Cast #	Date	Time	Temp	Temp. (°C)	Press.	Seas	Vis	W	Winds		Clouds	Weather
		(GMT)	Dry	Wet	(mb)	(CODE)	(CODE)	Dirn (true)	Speed (kts)	Amt **	Type (CODE)	(CODE)
100	15 APR 98	Ph8/	3.8	2.7	992.0	7	4	180	40	O.	2,0 %	7
803	15APR 98	1339	3.9	3.2	2.466	7	7	7	50	Œ	2.9.2	7
893	15AR 98 2219	22.19	10.1	8.3	996.3	7	4	100	0	1	8 2 8	\
000	15AL 98 2324	2324	3.3	52	676.3	7	4	00/	90	0	3.68	/
500	16APZ 88 0785	23,60	2.3	1.2	996.0	76	+	060	2)	4	3.68	,
200	16xx18 0930	0330	1.6	0.9	2955	2	t	30	14	4	4.3	/
DO 7	1649898	1154	1.2	6.0	945.8	3	14	450	72/	t=	7 00	
800	z z	1337	0.5	h'0	995.4	ε	t	032	77	10	7	
009	11	1403	6.5	h.0	995.3	2	4	250	7/	大大	7	
010	16 ATR 98	1746	1.9	1.9	995.9	3		032	81	æ	4	7
011	16 MPR 98 1858	1858	1.6	1.6	996.1	٤	9	030	9)	œ	7	ď
210	16 APR 98	1950	6.8	6.0	1.966	<i>F</i>	7	030	20	90	N	7
63	17-MRSD 0739	10739	0,	0.7	9%,0	4	30	er 503	0 22	Y	t	7
614	17 44298 080	2080	1,0	6.0	996.0	4	o	030	18	S	t	g
015	17 ARRAS 114	1/4//	1.0	0.0	996.1	4	0	510	23	60	土	q

** IF SKY IS NOT VISIBLE, CLOUD AMOUNT = 9; OTHERWISE CLOUD AMOUNT SHOULD BE RECORDED IN EIGHTHS (EXAMPLE: CLOUD AMOUNT = 3/8; RECORD 3)

			9	3.1 	Š	,—·—		111	Ţ	,	, .
CODE	0	-	2	8	4	5	9	2	8	6	*
WEATHER	CLEAR	PARTLY CLOUDY	CONTINUOUS CLOUDS	BLOWING SNOW	FOG, THICK DUST, HAZE	DRIZZLE	RAIN	SNOW OR RAIN/SNOW MIX	SHOWERS	THUNDERSTORMS	NO OBSERVATION
CLOUD TYPE	CIRRUS	CIRROCUMULUS	CIRROSTRATUS	ALTOCUMULUS	ALTOSTRATUS	NIMBOSTRATUS DRIZZLE	STRATOCUMULUS RAIN	STRATUS	CUMULUS	> 25.00 CUMULONIMBUS THUNDERSTORMS	NO OBSERVATION
VISIBILITY (NM)	< 00.02	00.02 - 00.10	00.10 - 00.25	00.25 - 00.50	00.50 - 01.00	01.00 - 02.00	02.00 - 05.00	05.00 - 10.00	10.00 - 25.00	> 25.00	NO OBSERVATION NO OBSERVATION NO OBSERVATION
SEA STATE (FT)	0.0 feet - Glassy	0.0 - 0.3 feet - Rippled	0.3 - 1.6 feet - Wavelet	1.6 - 4.1 feet - Slight	4.1 - 8.2 feet - Moderate	8.2 - 13.1 feet - Rough	13.1 - 19.7 feet - Very Rough	19.7 - 29.5 feet - High	29.5 - 45.9 feet - Very High	> 45.9 feet - Phenomenal	NO OBSERVATION
SODE	0	1	2	43	4	5	9	7	8	6	

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Weather	(CODE)	7	2	7	d	d	7	4	からろ	7	7		d	々	って	N
Clouds	Type (CODE)	+	せ	ц	ħ	H	7	t	た	t	7	do	4	, t	6	t
	Amt **	90	Do	Ø	∞	80	60	60	8	00	80	do	80	8	Q (Æ
spı	Speed (kts)	25	97	h2	35	26	30	26	24	42	2.0	100	4	t	Ø	à
Winds	Dirn (true)	348	345	350	355	348	345	345	340	340	340	330	552	255	255	285
Vis	(CODE)	4	7	t	1	7	7	£'9	1 4,	23	7	de	7	1 7	1	4
Seas	(CODE)	7	Ś	5	0	6)	2	6	5	9	7	5	3	3	3	3
Press.	(dm)	997.2	948.8	998.8	100/11	1003.9	(006.2	1009.2	\$.6001	1010.6	1011.0	105.5	1016.2	C2/0/	10/6.3	5.9/01
(၁့)	Wet	6.0-	-2-2	١-٢.٠	-2.4	- 3.8	8.6-	-4.3	-3.2	-3.5	-3.5	-35	6.0	8.0	0.2	1''
Temp. (°C)	Dry	-0.5	~2.0	1.2-	1-1.9	-2.4	-4.2	-4.0	1.5-	-3.5	-3.5	~3.0	J. 5.	1.1	0.4	8.1
Time	(GMT)	1528	6h2	1916	2249	0309	0839	1430	1657	0161	1944	0525	2561	2016	300C	6tree
Date	- 1 - (*)	17APK	17 APR	17 APR	17 AlL	18 APR	18 APR	8 71	11	11	31	19 APIZ	19 MM	19461	19 HR	19 APR
Cast #		016	210	018	6/0	020	120	270	220	h20	220	026	27	8	50	30

** IF SKY IS NOT VISIBLE, CLOUD AMOUNT = 9; OTHERWISE CLOUD AMOUNT SHOULD BE RECORDED IN EIGHTHS

(EXAMPLE: CLOUD AMOUNT = 3/8; RECORD 3)

-					
CODE	SEA STATE (FT)	VISIBILITY (NM)	CLOUD TYPE	WEATHER	CODE
	0.0 feet - Glassy	< 00.02	CIRRUS	CLEAR	0
Ž	0.0 - 0.3 feet - Rippled	00.02 - 00.10	CIRROCUMULUS	PARTLY CLOUDY	
2	0.3 - 1.6 feet - Wavelet	00.10 - 00.25	CIRROSTRATUS	SONTINOUS CLOUDS	2
3	1.6 - 4.1 feet - Slight	00.25 - 00.50	ALTOCUMULUS	BLOWING SNOW	3
	4.1 - 8.2 feet - Moderate	00.50 - 01.00	ALTOSTRATUS	FOG,THICK DUST, HAZE	4
5	8.2 - 13.1 feet - Rough	01.00 - 02.00	NIMBOSTRATUS DRIZZLE	DRIZZIE	5
ဖ	13.1 - 19.7 feet - Very Rough	02.00 - 05.00	STRATOCUMULUS RAIN	RAIN	9
	19.7 - 29.5 feet - High	05.00 - 10.00	STRATUS	SNOW OR BAIN/SNOW MIX	7
8	29.5 - 45.9 feet - Very High	10.00 - 25.00	CLIMULUS	SHOWERS	8
6	> 45.9 feet - Phenomenal	> 25.00	CUMULONIMBUS THUNDERSTORMS	THUNDERSTORMS	6
	NO OBSERVATION	NO OBSERVATION NO OBSERVATION NO OBSERVATION	NO OBSERVATION	NO OBSERVATION	5
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mm m	1016.9	-6.2 1016.9 -0.9 1017.1 0.0 1017.5 1.4 1018.1 0.2 1018.1 1.6 1021.5	0
- 12	0 2		
See a PA	2		
25A3	_		
1018.1		0.5	2.0 1.4
1018.6 3			
021.5 3			1.6
3 3 3	1	0.9 1	
1017.6 3		1.51	
1015.5 3		2.6	\dashv
1015.5 3		2.5	
1014.6 4		3,1	3.7 3.1
4 6.8101]	3.3	3,8 3.2
1011.9 4		3.3	
100ES 4		5,2	
1008.4 4	-	3.2	3.8 3.2

** IF SKY IS NOT VISIBLE, CLOUD AMOUNT = 9; OTHERWISE CLOUD AMOUNT SHOULD BE RECORDED IN EIGHTHS (EXAMPLE: CLOUD AMOUNT = 3/8; RECORD 3)

t - Glassy - Rippled t - Wavelet t - Slight t - Moderate - Rough Very Rough - High - Very High	SEA STATE (FT) VI	VISIBILITY (NM)	CLOUD TYPE	WEATHER	SODE
0.0 - 0.3 feet - Rippled 0.3 - 1.6 feet - Wavelet 1.6 - 4.1 feet - Slight 4.1 - 8.2 feet - Moderate 8.2 - 13.1 feet - Rough 13.1 - 19.7 feet - Very Rough 19.7 - 29.5 feet - High 29.5 - 45.9 feet - Very High > 45.9 feet - Phenomenal	feet - Glassy	< 00.02	CIRRUS	CLEAR	0
0.3 - 1.6 feet - Wavelet 1.6 - 4.1 feet - Slight 4.1 - 8.2 feet - Moderate 8.2 - 13.1 feet - Rough 13.1 - 19.7 feet - Very Rough 19.7 - 29.5 feet - High 29.5 - 45.9 feet - Very High > 45.9 feet - Phenomenal		00.02 - 00.10	CIRROCUMULUS	PARTLY CLOUDY	-
1.6 - 4.1 feet - Slight 4.1 - 8.2 feet - Moderate 8.2 - 13.1 feet - Rough 13.1 - 19.7 feet - Very Rough 19.7 - 29.5 feet - High 29.5 - 45.9 feet - Very High > 45.9 feet - Phenomenal		00.10 - 00.25	CIRROSTRATUS	SONTINUOUS CLOUDS	2
4.1 - 8.2 feet - Moderate 8.2 - 13.1 feet - Rough 13.1 - 19.7 feet - Very Rough 19.7 - 29.5 feet - High 29.5 - 45.9 feet - Very High > 45.9 feet - Phenomenal		00.25 - 00.50	ALTOCUMULUS	BLOWING SNOW	ဗ
8.2 - 13.1 feet - Rough 13.1 - 19.7 feet - Very Rough 19.7 - 29.5 feet - High 29.5 - 45.9 feet - Very High > 45.9 feet - Phenomenal		00.50 - 01.00	ALTOSTRATUS	FOG,THICK DUST, HAZE	4
13.1 - 19.7 feet - Very Rough 19.7 - 29.5 feet - High 29.5 - 45.9 feet - Very High > 45.9 feet - Phenomenal		01.00 - 02.00	NIMBOSTRATUS DRIZZLE	DRIZZLE	5
19.7 - 29.5 feet - High 29.5 - 45.9 feet - Very High > 45.9 feet - Phenomenal		02.00 - 05.00	STRATOCUMULUS RAIN	RAIN	9
29.5 - 45.9 feet - Very High > 45.9 feet - Phenomenal		05.00 - 10.00	STRATUS	SNOW OR RAIN/SNOW MIX	7
> 45.9 feet - Phenomenal		10.00 - 25.00	CUMULUS	SHOWERS	8
14011		> 25.00	CUMULONIMBUS	THUNDERSTORMS	6
NO OBSERVATION NO OBSERVATION INC OBSERVATION OBSERVATION	/ATION	O OBSERVATION	NO OBSERVATION	NO OBSERVATION	•

Date	Time	Temp	Temp. (°C)	Press.	Seas	Vis	M	Winds		Clouds	Weather
	(GMT)	Dry	Wet	(mb)	(CODE)	(CODE)	Dirn (true)	Speed (kts)	Amt **	Type (CODE)	(CODE)
2211898	1/32	3.4	2.9	8:5001	*	4	140	/2	Ø	7	2
5	1342	3.1	2,9	1.5001	4	Ź	122	80/	න	rt	48
7,6	1540	3.0	5.2	1004.3	4	t	130	18	Po	7	2
2	1729	3.0	2.8	1004.5	h	t	081	8/	می	t	2
=	1920	3.0	2.8	7.2001	4	7	130	18	Δ	t	7
,	5461	17	2.1	1003.4	4	9	130	1-2	Ø	4	N
23 APR 98	8 16.35	4.3	36	994.9	Ţ,	t	200	/ d	8	£	7
÷	1739	4.9	3.9	494.7	3	7	230	14	h	.t	
34 MPR 88	B 02,7	4.5	3.6	985.3	3	t	215	13	7	80	
۲	0446	0,2	4-5	994.9	જ	ds	202	7	Ş	0	
71	0701	60	4.5	224.9		7	-	Ö	Þ	J	
24 ARR98	8 0950	5.3	4.7	7.466	7	£	090	/	~	9	
24 APR 98	3 1324	4.0	2.9	993,3	3	Ł	330	90	3	ور	
ا ت	(420)	3.0	2.7	441.8	3	00	350	1/6	8	9	2
"	2029	2.6	2.6	488.7	r	古	910	17	മ	9	4
					-						

** IF SKY IS NOT VISIBLE, CLOUD AMOUNT = 9; OTHERWISE CLOUD AMOUNT SHOULD BE RECORDED IN EIGHTHS (EXAMPLE: CLOUD AMOUNT = 3/8; RECORD 3)

VISIBILITY (NM) CLOUD	CLOUD TYPE	WEATHER	8
< 00.02 CIPRUS	No.	CLEAR	0
00.02 - 00.10 CIRROCUMULUS		PARTLY CLOUDY	-
00.10 - 00.25 CIRROSTE	RATUS	CIRROSTRATUS CONTINUOUS CLOUDS	61
00.25 - 00.50 ALTOCUMULUS		BLOWING SNOW	က
00.50 - 01.00 ALTOSTRATUS		FOG,THICK DUST, HAZE	4
01.00 - 02.00 NIMBOSTRATUS DRIZZLE	RATUS	DRIZZLE	ເດ
02.00 - 05.00 STRATOCUMULUS RAIN	SUJUMU	RAIN	9
05.00 - 10.00 STRATUS		SNOW OR RAIN/SNOW MIX	7
10.00 - 25.00 CUMULUS		SHOWERS	8
> 25.00 CUMULON	SUBMIN	CUMULONIMBUS THUNDERSTORMS	တ
NO OBSERVATION NO OBSERVATION NO OBSERVATION	RVATION	NO OBSERVATION	*
SERVATION INC OF	別	SERVATION	DEHVALIONING OBSERVATION

CTD METADATA MF98-05B

Weather	-544	B	1.5	,7	/		8	Ø	0	B	Ø	0 /	•	0	0	
Clouds	Amt ** Type (CODE)	ی	7	و	4	*		5 1		1	1	6	0			The second secon
	Amt *	8	120	00	2	-	Ø	_	Q	Ø	Ø	7	4	B	B	
Winds	Speed (kts)	4	91	9	17	9/	1/6	ָדַ <u></u>	17	75/	h/	4/	5/	0/)1	
Wi	Dirn (true)	210	980	070	020	351	30	000	000	000	355	355	350	340	340	>
Vis	(CODE)	7	<u>+</u>	Ł	60	4	+	£	£	t	£	8	$\mathbf{\alpha}$	90	8	
Seas	(CODE)	5	3	-3	7	h	h	$_{\sim}h$	b	State of		h	4	h	h	
Press.	(mb)	992.8	94.0	1.966	X'he01	0 '500/	100%	hitaal	2.8901	1009.5	5.6091	h'1101	1911ع	1012.2	1013.2	
(၁့)	Wet	2.7	3.2	4.6	3.3	3.1	3,(3.2	3.4	3.4	3.2	3.3	3.4	3.8	40	
Temp. (°C)	Dry	5.2	3.4	5.1	4.2	4.1	4.0	3.8	3.8	3.9	3.8	4.0	4.1	4.9	6-H	
Time	(GMT)	2127		6350	1124	1521	1359	1540	0121	1848	1915	204(,	2303	0131	0359	
Date		368 HARE	25 APR 98 60 40	- 14	SPARSE	11	9 13	1.1	u	11	11	u	11	20 #APR	ול	
Cast #		19	27	63	49	S	lete	79	89	69	25	12	72	73	74	

** IF SKY IS NOT VISIBLE, CLOUD AMOUNT = 9; OTHERWISE CLOUD AMOUNT SHOULD BE RECORDED IN EIGHTHS (EXAMPLE: CLOUD AMOUNT = 3/8; RECORD 3)

30 30 30 30 30 30 30 30 30 30 30 30 30 3	SEA STATE (FT)	VISIBILITY (NM)	CLOUD TYPE	WEATHER	CODE
0	0.0 feet - Glassy	< 00.02	CIPRUS	CLEAR	0
1	0.0 - 0.3 feet - Rippled	00.02 - 00.10	CIRROCUMULUS	PARTLY CLOUDY	-
2	0.3 - 1.6 feet - Wavelet	00.10 - 00.25	CIRROSTRATUS	CONTINUOUS CLOUDS	2
8	1.6 - 4.1 feet - Slight	00.25 - 00.50	ALTOCUMULUS	BLOWING SNOW	3
4	4.1 - 8.2 feet - Moderate	00.50 - 01.00	ALTOSTRATUS	FOG,THICK DUST, HAZE	4
2	8.2 - 13.1 feet - Rough	01.00 - 02.00	NIMBOSTRATUS	DRIZZLE	သ
9	13.1 - 19.7 feet - Very Rough	05.00 - 05.00	STRATOCUMULUS RAIN	RAIN	9
7	19.7 - 29.5 feet - High	05.00 - 10.00	STRATUS	SNOW OR HAIN/SNOW MIX.	7.
8	29.5 - 45.9 feet - Very High	10.00 - 25.00	CUMULUS	SHOWERS	လ
6	> 45.9 feet - Phenomenal	> 25.00	CUMULONIMBUS THUNDERSTORMS	THUNDERSTORMS	6
*	NO OBSERVATION	NO OBSERVATION NO OBSERVATION NO OBSERVATION	NO OBSERVATION	NO OBSERVATION	

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April 14 - 29, 1998

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Weather	(CODE)	_	-	C	_	14	7	7	7	ų	K	_	,	\		\
Clouds	Type (CODE)	2	2	Ì	Н	Ч	7	*	4	2	0	1	h	80	300	&
	Amt **	m	3	3	t	α	\ \sqrt{\chi}	×	00	Ø	Ø	74	rt	7	+	4
sp	Speed (kts)	8	4	e	4	C/a	2	/3	4	1/2	20	23	22	23	20	23
Winds	Dirn (true)	390	087	270	277	270	240	230	720	290	200	305	310	330	335	335
Vis	(CODE)	ထ	O	ထ	to	4	4	N	7	4	4	4	4	4	4	U.
Seas	(CODE)	2	2	.3	6	n	W	W	5	7	7	re	10	2	ق	9
Press.	(dm)	4:4/0)	10 13.8	1013.1	1052.1	1011.4	1.0101	h'8001	1008.1	95.69	2.866	1011. /	7,8101	10/9.8	1020.2	9./29/
(°C)	Wet	3.1	3.3	3.2	2.4	2.1	2.3	2.0	6.7	7.6	(13)	1.8	10	9.0	7.8	2.7
Temp. (°C)	Dry	7.2	7. C	3.4	2.5	2.5	2.7	2.0	6.1	2.5	20	30	1.5	87	2.4	3.2
Time	(GMT)	-5180	800	1153	1346	1544	1716	7261	1950	3080	2530	2216	1844	5561	2119	2330
Date		26 APR SB	26 APR 28 10	26 APROS	16	11	14	п	11	27AAR	27 APP-	27 APR	28 APV	28 APL	28 APR	28 APR
Cast #		76	#	38	49	80	18	78	280	10	58	80	48	88	68	06

** IF SKY IS NOT VISIBLE, CLOUD AMOUNT = 9; OTHERWISE CLOUD AMOUNT SHOULD BE RECORDED IN EIGHTHS (EXAMPLE: CLOUD AMOUNT = 3/8; RECORD 3)

8 0 Ø Ó 4 ın Ø SNOW OR RAIN/SNOW MIX FOG, THICK DUST, HAZE CONTINUOUS CLOUDS WEATHER NO OBSERVATION NO OBSERVATION NO OBSERVATION THUNDERSTORMS PARTLY CLOUDY **BLOWING SNOW** SHOWERS DRIZZLE CLEAR STRATOCUMULUS RAIN CUMULONIMBUS NIMBOSTRATUS CIRROCUMULUS CLOUD TYPE CIRROSTRATUS **ALTOCUMULUS ALTOSTRATUS** CUMULUS STRATUS CHRUS > 25.00 < 00.02 25.00 00.02 - 00.10 - 00.25 - 00.50 - 01.00 - 02.00 - 05.00 - 10.00 VISIBILITY (NM) 00.10 00.25 00.50 01.00 05.00 02.00 10.00 - 45.9 feet - Very High > 45.9 feet - Phenomenal 8.2 feet - Moderate 13.1 - 19.7 feet - Very Rough Wavelet 0.3 feet - Rippled 0.0 feet - Glassy 8.2 - 13.1 feet - Rough - Slight - 29.5 feet - High SEA STATE (FT) NO OBSERVATION 1.6 feet 4.1 feet 1.6 -0.3 0.0 4. 19.7 29.5 80E S 9 α Q 0 S က 4

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Weather		-		- <	<u> </u>			ļ 				
Clouds	Amt ** Type (CODE)	00,0	6	₹.	3 &	7						
	Amt ::	rt	Q	ی ا	7			3				
Winds	Dirn (true) Speed (kts)	20	20	20	/3				37 47			
Win	Dirn (true)	312	320	310	340							
Vis	(CODE)	4	r	4	4			1 74 23				Ď.
Seas	(CODE)	ی	ه	عرا	e	\$5555 U	30.3	뷨				
Press.	(mb)	7 . 2291	1022.5	(623.0	1623.3						:	
Temp. (°C)	Wet	3.60	3.2	2.1	/ ' /	-						
Temp	Dry	3.8	3.51	3.2	2.9							
Time	(GMT)	1510	0452	2590	0755							
Date		29 APK98 0151	11	પ	29 APR 0755	,	9-					
Cast #		16	92	83	46							

" IF SKY IS NOT VISIBLE, CLOUD AMOUNT = 9; OTHERWISE CLOUD AMOUNT SHOULD BE RECORDED IN EIGHTHS (EXAMPLE: CLOUD AMOUNT = 3/8; RECORD 3)

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80 E	0	-	2	8	4	ľo	0	1~.	80	6	
WEATHER	CLEAR	PARTLY CLOUDY	CONTINUOUS CLOUDS	BLOWING SNOW	FOG, THICK DUST, HAZE	DRIZZLE	RAIN	SNOW OR FAIN/SNOW MIX	SHOWERS	THUNDERSTORMS	NO OBSERVATION
CLOUD TYPE	SURRICE	CIRROCUMULUS	CIRROSTRATUS	ALTOCUMULUS	ALTOSTRATUS	NIMBOSTRATUS	STRATOCUMULUS RAIN	STRATUS	CUMULUS	CUMULONIMBUS	NO OBSERVATION
VISIBILITY (NM)	< 00.05	00.02 - 00.10	00.10 - 00.25	00.25 - 00.50	00.50 - 01.00	01.00 - 02.00	02.00 - 05.00	05.00 - 10.00	10.00 - 25.00	> 25.00	NO OBSERVATION NO OBSERVATION NO OBSERVATION
SEA STATE (FT)	0.0 feet - Glassy	0.0 - 0.3 feet - Rippled	0.3 - 1.6 feet - Wavelet	1.6 - 4.1 feet - Slight	4.1 - 8.2 feet - Moderate	8.2 - 13.1 feet - Rough	13.1 - 19.7 feet - Very Rough	19.7 - 29.5 feet - High	29.5 - 45.9 feet - Very High	> 45.9 feet - Phenomenal	NO OBSERVATION
SDE	0	1	2	3	4	5	9	7	80	6	n