptomedusae sp.*	2.67	0.98		3.50							
10		*Bougainvillia ramosa*			10.00								
11		*Muggiae atlantica*	5.35				1.01	3.64	2.04	7.91	2.10	6.20	1.78
12		*Diphyes chamissonis*					1.01						
13		*Lensia subtiloides*				6.99						1.24	
14	CTENOPHORA	*Pleurobrachia globosa*	8.02	11.73	35.00	13.99	8.08	3.64	3.06	11.86	0.70	4.96	
15		*Beroe cucumis*						1.82				1.24	
16	MOLLUSCA	*Atlanta sp.*	16.04	2.93		10.49		21.82	3.06		9.09	9.92	3.57
17	ANNELIDA	Polychaeta larvae	895.72	21.51	17.50	305.94	2.02	69.09	5.11	43.48	33.57	71.90	16.04
18	ARTHROPODA	*Penilia avirostris*											
19		*Podon schmackeri*											
20		*Cypridina acuminata*	16.04	3.91		19.23				27.67	16.08	14.88	3.57
21		*Euconchoecia aculeata*	18.72	3.91		13.99			3.06	23.72	14.69	13.64	1.78
22		*Halocypria globosa*				6.99					5.59		
23		*Canthocalanus pauper*									6.99	2.48	
24		*Neocalanus gracilis*	21.39	62.56	5.00	41.96	141.41	21.82	36.77	59.29	97.90	71.90	106.95
25		*Acrocalanus gracilis*											2.97
26		*Acrocalanus longicornis*	10.70										
27		*Paracalanus aculeatus*	85.56	58.65	10.00	13.99	60.61	47.27	24.51	83.00	90.91	17.36	
28		*Paracalanus crassirostris*	941.18	43.01	1367.50	160.84	121.21	76.36	49.03	31.62	20.98	9.92	
29		*Paracalanus nanus*										1.24	
30		*Paracalanus parvus*	491.98	62.56	215.00	108.39	979.80	18.18	290.09	126.48	55.94	29.75	
31		*Paracalanus serrulus*					10.10				6.99		
32		*Clausoculanus farrani*					10.10						
33		*Clausoculanus furcatus*									6.99		
34		*Euchaeta concinna*				3.50							
35		*Euchaeta plana*											

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—6

Unit : ind/m^3 .

No.		Stn. No. / Species name	P11	P12	P14	P15	P16	P17	P18	P19	P20	P21	P22
36	ARTHROPODA	*Temora discaudata*					20.20				13.99		8.91
37		*Temora turbinata*					10.10		4.09		27.97		11.88
38		*Canthocalanus tenuiremis*	32.09	15.64			50.51	7.27	8.17				2.97
39		*Schmackeria laeyidactylus*											
40		*Schmackeria inopinus*											
41		*Schmackeria poplesia*			7.50		20.20				34.97		
42		*Labidocera bipinuata*					10.10						
43		*Pantellopsis regalis*											
44		*Acartia erythraea*	21.39		117.50	45.45							
45		*Acartia spinicanda*	149.73	35.19	150.00	227.27	60.61	105.45		43.48		22.31	
46		*Acartiella sinensis*						3.64					
47		*Tortanus dextrilobatus*											
48		*Tortanus spinicaudatus*											
49		*Oithona attenutus*	10.70	7.82						3.95	6.99	17.36	
50		*Oithona brevicornis*	213.90	70.38	12.50	87.41	181.82	101.82	85.80	339.92	139.86	210.74	71.30
51		*Oithona decipians*											
52		*Oithona fallax*											
53		*Oithona nana*				6.99						29.75	
54		*Oithona rigida*								27.67			
55		*Oithona simlis*	320.86	125.12	22.50	230.77	292.93	178.18	257.41	494.07	321.68	441.32	225.79
56		*Oithona simplex*	21.39	7.82		10.49	40.40	10.91					
57		*Oithona tennis*	42.78										
58		*Oncaea conifera*						7.27					
59		*Oncaea dentipes*					30.30			3.95	41.96	7.44	14.85
60		*Oncaea media*					30.30				6.99		
61		*Oncaea mèditerranea*				6.99	80.81	10.91	4.09	3.95	20.98	9.92	14.26
62		*Oncaea minuta*					60.61						
63		*Oncaea simlis*				3.50			4.09		6.99		20.80
64		*Oncaea venusta*											
65		*Corycaeus affinis*	64.17	50.83	5.00	20.98	212.12	18.18	61.29	94.86	307.69	52.07	29.71
66		*Corycaeus dahli*						10.91	12.26	23.72	13.99		
67		*Corycaeus erythraeus*											
68		*Corycaeus giesbrechti*						7.27					
69		*Corycaeus longicaudis*											
70		*Corycaeus lubbocki*	53.48	62.56		52.45	151.52		40.86	169.96	195.80	74.38	14.85

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—7

Unit : ind/m^3

No.		Stn. No. / Species name	P11	P12	P14	P15	P16	P17	P18	P19	P20	P21	P22
71	ARTHROPODA	*Corycaeus robustus*											
72		*Corycaeus rostratus*											
73		*Corycaeus subtilis*	21.39	11.73		31.47	171.72	18.18	89.89	55.34	286.71	12.40	98.04
74		*Microsetella norvegica*	10.70	11.73		3.50	131.31	3.64	16.34	75.10	48.95	34.71	5.94
75		*Microsetella rosea*					30.30						
76		*Euterpina acutirons*	21.39								6.99		
77		*Clytemnestra rostrata*									6.99		
78		*Clytemnestra scutillata*								3.95	27.97		2.97
79		*Setella gracilis*					10.10				6.99		
80		Copepoda larvae	2342.25	1208.21	590.00	1486.01	5737.37	916.36	1188.97	2893.28	3132.87	2221.49	1143.79
81		*Eupronoe minuta*											1.19
82		*Lycaea pulex*											1.78
83		*Euphausia nana*											1.19
84		*Euphausia pacifica*		2.93					7.15		18.88		
85		*Euphausia sanzoi*											1.78
86		*Pseudeuphausia latifrons*	16.04	5.87		10.49	8.08	5.45	9.19		10.49	6.20	7.13
87		*Pseudeuphausia larvae*		2.93		12.24	3.03	9.09	3.06	5.93	12.59	2.48	5.94
88		*Exopalaemon sp.*											
89		Macrura larvae	40.11	7.82	5.00	13.99	6.06	12.73	12.26	9.88	12.59	8.68	9.51
90		Brachyura larvae	18.72	3.91	7.50	6.99	3.03	5.45	3.06	3.95	2.10	3.72	3.57
91	CHAETOGNATHA	*Sagitta bedoti*		1.96					2.04	1.98			
92		*Sagitta enflata*	10.70	5.87		3.50	9.09	3.64	8.17	9.88	5.59	11.16	2.38
93		*Sagitta nagae*	2.67	6.84		1.75	4.04		1.02		0.70	7.44	
94		*Sagitta neglecta*					1.01						
95		*Sagitta regularis*					1.01						
96		Chaetognata larvae	56.15	6.84		80.42	64.65	21.82	66.39	45.45	65.03	61.98	21.98
97	PROTOCHORDATA	*Oikopleura albicans*	77.54	9.78		29.72	32.32	7.27	14.30	23.72	23.08	18.60	16.64
98		*Oikopleura fusiformis*					30.30				15.38		10.10
99		*Oikopleura intermedia*	18.72	12.71		20.98	25.25		7.15	17.79	13.29	22.31	13.07
100		*Oikopleura longicauda*	50.80	15.64		10.49	24.24	9.09		13.83	20.28	9.92	13.67
101		*Oikopleura rufescen*	80.21	19.55		36.71	36.36	20.00	16.34	37.55	34.27	34.71	24.96
102		*Fritillarva formica*	18.72	7.82		20.98	12.12					16.12	7.13
103		*Althoffia tumida*				12.24					12.59		9.51
104		*Dolioleta gegenbauri*		2.93							11.89		15.45
105		*Doliolum denticaulatum*											2.38

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—8

Unit : ind/m^3 .

No.		Stn. No. / Species name	P11	P12	P14	P15	P16	P17	P18	P19	P20	P21	P22
106	PROTOCHORDATA	*Brooksia rostrata*								11.86			
107	VERTEBRATA	Fish egg		3.91		5.24				3.95			1.78
108		Fish larvae		1.96		1.75							1.19

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season－9

Unit : ind/m^3 .

No.		Stn. No. / Species name	P23	P24	P25	P27
1	DINOPHYTA	*Noctiluca scintillans*	487733.54	11650.51	208398.06	126289.77
2	CILIOPHORA	*Tintinnopsis sp.*	34.48	28.28	12.37	34.09
3		*Favella sp.*	36.05	18.18	11.83	35.98
4	CNIDARIA	*Euphysora bigelowi*				
5		*Eirene sp.*				
6		*Malayazzia sp.*				
7		*Liriope tetraphylla*				
8		*Aglaura hemistoma*			1.08	1.89
9		*Leptomedusae sp.*				
10		*Bougainvillia ramosa*				
11		*Muggiae atlantica*	6.27		2.15	
12		*Diphyes chamissonis*				
13		*Lensia subtiloides*				
14	CTENOPHORA	*Pleurobrachia globosa*	6.27	14.14	0.54	7.58
15		*Beroe cucumis*		6.06		
16	MOLLUSCA	*Atlanta sp.*		6.06	7.53	17.05
17	ANNELIDA	Polychaeta larvae	43.89	56.57	27.97	53.03
18	ARTHROPODA	*Penilia avirostris*				
19		*Podon schmackeri*				
20		*Cypridina acuminata*	14.11	14.14	12.37	17.05
21		*Euconchoecia aculeata*	17.24	12.12	22.59	7.58
22		*Halocypria globosa*		4.04		
23		*Canthocalanus pauper*			10.76	
24		*Neocalanus gracilis*	122.26	8.08	80.69	7.58
25		*Acrocalanus gracilis*	4.70	16.16	10.76	3.79
26		*Acrocalanus longicornis*				
27		*Paracalanus aculeatus*	4.70	4.04	32.28	109.85
28		*Paracalanus crassirostris*	9.40			15.15
29		*Paracalanus nanus*				3.79
30		*Paracalanus parvus*	70.53		118.34	162.88
31		*Paracalanus serrulus*				
32		*Clausoculanus farrani*				
33		*Clausoculanus furcatus*			10.76	
34		*Euchaeta concinna*				
35		*Euchaeta plana*	14.11	4.04	21.52	

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—10

Unit : ind/m^3 .

No.		Stn. No. / Species name	P23	P24	P25	P27
36	ARTHROPODA	*Temora discaudata*				
37		*Temora turbinata*	4.70		10.76	3.79
38		*Canthocalanus tenuiremis*		36.36		11.36
39		*Schmackeria laeyidactylus*				
40		*Schmackeria inopinus*				
41		*Schmackeria poplesia*				
42		*Labidocera bipinuata*				
43		*Pantellopsis regalis*			10.76	
44		*Acartia erythraea*		24.24		
45		*Acartia spinicanda*		113.13		30.30
46		*Acartiella sinensis*		4.04		
47		*Tortanus dextrilobatus*				
48		*Tortanus spinicaudatus*				
49		*Oithona attenutus*				
50		*Oithona brevicornis*	112.85	16.16		30.30
51		*Oithona decipians*				
52		*Oithona fallax*				
53		*Oithona nana*		24.24		
54		*Oithona rigida*		8.08		
55		*Oithona simlis*	164.58			208.33
56		*Oithona simplex*				
57		*Oithona tennis*				
58		*Oncaea conifera*	18.81			
59		*Oncaea dentipes*				
60		*Oncaea media*	4.70			
61		*Oncaea mediterranea*	14.11			3.79
62		*Oncaea minuta*				
63		*Oncaea simlis*		48.48		
64		*Oncaea venusta*		8.08		
65		*Corycaeus affinis*	89.34	8.08	86.07	7.58
66		*Corycaeus dahli*			10.76	
67		*Corycaeus erythraeus*				
68		*Corycaeus giesbrechti*				
69		*Corycaeus longicaudis*				
70		*Corycaeus lubbocki*	65.83	20.20	32.28	

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—11

Unit : ind/m^3 .

No.		Stn. No. / Species name	P23	P24	P25	P27
71	ARTHROPODA	*Corycaeus robustus*		4.04		
72		*Corycaeus rostratus*				
73		*Corycaeus subtilis*				
74		*Microsetella norvegica*	32.92	24.24		3.79
75		*Microsetella rosea*		16.16		
76		*Euterpina acutirons*	9.40	4.04	10.76	
77		*Clytemnestra rostrata*	14.11			
78		*Clytemnestra scutillata*			5.38	
79		*Setella gracilis*				
80		Copepoda larvae	1231.97	1486.87	2651.96	768.94
81		*Eupronoe minuta*	4.70			
82		*Lycaea pulex*	4.70			
83		*Euphausia nana*	3.13			
84		*Euphausia pacifica*	6.27			
85		*Euphausia sanzoi*	4.70			
86		*Pseudeuphausia latifrons*	10.97	6.06	3.77	
87		*Pseudeuphausia larvae*	9.40		6.46	
88		*Exopalaemon sp.*				
89		Macrura larvae	18.81	34.34	9.68	22.73
90		Brachyura larvae	6.27	18.18	4.84	34.09
91	CHAETOGNATHA	*Sagitta bedoti*	4.70			
92		*Sagitta enflata*	51.72	4.04	3.23	
93		*Sagitta nagae*	7.84	2.02		
94		*Sagitta neglecta*				
95		*Sagitta regularis*				
96		Chaetognata larvae	45.45	8.08	19.37	64.39
97	PROTOCHORDATA	*Oikopleura albicans*	47.02	50.51	17.21	34.09
98		*Oikopleura fusiformis*	21.94	24.24	14.52	24.62
99		*Oikopleura intermedia*	39.18	40.40	17.21	41.67
100		*Oikopleura longicauda*	36.05	36.36	15.06	39.77
101		*Oikopleura rufescen*	59.56	64.65	29.05	60.61
102		*Fritillarva formica*	20.38			22.73
103		*Althoffia tumida*	23.51		6.99	
104		*Dolioleta gegenbauri*	39.18		15.06	
105		*Doliolum denticaulatum*	4.70		15.06	

Table Species and Individuals of Zooplankton in Pearl River Estuary :Intermediate season—12

Unit : ind/m^3 .

No.		Stn. No. / Species name	P23	P24	P25	P27
106	PROTOCHORDATA	*Brooksia rostrata*				
107	VERTEBRATA	Fish egg				
108		Fish larvae				

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—1

No.	Phylum	Species name \ Stn. No.	P01		P02		P03		P04		P05		P06		P07	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
1	CNIDARIA	*Cavernularia obesa*														
2		*Virgularia alba*											2.50	0.20		
3	MOLLUSCA	*Minolia chinensis*											5.00	0.25		
4		*Umbonium vestiarium*														
5		*Turritella bacillum*											2.50	0.18		
6		*Semisulcospira cancellata*							2.50	0.83						
7		*Semisulcospira sp.*											2.50	0.10		
8		*Atlanta sp.*											2.50	0.08		
9		*Natica spadiceoides*														
10		*Natica zebra*														
11		*Sinum javanicum*														
12		*Murex trapa*														
13		*Mitrella bella*														
14		*Nassarius (Reticunassa) festivus*														
15		*Nassarius (Varicinassa) variciferus*														
16		*Nassarius (Zeuxis) dorsatus*														
17		*Nassarius (Zeuxis) hepaticus*														
18		*Nassarius (Zeuxis) succinctus*														
19		*Nassarius (Zeuxis) siquijorensis*														
20		*Oliva mustellina*														
21		*Olivella plana*														
22		*Crassispira pseudoprinciplis*														
23		*Inquistor flavidula*														
24		*Lophiotoma leucotropis*														
25		*Turricula nelliae*														
26		*Diplomeriza duplicata*														
27		*Terebra (Noditerebra) dussumieri*														
28		*Architectonica perspectiva*														
29		*Cadulus clavatus*														
30		*Nucula (Leionucula) parvula*														
31		*Anadara crebricostata*														
32		*Mabellarca consociata*														
33		*Macoma (Psammacoma) candida*														
34		*Macoma (Psammacoma) praerupta*														
35		*Tellina sp.*														

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—2

No.	Phylum	Species name \ Stn. No.	P01		P02		P03		P04		P05		P06		P07	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
36	MOLLUSCA	*Solen dunkerianus*														
37		*Cultellus attenuatus*														
38		*Siliqua minima*														
39		*Corbicula fluminea*							2.50	0.28						
40		*Paphia (Paratapes) undulata*														
41		*Dosinia(Phacosoma) japonica*														
42		*Clausinella calophylla*														
43		*Potamocorbula laevis*			4305.00	205.00	12.50	1.08					45.00	2.40	5.00	0.10
44		*Cuspidaria chinensis*														
45	ANNELIDA	*Tylonereis bogoyawleskyi*	5.00	0.28												
46		*Glycera alba*														
47		*Aglaophamus lyrochaeto*							5.00	0.43						
48		*Diopatra variabilis*														
49		*Marphysa belli*														
50		*Lumbrineris heteropoda*														
51		*Schistomeringos incertai*														
52		*Paraprionospio pinnata*														
53		*Magelona crenulifrons*														
54		*Sternaspis scutata*														
55		*Capitella capitata*														
56		*Heteromastus filiformis*							2.50	0.08	2.50	0.13	7.50	0.30	2.50	0.08
57		*Owenia fusiformis*														
58		*Terebellides stroemii*														
59		*Branchiomma cingulata*														
60		*Limnodriloides sp.*									2.50	0.13				
61	ECHIURA	*Listriolobus brevirostris*													2.50	0.38
62	SIPUNCULA	*Phascolosoma sp.*														
63	ARTHROPODA	*Balanus reticulatus*	10.00	1.88											5.00	0.13
64		*Eocuma sp.*														
65		*Ampelisca sp.*			2.50	0.68										
66		*Byblis japonicus*														
67		*Leptochela gracilis*														
68		*Raphidopus ciliatus*														
69		*Charybdis variegata*									2.50	0.68				
70		*Hexapus granuliferus*														

Table Species, individuals and wet weight of Benthos in Pearl River Estuary : Intermediate season—3

No.	Phylum	Species name \ Stn. No.	P01		P02		P03		P04		P05		P06		P07	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
71	ARTHROPODA	*Eucrate costata*														
72		*Scalopidia spinosipes*														
73		*Typhlocarcinus nudud*														
74		*Typhlocarcinus villosus*														
75		*Xenophthalmodes moebii*														
76		*Neoxenophthalmus obscurus*														
77		*Varuna litterata*													7.50	4.55
78		*Phalangipus longipes*														
79	ECHINODERMATA	*Amphioplus laevis*														
80		*Amphiopus depressus*														
81		*Ophiocnemis marmorata*														
82		*Cladolabes crassus*														
83		*Acaudina molpadioides*														
84		*Protankyra bidentata*														
85	VERTEBRATA	*Anguilla japonica*														
86		*Oxyurichthys tentacularis*														
87		*Cynoglossus puncticeps*														

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—4

No.	Phylum	Species name \ Stn. No.	P08		P09		P10		P11		P12		P14		P15	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
1	CNIDARIA	*Cavernularia obesa*	5.00	0.73	5.00	45.30										
2		*Virgularia alba*														
3	MOLLUSCA	*Minolia chinensis*			2.50	0.10					7.50	1.15				
4		*Umbonium vestiarium*														
5		*Turritella bacillum*							7.50	0.73						
6		*Semisulcospira cancellata*														
7		*Semisulcospira sp.*														
8		*Atlanta sp.*														
9		*Natica spadiceoides*														
10		*Natica zebra*														
11		*Sinum javanicum*														
12		*Murex trapa*														
13		*Mitrella bella*													5.00	0.25
14		*Nassarius (Reticunassa) festivus*														
15		*Nassarius (Varicinassa) variciferus*														
16		*Nassarius (Zeuxis) dorsatus*														
17		*Nassarius (Zeuxis) hepaticus*														
18		*Nassarius (Zeuxis) succinctus*	10.00	1.45					35.00	5.33	5.00	0.30			17.50	3.70
19		*Nassarius (Zeuxis) siquijorensis*							12.50	0.58	5.00	0.18			5.00	0.20
20		*Oliva mustellina*									7.50	0.33				
21		*Olivella plana*							2.50	0.10						
22		*Crassispira pseudoprinciplis*														
23		*Inquistor flavidula*														
24		*Lophiotoma leucotropis*														
25		*Turricula nelliae*														
26		*Diplomeriza duplicata*														
27		*Terebra (Noditerebra) dussumieri*														
28		*Architectonica perspectiva*														
29		*Cadulus clavatus*									2.50	0.15				
30		*Nucula (Leionucula) parvula*									2.50	0.20			2.50	0.20
31		*Anadara crebricostata*														
32		*Mabellarca consociata*									2.50	0.13				
33		*Macoma (Psammacoma) candida*														
34		*Macoma (Psammacoma) praerupta*														
35		*Tellina sp.*														

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—5

No.	Phylum	Species name \ Stn. No.	P08		P09		P10		P11		P12		P14		P15	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
36	MOLLUSCA	*Solen dunkerianus*														
37		*Cultellus attenuatus*					2.50	1.93								
38		*Siliqua minima*														
39		*Corbicula fluminea*														
40		*Paphia (Paratapes) undulata*									5.00	6.20				
41		*Dosinia(Phacosoma) japonica*														
42		*Clausinella calophylla*														
43		*Potamocorbula laevis*	8810.00	2447.50	10.00	2.20	25.00	3.95	3050.00	545.00	185.00	25.63	420.00	16.80	52.50	5.85
44		*Cuspidaria chinensis*														
45	ANNELIDA	*Tylonereis bogoyawleskyi*	12.50	2.08			2.50	0.58								
46		*Glycera alba*					7.50	1.13							2.50	0.20
47		*Aglaophamus lyrochaeto*									10.00	0.30				
48		*Diopatra variabilis*													2.50	0.38
49		*Marphysa belli*													2.50	0.30
50		*Lumbrineris heteropoda*									2.50	0.10				
51		*Schistomeringos incertai*					2.50	0.28								
52		*Paraprionospio pinnata*			7.50	0.35					5.00	0.15				
53		*Magelona crenulifrons*														
54		*Sternaspis scutata*														
55		*Capitella capitata*							2.50	0.35						
56		*Heteromastus filiformis*	2.50	0.15											2.50	0.23
57		*Owenia fusiformis*													2.50	0.10
58		*Terebellides stroemii*														
59		*Branchiomma cingulata*					10.00	0.33								
60		*Limnodriloides sp.*														
61	ECHIURA	*Listriolobus brevirostris*														
62	SIPUNCULA	*Phascolosoma sp.*														
63	ARTHROPODA	*Balanus reticulatus*	17.50	4.33					12.50	1.63					15.00	1.83
64		*Eocuma sp.*					2.50	0.05								
65		*Ampelisca sp.*														
66		*Byblis japonicus*					15.00	0.33								
67		*Leptochela gracilis*														
68		*Raphidopus ciliatus*														
69		*Charybdis variegata*														
70		*Hexapus granuliferus*									2.50	0.58				

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—6

No.	Phylum	Stn. No. / Species name	P08		P09		P10		P11		P12		P14		P15	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
71	ARTHROPODA	*Eucrate costata*			2.50	4.93										
72		*Scalopidia spinosipes*														
73		*Typhlocarcinus nudud*														
74		*Typhlocarcinus villosus*			2.50	0.58										
75		*Xenophthalmodes moebii*														
76		*Neoxenophthalmus obscurus*			7.50	4.85	15.00	14.65								
77		*Varuna litterata*														
78		*Phalangipus longipes*														
79	ECHINODERMATA	*Amphioplus laevis*							2.50	0.25	5.00	0.43			2.50	0.13
80		*Amphiopus depressus*														
81		*Ophiocnemis marmorata*														
82		*Cladolabes crassus*														
83		*Acaudina molpadioides*													5.00	150.60
84		*Protankyra bidentata*							2.50	1.08	10.00	8.20				
85	VERTEBRATA	*Anguilla japonica*			2.50	0.65										
86		*Oxyurichthys tentacularis*														
87		*Cynoglossus puncticeps*			2.50	22.20										

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—7

No.	Phylum	Species name \ Stn. No.	P16		P17		P18		P19		P20		P21		P22	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
1	CNIDARIA	*Cavernularia obesa*														
2		*Virgularia alba*														
3	MOLLUSCA	*Minolia chinensis*											2.50	0.08		
4		*Umbonium vestiarium*	2.50	0.10												
5		*Turritella bacillum*	10.00	8.40					5.00	4.43			5.00	7.88		
6		*Semisulcospira cancellata*														
7		*Semisulcospira sp.*														
8		*Atlanta sp.*														
9		*Natica spadiceoides*									2.50	3.15				
10		*Natica zebra*														
11		*Sinum javanicum*											2.50	18.75		
12		*Murex trapa*									5.00	3.60				
13		*Mitrella bella*													2.50	0.08
14		*Nassarius (Reticunassa) festivus*									7.50	0.35				
15		*Nassarius (Varicinassa) variciferus*									2.50	0.63				
16		*Nassarius (Zeuxis) dorsatus*	2.50	0.40												
17		*Nassarius (Zeuxis) hepaticus*									2.50	0.60				
18		*Nassarius (Zeuxis) succinctus*	30.00	4.20			7.50	0.55	25.00	3.83	12.50	1.30	22.50	2.95	5.00	0.58
19		*Nassarius (Zeuxis) siquijorensis*	7.50	0.53			20.00	0.88	7.50	0.45	32.50	2.13	5.00	0.25	2.50	6.20
20		*Oliva mustellina*	2.50	0.13					2.50	0.15			2.50	0.05		
21		*Olivella plana*							2.50	0.13			5.00	0.10		
22		*Crassispira pseudoprinciplis*														
23		*Inquistor flavidula*									2.50	0.75	2.50	2.23		
24		*Lophiotoma leucotropis*														
25		*Turricula nelliae*									2.50	0.35	2.50	0.45		
26		*Diplomeriza duplicata*	5.00	0.25					5.00	0.30			7.50	0.30		
27		*Terebra (Noditerebra) dussumieri*											2.50	1.93		
28		*Architectonica perspectiva*											7.50	1.05		
29		*Cadulus clavatus*											2.50	0.15		
30		*Nucula (Leionucula) parvula*					2.50	0.20	127.50	6.23	5.00	0.55	130.00	7.85		
31		*Anadara crebricostata*														
32		*Mabellarca consociata*							2.50	0.28			2.50	0.30	5.00	0.83
33		*Macoma (Psammacoma) candida*														
34		*Macoma (Psammacoma) praerupta*														
35		*Tellina sp.*														

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—8

No.	Phylum	Species name \ Stn. No.	P16		P17		P18		P19		P20		P21		P22	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
36	MOLLUSCA	*Solen dunkerianus*														
37		*Cultellus attenuatus*														
38		*Siliqua minima*			2.50	1.65							5.00	0.68		
39		*Corbicula fluminea*														
40		*Paphia (Paratapes) undulata*					2.50	2.10	2.50	6.28					15.00	112.33
41		*Dosinia(Phacosoma) japonica*											2.50	0.85		
42		*Clausinella calophylla*														
43		*Potamocorbula laevis*	7.50	0.40	15.00	1.20	32.50	2.68	2560.00	160.00	2.50	0.10			195.00	20.40
44		*Cuspidaria chinensis*											2.50	0.18		
45	ANNELIDA	*Tylonereis bogoyawleskyi*			2.50	0.70										
46		*Glycera alba*	7.50	1.18												
47		*Aglaophamus lyrochaeto*					15.00	2.30	2.50	0.35						
48		*Diopatra variabilis*														
49		*Marphysa belli*														
50		*Lumbrineris heteropoda*	7.50	0.70			5.00	0.93								
51		*Schistomeringos incertai*														
52		*Paraprionospio pinnata*	12.50	0.43			2.50	0.28							7.50	0.88
53		*Magelona crenulifrons*													5.00	0.43
54		*Sternaspis scutata*							2.50	0.68						
55		*Capitella capitata*														
56		*Heteromastus filiformis*														
57		*Owenia fusiformis*														
58		*Terebellides stroemii*													7.50	2.40
59		*Branchiomma cingulata*														
60		*Limnodriloides sp.*														
61	ECHIURA	*Listriolobus brevirostris*														
62	SIPUNCULA	*Phascolosoma sp.*									2.50	0.28				
63	ARTHROPODA	*Balanus reticulatus*					2.50	0.38	37.50	5.48						
64		*Eocuma sp.*														
65		*Ampelisca sp.*														
66		*Byblis japonicus*														
67		*Leptochela gracilis*													5.00	0.28
68		*Raphidopus ciliatus*														
69		*Charybdis variegata*														
70		*Hexapus granuliferus*			5.00	0.70	2.50	0.18	10.00	2.15			5.00	0.58		

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—9

No.	Phylum	Stn. No. / Species name	P16		P17		P18		P19		P20		P21		P22	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
71	ARTHROPODA	*Eucrate costata*														
72		*Scalopidia spinosipes*	2.50	0.98												
73		*Typhlocarcinus nudud*													2.50	10.00
74		*Typhlocarcinus villosus*									2.50	0.20				
75		*Xenophthalmodes moebii*													12.50	2.58
76		*Neoxenophthalmus obscurus*	10.00	2.13			5.00	1.65			40.00	6.83			17.50	3.30
77		*Varuna litterata*														
78		*Phalangipus longipes*	2.50	1.78												
79	ECHINODERMATA	*Amphioplus laevis*			7.50	0.90	7.50	1.10	2.50	0.25	10.00	0.15			22.50	3.58
80		*Amphiopus depressus*	7.50	0.68												
81		*Ophiocnemis marmorata*													2.50	0.08
82		*Cladolabes crassus*	2.50	0.73												
83		*Acaudina molpadioides*														
84		*Protankyra bidentata*	10.00	13.20	10.00	12.85	10.00	33.55	10.00	21.63	10.00	18.30				
85	VERTEBRATA	*Anguilla japonica*														
86		*Oxyurichthys tentacularis*													2.50	3.65
87		*Cynoglossus puncticeps*														

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—10

No.	Phylum	Stn. No. / Species name	P23		P24		P25		P27	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
1	CNIDARIA	*Cavernularia obesa*								
2		*Virgularia alba*								
3	MOLLUSCA	*Minolia chinensis*	5.00	0.55			5.00	0.55	15.00	1.68
4		*Umbonium vestiarium*								
5		*Turritella bacillum*			5.00	0.35	2.50	0.23	15.00	5.40
6		*Semisulcospira cancellata*								
7		*Semisulcospira sp.*								
8		*Atlanta sp.*								
9		*Natica spadiceoides*								
10		*Natica zebra*					2.50	0.23		
11		*Sinum javanicum*							2.50	18.58
12		*Murex trapa*	5.00	10.15						
13		*Mitrella bella*	2.50	0.08						
14		*Nassarius (Reticunassa) festivus*								
15		*Nassarius (Varicinassa) variciferus*							2.50	0.80
16		*Nassarius (Zeuxis) dorsatus*								
17		*Nassarius (Zeuxis) hepaticus*	2.50	3.30			2.50	0.68		
18		*Nassarius (Zeuxis) succinctus*	22.50	3.48	2.50	0.93			20.00	4.10
19		*Nassarius (Zeuxis) siquijorensis*	2.50	0.15			5.00	0.93	2.50	0.20
20		*Oliva mustellina*							2.50	0.13
21		*Olivella plana*								
22		*Crassispira pseudoprinciplis*					2.50	5.33		
23		*Inquistor flavidula*								
24		*Lophiotoma leucotropis*	2.50	2.38					2.50	1.13
25		*Turricula nelliae*	22.50	11.33			2.50	0.35		
26		*Diplomeriza duplicata*								
27		*Terebra (Noditerebra) dussumieri*								
28		*Architectonica perspectiva*								
29		*Cadulus clavatus*								
30		*Nucula (Leionucula) parvula*								
31		*Anadara crebricostata*			5.00	65.73	2.50	0.28		
32		*Mabellarca consociata*					2.50	22.33		
33		*Macoma (Psammacoma) candida*			2.50	1.55				
34		*Macoma (Psammacoma) praerupta*	5.00	11.45						
35		*Tellina sp.*					5.00	12.75		

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—11

No.	Phylum	Stn. No. / Species name	P23		P24		P25		P27	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
36	MOLLUSCA	*Solen dunkerianus*	5.00	1.78						
37		*Cultellus attenuatus*								
38		*Siliqua minima*			2.50	2.08				
39		*Corbicula fluminea*								
40		*Paphia (Paratapes) undulata*	2.50	3.33			5.00	2.93		
41		*Dosinia(Phacosoma) japonica*								
42		*Clausinella calophylla*					5.00	19.88		
43		*Potamocorbula laevis*								
44		*Cuspidaria chinensis*								
45	ANNELIDA	*Tylonereis bogoyawleskyi*			5.00	0.93				
46		*Glycera alba*			10.00	1.03				
47		*Aglaophamus lyrochaeto*							12.50	1.33
48		*Diopatra variabilis*			12.50	0.65				
49		*Marphysa belli*								
50		*Lumbrineris heteropoda*								
51		*Schistomeringos incertai*								
52		*Paraprionospio pinnata*			42.50	1.08				
53		*Magelona crenulifrons*								
54		*Sternaspis scutata*								
55		*Capitella capitata*								
56		*Heteromastus filiformis*			2.50	0.08				
57		*Owenia fusiformis*								
58		*Terebellides stroemii*			32.50	5.30			2.50	0.35
59		*Branchiomma cingulata*								
60		*Limnodriloides sp.*	5.00	3.65						
61	ECHIURA	*Listriolobus brevirostris*			5.00	6.93			2.50	4.60
62	SIPUNCULA	*Phascolosoma sp.*	12.50	4.38			2.50	0.38		
63	ARTHROPODA	*Balanus reticulatus*								
64		*Eocuma sp.*								
65		*Ampelisca sp.*								
66		*Byblis japonicus*								
67		*Leptochela gracilis*	2.50	0.15						
68		*Raphidopus ciliatus*			2.50	0.58				
69		*Charybdis variegata*								
70		*Hexapus granuliferus*	2.50	0.23			2.50	0.65		

Table Species, individuals and wet weight of Benthos in Pearl River Estuary: Intermediate season—12

No.	Phylum	Stn. No. / Species name	P23		P24		P25		P27	
			ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2	ind/m^2	g/m^2
71	ARTHROPODA	*Eucrate costata*			5.00	3.18				
72		*Scalopidia spinosipes*								
73		*Typhlocarcinus nudud*					5.00	1.95		
74		*Typhlocarcinus villosus*	5.00	1.08						
75		*Xenophthalmodes moebii*								
76		*Neoxenophthalmus obscurus*	10.00	1.60	2.50	0.63			2.50	0.63
77		*Varuna litterata*								
78		*Phalangipus longipes*								
79	ECHINODERMATA	*Amphioplus laevis*			17.50	2.63	30.00	4.93	7.50	0.45
80		*Amphiopus depressus*								
81		*Ophiocnemis marmorata*								
82		*Cladolabes crassus*								
83		*Acaudina molpadioides*								
84		*Protankyra bidentata*								
85	VERTEBRATA	*Anguilla japonica*								
86		*Oxyurichthys tentacularis*								
87		*Cynoglossus puncticeps*								

Coelenterata

沙箸科 Veretillidae
海仙人掌 *Cavernularia obesa* Milne Edwards et Hailme
白沙箸科 Virgulariidae
白沙箸 *Virgularia alba* (Nutting)

Annelida

沙蚕科 Nereidae
疣 沙 *Tylonereis bogoyawlenskyi* Fauvel
疣吻沙蚕 *Tylorrhynchus heterochaetus* (Quatrefages)
吻沙蚕科 Glyceridae
白色吻沙蚕 *Glycera alba* (Muller)
吻 沙 蚕Nephtyidae
弦 毛 内 蚕 *Aglaophamus lyrochaeto* (Fauvel)
虫 科Orbiniidae
虫 *Haploscoloplos elongatus* (Johnson)
海稚虫科 Spionidae
后指虫 *Laonice cirrata* (Sars)
奇 稚 *Paraprionospio pinnata* (Ehlers)
虫 科Cirratulidae
独 毛 *Tharyx filibranchia* Day
手 沙 蚕Magelonidae
状 手 蚕 *Magelona crenulifrons* Gallardo
小 虫 科apitellidae
小 虫 *Capitella capitata* (Fabriceus)
蚓 虫 *Heteromastus filiformis* (Claparede)
背毛背蚓虫 *Notomastues cf. aberans* Day
海蛹科 Opheliidae
角海蛹 *Ophelia acuminata* Oersted
欧努菲虫科 Onuphidae
色 沙 *Diopatra variabilis* Southern
沙 蚕 Eunicidae
氏 岩 *Marphysa belli* Audouin et M. Edwards
索沙蚕科 Lumbrineriidae
足 索 沙 *Lumbrineris heteropoda* (Marenzeller)
豆 虫 科orvilleidae
无 眼 叉 毛豆虫 *Schistomeringos incertai* (Schmarda)
不倒翁虫科 Sternaspidae

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不倒翁虫 *Sternaspis scutata* (Renier)
欧文虫科 Oweniidae
欧文虫 *Owenia fusformis* Delle Chiaje
扇毛虫科 Flabelligeridae
孟加拉海扇虫 *Pherusa cf. Bengalensis* (Fauvel)
毛 虫 Trichobrachidae
梳 虫 *Terebellides stroemii* Sars
虫 科Sabellidae
斑 虫 *Branchiomma cingulata* (Goube)
蚓 科Tubificidae
沼蚓 *Limnodriloides sp.*
Sipuncula
革 星 科Phascolosomatidae
革 星 虫 *Phascolosoma sp.*
Echiura
科 Echiuridae
短 吻 *Listriolobus brevirostris* Chen et Yeh
Mollusca
胡桃蛤科 Nuculidae
微型胡桃蛤 *Nucula (Leionucula) parvula* Gould
蚶科 Arcidae
密 肋 粗 *Anadara crebricostata* (Reeve)
珠 蚶 *Mabellarca consociata* (Smith)
蛤 科Tellinidae
蛤 *Tellina sp.*
美 女 白 *Macoma (Psammacoma) candida* (Lamarck)
紫 白 *Macoma (Psammacoma) praerupta* Salisbury
竹 科Solenidae
短 竹 *Solen dunkerianus* Clessin
刀 科Cultellidae
小 刀 *Cultellus attenuatus* Dunker
小 *Siliqua minima* (Gmelin)
科 Corbiculidae
河 *Corbicula fluminea* (Muller)
蛤 科Veneridae
日 本 蛤 *Dosinia(Phacosoma) japonica* (Reeve)
美叶雪蛤 *Clausinella calophylla* (Philippi)
波 巴 非 *Paphia (Paratapes) undulata* (Born)

蛤　科Corbulidae	
光滑河　　蛤	*Potamocorbula laevis* (Hinds)
杓蛤科　Cuspidariidae	
中国杓蛤	*Cuspidaria chinensis* Griffith et Pidgeon
管　角　　Siphonodentaliidae	
梭　形　棒	*Cadulus clavatus* Gould
蹄　螺　科Trochidae	
中　国　小	*Minolia chinensis* Sowerby
肋　　螺	Umbonium vestiarium (Linne)
螺　科Turritellidae	
棒　　螺	*Turritella bacillum* Kiener
螺　科Architectonicidae	
配　景	*Architectonica perspectiva* (Linne)
黑螺科　Melanidae	
方　格　短	*Semisulcospira cancellata* (Benson)
短　　蜷	*Semisulcospira sp.*
明螺科　Atlantidae	
明螺	*Atlanta sp.*
玉螺科　Naticidae	
爪　哇	*Sinum javanicum*　(Griffith et Pidgeon)
褐　玉	*Natica spadiceoides* Liu
斑　　玉	*Natica zebra* Lamarck
骨螺科　Muricidae	
浅　　合　骨	*Murex trapa* Roding
核螺科　Pyrenidae	
核　螺	*Mitrella bella* (Reeve)
螺　科Nassariidae	
肋　　螺	*Nassarius (Varicinassa) variciferus* (A. Adams)
秀　　螺	*Nassarius (Reticunassa) festivus* (Powys)
螺	*Nassarius (Zeuxis) succinctus* (A. Adams)
光　　螺	*Nassarius (Zeuxis) dorsatus* (Roding)
西　格	*Nassarius (Zeuxis) siquijorensis* (A. Adams)
螺	*Nassarius (Zeuxis) hepaticus* (Pulteney)
榧螺科　Olividae	
伶鼬榧螺	*Oliva mustellina* Lamarck
平小榧螺	*Olivella plana* (Marrat)
塔螺科　Turridae	
黄短口螺	*Inquistor flavidula* (Lamarck)
假主棒螺	*Crassispira pseudoprinciplis* (Yokoyama)

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白　骨　螺　*Lophiotoma leucotropis* (Adams et Reeve)
假 奈　塔螺　*Turricula nelliae* (Hedley)
笋螺科　Terebridae
白　笋　*Terebra (Noditerebra) dussumieri* Kiener
双　笋　*Diplomeriza duplicata* (Linnaeus)

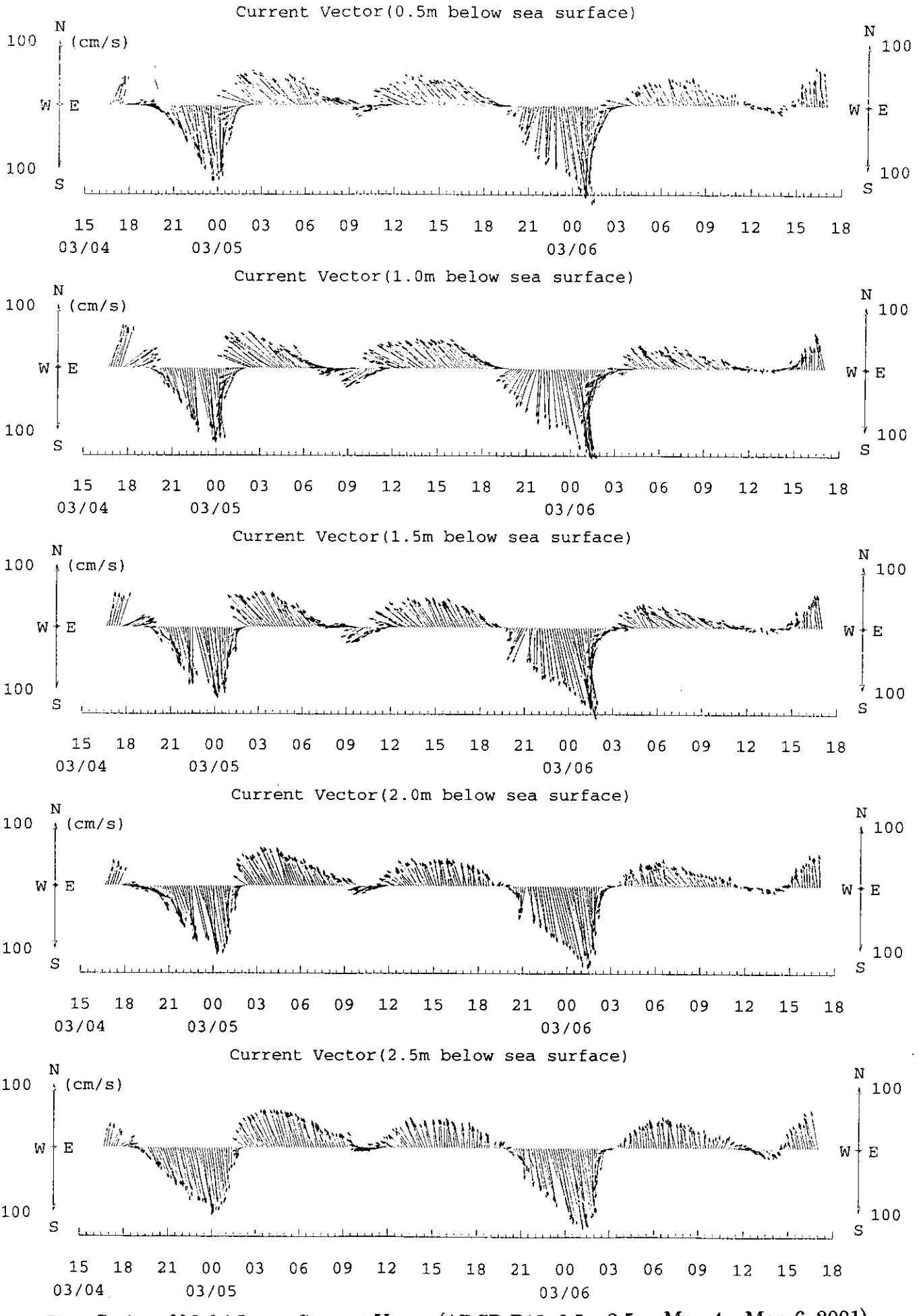
Arthropoda

藤　科Balanidae
网　藤　*Balanus reticulatus* Utinomi
虫　科Bodotriidae
古　虫　*Eocuma sp.*
双 眼　Ampeliscidae
双 眼　*Ampelisca sp.*
日 本 沙　*Byblis japonicus* Dahl
玻 璃　科siphaeidae
螯　*Leptochela gracilis* Stimpson
瓷蟹科　Porcellanidae
毛　足　*Raphidopus ciliatus* Stimpson
蜘蛛蟹科　Majidae
足　蟹　*Phalangipus longipes* (Linnaeus)
梭子蟹科　Portunidae
口　*Charybdis variegata* (Fabricius)
脚 蟹　Goneplacidae
隆 背　*Eucrate costata* Yang et Sun
毛盲蟹　*Typhlocarcinus villosus* Stimpson
裸盲蟹　*Typhlocarcinus nudud* Stimpson
刺足掘沙蟹　*Scalopidia spinosipes* Stimpson
粒 六 足　*Hexapus granuliferus* Campbell et Stephenson
莫 氏　短[illegible]　*Xenophthalmodes moebii* Richters
豆蟹科　Pinnotheridae
模糊新短眼蟹　*Neoxenophthalmus obscurus* (Henderson)
方蟹科　Grapsidae
字　弓　*Varuna litterata* (Fabricius)

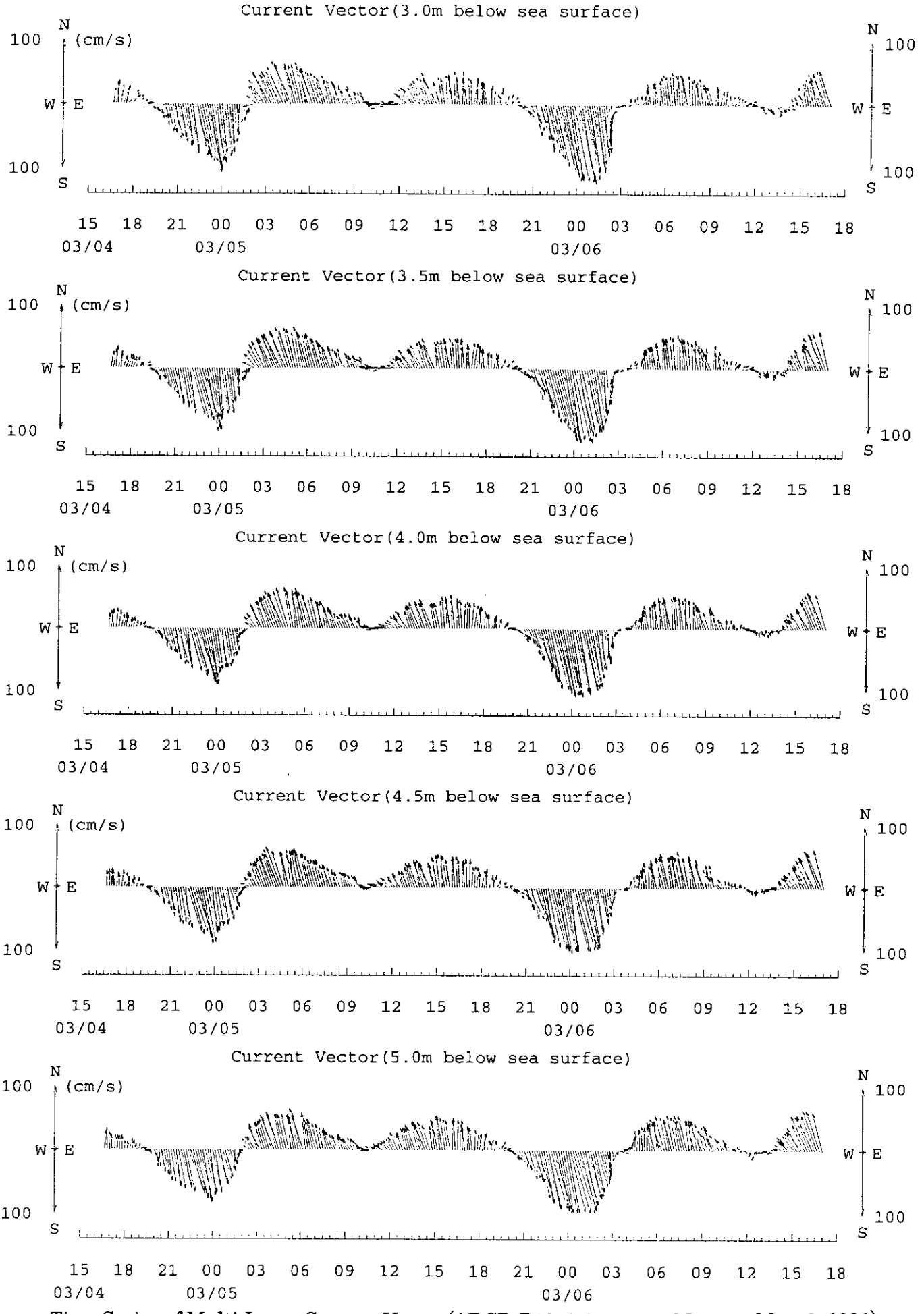
Echinodermata

沙　子 科hyllophoridae
粗枝柄参　*Cladolabes crassus* (H. L. Clark)
芋参科　Molpadiidae
海地瓜　*Acaudina molpadioides* (Semper)
海 参　Synaptidae
棘 刺　*Protankyra bidentata* (Woodard et Barrett)

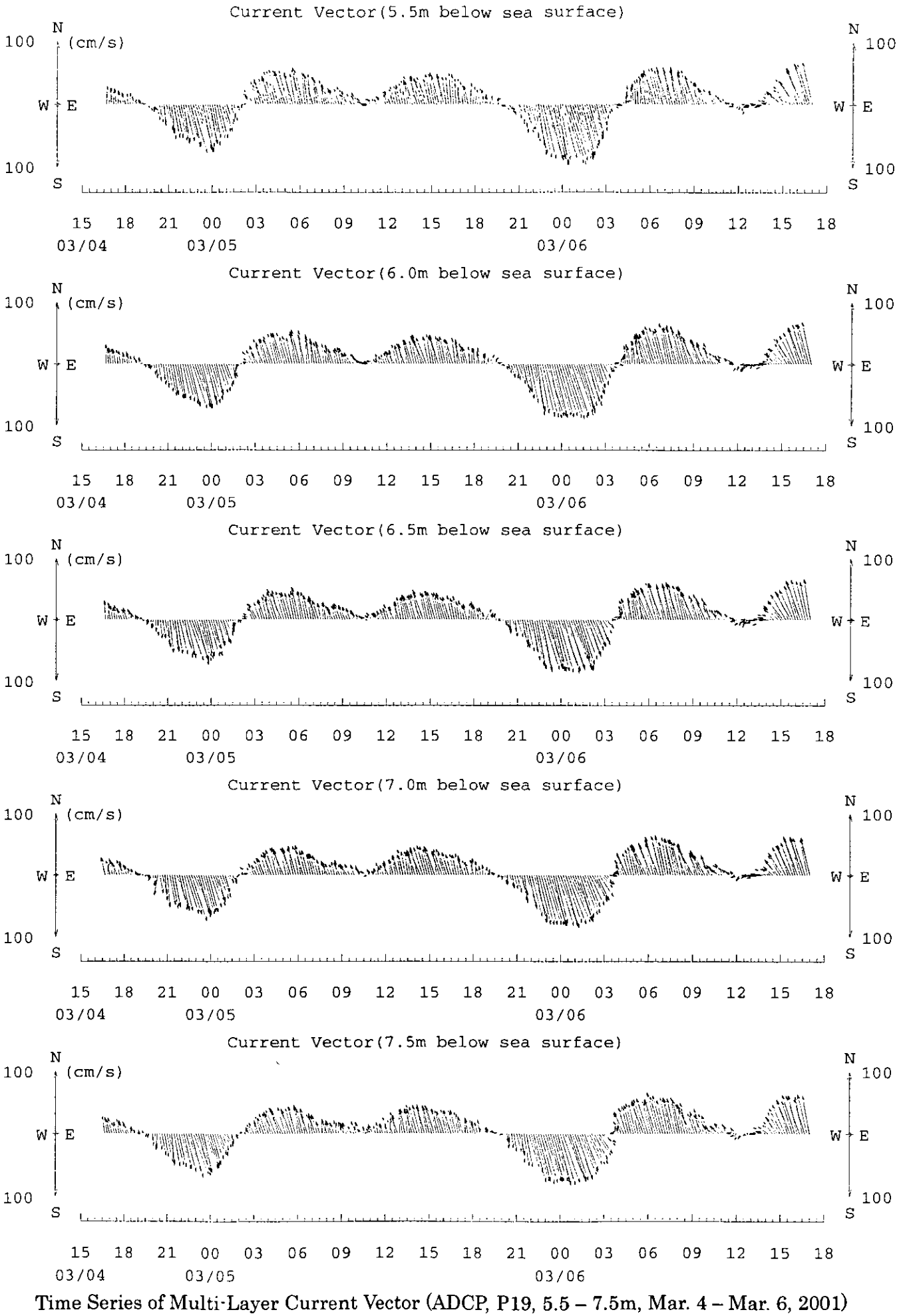
遂　足　Amphiuridae	
光滑倍棘蛇尾	*Amphioplus laevis* (Lyman.)
Chordata	
科　Anguillidae	
日　本	*Anguilla japonica* Tamminca et Schlegel
鰕　虎　科Gobiidae	
触　角　鰕虎	*Oxyurichthys tentacularis* (Cuvier et Valenciennes)
舌　科Cynoglossidae	
斑　舌	*Cynoglossus puncticeps* (Richardson)



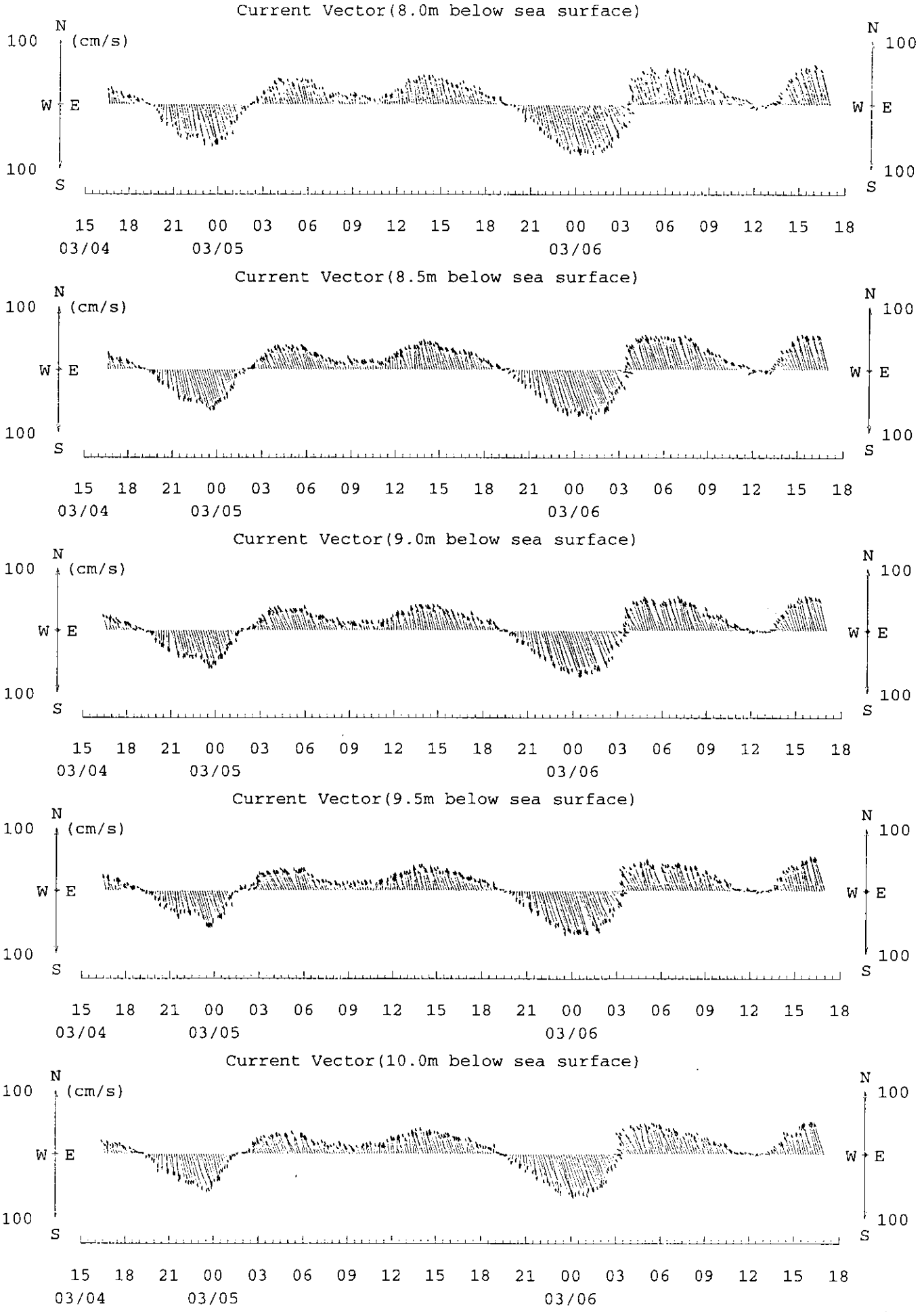
Time Series of Multi-Layer Current Vector (ADCP, P19, 0.5 – 2.5m, Mar. 4 – Mar. 6, 2001)



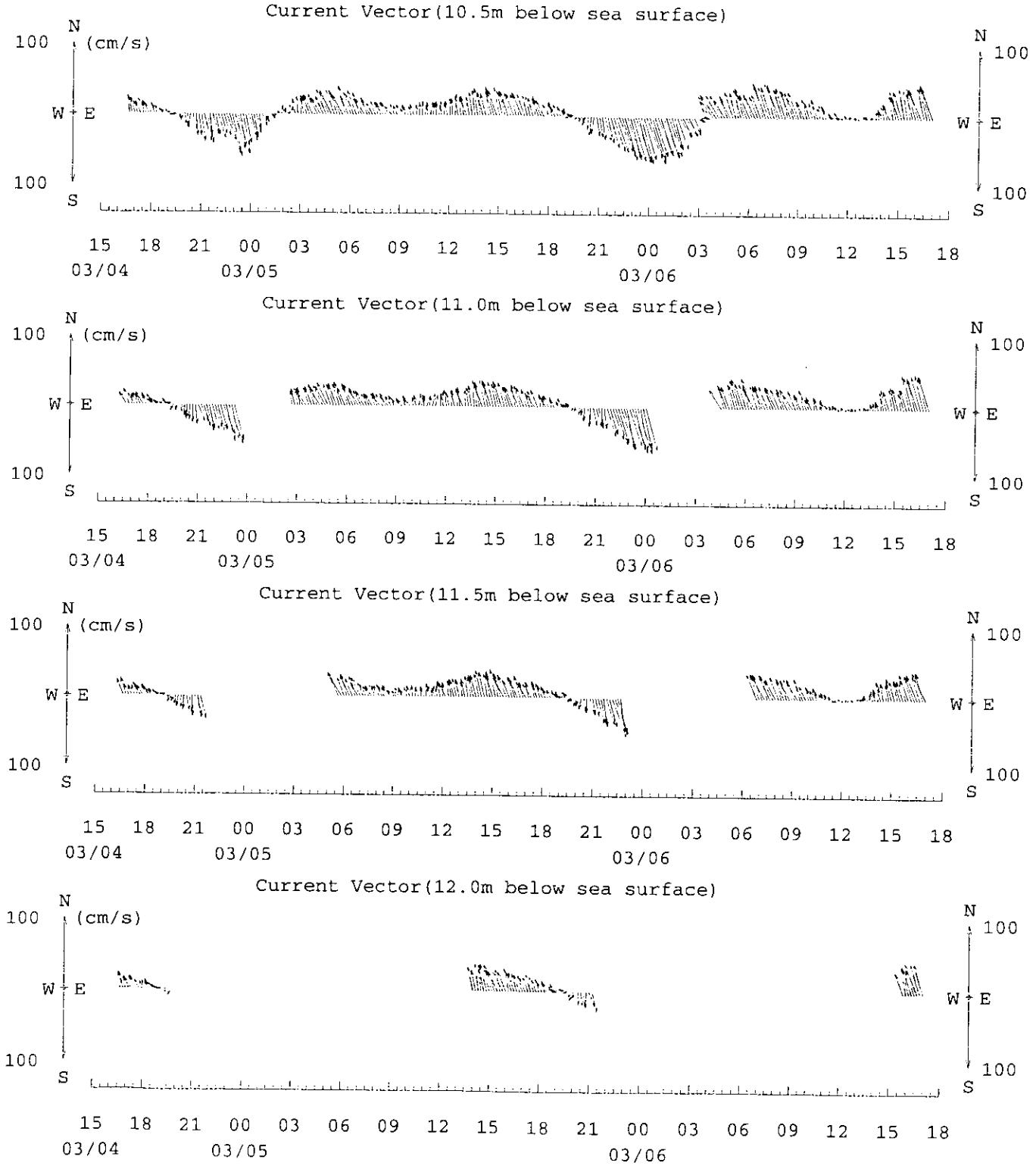
Time Series of Multi-Layer Current Vector (ADCP, P19, 3.0 – 5.0m, Mar. 4 – Mar. 6, 2001)



Time Series of Multi-Layer Current Vector (ADCP, P19, 5.5 – 7.5m, Mar. 4 – Mar. 6, 2001)

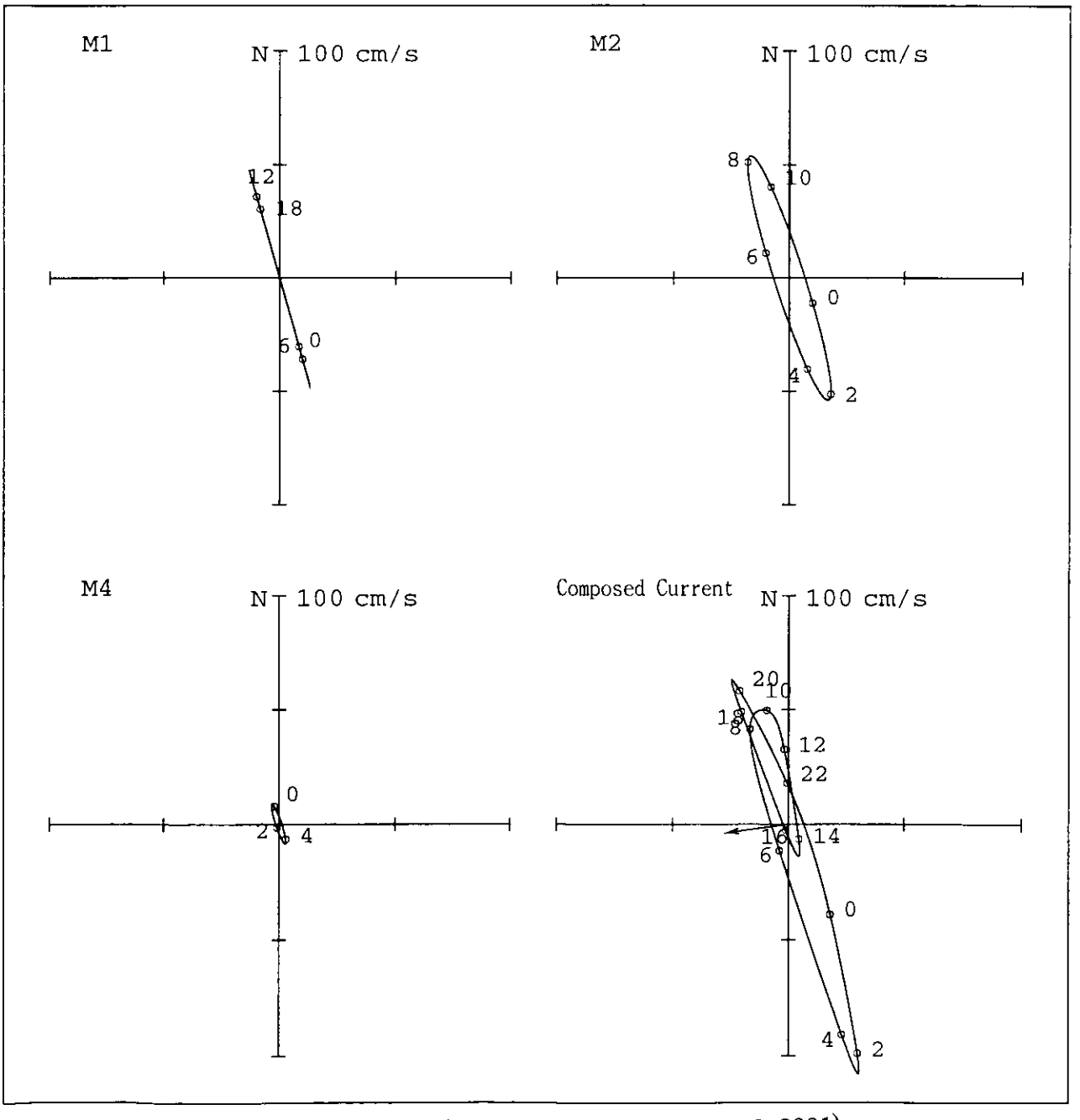


Time Series of Multi-Layer Current Vector (ADCP, P19, 8.0 – 10.0m, Mar. 4 – Mar. 6, 2001)



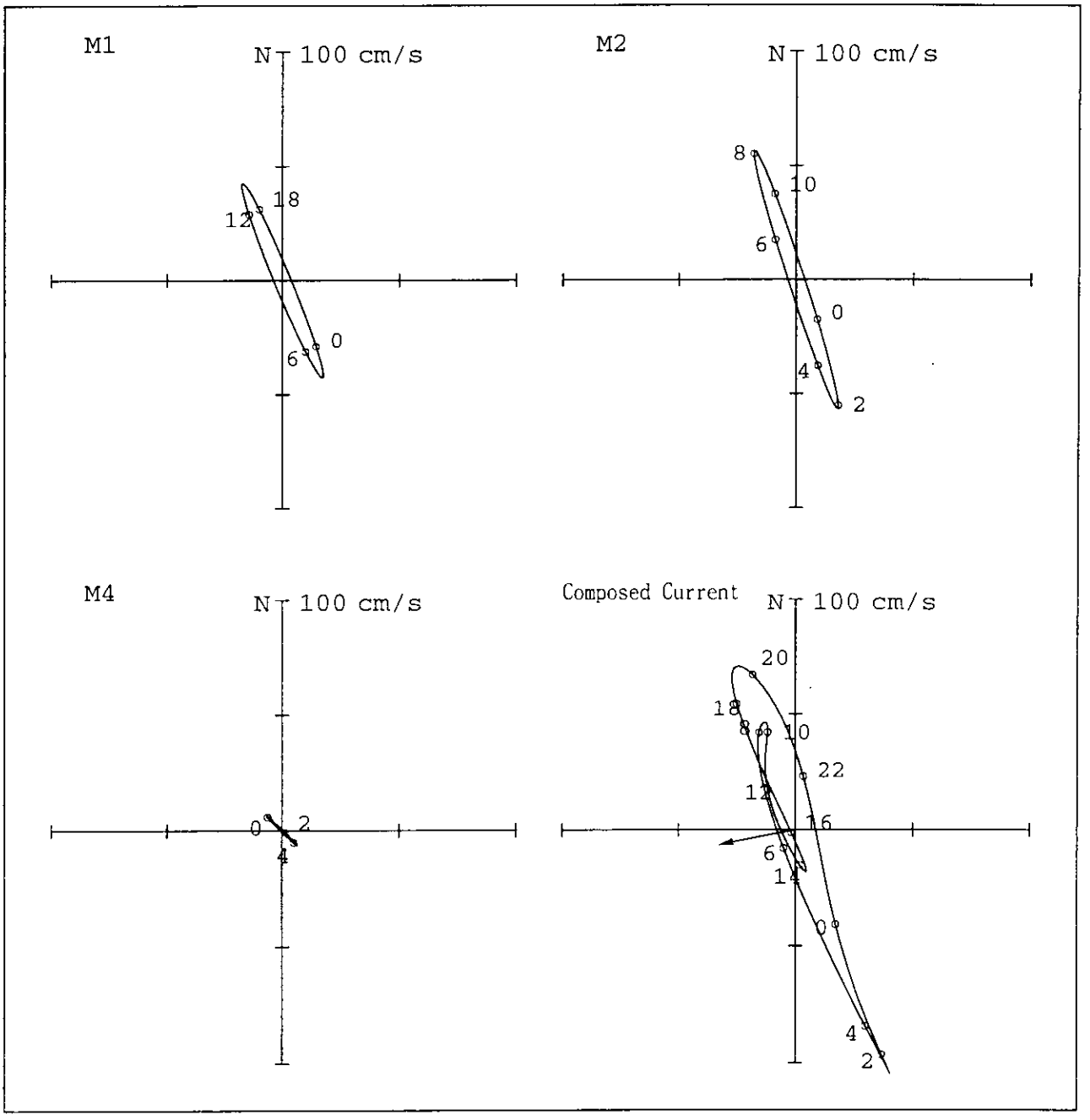
Time Series of Multi-Layer Current Vector (ADCP, P19, 10.5 – 12.0m, Mar. 4 – Mar. 6, 2001)

Current Ellipse(0.5m below sea surface)



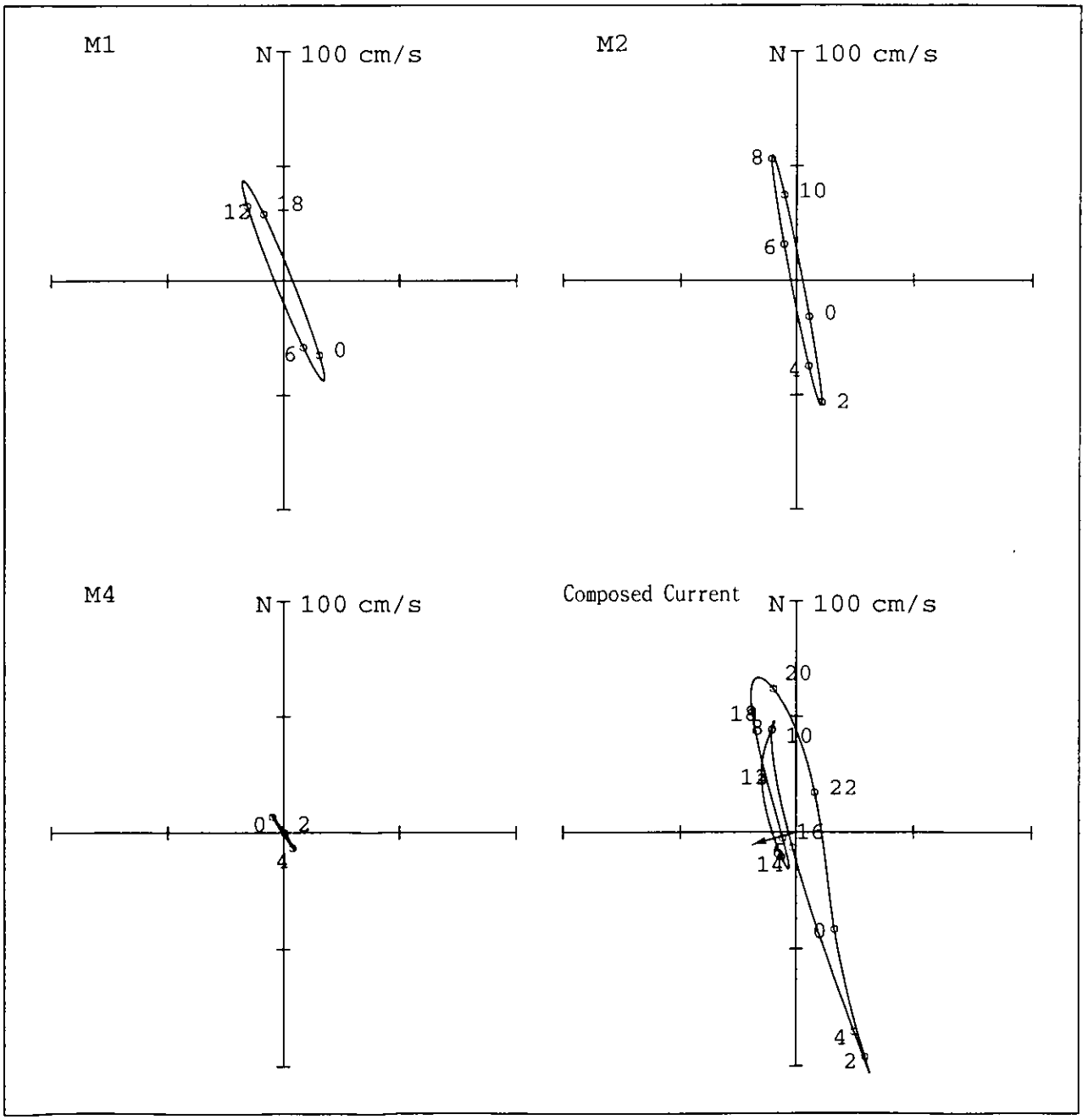
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(1.0m below sea surface)



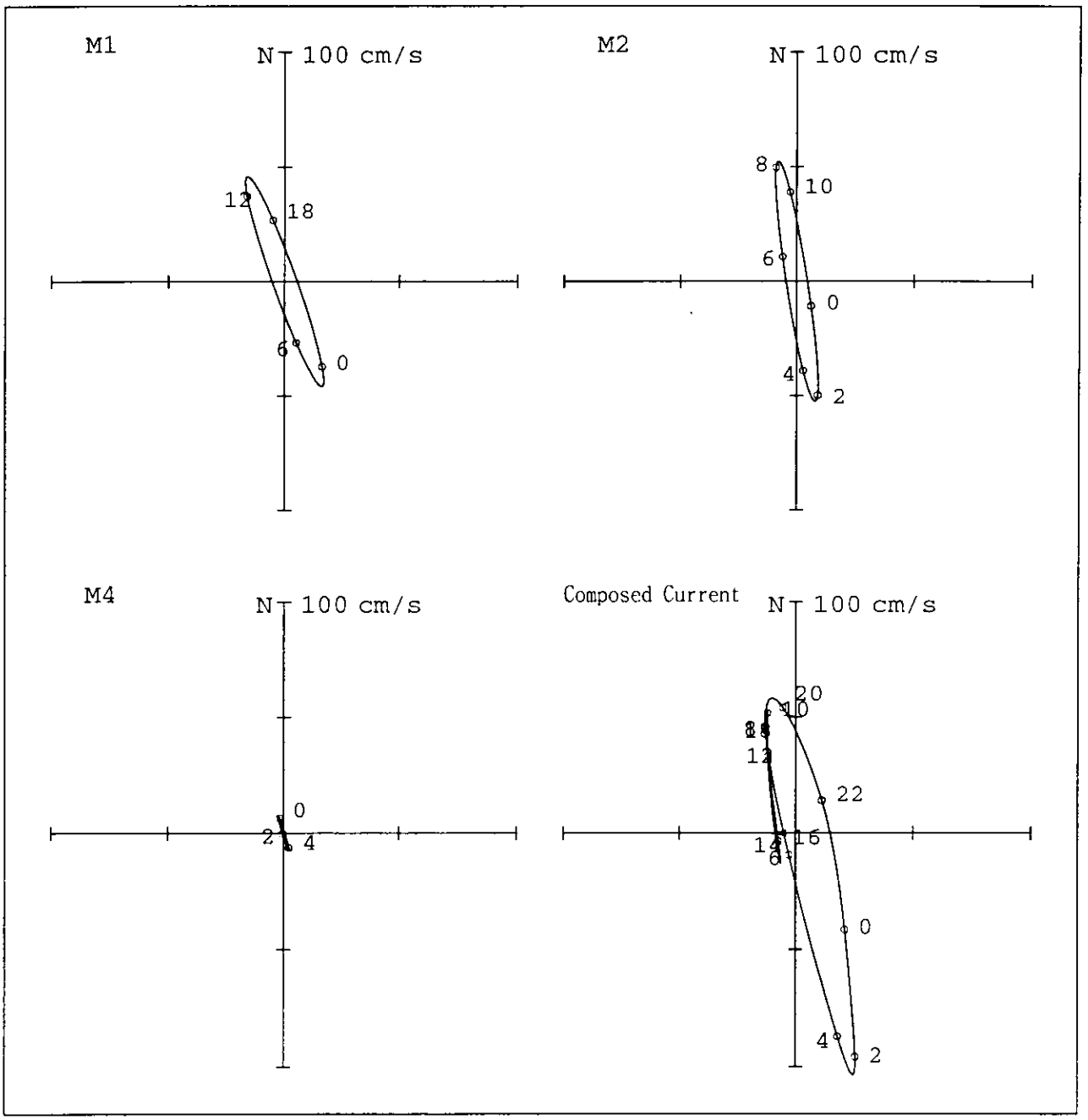
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(1.5m below sea surface)



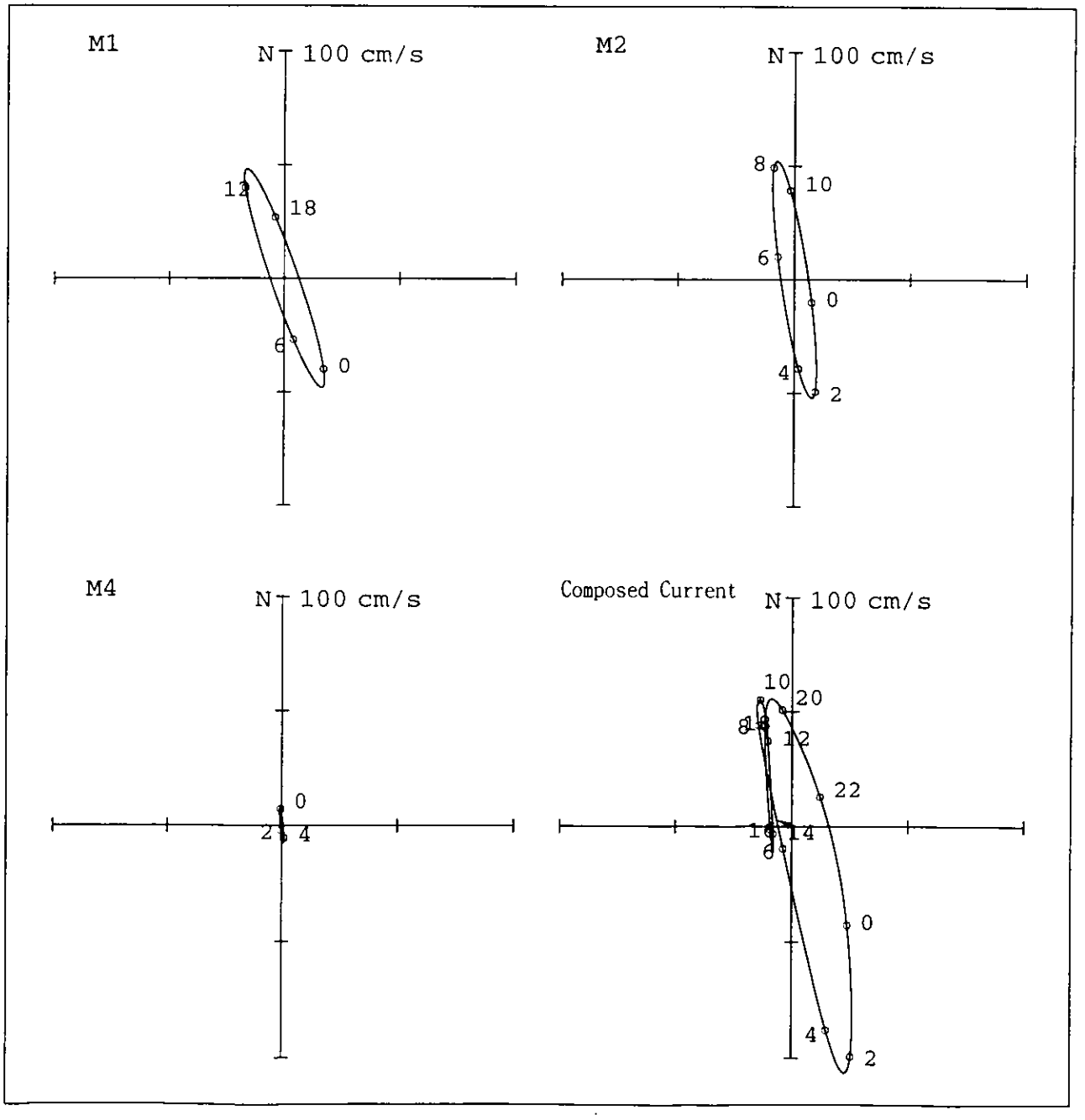
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(2.0m below sea surface)



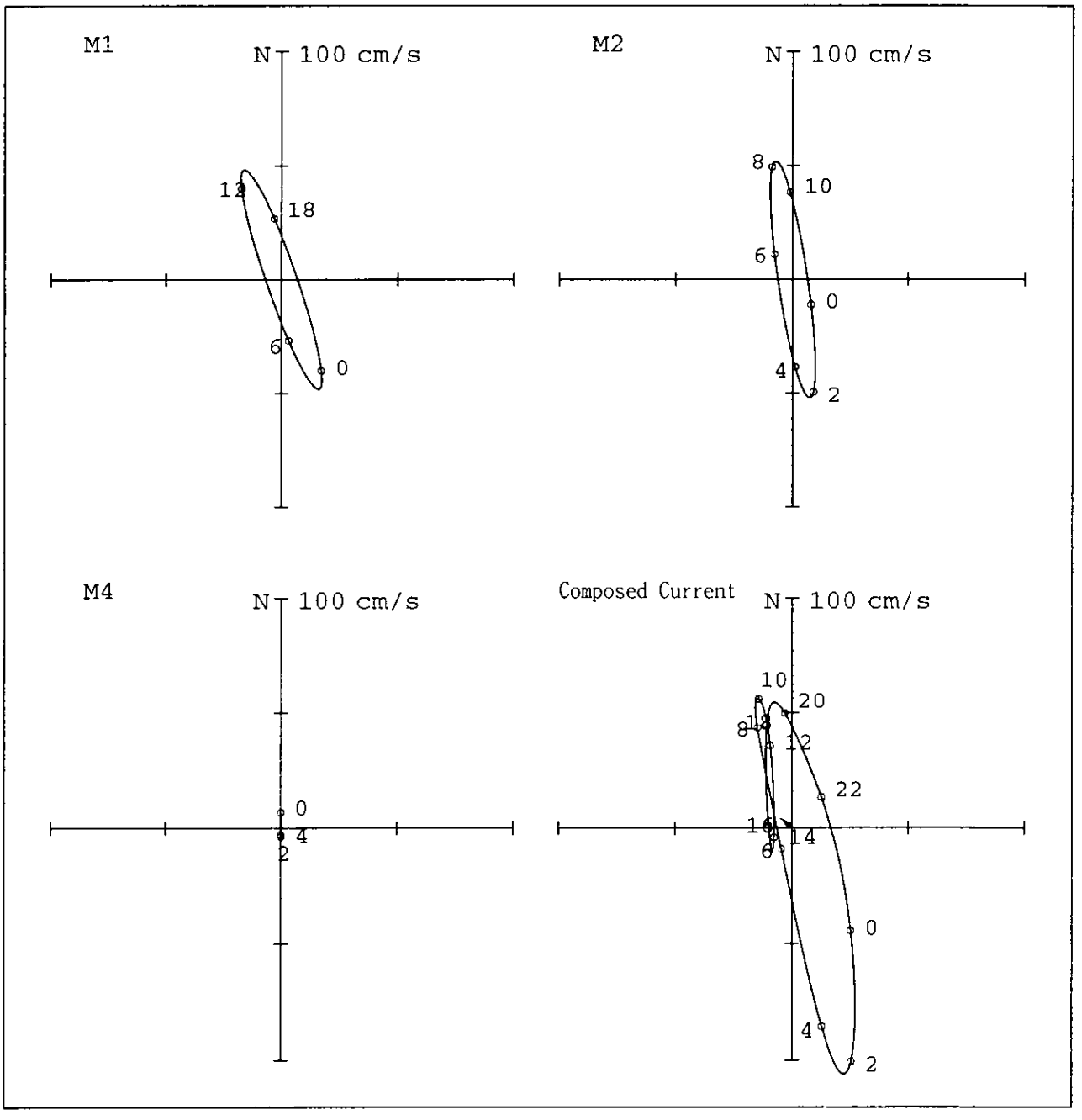
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(2.5m below sea surface)



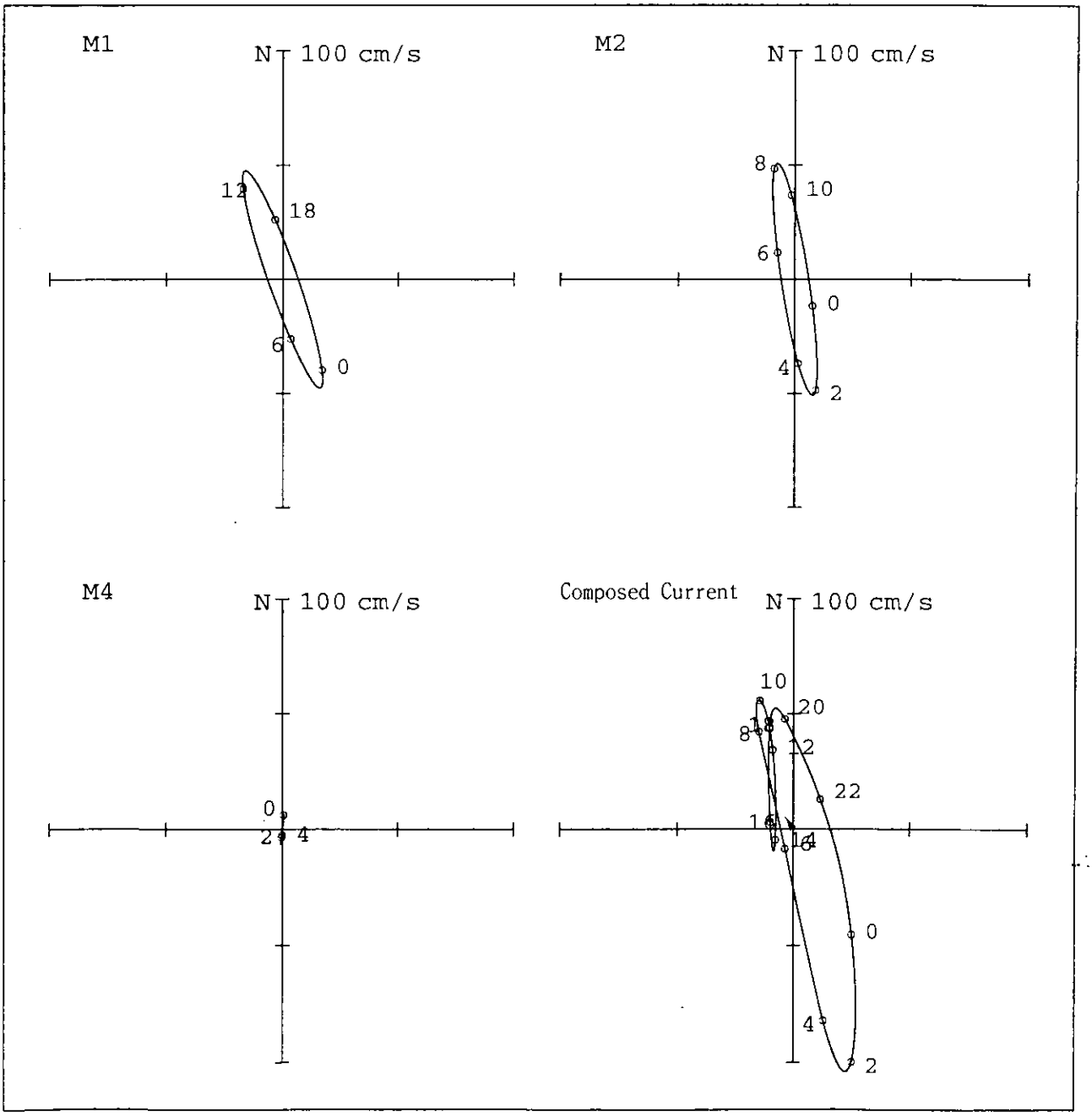
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(3.0m below sea surface)



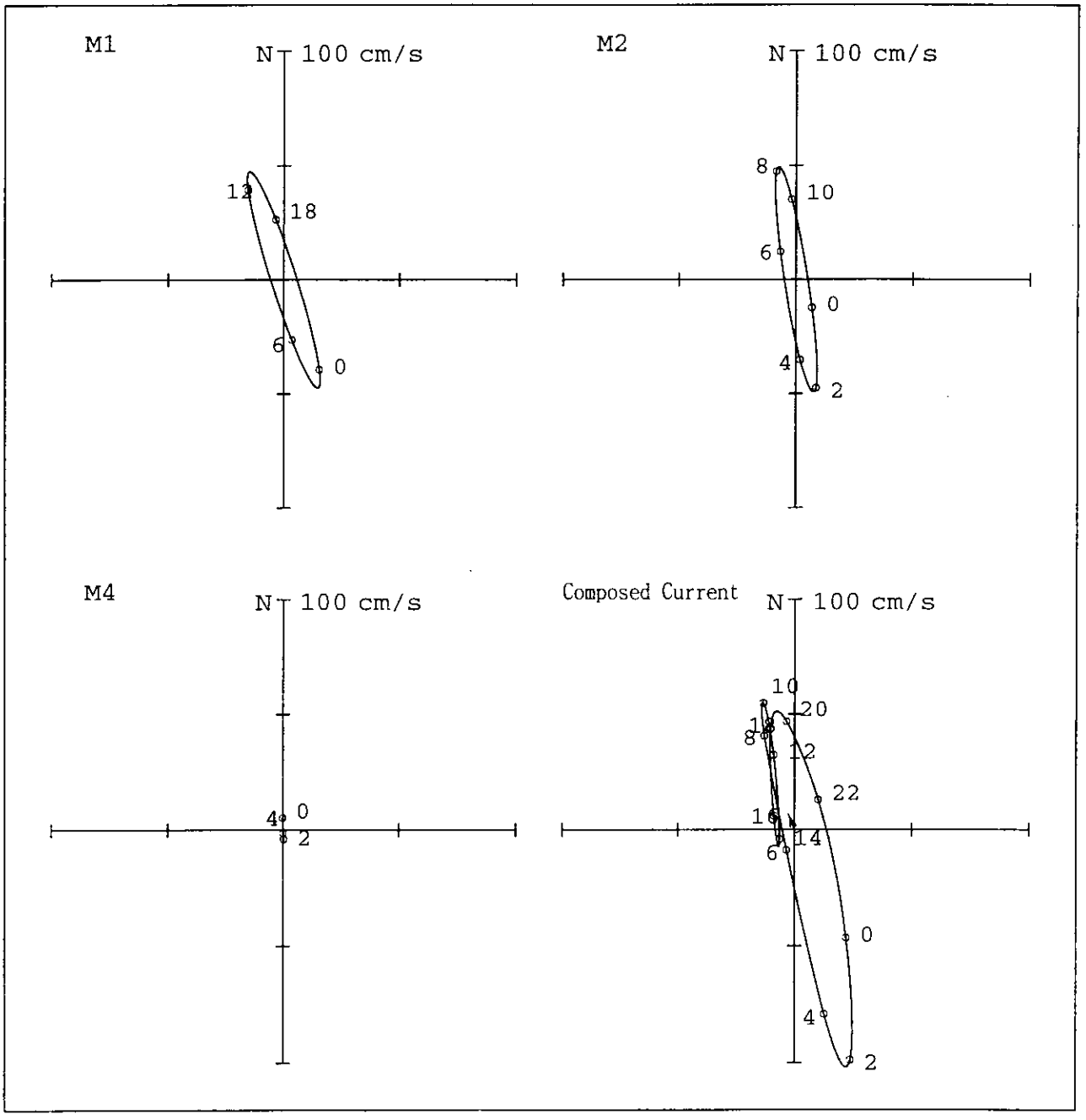
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(3.5m below sea surface)



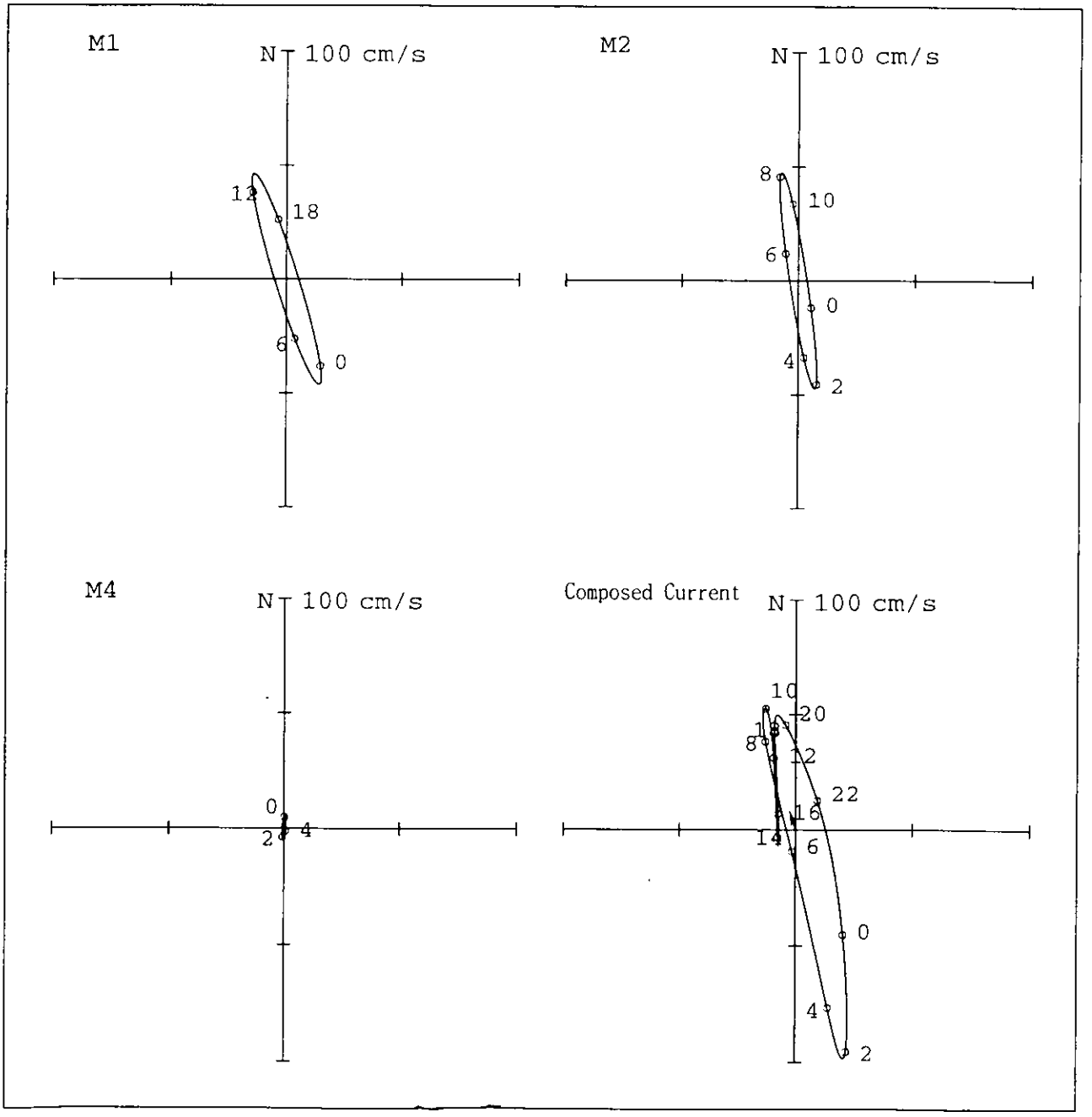
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(4.0m below sea surface)



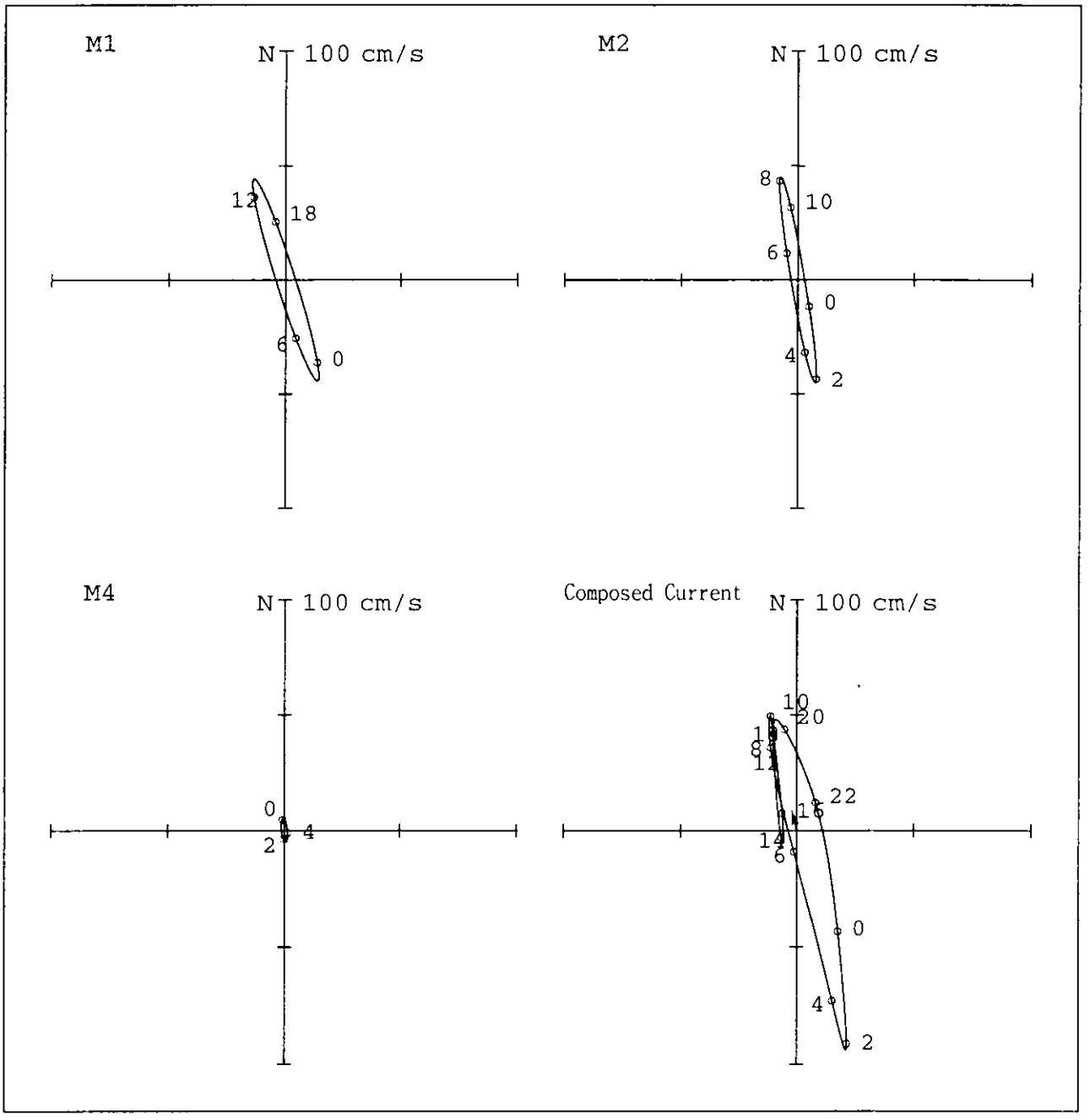
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(4.5m below sea surface)



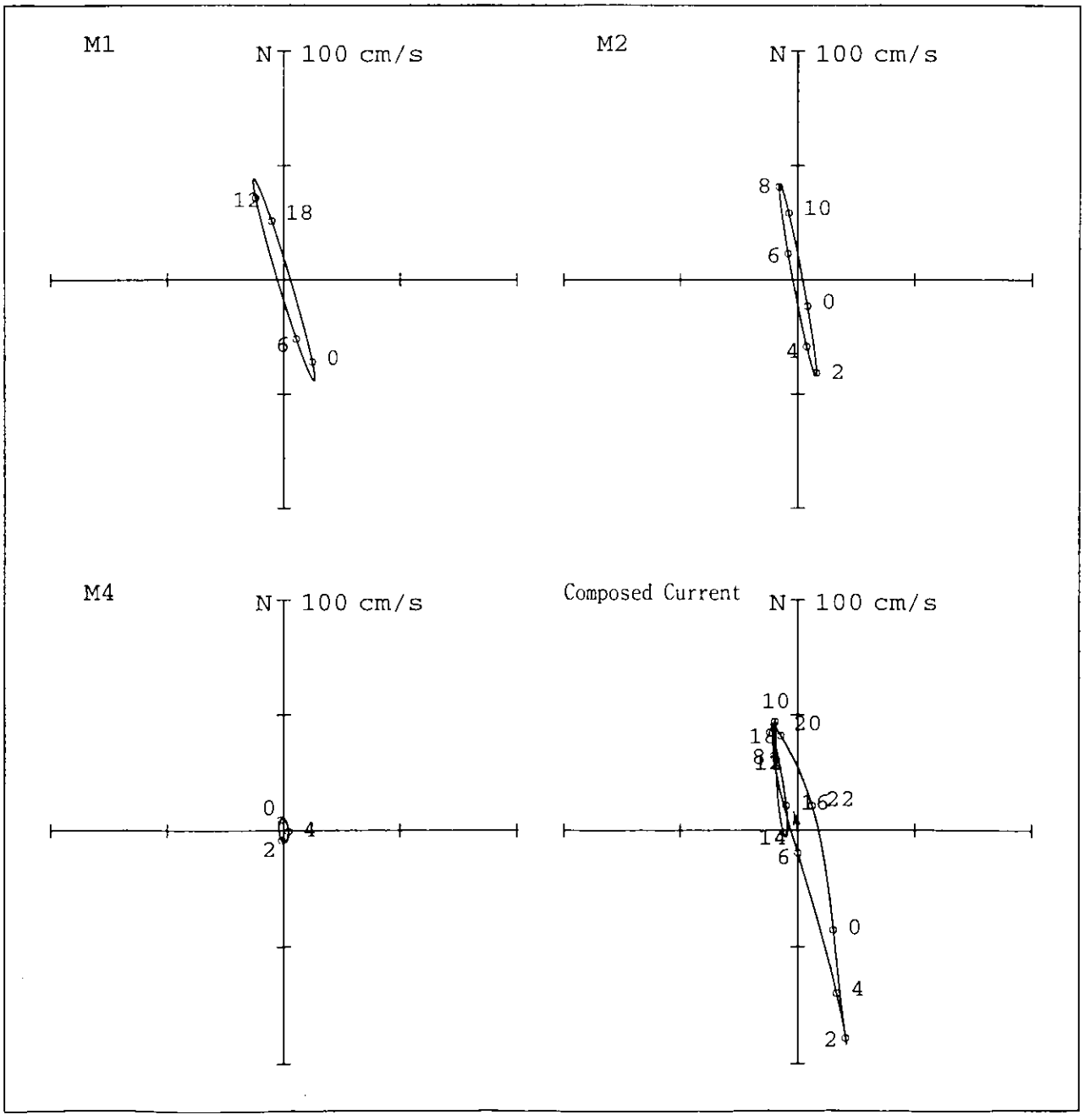
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(5.0m below sea surface)



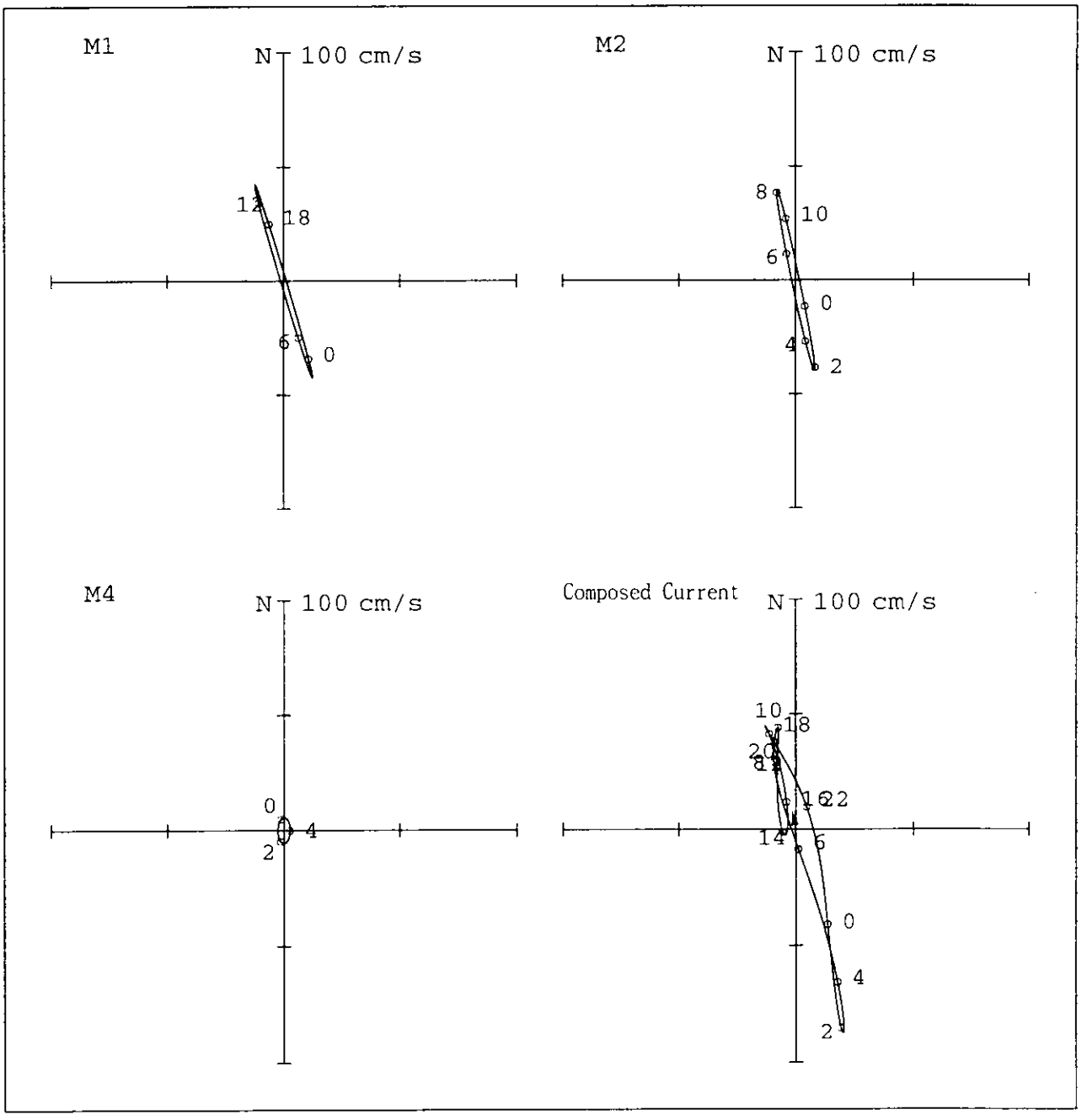
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(5.5m below sea surface)



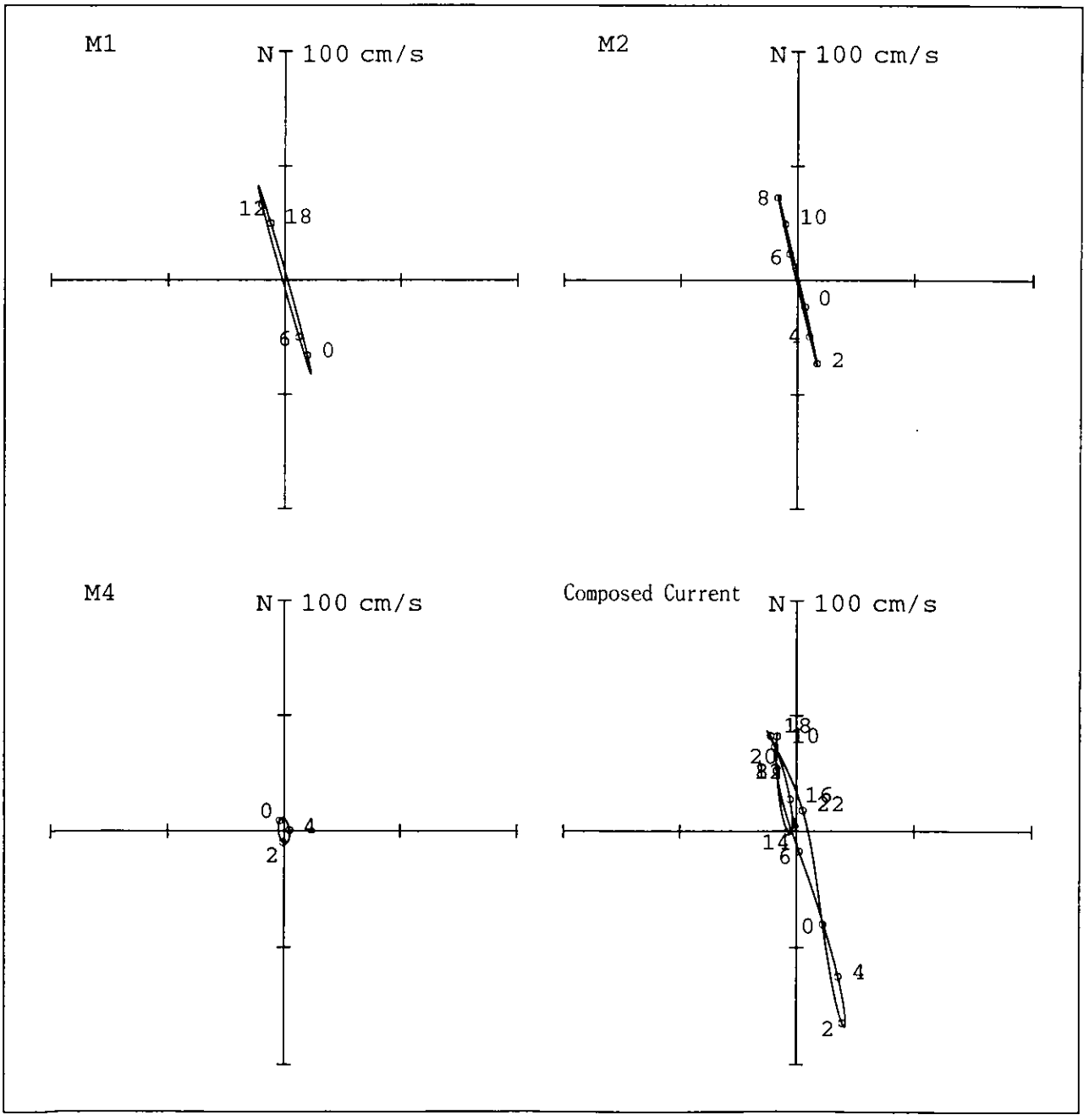
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(6.0m below sea surface)



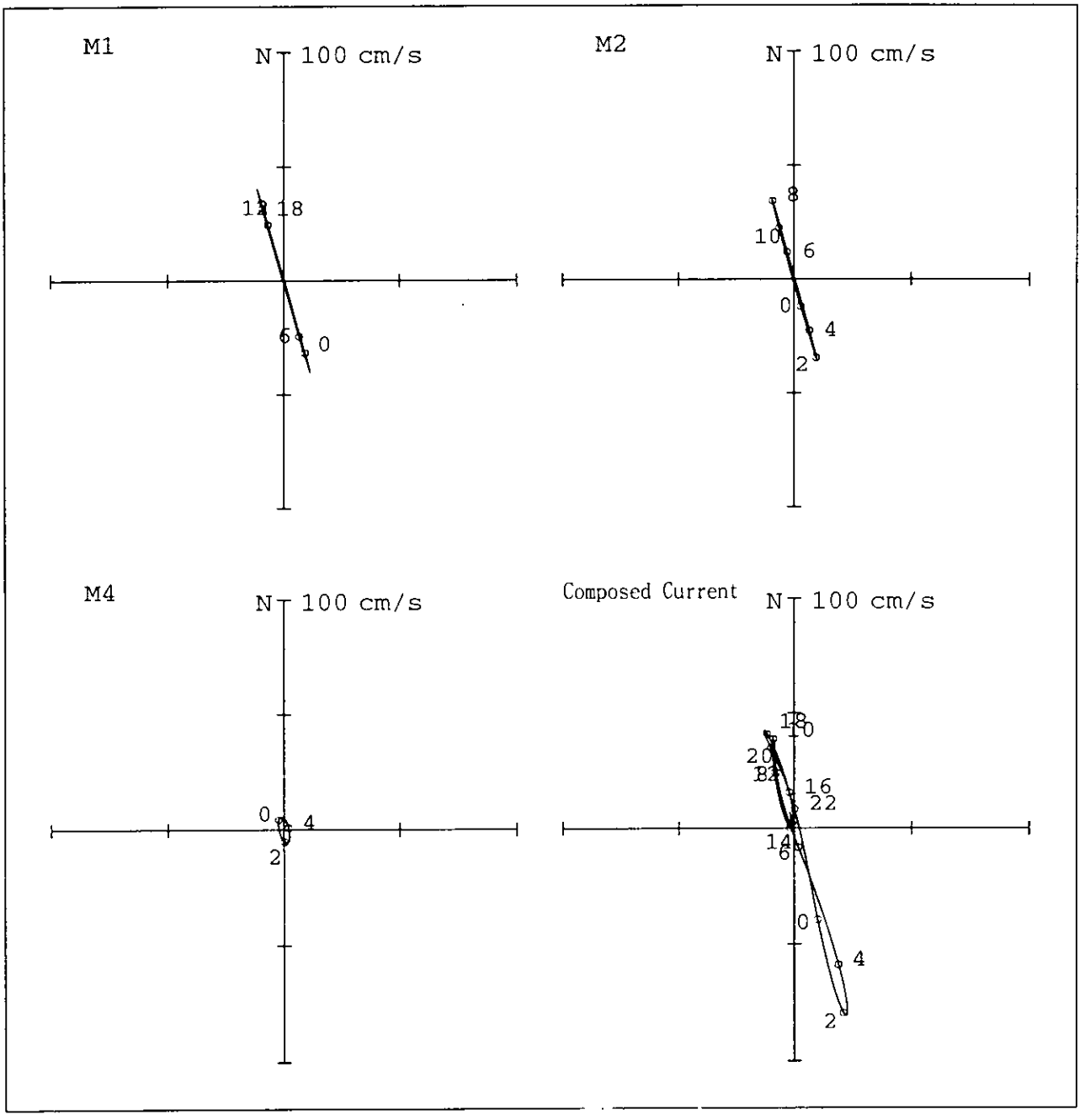
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(6.5m below sea surface)



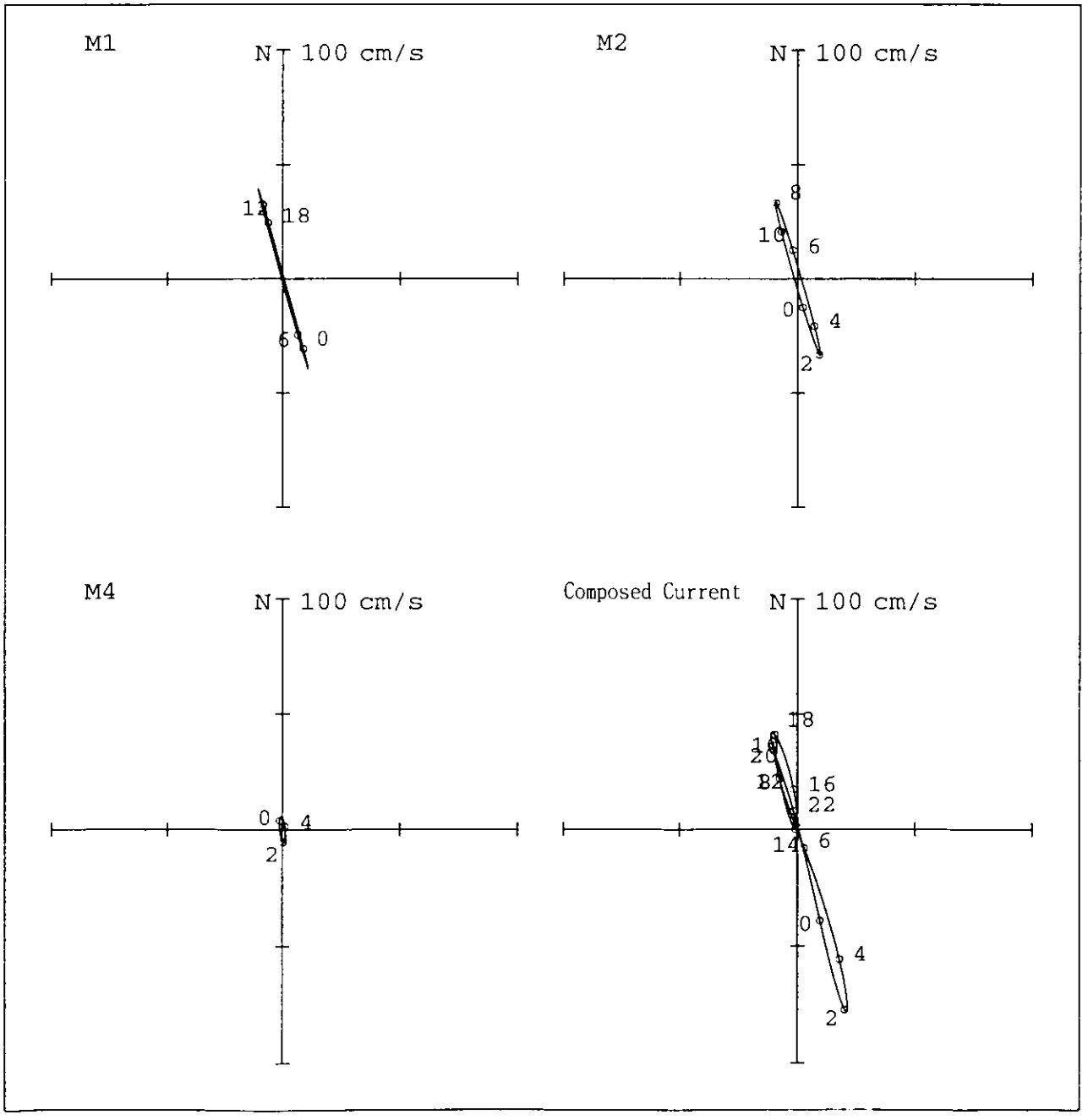
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(7.0m below sea surface)



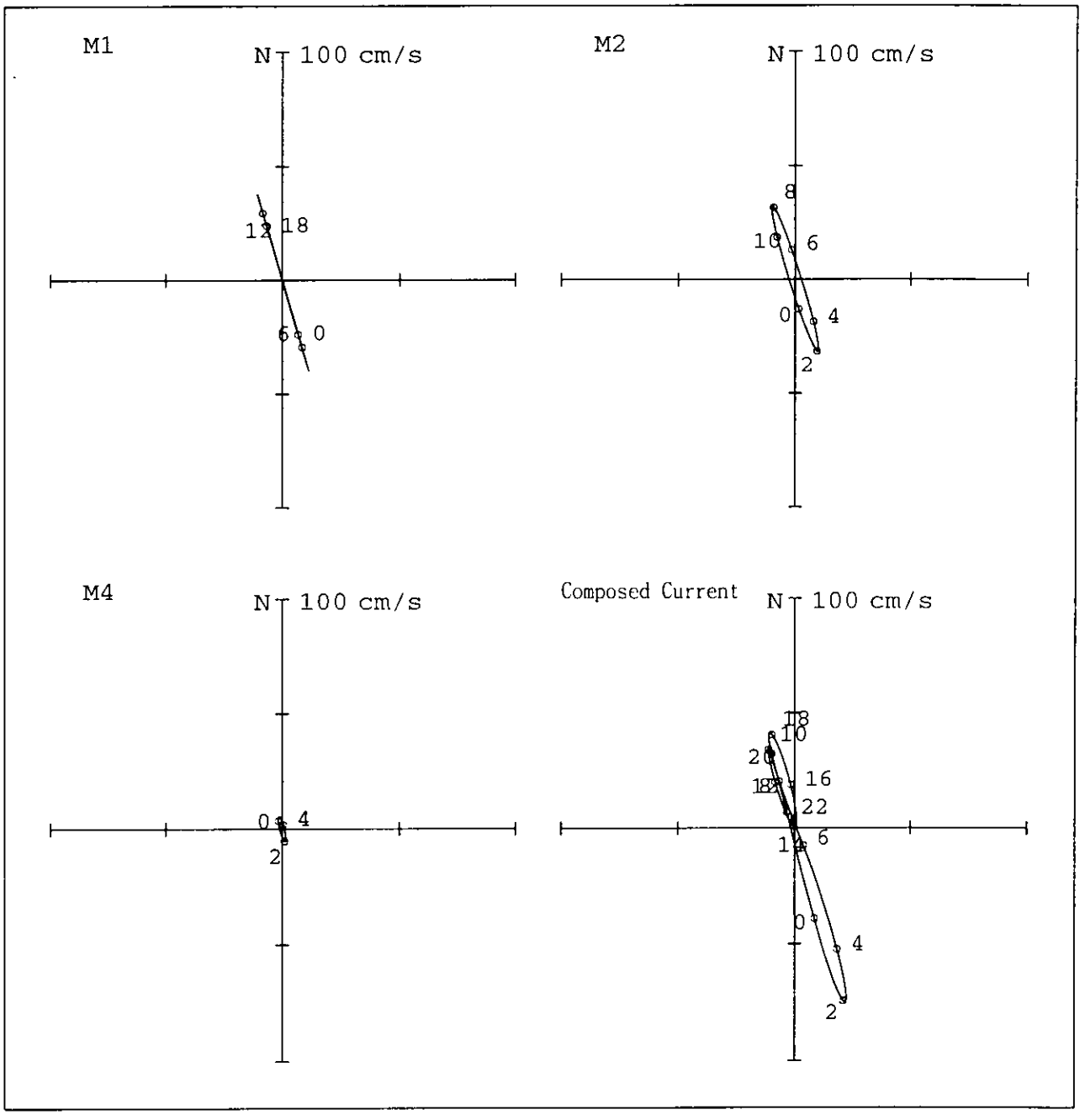
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(7.5m below sea surface)



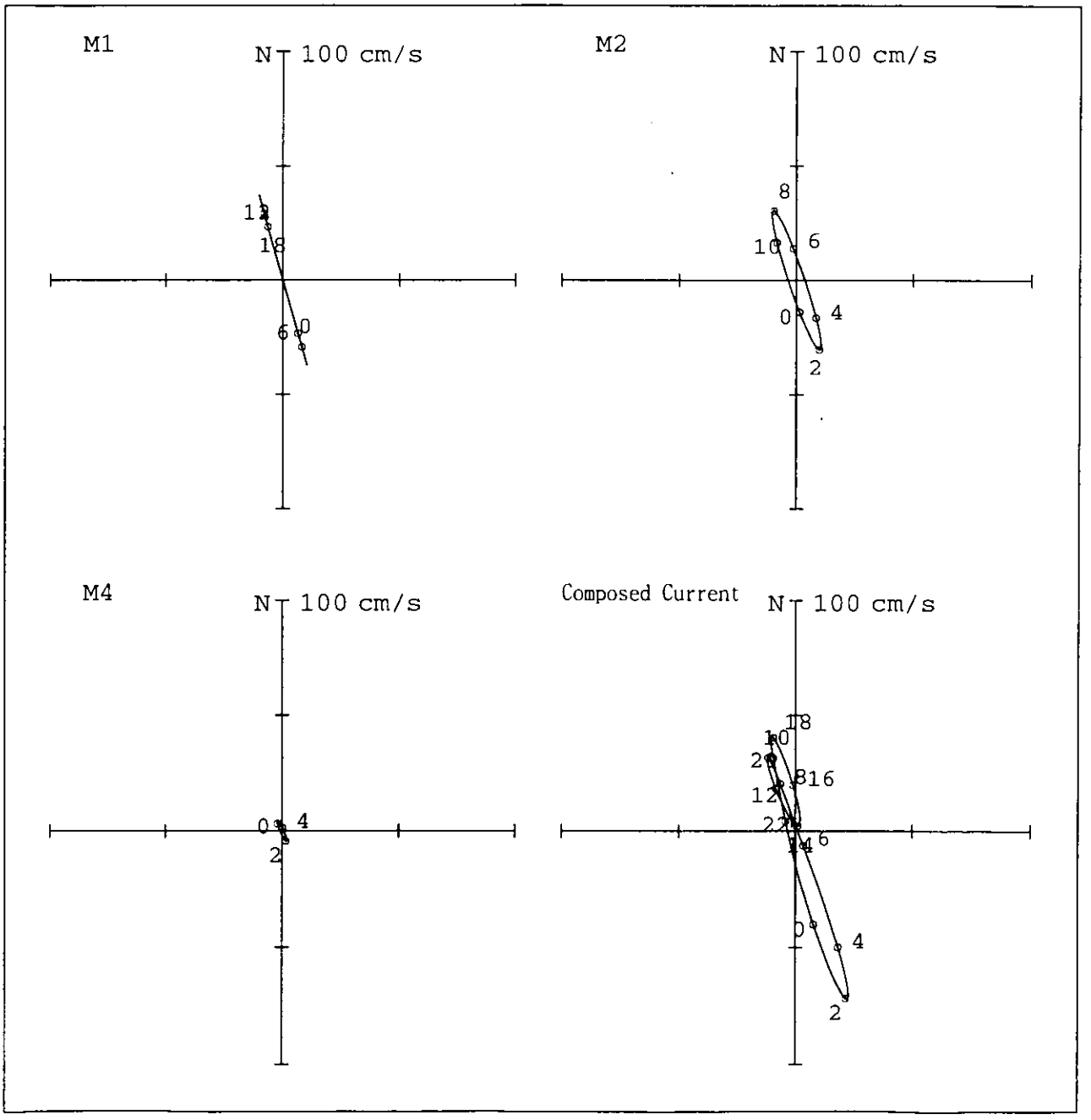
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(8.0m below sea surface)



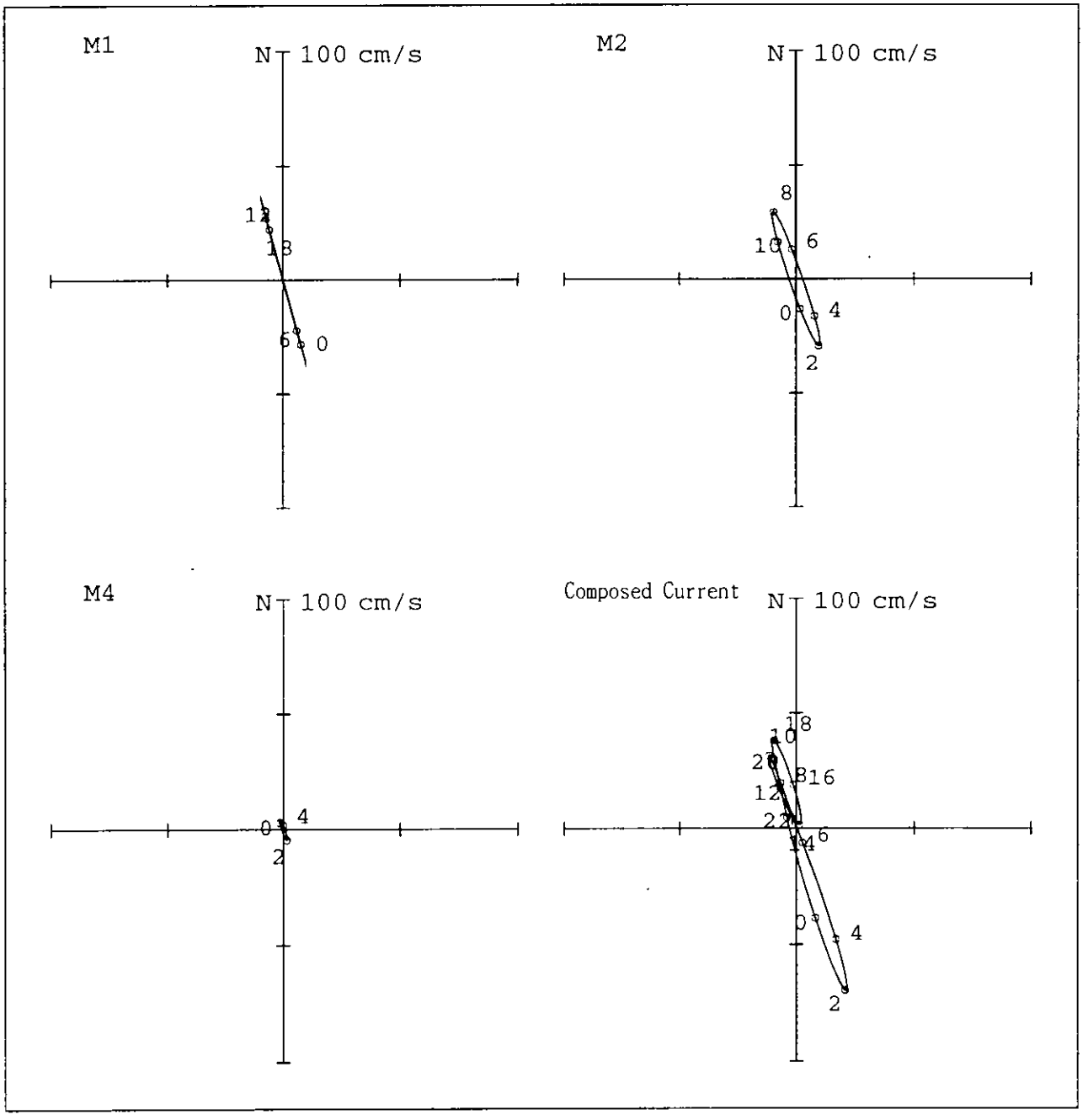
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(8.5m below sea surface)



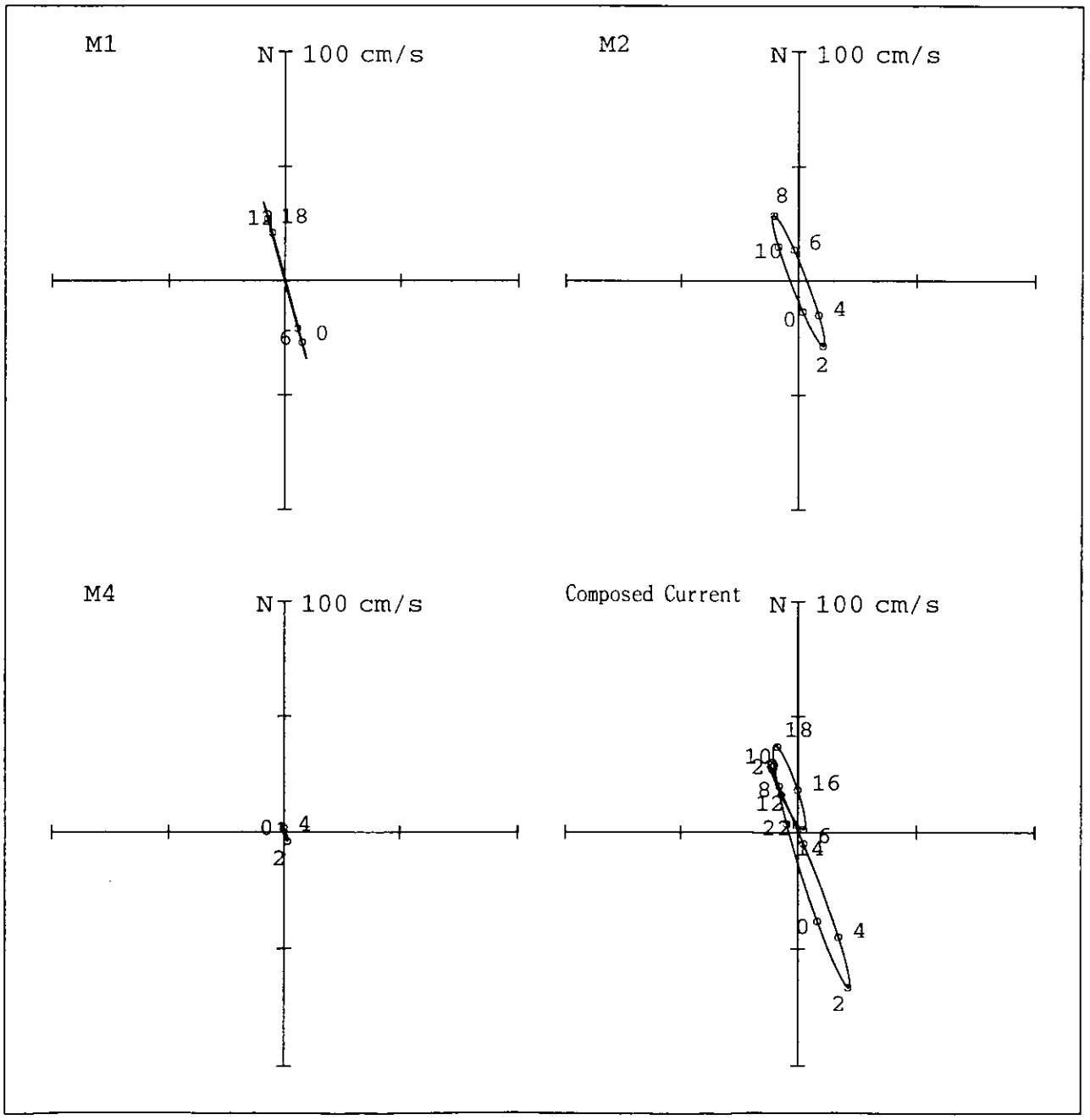
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(9.0m below sea surface)



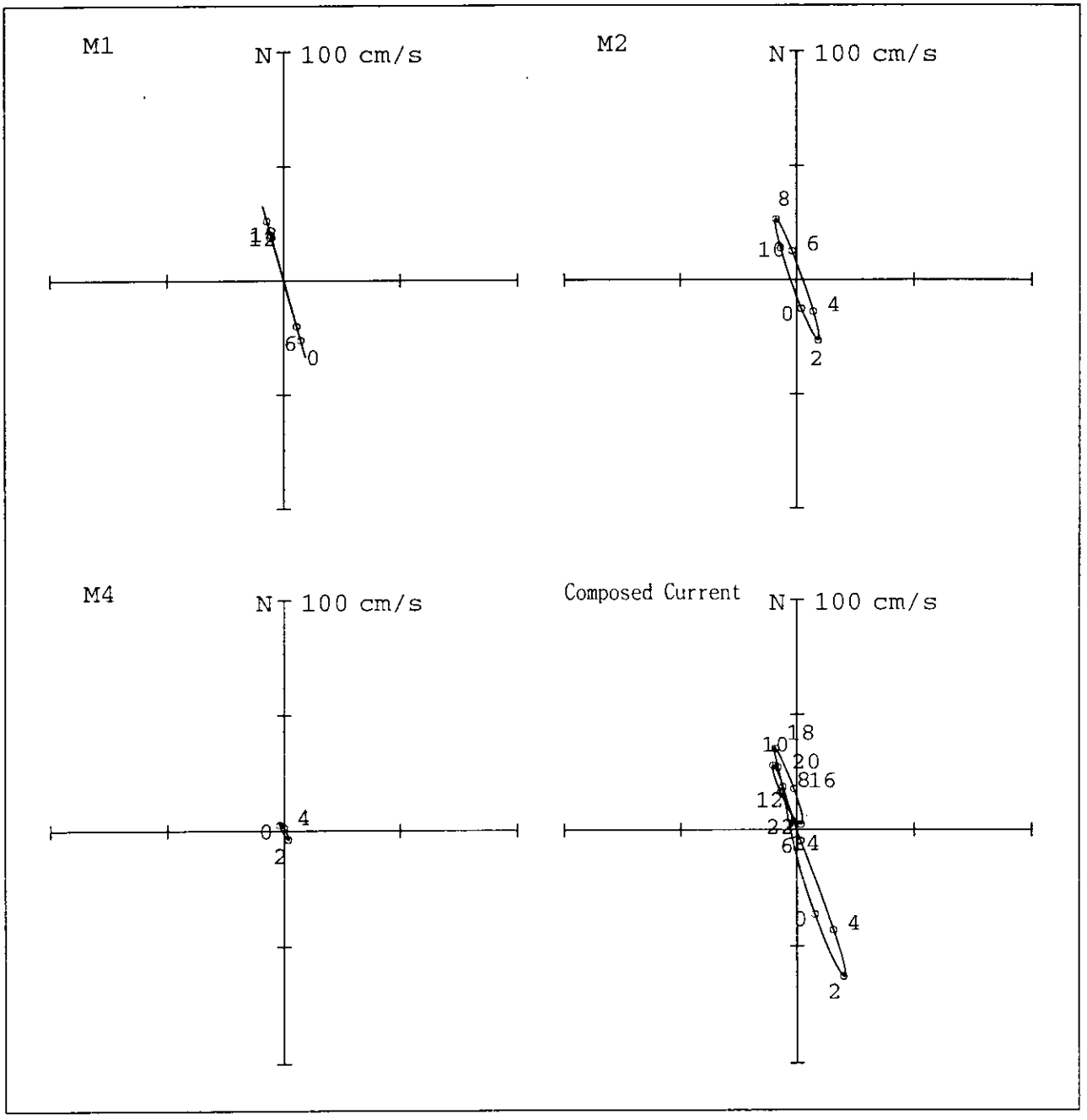
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(9.5m below sea surface)



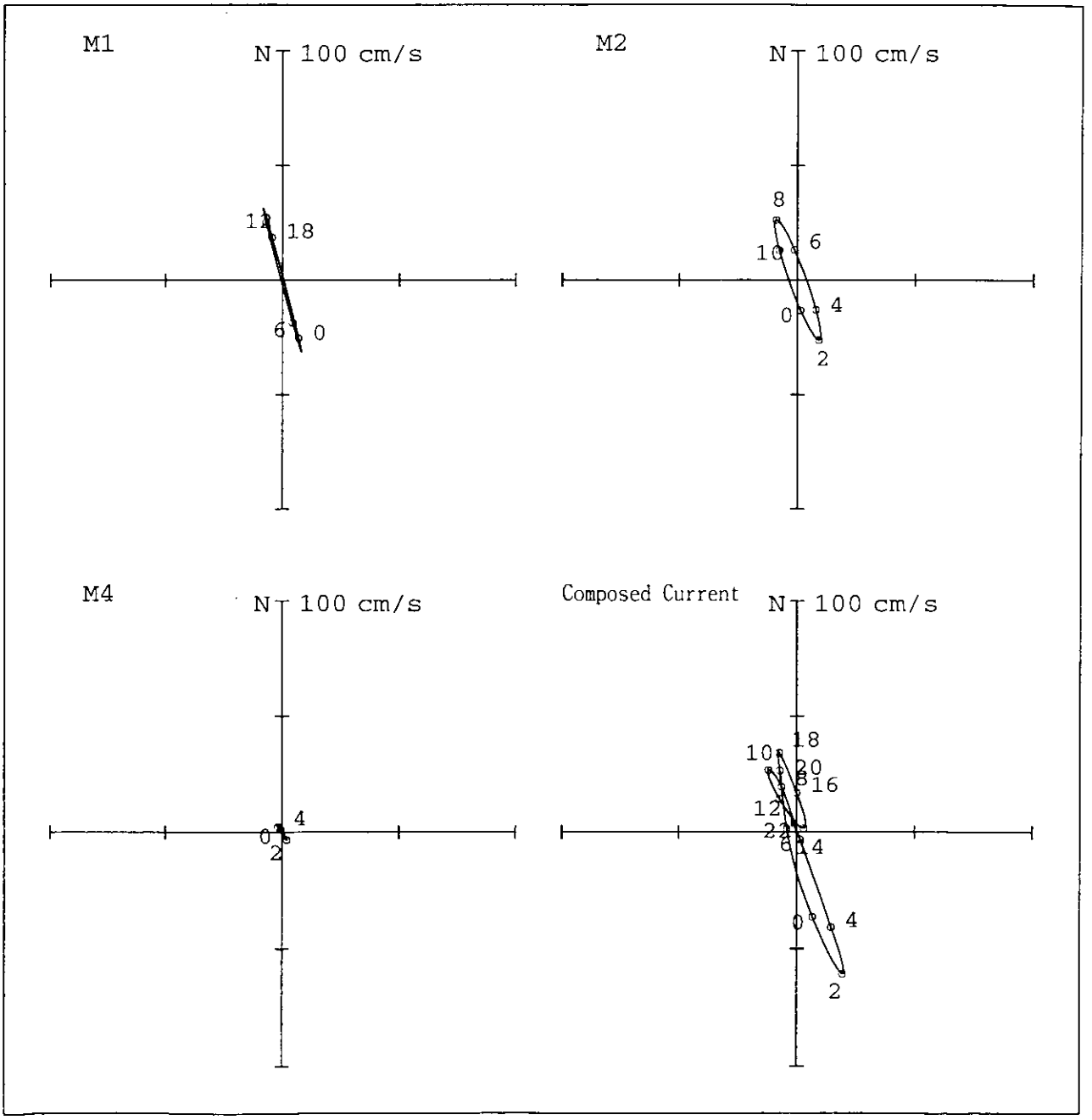
Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(10.0m below sea surface)



Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)

Current Ellipse(10.5m below sea surface)



Current Ellipse (ADCP, P20, Mar. 4 – Mar. 6, 2001)