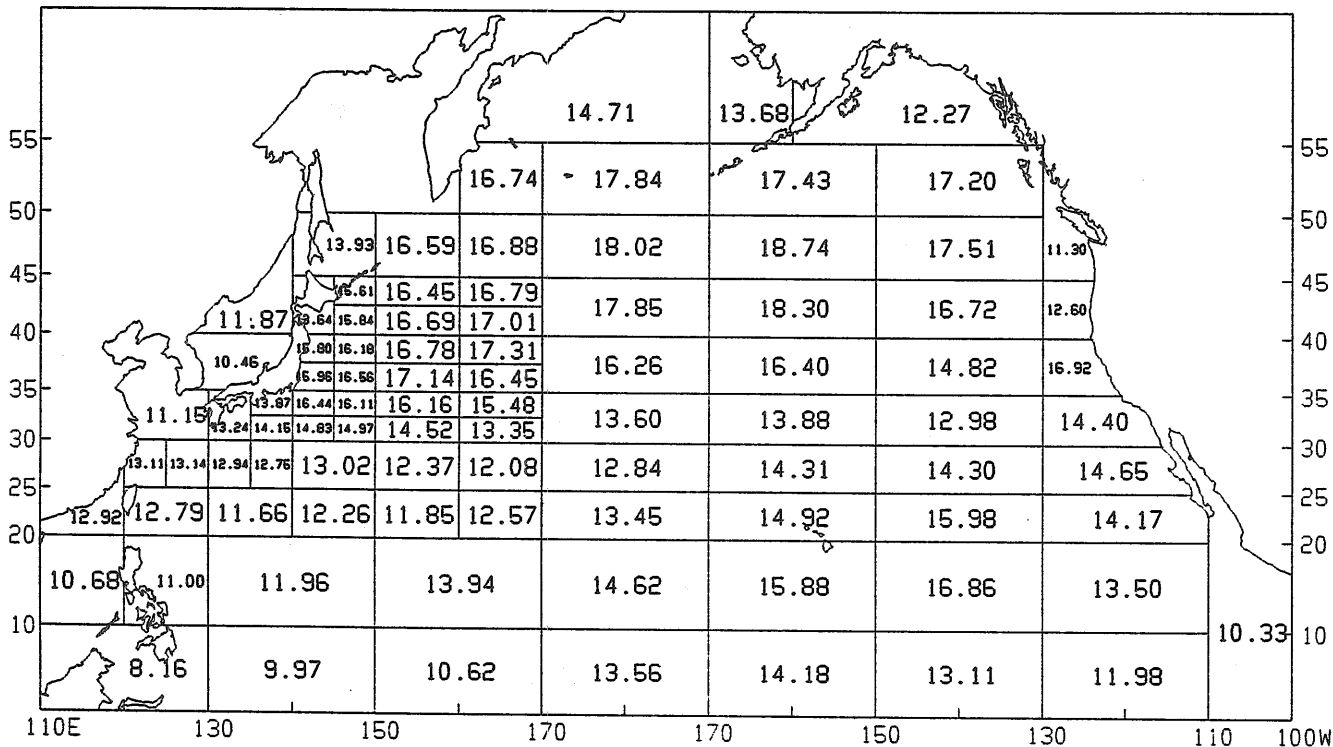
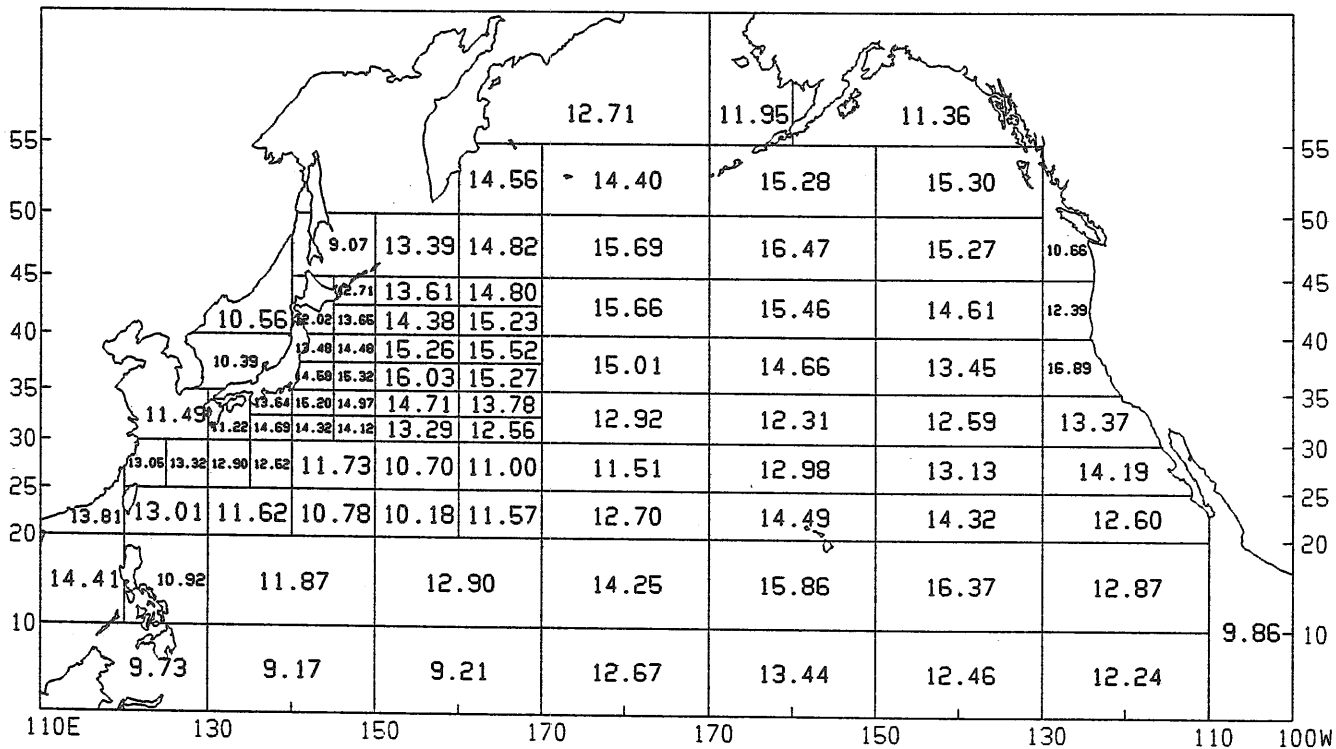


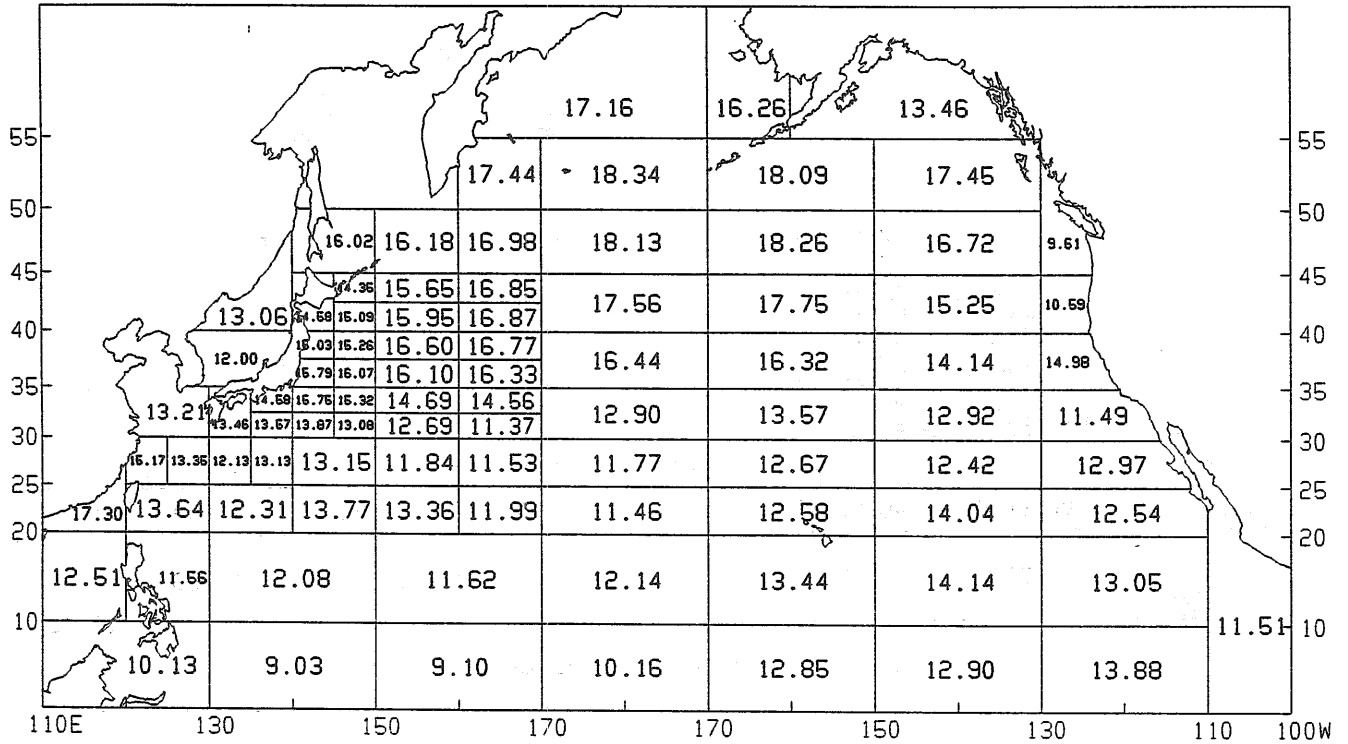
MEAN WIND SPEED (MAY): SHIP



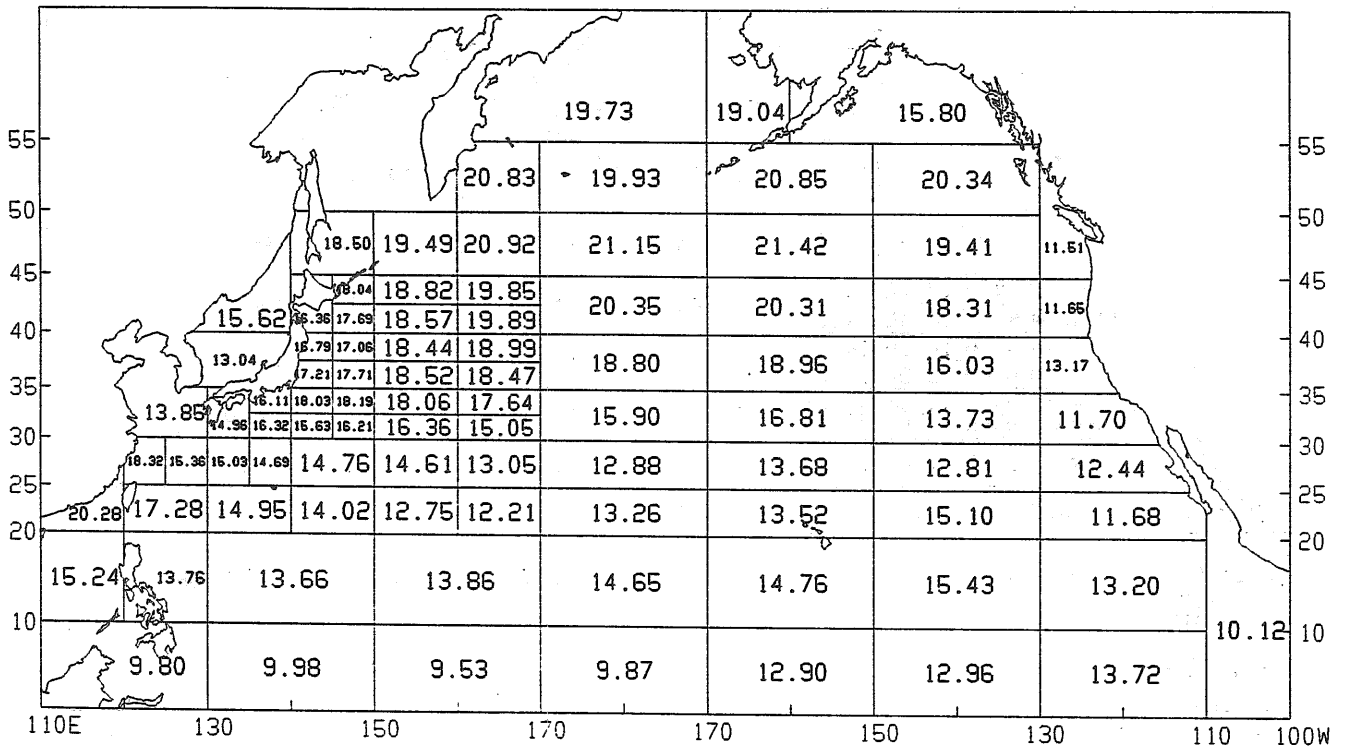
MEAN WIND SPEED (JUNE): SHIP



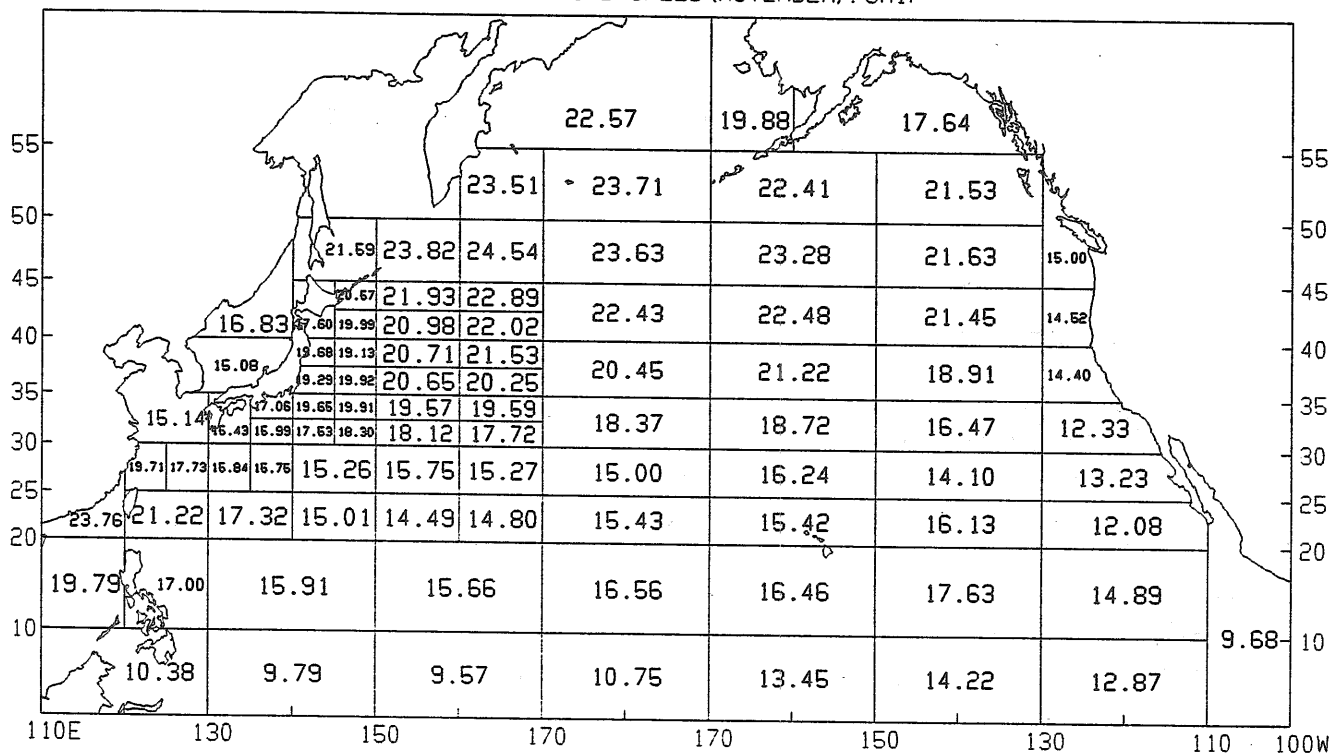
MEAN WIND SPEED (SEPTEMBER) : SHIP



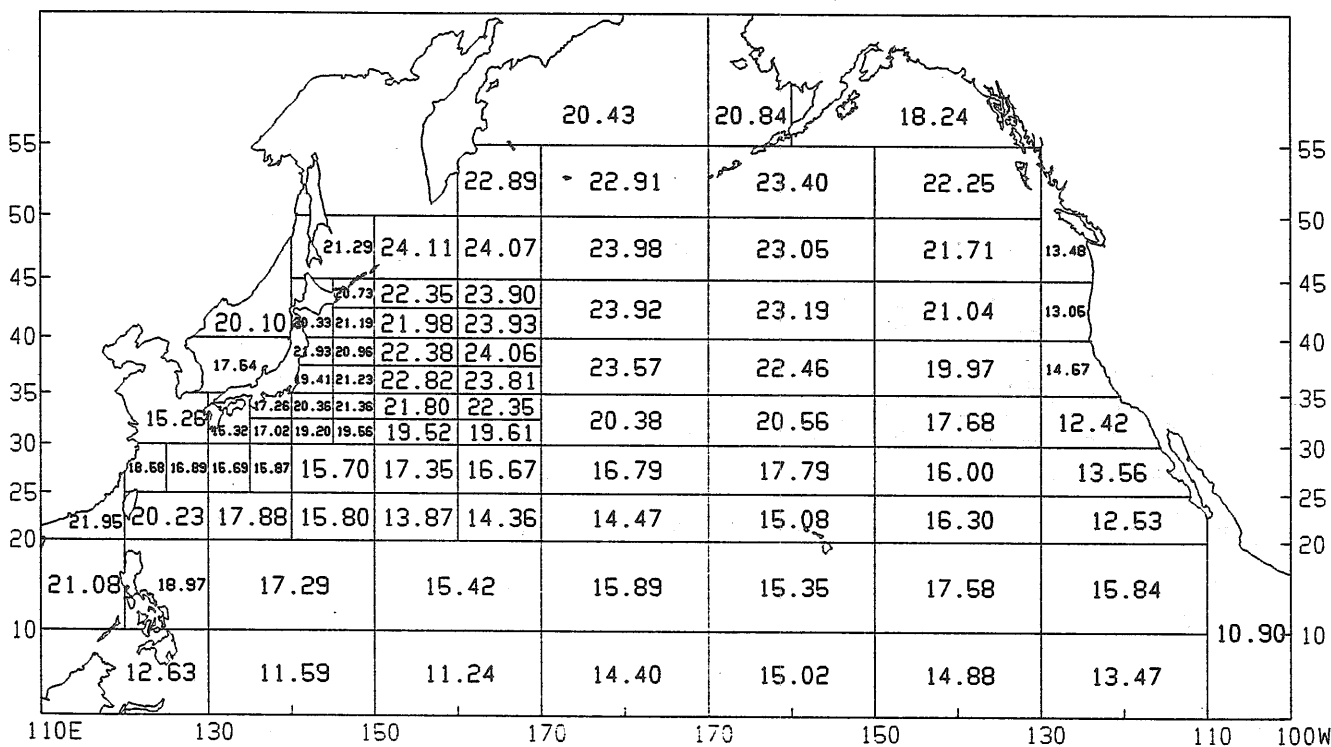
MEAN WIND SPEED (OCTOBER) : SHIP



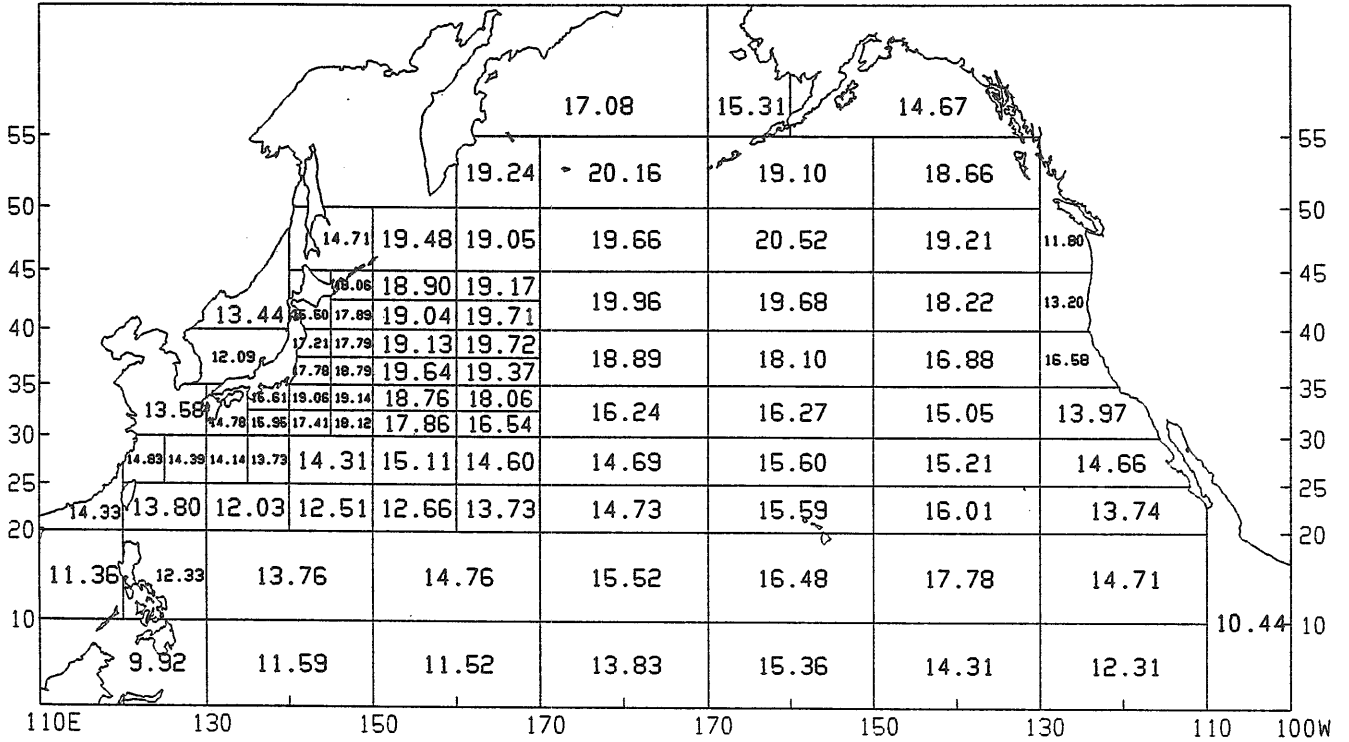
MEAN WIND SPEED (NOVEMBER): SHIP



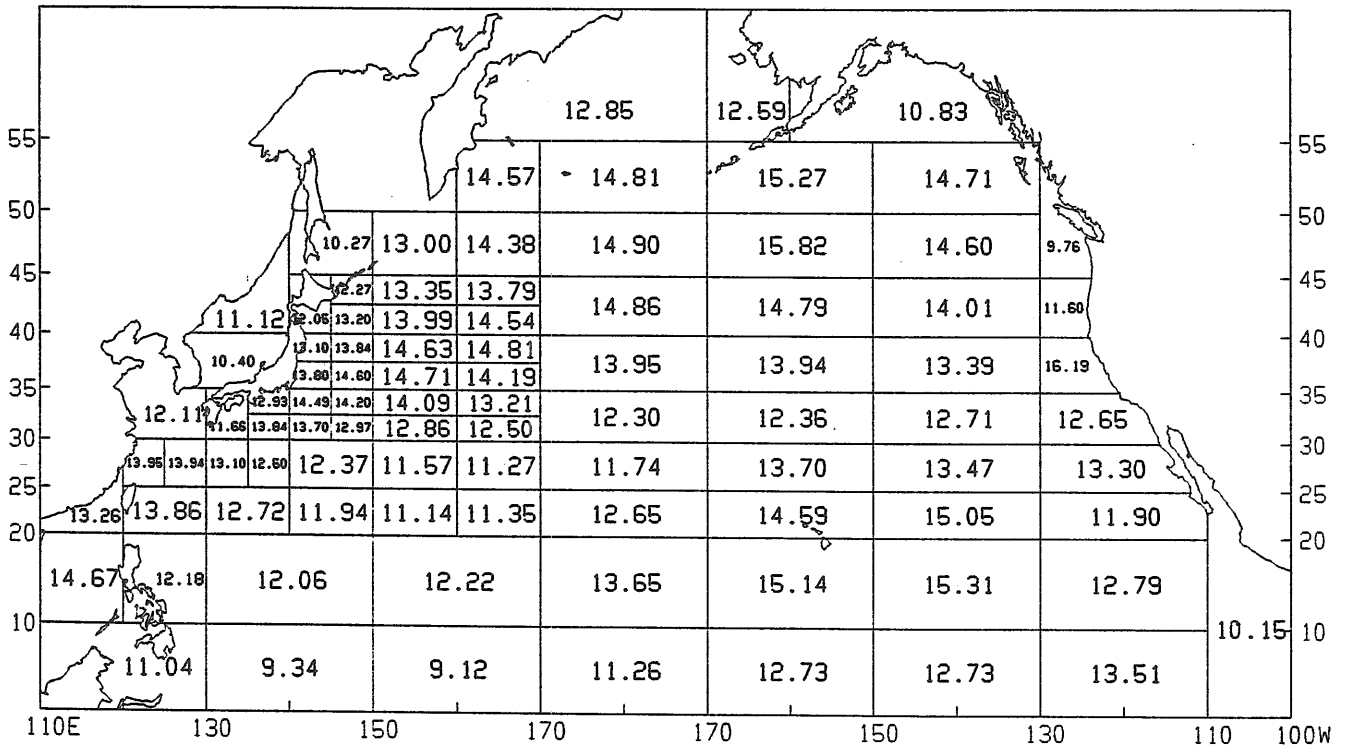
MEAN WIND SPEED (DECEMBER): SHIP



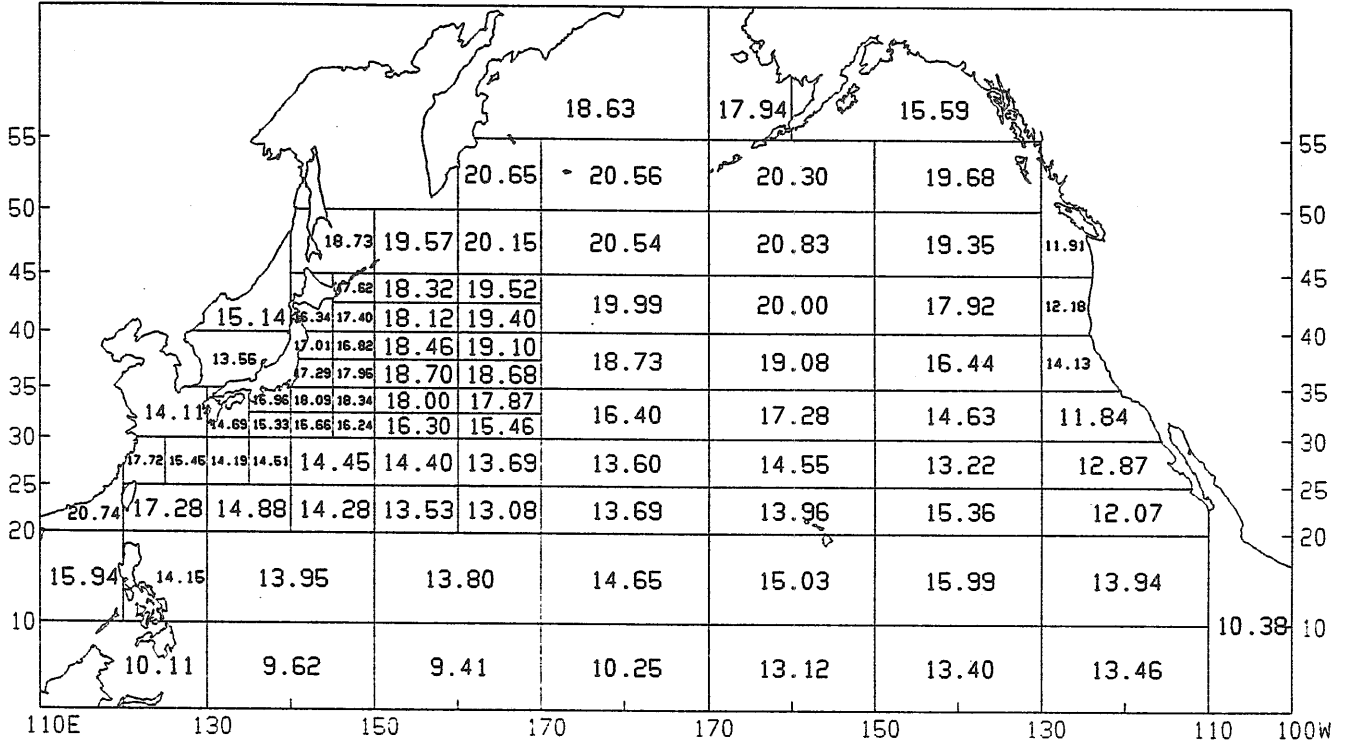
MEAN WIND SPEED (SPRING) : SHIP



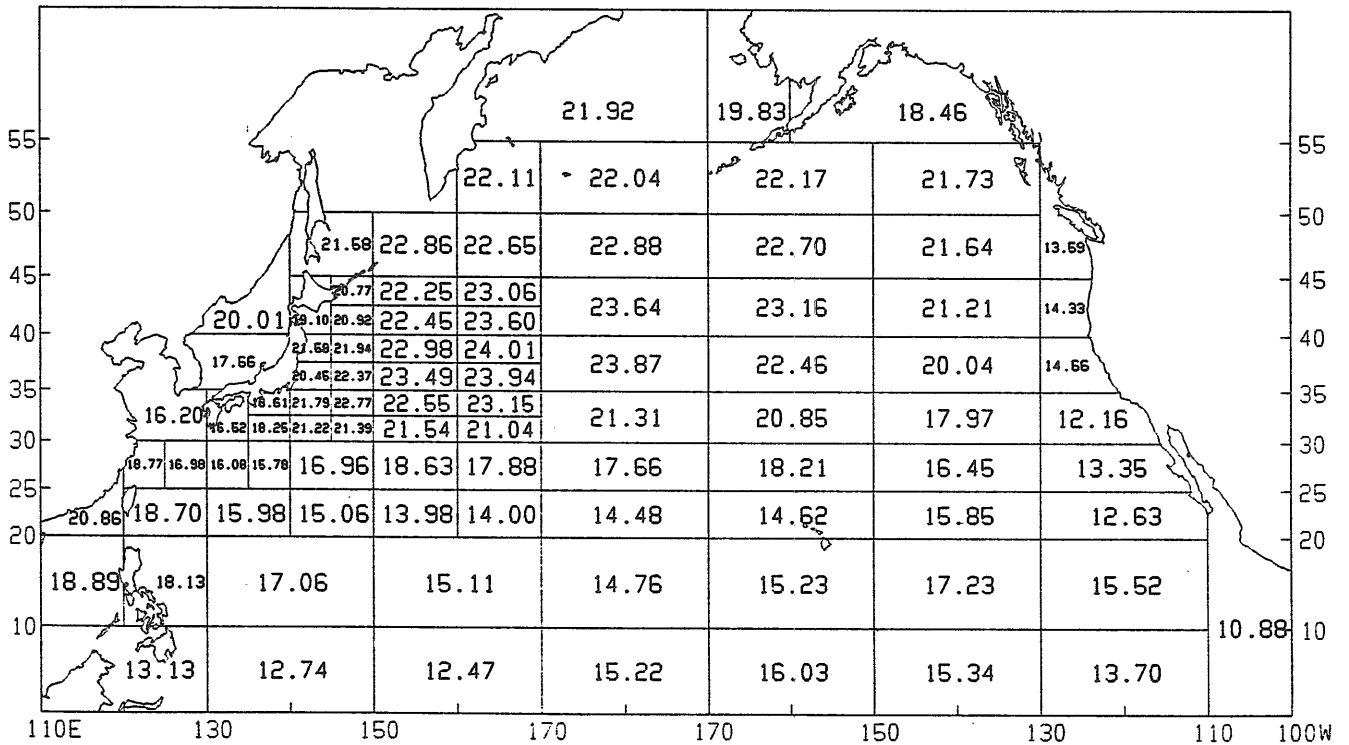
MEAN WIND SPEED (SUMMER) : SHIP



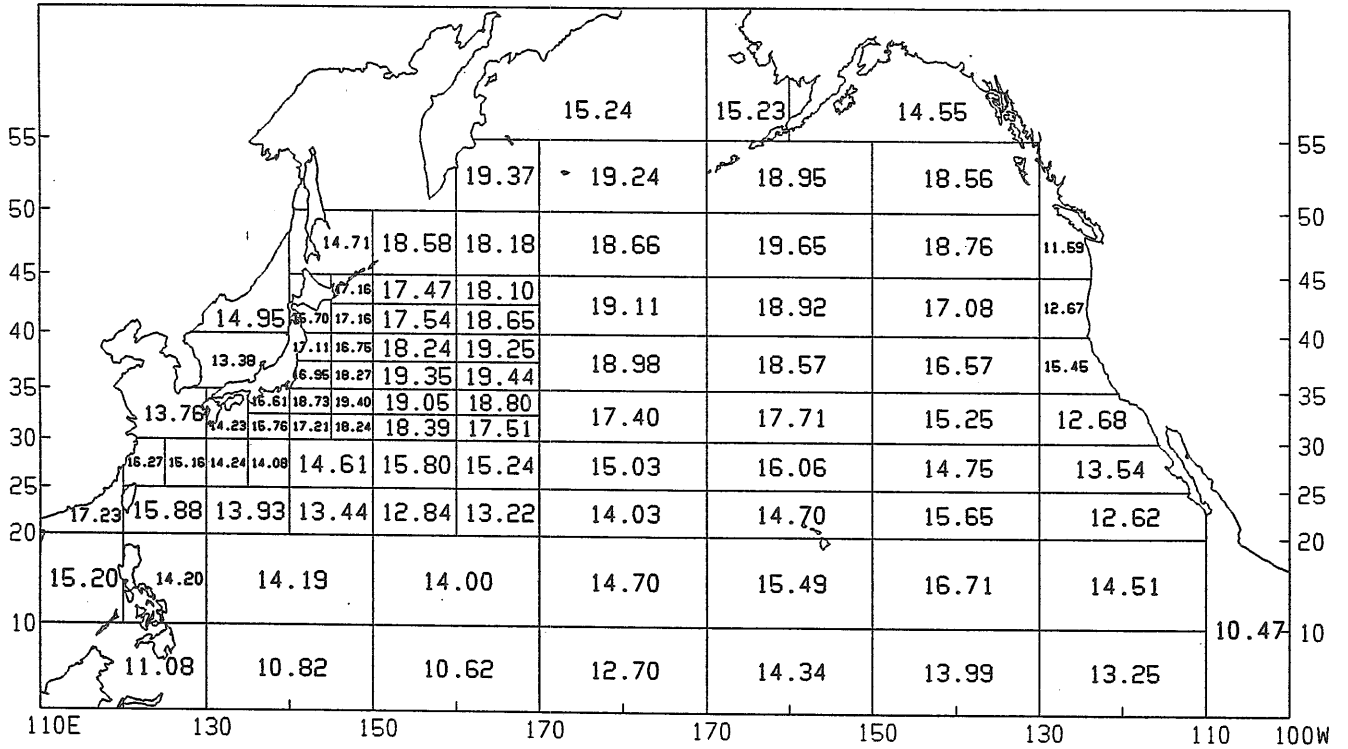
MEAN WIND SPEED (AUTUMN) : SHIP



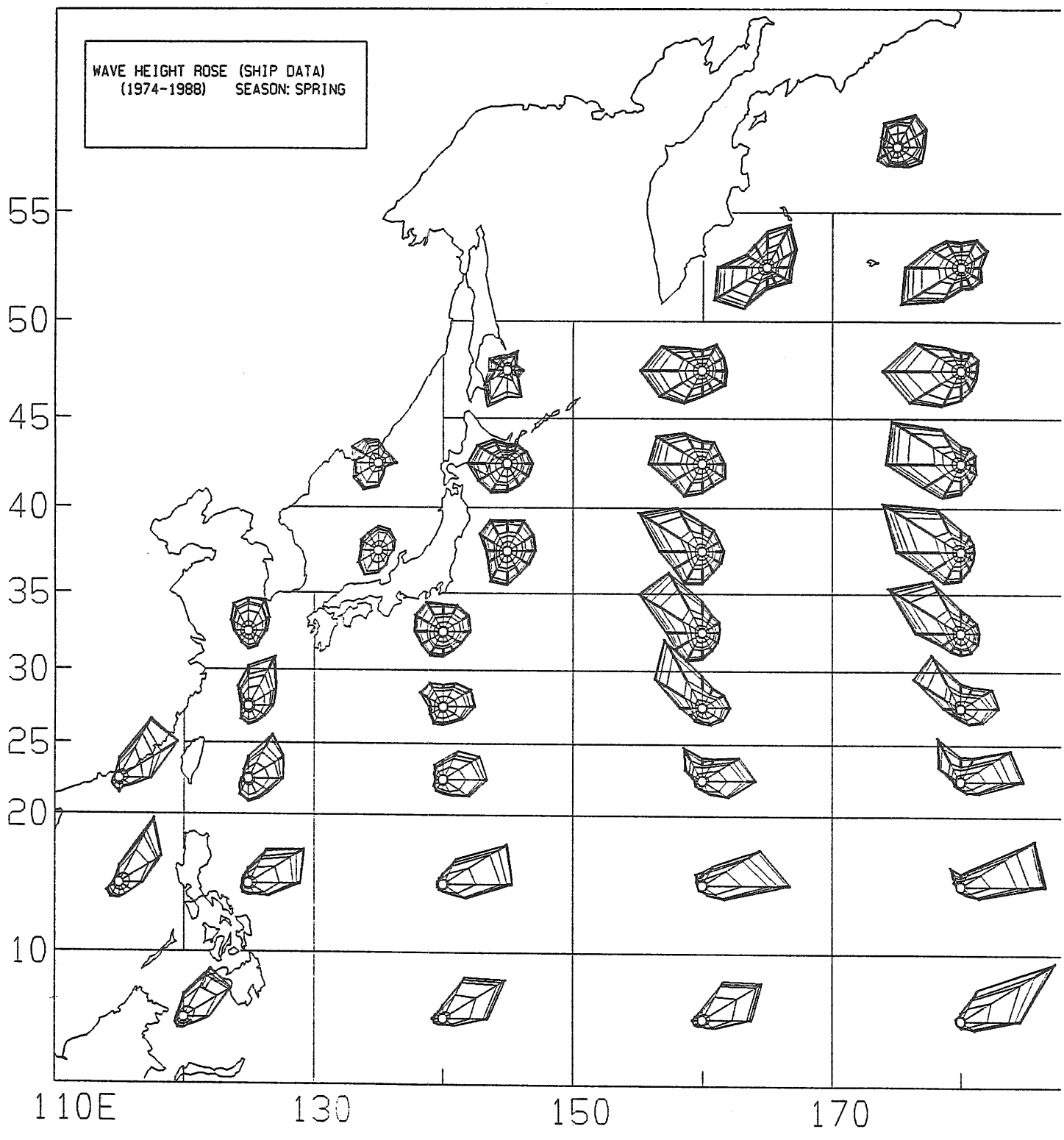
MEAN WIND SPEED (WINTER) : SHIP

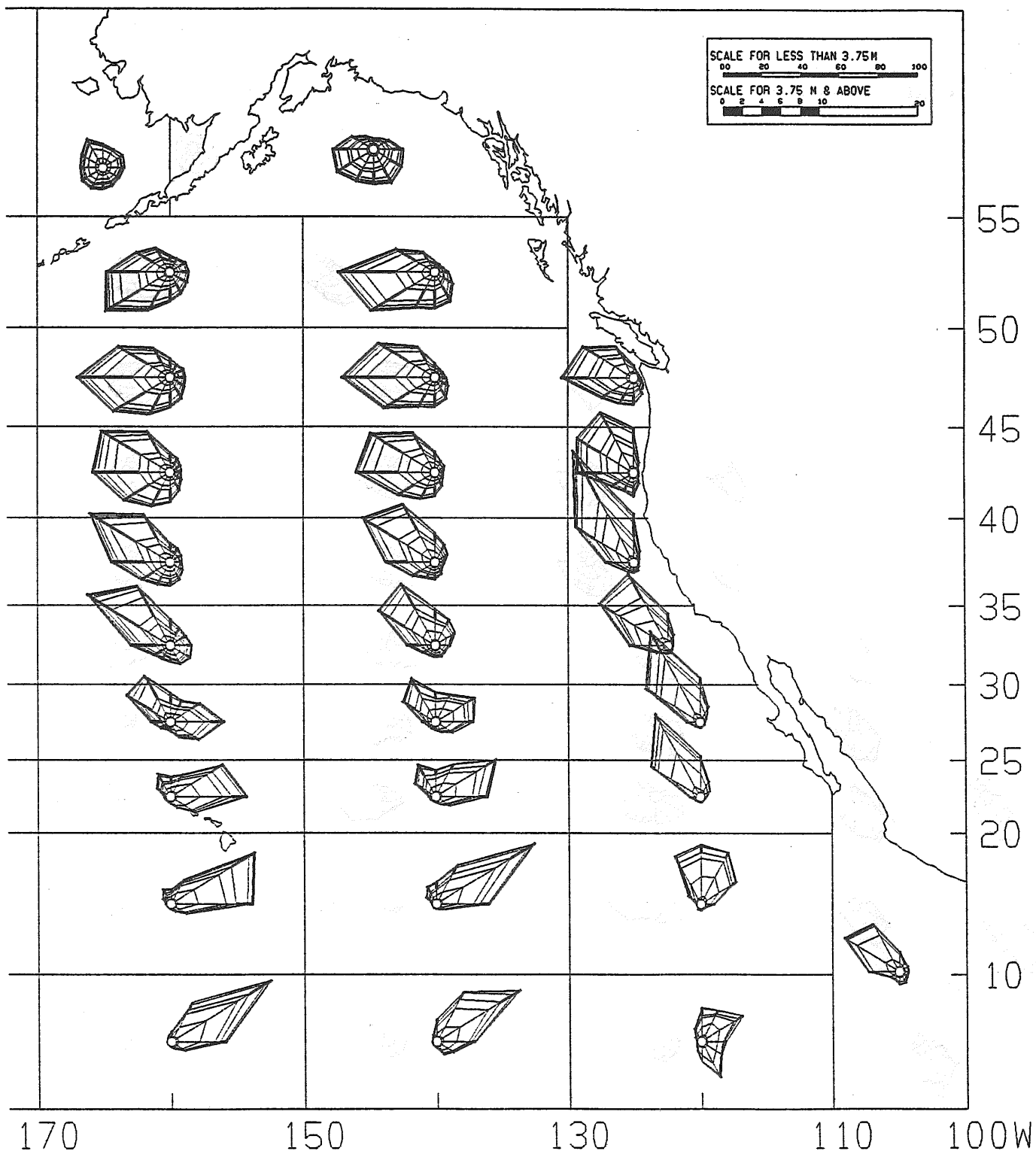


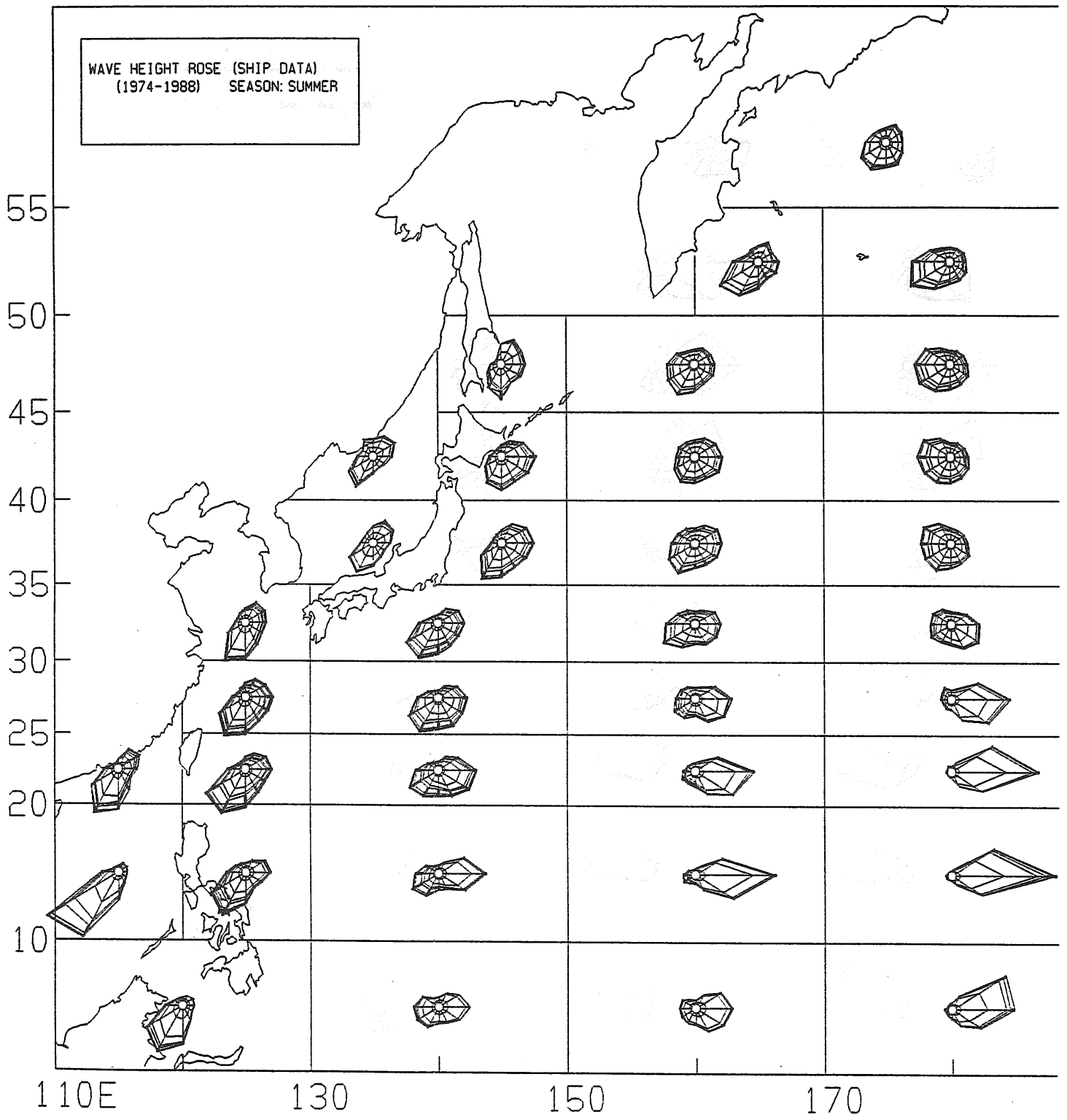
MEAN WIND SPEED (ALL SEASONS) : SHIP

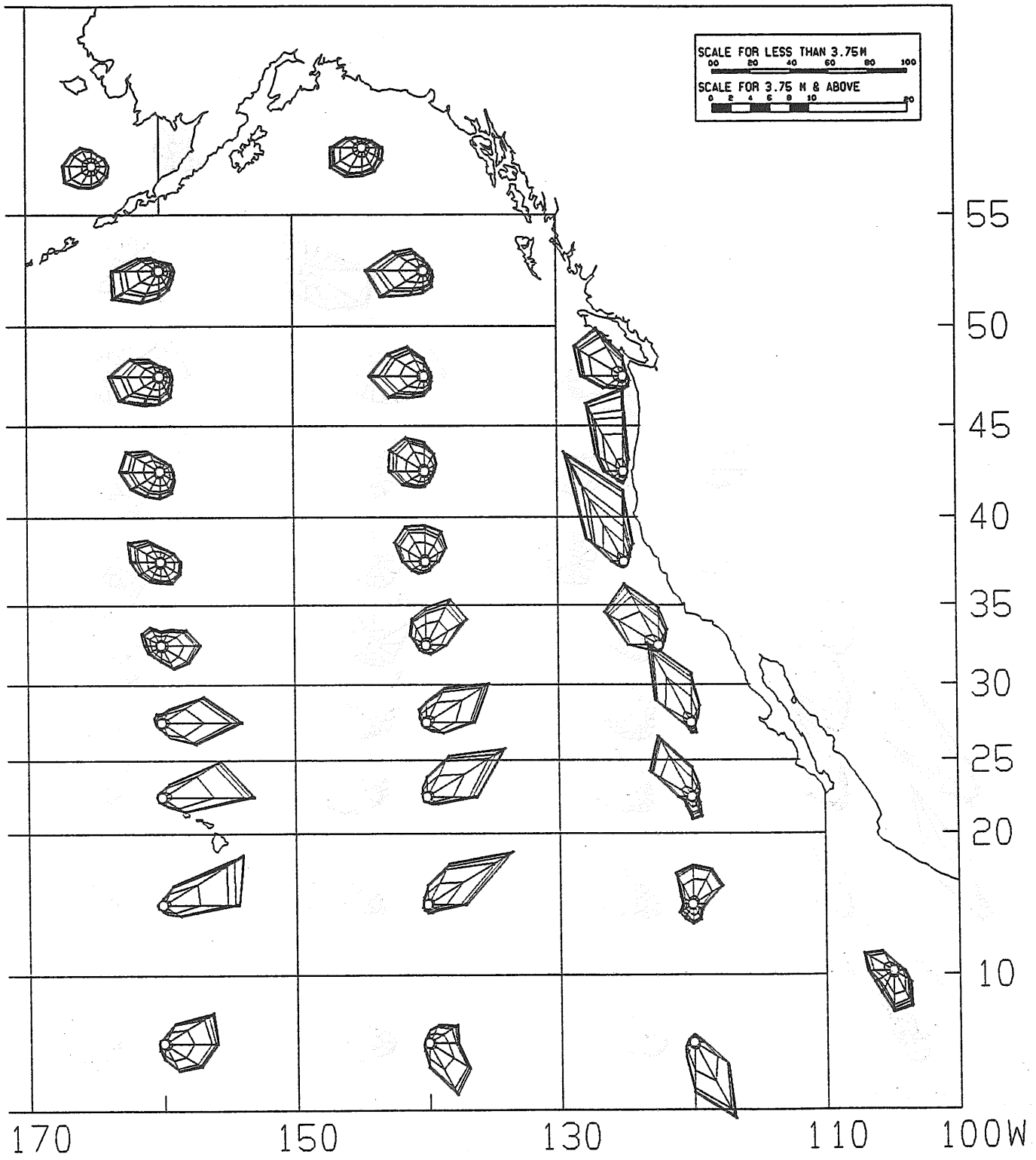


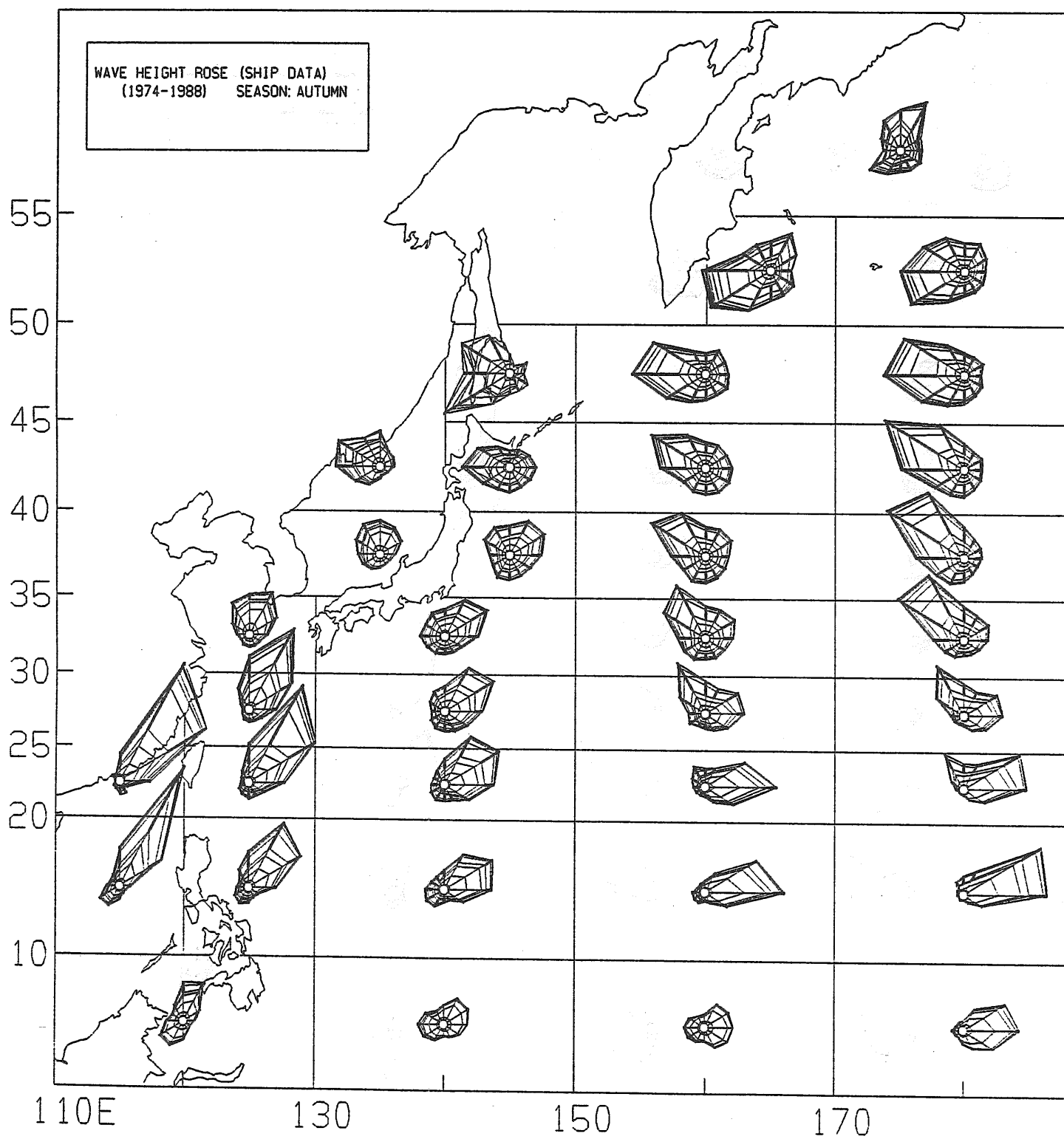
WAVE HEIGHT ROSE (SHIP DATA)
(1974-1988) SEASON: SPRING

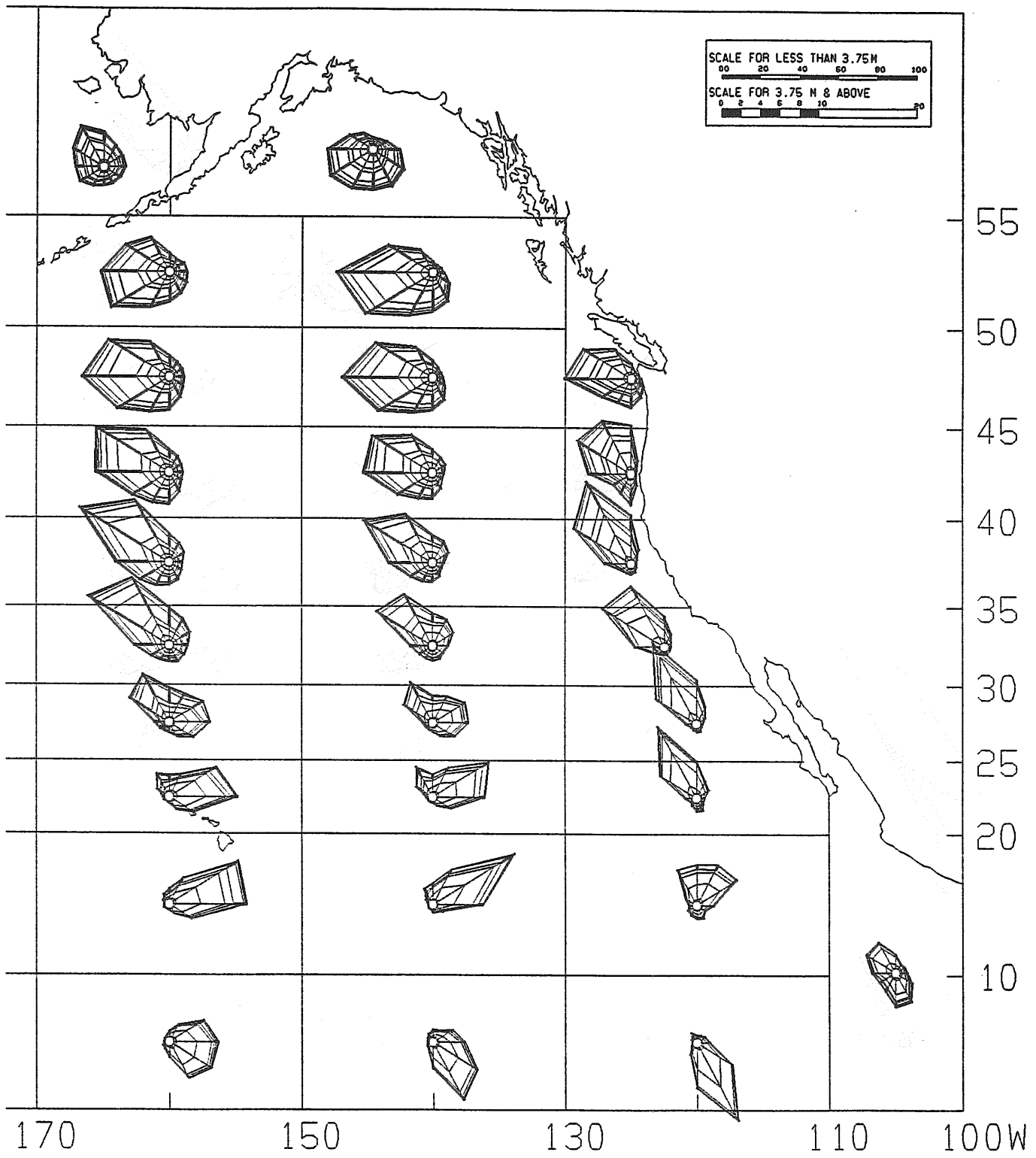




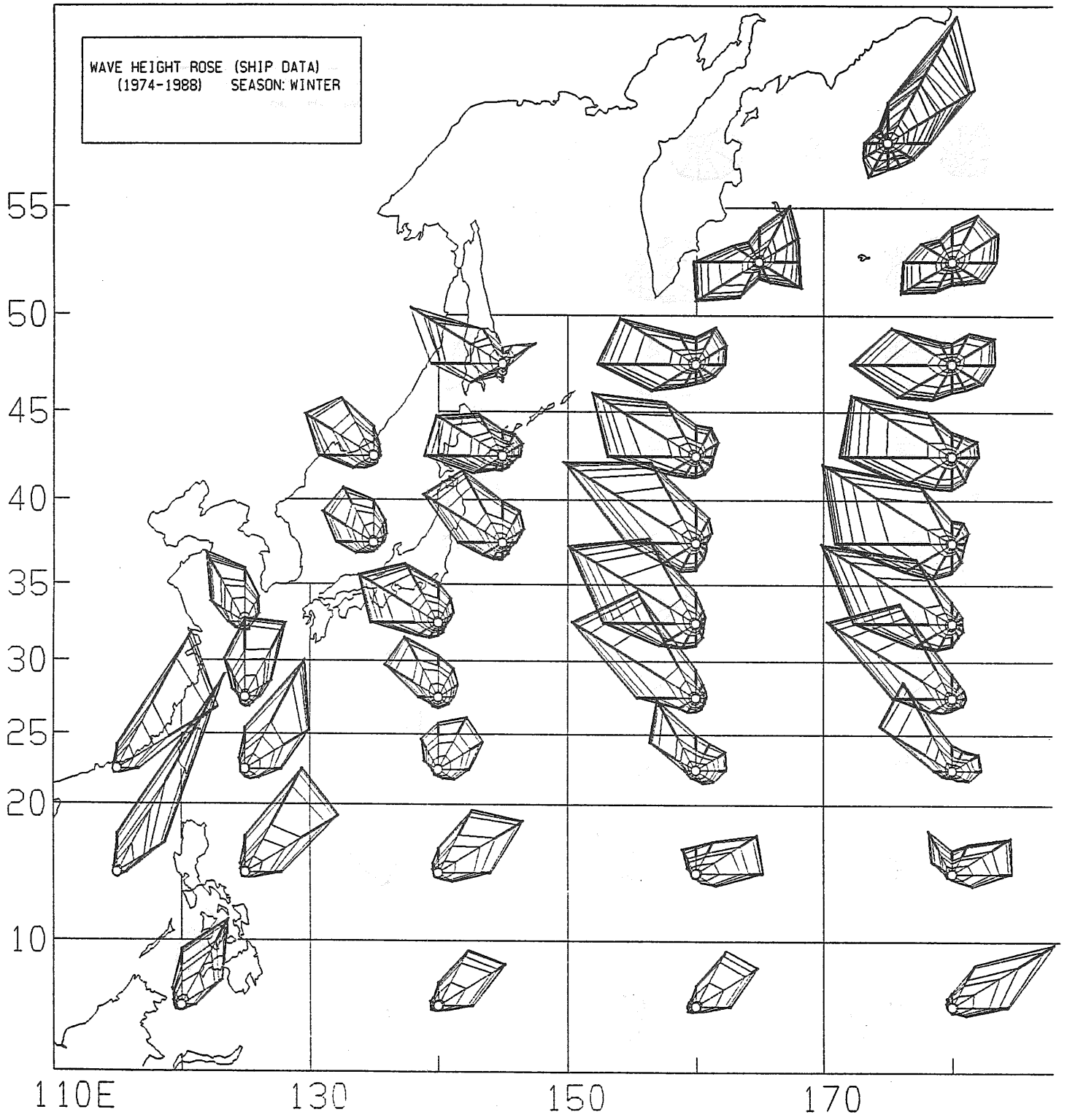


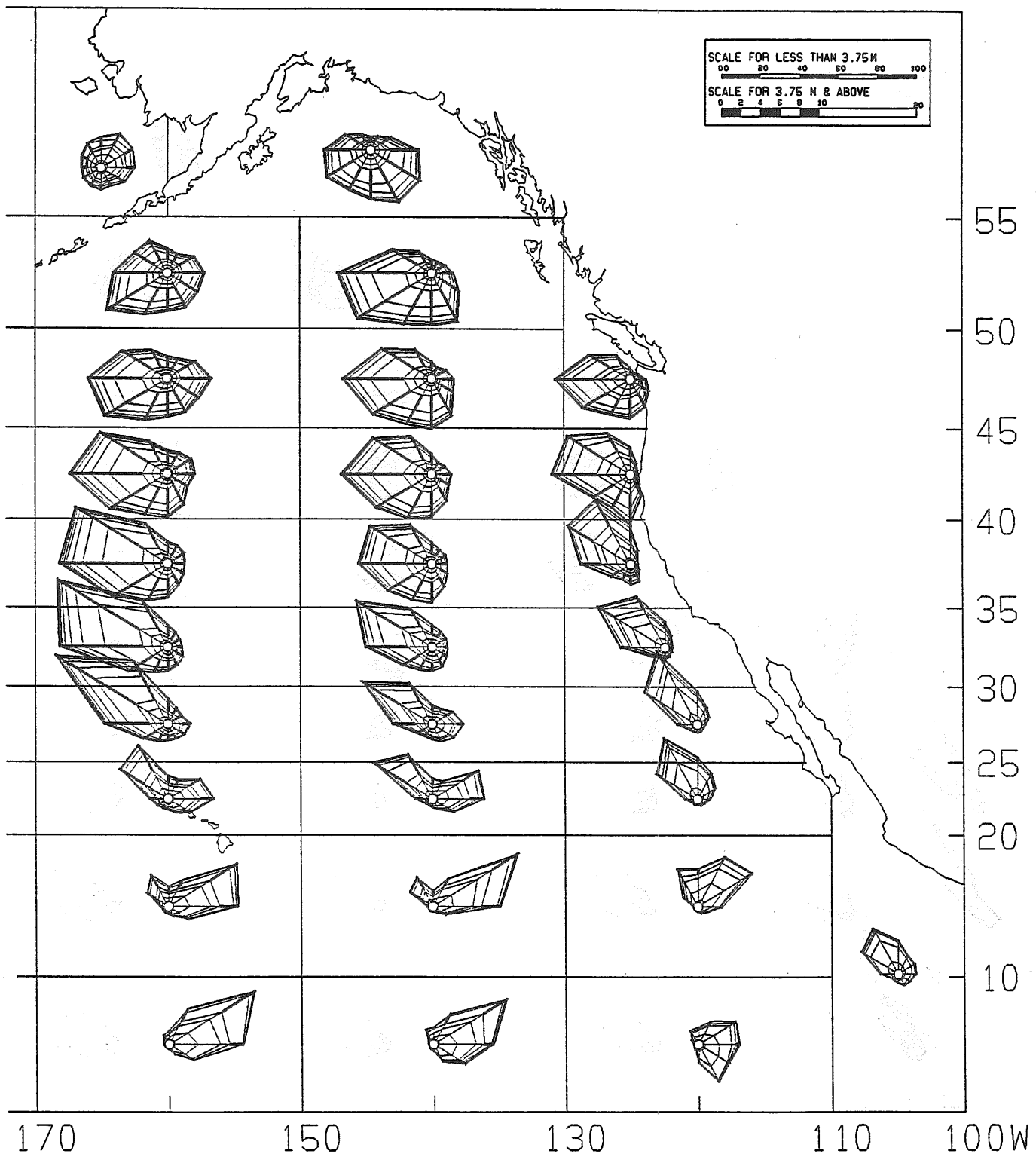


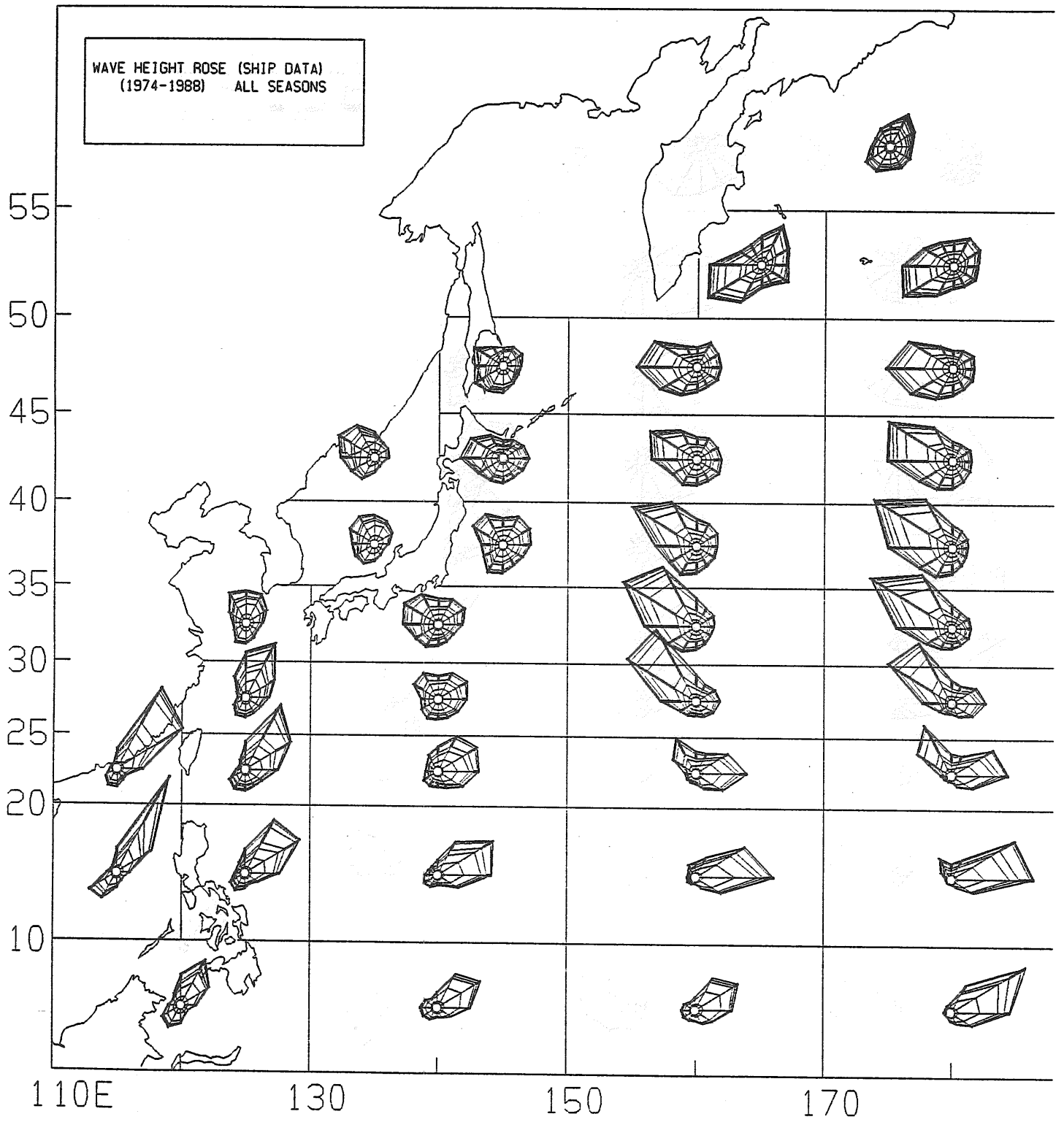


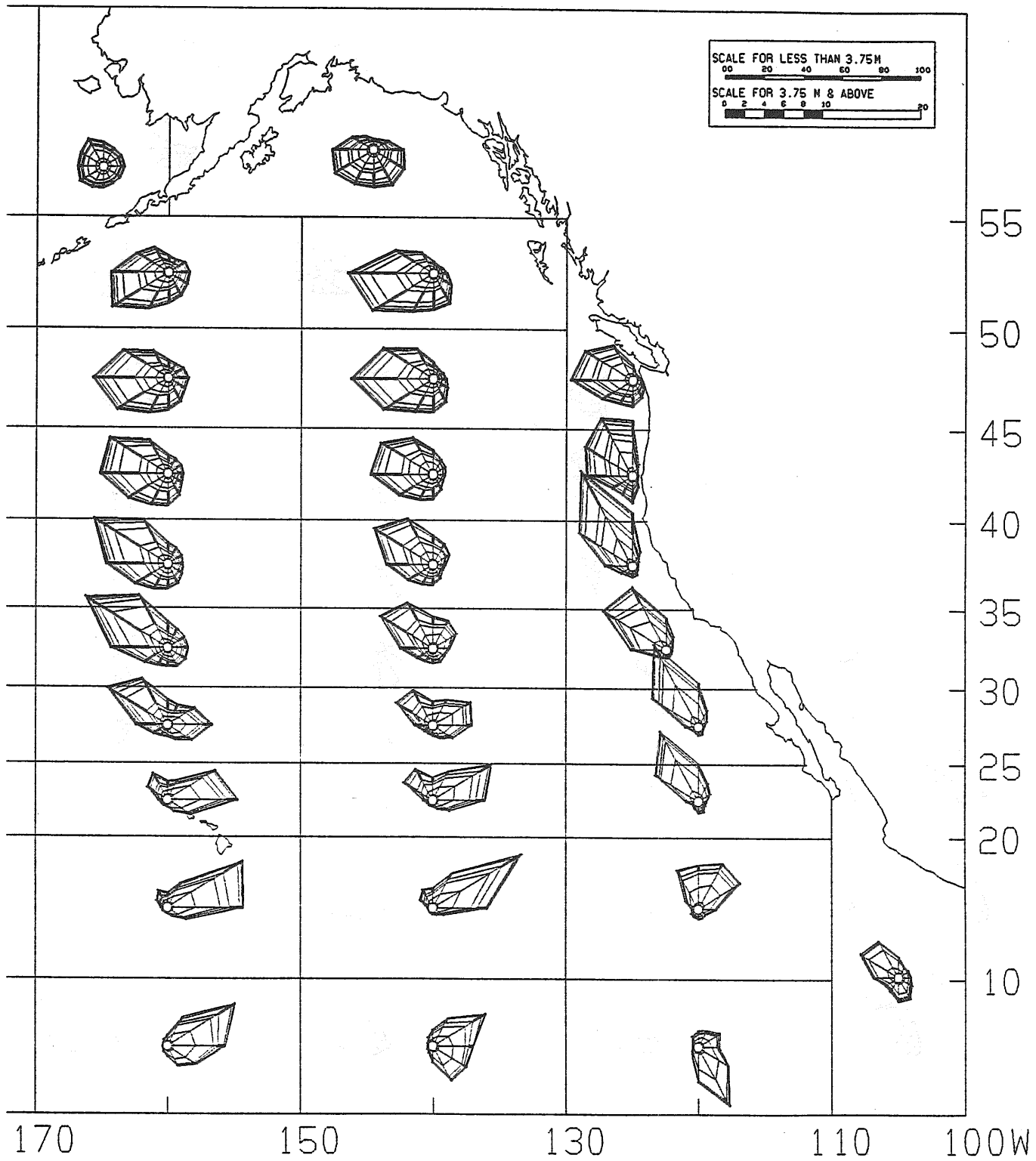


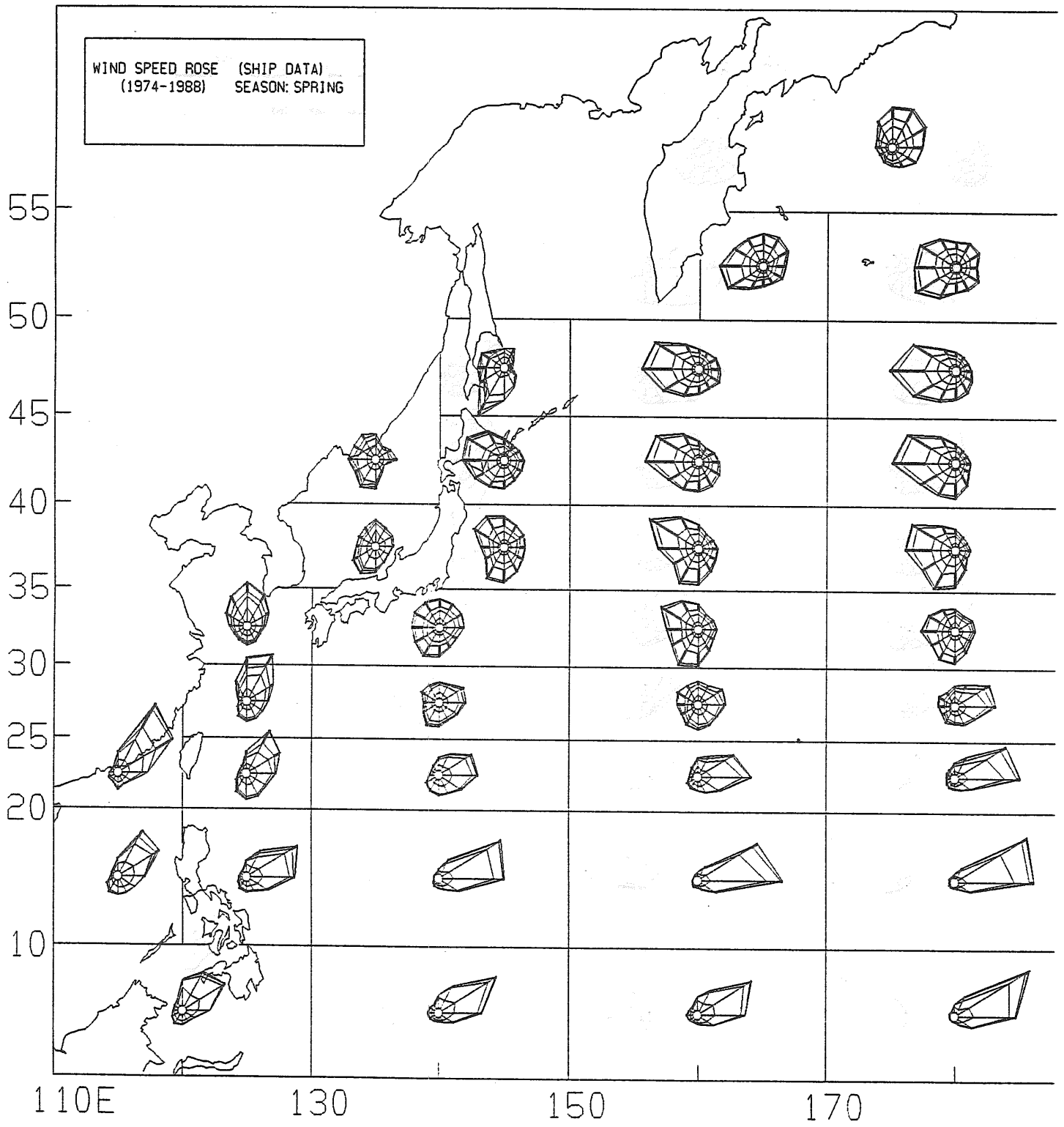
WAVE HEIGHT ROSE (SHIP DATA)
(1974-1988) SEASON: WINTER

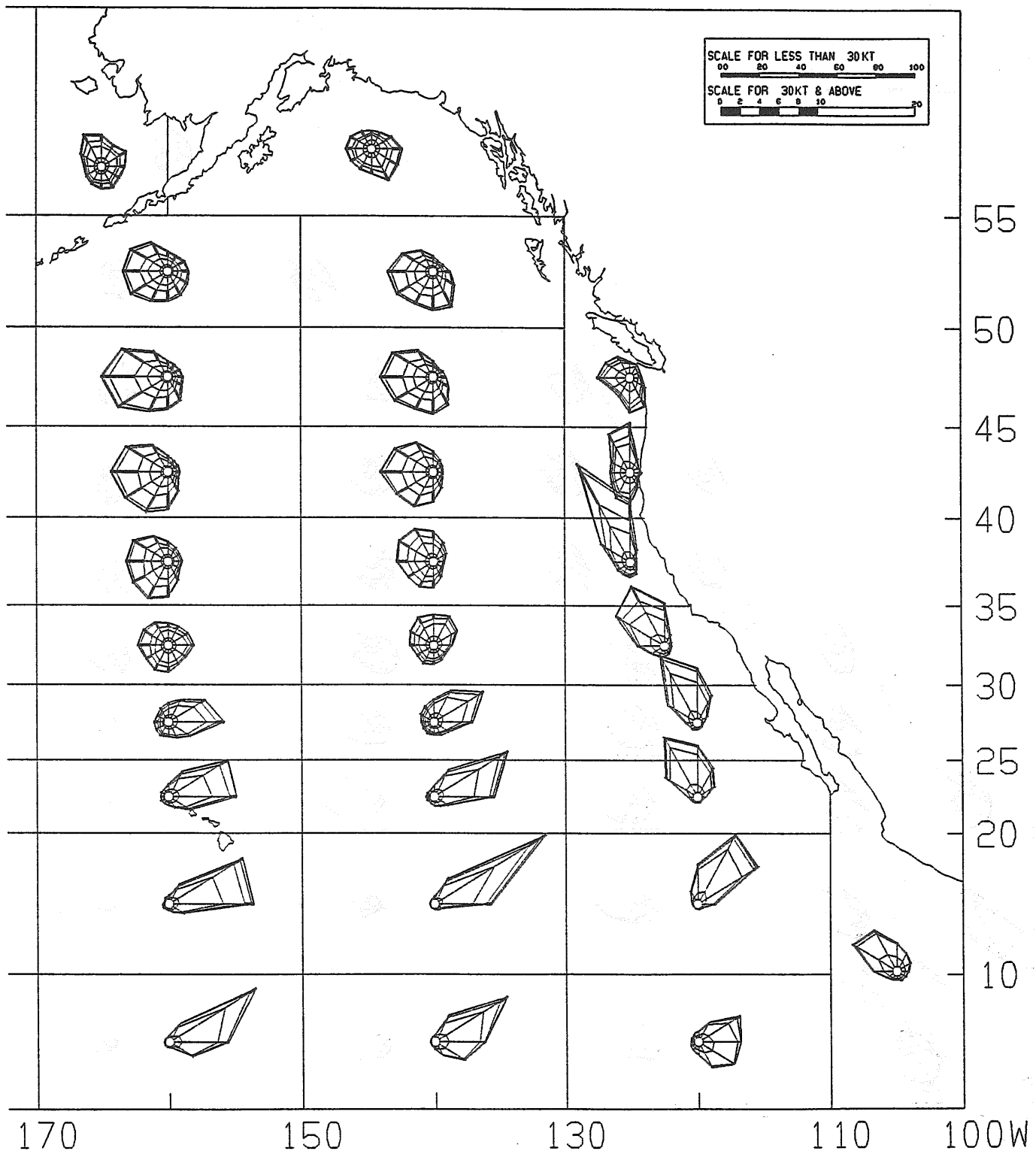


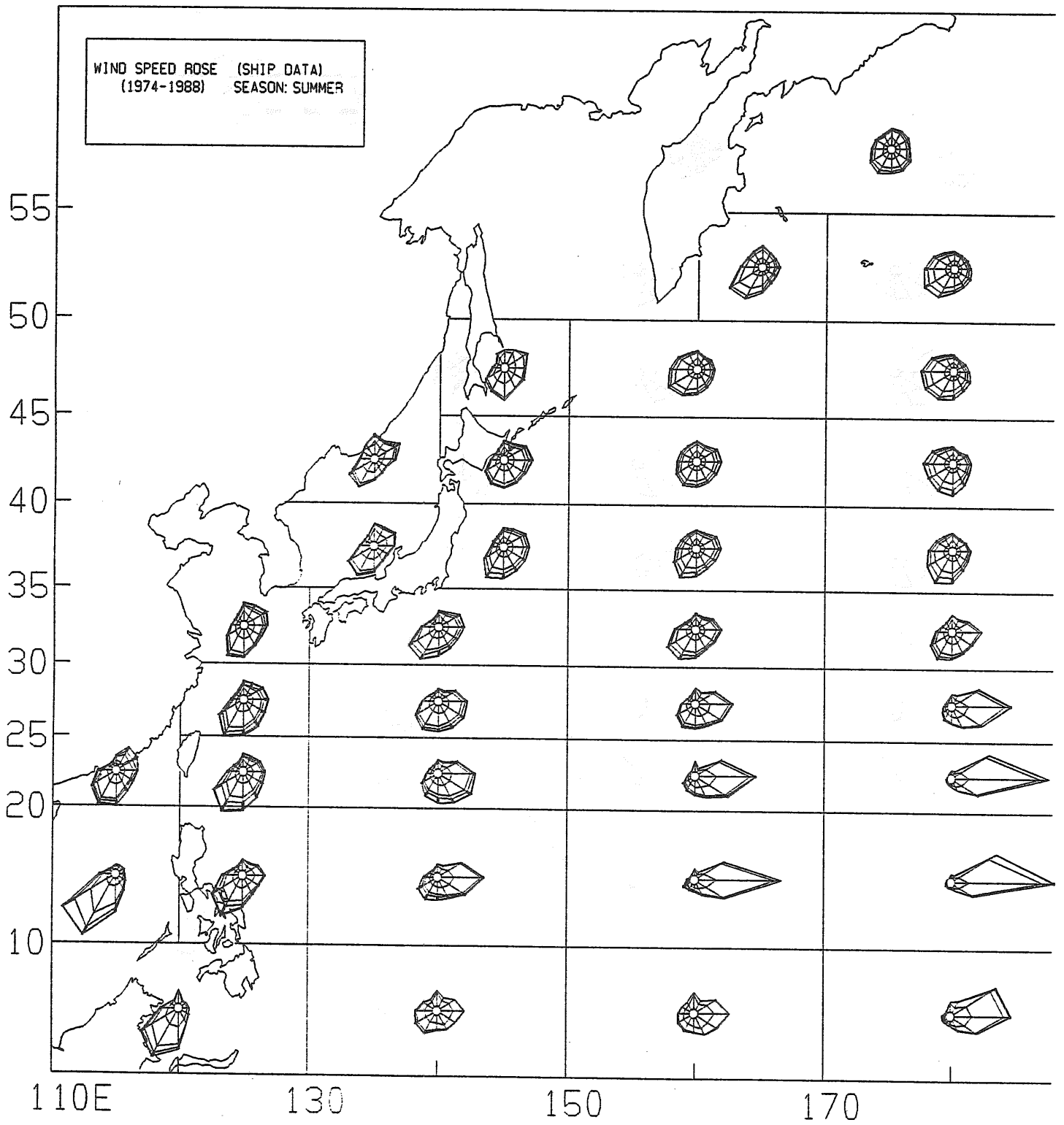


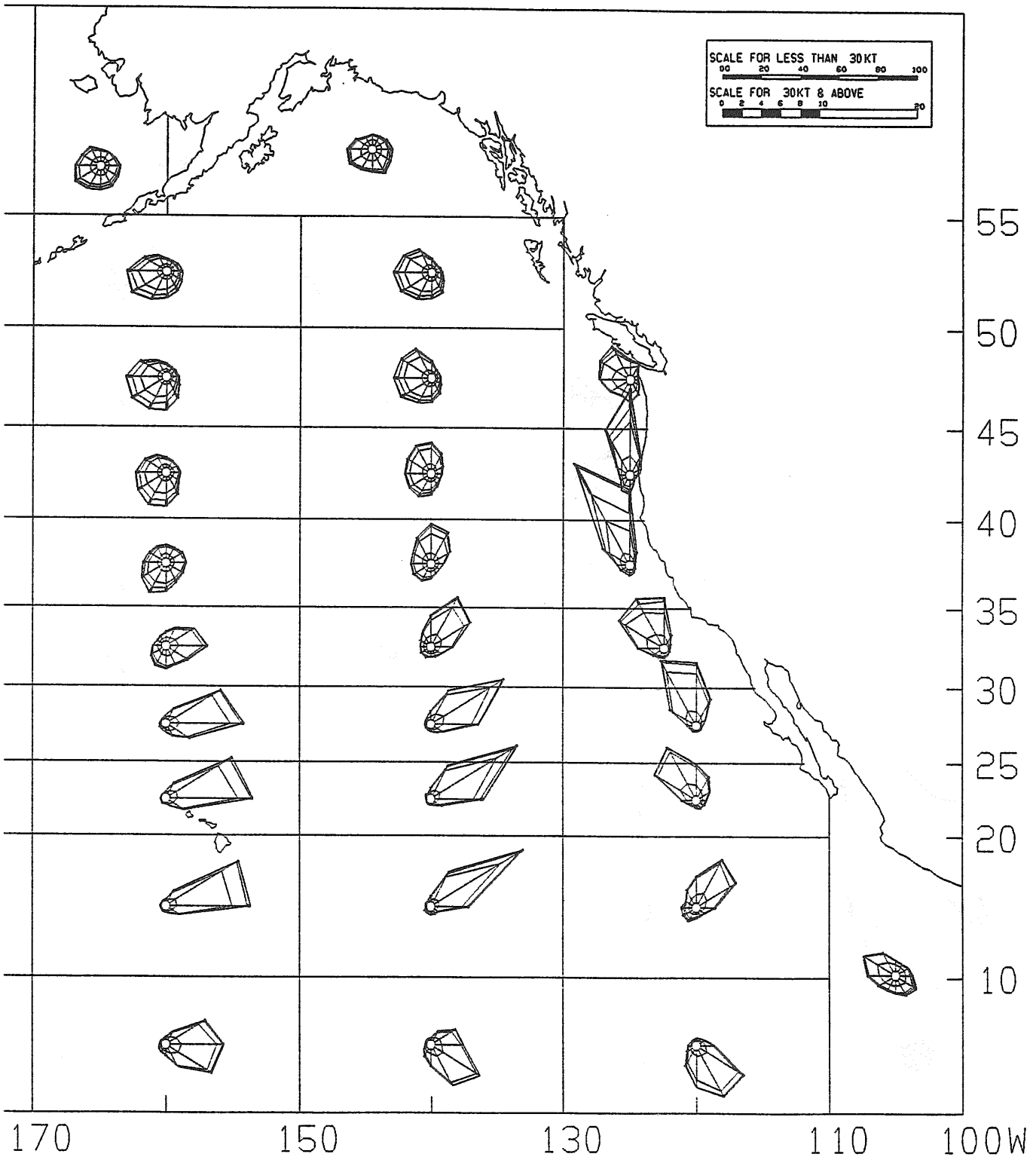


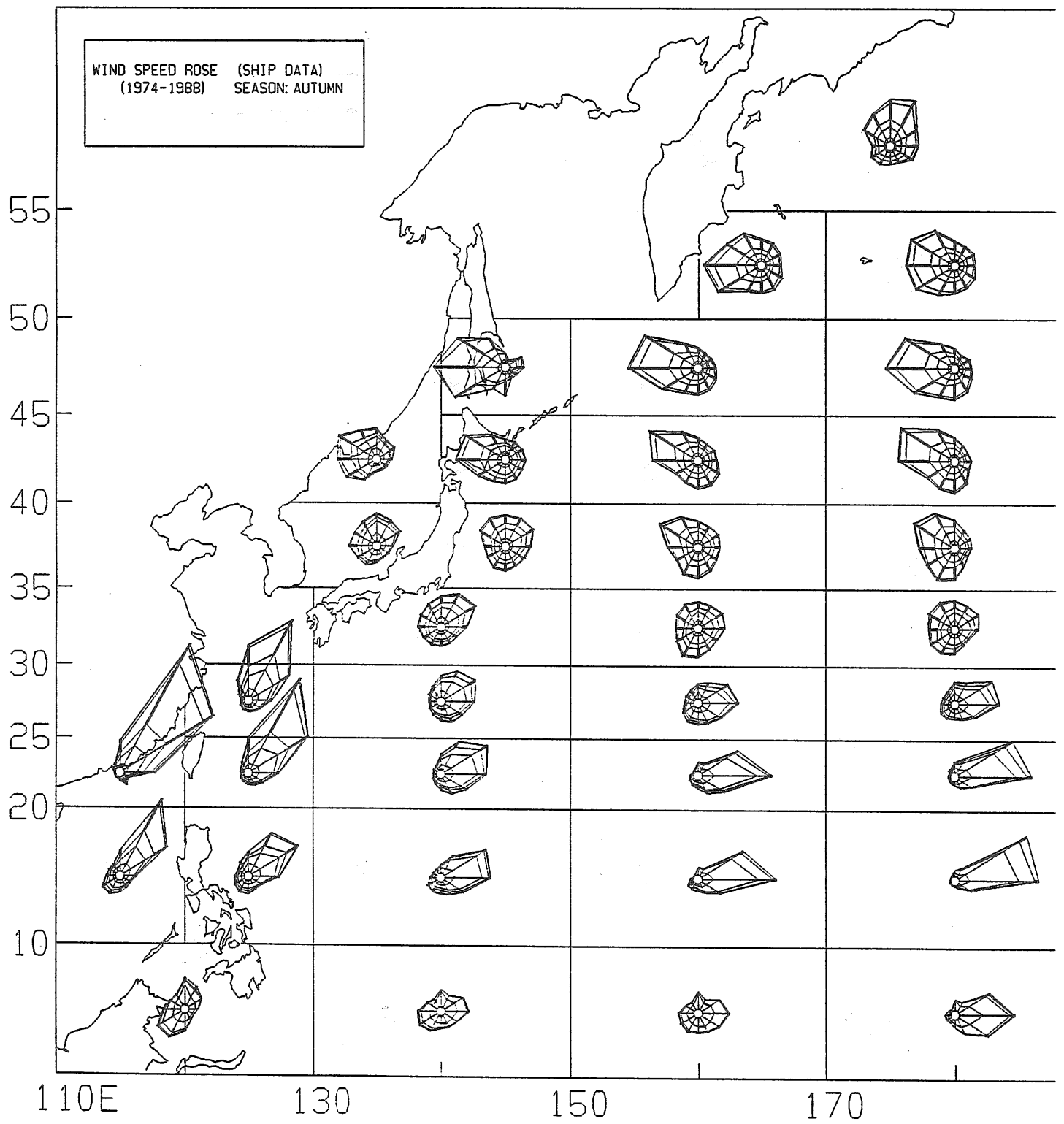


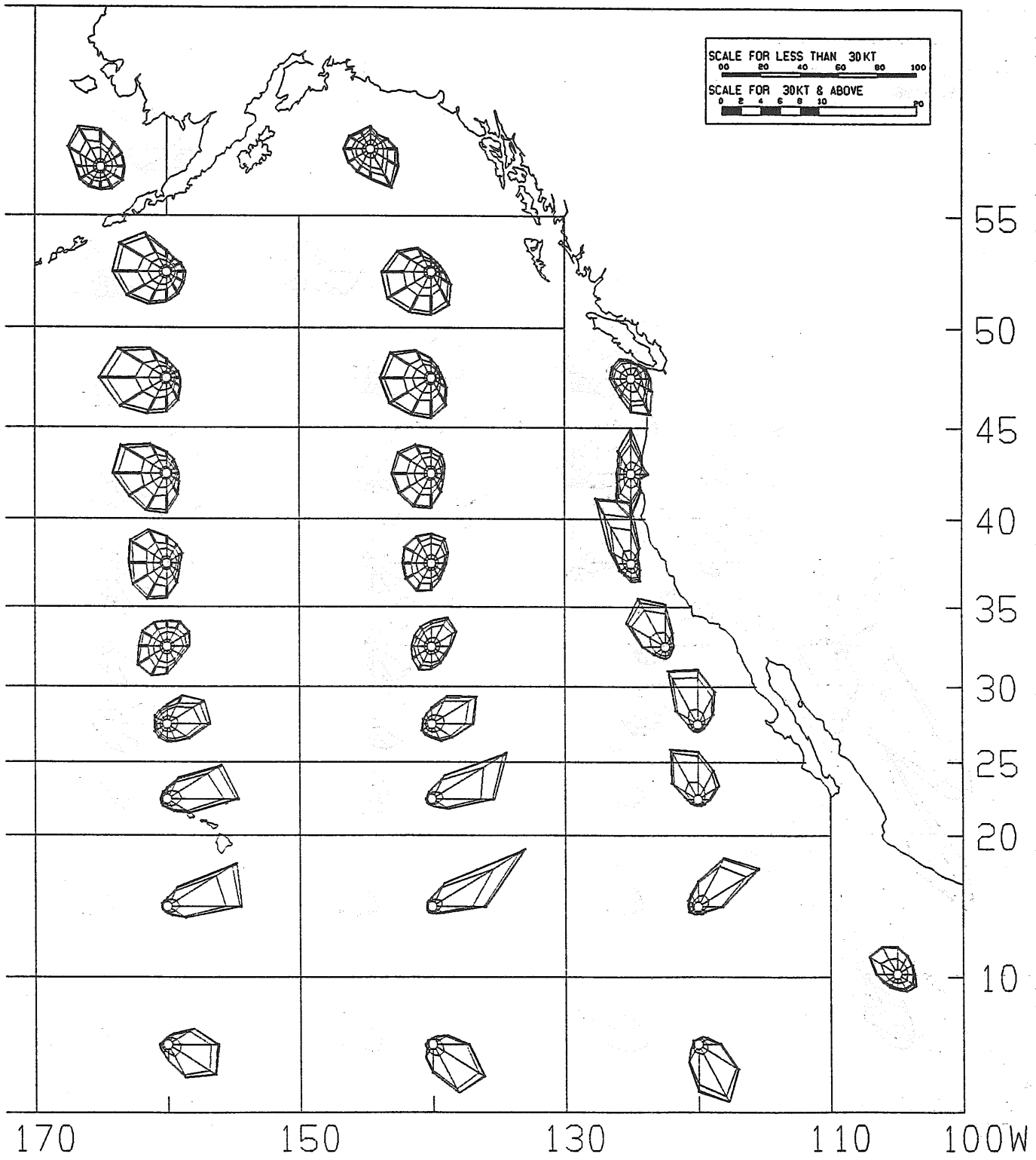




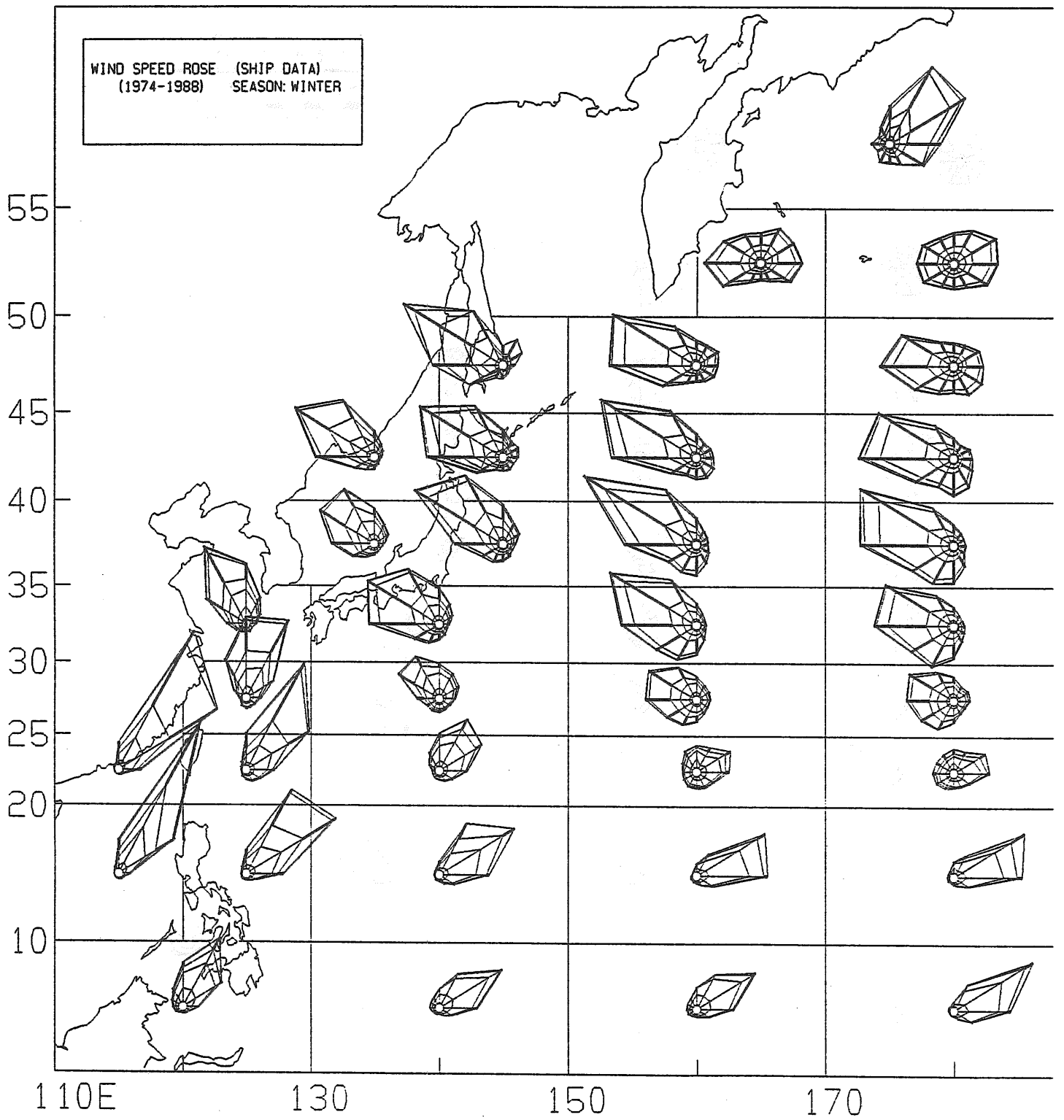


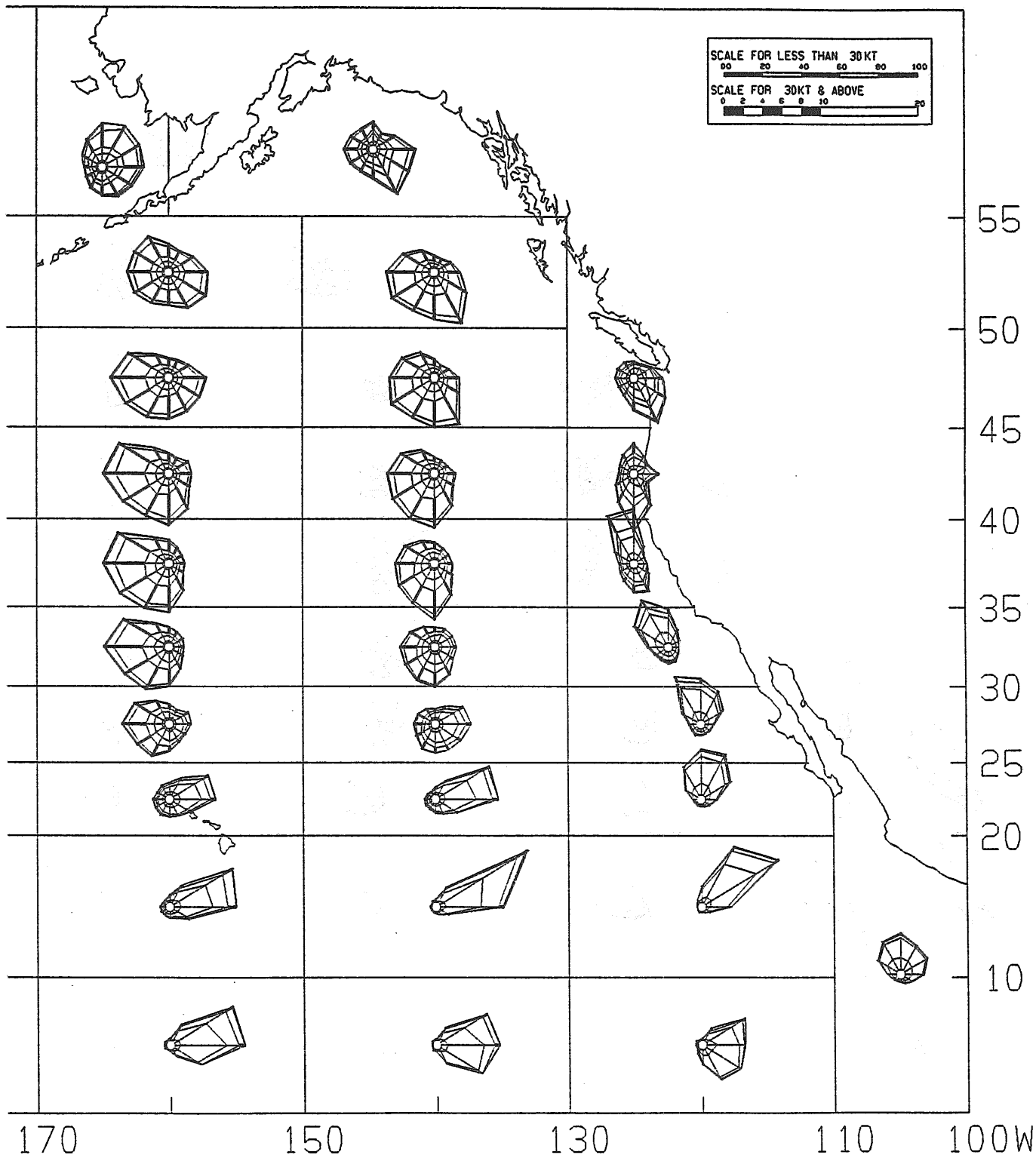




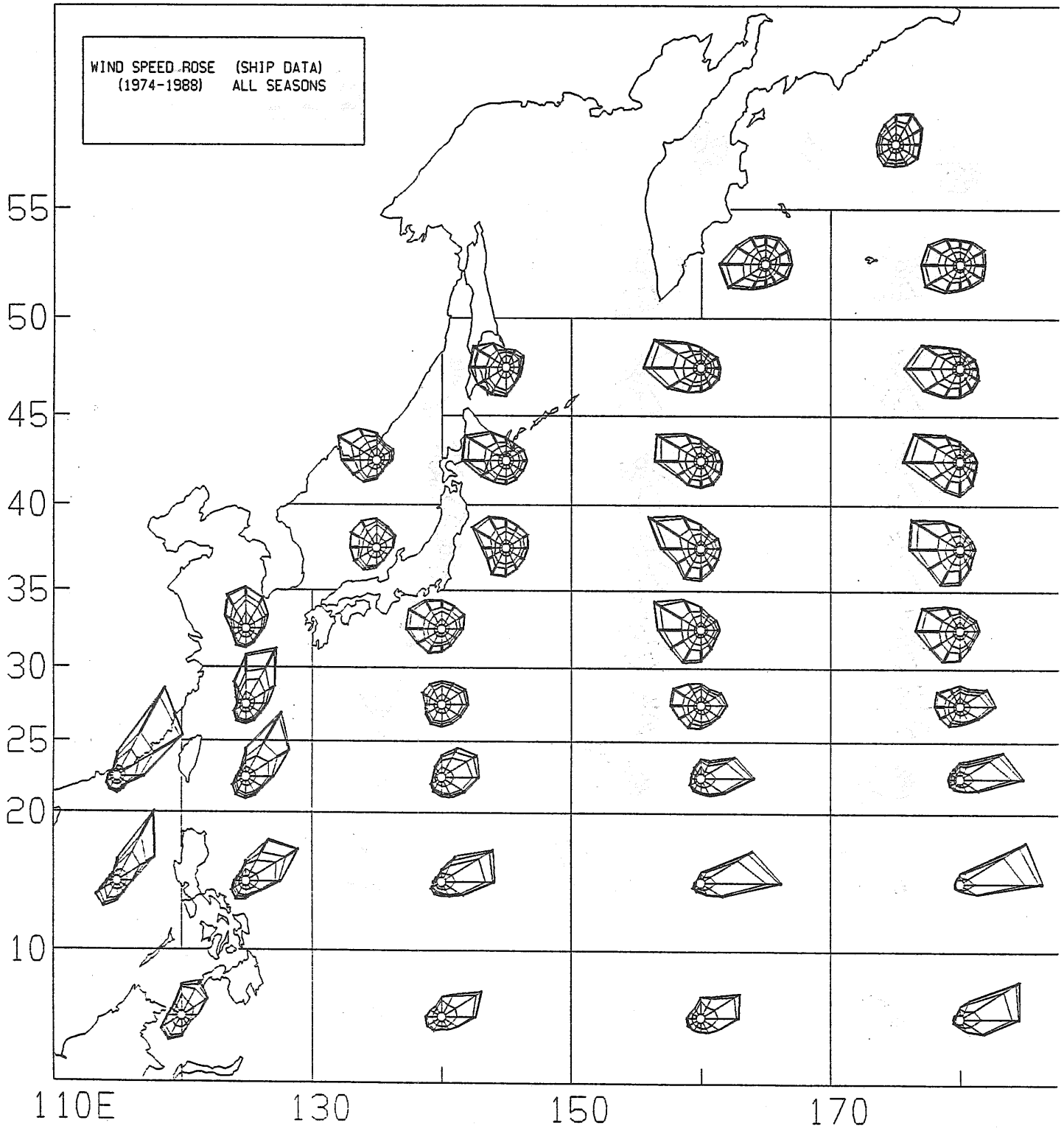


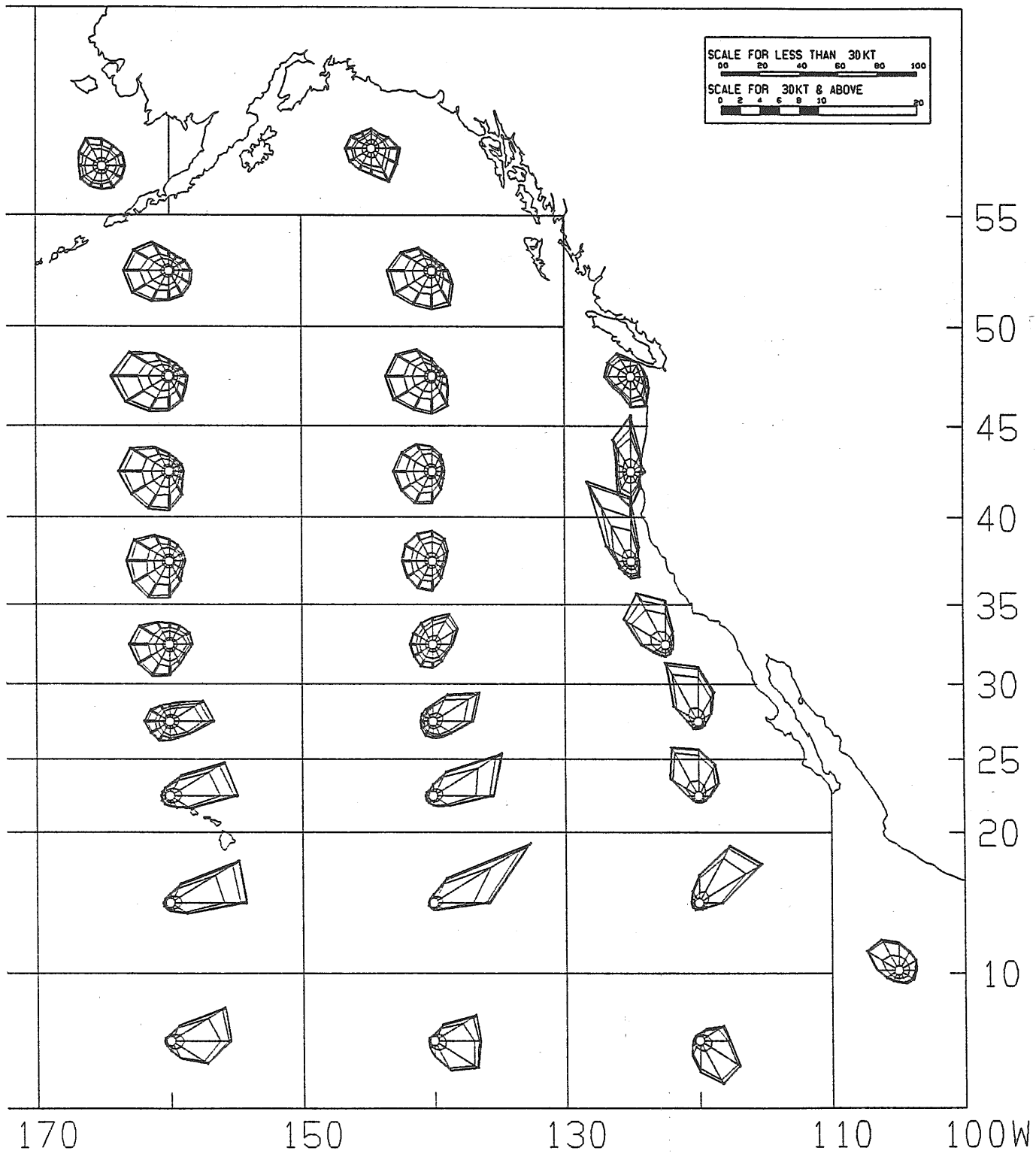
WIND SPEED ROSE (SHIP DATA)
(1974-1988) SEASON: WINTER





WIND SPEED ROSE (SHIP DATA)
(1974-1988) ALL SEASONS

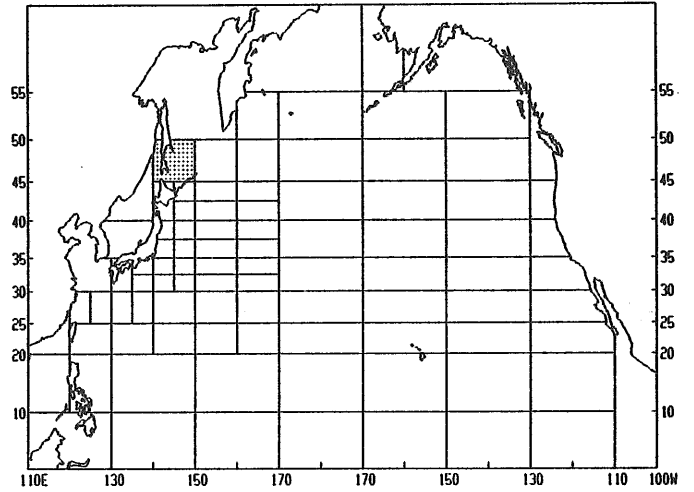




1974-1988 All seasons

AREA E01 (45.0N-50.0N, 140.0E-150.0E)		PERIOD (SEC)														MEAN OF WAVE HEIGHT 1.60 M MEAN OF WAVE PERIOD 5.01SEC	
HEIGHT (M)	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-	TOTAL					
14.75-														0			
13.75-														0			
12.75-														0			
11.75-														0			
10.75-														0			
9.75-														0			
8.75-														0			
7.75-						1								1			
6.75-		1	1	2	2	3	3				1	1		14			
5.75-		1			3	1	1		3					9			
4.75-	1	1	5		3	6	2		1	2				21			
3.75-		2	9	12	11	11	6	2			3			56			
2.75-	14	22	31	19	22	8	3	3	2		1			125			
1.75-	49	51	31	28	25	7	7	1	1		1			201			
0.75-	226	124	81	50	27	3	4		1					516			
0.00-	138	53	40	14	12									257			
TOTAL	428	255	198	125	106	39	26	6	8	3	6			1200			
MAX	5.00	7.00	7.00	7.00	8.00	7.00	7.00	4.00	6.00	7.00	7.00						

DATE (MAX HEIGHT) 06h 24-OCT-81



1974-1988 Spring

AREA E01 (45.0N-50.0N, 140.0E-150.0E)		PERIOD (SEC)														MEAN OF WAVE HEIGHT 1.37 M MEAN OF WAVE PERIOD 4.46SEC	
HEIGHT (M)	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-	TOTAL					
14.75-														0			
13.75-														0			
12.75-														0			
11.75-														0			
10.75-														0			
9.75-														0			
8.75-														0			
7.75-														0			
6.75-			1				1							2			
5.75-														0			
4.75-					1	1								2			
3.75-		1	1	1	2	1								6			
2.75-	5	4	5	3	4	2	1	1						25			
1.75-	13	14	2	4	5	2	1				1			42			
0.75-	77	24	22	17	8		1							149			
0.00-	42	7	4	1										54			
TOTAL	137	60	35	26	20	6	4	1	0	0	1			280			
MAX	3.50	4.00	7.00	4.00	5.00	5.00	7.00	3.00	0.00	0.00	2.50						

DATE (MAX HEIGHT) 03h 05-MAY-83

1974-1988 Summer

AREA E01 (45.0N-50.0N, 140.0E-150.0E)		PERIOD (SEC)														MEAN OF WAVE HEIGHT 1.02 M MEAN OF WAVE PERIOD 4.54SEC	
HEIGHT (M)	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-	TOTAL					
14.75-														0			
13.75-														0			
12.75-														0			
11.75-														0			
10.75-														0			
9.75-														0			
8.75-														0			
7.75-														0			
6.75-											1			1			
5.75-									2					2			
4.75-		1	2						1					4			
3.75-			3								1			4			
2.75-		6	4	4	3									17			
1.75-	5	11	13	11	3	2								45			
0.75-	60	74	50	29	9	1	1				1			225			
0.00-	86	44	36	13	4									183			
TOTAL	151	136	108	57	21	4	3	0	1	0	0			481			
MAX	2.50	5.00	5.00	3.50	6.00	5.00	7.00	0.00	1.00	0.00	0.00						

DATE (MAX HEIGHT) 06h 29-JUN-86

1974-1988 Autumn

AREA E01 (45.0N-50.0N, 140.0E-150.0E)		PERIOD (SEC)														MEAN OF WAVE HEIGHT 2.32 M MEAN OF WAVE PERIOD 5.75SEC	
HEIGHT (M)	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-	TOTAL					
14.75-														0			
13.75-														0			
12.75-														0			
11.75-														0			
10.75-														0			
9.75-														0			
8.75-														0			
7.75-						1								1			
6.75-				1	1	2								4			
5.75-		1			1	1			2					5			
4.75-	1		2		2	2	1		1	2				11			
3.75-		1	4	6	2	5	3	1			1			23			
2.75-	5	8	7	4	7	5	1	1			1			39			
1.75-	20	12	6	5	12	1	3							59			
0.75-	54	17	4	3	9	2	2							91			
0.00-	8			8										16			
TOTAL	88	39	23	19	43	18	10	2	3	2	2			249			
MAX	5.00	6.00	5.00	7.00	8.00	7.00	5.50	4.00	6.00	5.00	4.00						

DATE (MAX HEIGHT) 06h 24-OCT-81

1974-1988 Winter

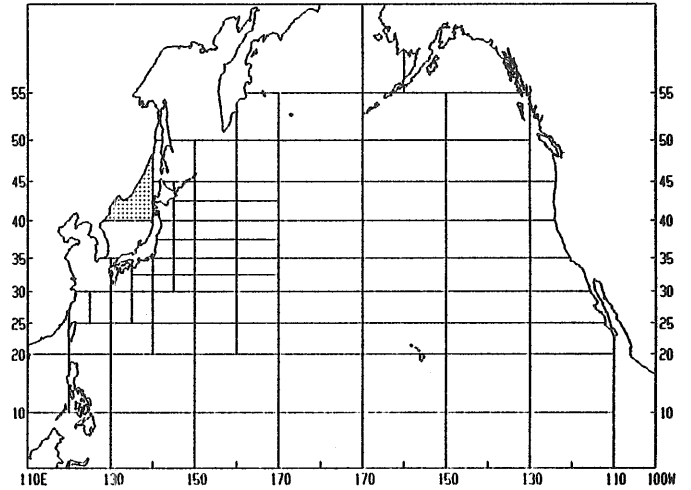
AREA E01 (45.0N-50.0N, 140.0E-150.0E)		PERIOD (SEC)														MEAN OF WAVE HEIGHT 2.62 M MEAN OF WAVE PERIOD 6.17SEC	
HEIGHT (M)	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-	TOTAL					
14.75-														0			
13.75-														0			
12.75-														0			
11.75-														0			
10.75-														0			
9.75-														0			
8.75-														0			
7.75-														0			
6.75-		1		1	1	1	1				1	1		7			
5.75-									1			1		2			
4.75-			1			2	1							4			
3.75-			1	5	7	5	2	1						23			
2.75-	4	4	15	8	8	1	1	1	2			2		44			
1.75-	11	14	10	8	5	2	3	1	1					55			
0.75-	35	9	5	1	1									51			
0.00-	2	2												4			
TOTAL	52	30	32	23	22	11	9	3	4	1	3			190			
MAX	3.00	7.00	5.50	7.00	7.00	7.00	7.00	4.00	6.00	7.00	7.00						

DATE (MAX HEIGHT) 00h 28-JAN-89

1974-1988 All seasons

AREA E02N (40.0N-45.0N, 130.0E-140.0E)		MEAN OF WAVE HEIGHT 1.56 M MEAN OF WAVE PERIOD 4.78SEC													
HEIGHT (M)	PERIOD (SEC)														TOTAL
	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-				
14.75-															0
13.75-															0
12.75-															0
11.75-															0
10.75-															0
9.75-												1	1		2
8.75-								1							1
7.75-			2			1			1				1		5
6.75-		1	1		2	3	1	2	2						12
5.75-		1	3	2	4	3	1	3	3				2		22
4.75-	3	4	4	6	13	6	12	2	3				1		54
3.75-	6	21	41	17	29	9	15	1	2	3	1				145
2.75-	37	86	125	53	86	32	17	10	4			2			452
1.75-	257	285	158	119	100	24	21	1	2	1	2				970
0.75-	878	446	199	138	60	12	13	3	5	1	3				1758
0.00-	704	165	63	20	7	2	1								962
TOTAL	1885	1009	596	355	301	92	82	23	21	6	13				4383
MAX	5.00	7.50	8.00	6.00	7.00	8.50	9.00	8.00	7.50	10.50	10.00				

DATE (MAX HEIGHT) 06h 19-DEC-76



1974-1988 Spring

AREA E02N (40.0N-45.0N, 130.0E-140.0E)		MEAN OF WAVE HEIGHT 1.32 M MEAN OF WAVE PERIOD 4.55SEC													
HEIGHT (M)	PERIOD (SEC)														TOTAL
	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-				
14.75-															0
13.75-															0
12.75-															0
11.75-															0
10.75-															0
9.75-															0
8.75-															0
7.75-															0
6.75-															0
5.75-											1				1
4.75-	1	1	1	1	1	1	1			1					8
3.75-		3	1	2	2	2	3	1							14
2.75-	1	12	13	6	14	5	2			2					55
1.75-	53	33	27	13	10	5	9	1							151
0.75-	180	92	37	23	11	9	5	1			1	2			361
0.00-	148	26	20	8	1	1	1								205
TOTAL	383	167	99	53	39	23	21	3	4	1	2				795
MAX	5.00	5.50	5.00	5.00	5.00	5.00	5.50	4.50	6.00	1.00	1.50				

DATE (MAX HEIGHT) 00h 02-MAR-84

1974-1988 Summer

AREA E02N (40.0N-45.0N, 130.0E-140.0E)		MEAN OF WAVE HEIGHT 1.02 M MEAN OF WAVE PERIOD 4.19SEC													
HEIGHT (M)	PERIOD (SEC)														TOTAL
	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-				
14.75-															0
13.75-															0
12.75-															0
11.75-															0
10.75-															0
9.75-															0
8.75-															0
7.75-															0
6.75-															0
5.75-															0
4.75-									2						2
3.75-		1	3	9	2	1	1								17
2.75-	7	11	9	6	3	3	3								42
1.75-	33	47	42	30	21	7	2				1			1	184
0.75-	233	195	79	55	20						1	2			585
0.00-	383	111	28	12	4	1									539
TOTAL	657	367	167	105	51	12	5	1	3	0	1				1369
MAX	4.00	4.50	4.00	4.00	5.00	4.00	3.00	1.00	2.50	0.00	2.00				

DATE (MAX HEIGHT) 00h 23-AUG-81

1974-1988 Autumn

AREA E02N (40.0N-45.0N, 130.0E-140.0E)		MEAN OF WAVE HEIGHT 1.67 M MEAN OF WAVE PERIOD 4.89SEC													
HEIGHT (M)	PERIOD (SEC)														TOTAL
	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-				
14.75-															0
13.75-															0
12.75-															0
11.75-															0
10.75-															0
9.75-														1	1
8.75-															1
7.75-			2					1						1	3
6.75-			1		1	2	1								5
5.75-			1		1	1		2	1						6
4.75-	2	2	1	2	6	4	2	1	1						21
3.75-		2	3	3	6	2	5			2			1		24
2.75-	18	17	18	11	9	14	5	1							93
1.75-	46	50	41	16	25	3	5								186
0.75-	221	97	57	28	13	3	5	1	1				1		427
0.00-	132	19	11		1										163
TOTAL	419	187	135	60	62	29	24	5	5	0	4				930
MAX	5.00	5.50	8.00	5.50	7.00	7.50	9.00	6.50	6.50	0.00	10.00				

DATE (MAX HEIGHT) 06h 19-OCT-79

1974-1988 Winter

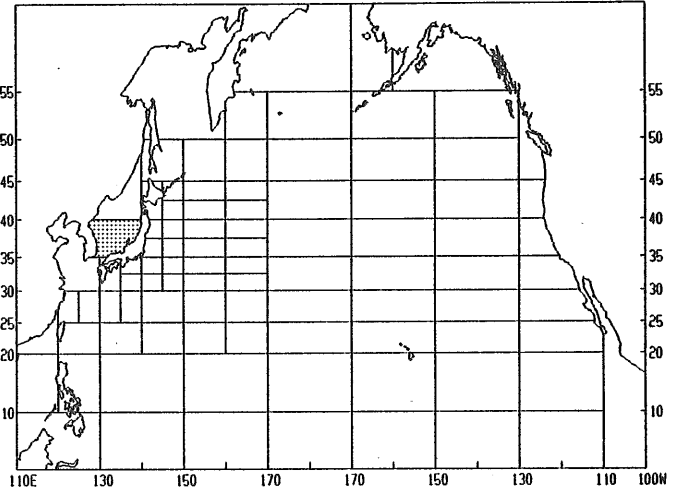
AREA E02N (40.0N-45.0N, 130.0E-140.0E)		MEAN OF WAVE HEIGHT 2.26 M MEAN OF WAVE PERIOD 5.52SEC													
HEIGHT (M)	PERIOD (SEC)														TOTAL
	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-				
14.75-															0
13.75-															0
12.75-															0
11.75-															0
10.75-															0
9.75-															0
8.75-															0
7.75-										1		1			2
6.75-			1			1	1			2	2				7
5.75-			1	2	2	3	2	1	1	1	1			2	15
4.75-			1	2	3	4	1	9	1	1				1	23
3.75-		5	13	28	10	20	4	7					3		90
2.75-	11	46	85	30	60	10	7	9	2					2	262
1.75-	125	155	48	60	44	9	5			1	1	1			449
0.75-	244	62	26	32	16					3		2			385
0.00-	41	9	4							1					55
TOTAL	426	288	195	137	149	28	32	14	9	5	6				1289
MAX	4.00	7.50	6.00	6.00	7.00	8.50	6.50	8.00	7.50	10.50	6.00				

DATE (MAX HEIGHT) 06h 19-DEC-76

1974-1988 All seasons

AREA E025 (35.0N-40.0N, 130.0E-140.0E)		PERIOD (SEC)											MEAN OF WAVE HEIGHT	1.35 M
													MEAN OF WAVE PERIOD	4.53SEC
HEIGHT (M)	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-	TOTAL		
14.75-												0		
13.75-												0		
12.75-												0		
11.75-												0		
10.75-					1							1		
9.75-					1	3			1	1	2	9		
8.75-				2	1	5			2	1		11		
7.75-					1			3	1	2		8		
6.75-			6	5	3	7	3	2	7	2	1	36		
5.75-	2	3	9	17	8	4	6	4	7		4	64		
4.75-	3	5	15	13	41	18	23	1	9			128		
3.75-	17	43	97	75	90	50	43	10	13	3	5	446		
2.75-	94	281	274	221	246	102	49	43	6	1	4	1321		
1.75-	704	815	509	534	369	95	67	11	10	6	9	3129		
0.75-	3394	1670	886	770	356	61	52	2	13	9	14	7227		
0.00-	3950	593	195	100	49	3	3	1	1			4903		
TOTAL	8164	3410	1994	1736	1165	348	249	76	71	24	46	17283		
MAX	6.00	6.50	10.50	8.00	11.50	10.00	8.00	10.00	10.00	10.00	8.50			

DATE (MAX HEIGHT) 06h 22-MAR-74



1974-1988 Spring

AREA E025 (35.0N-40.0N, 130.0E-140.0E)		PERIOD (SEC)											MEAN OF WAVE HEIGHT	1.07 M
													MEAN OF WAVE PERIOD	3.99SEC
HEIGHT (M)	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-	TOTAL		
14.75-												0		
13.75-												0		
12.75-												0		
11.75-												0		
10.75-					1							1		
9.75-									1	1		2		
8.75-			1			1						2		
7.75-												0		
6.75-			1			1	1					3		
5.75-			1		1	1	1	3				7		
4.75-	1		2	3	6	4	7		2			25		
3.75-	3	5	5	6	10	5	9		1		1	45		
2.75-	17	32	28	28	34	7	9	6				161		
1.75-	144	146	72	54	38	24	10	4	1	3	4	500		
0.75-	893	402	212	138	65	9	9		4	2	11	1745		
0.00-	1157	161	63	22	11		1	1			1	1417		
TOTAL	2215	746	395	251	166	51	47	12	12	6	17	3908		
MAX	5.00	4.00	9.00	5.50	11.50	9.00	7.50	6.00	10.00	10.00	4.00			

DATE (MAX HEIGHT) 06h 22-MAR-74

1974-1988 Summer

AREA E025 (35.0N-40.0N, 130.0E-140.0E)		PERIOD (SEC)											MEAN OF WAVE HEIGHT	0.93 M
													MEAN OF WAVE PERIOD	3.79SEC
HEIGHT (M)	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-	TOTAL		
14.75-												0		
13.75-												0		
12.75-												0		
11.75-												0		
10.75-												0		
9.75-									1			1		
8.75-											1	1		
7.75-											1	1		
6.75-								1		1		3		
5.75-	1		1	1	1					1		4		
4.75-		1	2	1	2	1						7		
3.75-	1	1	5	2	9	1	4	3	1	1		28		
2.75-	10	26	32	38	15	2	4	1			1	129		
1.75-	110	124	99	99	51	4	4	2	2		3	498		
0.75-	864	497	223	120	52	8	8	1	5	2	1	1781		
0.00-	1569	262	66	31	17	1	1	1		1	6	1954		
TOTAL	2555	911	429	293	146	18	21	7	12	3	12	4407		
MAX	6.00	5.00	10.50	7.00	5.00	7.00	4.50	4.00	9.00	4.00	7.50			

DATE (MAX HEIGHT) 00h 18-JUN-86

1974-1988 Autumn

AREA E025 (35.0N-40.0N, 130.0E-140.0E)		PERIOD (SEC)											MEAN OF WAVE HEIGHT	1.37 M
													MEAN OF WAVE PERIOD	4.77SEC
HEIGHT (M)	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-	TOTAL		
14.75-												0		
13.75-												0		
12.75-												0		
11.75-												0		
10.75-												0		
9.75-					1							1		
8.75-					1	1						2		
7.75-							2	1			1	4		
6.75-			1	1	2	2		2	1			9		
5.75-		1	1			2	3					7		
4.75-	1		1	6	12	2	5					27		
3.75-	1	5	18	16	32	16	10	4	2		2	106		
2.75-	22	58	82	45	55	25	12	1	2		1	303		
1.75-	178	217	173	147	102	12	27	2	3			861		
0.75-	967	472	284	319	133	19	15		3	5	1	2218		
0.00-	889	120	55	32	17		1					1115		
TOTAL	2058	873	615	566	355	79	75	10	11	5	6	4653		
MAX	5.00	6.00	7.00	7.50	10.00	9.00	8.00	8.00	7.00	1.50	8.50			

DATE (MAX HEIGHT) 12h 19-OCT-79

1974-1988 Winter

AREA E025 (35.0N-40.0N, 130.0E-140.0E)		PERIOD (SEC)											MEAN OF WAVE HEIGHT	2.05 M
													MEAN OF WAVE PERIOD	5.59SEC
HEIGHT (M)	0-	5-	6-	7-	8-	9-	10-	11-	12-	13-	14-	TOTAL		
14.75-												0		
13.75-												0		
12.75-												0		
11.75-												0		
10.75-												0		
9.75-									3		1	1	5	
8.75-										3		1	6	
7.75-									1		1		3	
6.75-										1	1		21	
5.75-										4	3	1	46	
4.75-	1	2	6	16	7	2	2	3	3			4	69	
3.75-	12	32	69	51	39	28	20	3	9	2	2	267		
2.75-	45	165	132	110	142	68	24	35	4	1	2	728		
1.75-	272	328	165	234	178	55	26	3	4	3	2	1270		
0.75-	670	299	167	193	106	25	20	1	1		1	1483		
0.00-	335	50	11	15	4	2						417		
TOTAL	1336	880	565	626	498	200	106	47	36	10	11	4315		
MAX	6.00	6.50	9.00	8.00	7.00	10.00	8.00	10.00	9.00	10.00	6.50			

DATE (MAX HEIGHT) 00h 02-JAN-81