ANNEX A

1. GENERAL

Due to the rapid growth of the use of microcomputers in the meteorological community and to save publishing costs, tropical cyclone track data (with best track, initial warning, 24-, 48- and 72-hour JTWC forecasts) and fix data (satellite, aircraft, radar and synoptic) are now available separately upon request. The data will be available in ASCII format on 5.25 inch "floppy" diskettes. The data sets are available on four diskettes, which include the western North Pacific and North Indian Ocean (1 January - 31 December 1987) on two and the South Pacific and South Indian Oceans (1 July 1986 - 30 June 1987) on the other two. Agencies or individuals desiring these data sets should send the appropriate number of "floppy" diskettes (four if both data sets are desired, two if only one desired) to NAVOCEANCOMCEN/JTWC Guam with their request. When the request is received, the data will be copied onto your diskettes and returned with an explanation of the data formats. The use of floppy diskettes should facilitate the transfer of these rather large data files into your computer.

2. WARNING VERIFICATION STATISTICS

a. WESTERN NORTH PACIFIC

This section includes verification statistics for each warning in the western North Pacific Ocean during 1987. Pre- and post-warning best track positions are not printed, but are available on floppy diskettes by request.

JTWC FORECAST TRACK AND INTENSITY ERRORS BY WARNING

Typhoon Orchid (01W)

	00h	24h	48h	72h
Average	17	91	158	234
# Cases	23	19	15	11

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87010812	1	7.2N	150.6E	37.7	37.6	126.7	204.5	35	-10	-5	-25	-20
87010818	2	7.2N	150.0E	65.7	53.6	130.7	168.2	35	-5	-10	-35	-10
87010900	3	7.3N	149.2E	6	152.2	252.5	242.1	40	-5	-10	-40	5
87010906	4	7.5N	148.0E	18.8	191.9	266.9	206.2	40	-5	-20	-35	5
87010912	5	7.9N	146.5E	13.4	119.5	139.2	144	45	-5	-25	-20	5
87010918	6	8.4N	144.9E	29.8	101.6	89	106.7	50	-10	-35	-10	10
87011000	7	8.8N	143.4E	13.3	49.4	60.9	147.2	55	-5	-25	20	40
87011006	8	9.2N	141.9E	29.7	26.5	47.4	207	65	-5	-10	25	40
87011012	9	9.7N	140.4E	5.9	50.4	151.1	330.5	75	-10	5	20	25
87011018	10	10.0N	139.1E	13.4	75.6	187	430	85	-15	20	25	25
87011100	11	10.2N	137.9E	5.9	11.8	93.5	390.8	95	-5	45	40	40
87011106	12	10.5N	136.8E	8.4	12	79.9	N/A	90	10	50	55	N/A
87011112	13	10.8N	135.8E	6	35.8	159.7	N/A	80	20	35	45	N/A
87011118	14	10.9N	134.9E	5.9	70.7	260.1	N/A	70	25	20	35	N/A
87011200	15	11.1N	134.0E	6	34.5	331.8	N/A	60	10	0	5	N/A
87011206	16	11.4N	133.3E	6	91.1	N/A	N/A	60	10	5	N/A	N/A
87011212	17	11.7N	132.7E	0	165.8	N/A	N/A	65	0	5	N/A	N/A
87011218	18	11.7N	132.2E	21.3	267.5	N/A	N/A	60	0	5	N/A	N/A
87011300	19	11.3N	131.6E	0	192.8	N/A	N/A	50	5	5	N/A	N/A
87011306	20	10.8N	131.1E	13.4	N/A	N/A	N/A	45	5	N/A	N/A	N/A
87011312	21	10.1N	130.7E	12	N/A	N/A	N/A	40	5	N/A	N/A	N/A
87011318	22	8.7N	130.4E	78.9	N/A	N/A	N/A	35	5	N/A	N/A	N/A
87011400	23	6.8N	129.9E	13.4	N/A	N/A	N/A	30	0	N/A	N/A	N/A

Tropical Storm Percy (02W)

	00h	24h	48h	72h
Average	19	69	116	206
# Cases	9	8	4	4

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87041100	1	9.3N	142.9E	8.4	43	92.5	163	40	0	20	25	30
87041106	2	9.8N	142.4E	24	81.5	30.6	100.6	40	0	20	25	30
87041112	3	10.3N	140.7E	59.3	85.8	152.1	279.8	35	5	15	15	5
87041118	4	10.6N	141.0E	18.9	70.6	191.8	280.2	30	10	10	10	5
87041200	5	10.8N	140.2E	18	51.2	N/A	N/A	30	0	0	N/A	N/A
87041206	6	11.0N	139.3E	13.4	50.2	N/A	N/A	25	5	0	N/A	N/A
87041212	7	11.2N	138.4E	11.8	67	N/A	N/A	25	5	5	N/A	N/A
87041218	8	11.4N	137.7E	6	102.6	N/A	N/A	25	5	0	N/A	N/A
87041300	9	11.8N	137.3E	16.8	N/A	N/A	N/A	25	5	N/A	N/A	N/A

Tropical Storm Ruth (03W)

	00h	24h	48h	72h
Average	13	141	N/A	N/A
# Cases	6	3	0	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87061800	1	19.2N	114.6E	33	168.4	N/A	N/A	30	0	5	N/A	N/A
87061806	2	19.7N	114.2E	0	120.9	N/A	N/A	30	0	15	N/A	N/A
87061812	3	20.3N	113.7E	8.2	133.7	N/A	N/A	30	0	5	N/A	N/A
87061818	4	20.8N	112.8E	11.2	N/A	N/A	N/A	35	0	N/A	N/A	N/A
87061900	5	21.3N	111.8E	12.7	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87061906	6	21.9N	110.8E	13.2	N/A	N/A	N/A	25	0	N/A	N/A	N/A

Typhoon Sperry (04W)

	00h	24h	48h	72h
Average	16	119	242	421
# Cases	18	15	12	9

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87062700	1	12.5N	137.4E	0	18.4	68.2	282.2	35	0	-10	0	35
87062706	2	13.0N	136.7E	16.8	53.3	59	270.3	45	-5	-5	10	45
87062712	3	13.3N	136.2E	42.4	71	57.9	269.7	45	0	-5	20	45
87062718	4	13.8N	135.8E	55.4	45.7	108.2	320.8	55	-5	-5	25	55
87062800	5	14.3N	135.3E	6	75.6	270.1	480.1	65	0	15	55	90
87062806	6	14.9N	135.0E	0	101	306.7	517	65	5	25	60	95
87062812	7	15.6N	134.6E	13	117.8	293.1	505.9	70	0	25	60	95
87062818	8	16.4N	134.2E	12	117.5	276.4	562.5	75	0	30	75	100
87062900	9	17.3N	133.9E	8.3	165	309.5	583.5	75	0	5	20	25
87062906	10	18.3N	133.4E	29.1	191.6	336	N/A	70	0	5	20	N/A
87062912	11	19.4N	132.8E	20.8	137.4	349.4	N/A	65	0	0	15	N/A
87062918	12	20.7N	132.0E	32.9	128.9	472	N/A	65	0	10	20	N/A
87063000	13	22.0N	131.5E	11.1	203.8	N/A	N/A	60	0	10	N/A	N/A
87063006	14	23.3N	131.3E	20.4	154.5	N/A	N/A	55	0	10	N/A	N/A
87063012	15	24.9N	131.4E	5.4	212.1	N/A	N/A	55	-5	5	N/A	N/A
87063018	16	26.7N	131.7E	6	N/A	N/A	N/A	45	-5	N/A	N/A	N/A
87070100	17	28.3N	132.6E	8	N/A	N/A	N/A	40	0	N/A	N/A	N/A
87070106	18	29.8N	134.6E	16.7	N/A	N/A	N/A	35	0	N/A	N/A	N/A

Super Typhoon Thelma (05W)

	00h	24h	48h	72h
Average	18	146	311	479
# Cases	34	31	28	24

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87070718	1	13.0N	149.5E	84.8	238.2	352.7	402.6	30	0	0	-30	-25
87070800	2	13.9N	148.9E	43.6	263.3	401	491.1	30	0	-5	-30	-45
87070806	3	14.5N	147.4E	58.4	280.1	510	995.5	30	0	0	-30	-70
87070812	4	14.6N	145.5E	37.6	202.8	462.2	864.3	35	-5	-20	-40	-80
87070818	5	15.0N	143.8E	34.1	8.3	128.1	350.8	40	-10	-25	-45	-60
87070900	6	15.6N	142.3E	18.9	139.9	318.5	636.9	45	5	-20	-45	-55
87070906	7	16.2N	141.0E	8.3	162.4	357.8	615.1	50	0	-25	-55	-60
87070912	8	16.5N	139.7E	13.3	109.6	336.4	529.5	60	-5	-25	-55	-45
87070918	9	16.7N	138.3E	11.5	127.8	250.1	187.5	70	-15	-35	-55	-25
87071000	10	17.0N	136.9E	6	116.8	271.7	234.3	80	0	-10	-5	30
87071006	11	17.3N	135.4E	18.9	165.2	292.1	258.2	85	0	-15	-5	35
87071012	12	17.7N	134.0E	8.3	181.4	324	288.5	90	0	-25	0	35
87071018	13	17.8N	132.5E	6	158.6	269.6	195.4	100	-5	-5	30	40
87071100	14	17.9N	131.2E	0	192.1	276.8	147.6	110	-5	10	30	25
87071106	15	17.9N	129.9E	18	122.7	168.2	108.5	120	-10	10	35	30
87071112	16	17.8N	128.8E	8.3	123.3	189	212.4	130	-10	25	45	25
87071118	17	17.6N	128.0E	16.6	104.9	188.2	307	125	-5	15	20	10
87071200	18	17.6N	127.3E	6	163.5	421.1	675.7	120	0	15	15	20
87071206	19	17.9N	126.8E	18.9	222.7	485.7	820.2	120	-5	15	10	15
87071212	20	18.5N	126.6E	8.3	141.3	382.1	762.7	115	-10	5	-5	5
87071218	21	19.2N	126.4E	29.4	190	418.3	857.9	105	-5	0	-5	20
87071300	22	19.9N	126.2E	8.2	92.3	192.6	540.2	95	-5	-10	-10	20
87071306	23	20.9N	126.0E	18.9	67.1	196.9	497.6	90	-5	-15	-15	15
87071312	24	22.1N	125.6E	12.6	47.1	217.8	524.5	90	-15	-25	-15	10
87071318	25	23.4N	125.3E	17.6	74	308	N/A	90	-15	-25	-5	N/A
87071400	26	24.7N	125.2E	6	62.7	354.2	N/A	90	-5	-10	15	N/A
87071406	27	25.9N	124.9E	0	54.9	312	N/A	90	-5	-10	20	N/A
87071412	28	27.4N	124.8E	8	102.1	346.4	N/A	90	-5	-5	20	N/A
87071418	29	28.6N	125.0E	8	186.1	N/A	N/A	85	-5	5	N/A	N/A
87071500	30	29.9N	125.5E	12	228.2	N/A	N/A	80	0	30	N/A	N/A
87071506	31	31.9N	126.3E	13	219.7	N/A	N/A	80	-5	20	N/A	N/A
87071512	32	34.4N	127.2E	24	N/A	N/A	N/A	70	0	N/A	N/A	N/A
87071518	33	36.8N	128.2E	30	N/A	N/A	N/A	55	5	N/A	N/A	N/A
87071600	34	39.0N	129.4E	101.3	N/A	N/A	N/A	40	-5	N/A	N/A	N/A

Typhoon Vernon (06W)

	00h	24h	48h	72h
Average	33	119	180	224
# Cases	21	18	14	10

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87071618	1	12.1N	137.5E	11.7	82.2	125.9	282.5	30	0	10	10	-15
87071700	2	12.2N	135.3E	54.1	42.9	151	209.5	30	0	10	5	-15
87071706	3	12.2N	133.1E	18.6	66.6	160.9	207.6	35	-5	5	0	-10
87071712	4	12.3N	131.0E	42.6	153.1	188.8	152.8	35	-5	5	-5	10
87071718	5	12.7N	129.7E	16.8	181.1	216.2	162.6	35	-5	0	-5	10
87071800	6	13.1N	128.9E	94.2	279.7	280.9	196.1	35	-5	-10	-10	15
87071806	7	13.6N	128.5E	112.3	212	207.6	219.4	40	-10	-20	-15	5
87071812	8	14.1N	128.1E	34.2	139.2	151.2	112.7	45	-5	-10	10	25
87071818	9	15.0N	127.5E	58	140.9	159.8	260.9	50	-10	-10	10	30
87071900	10	15.9N	126.7E	23.9	125	234.8	442.9	55	0	0	25	60
87071906	11	16.9N	125.9E	42	103.4	214.5	N/A	60	0	10	35	N/A
87071912	12	18.0N	125.3E	12	84.7	81.4	N/A	65	0	20	50	N/A

87071918	13	18.7N	124.7E	24.8	75.7	128.8	N/A	65	0	20	55	N/A
87072000	14	19.3N	124.2E	5.7	73.9	217.1	N/A	65	0	15	35	N/A
87072006	15	20.1N	123.5E	12.8	101.5	N/A	N/A	60	5	15	N/A	N/A
87072012	16	21.1N	123.0E	16.4	116.1	N/A	N/A	55	0	20	N/A	N/A
87072018	17	22.0N	122.5E	20.6	110.1	N/A	N/A	55	0	25	N/A	N/A
87072100	18	23.1N	122.2E	8.2	66.8	N/A	N/A	50	5	30	N/A	N/A
87072106	19	24.6N	121.8E	32.4	N/A	N/A	N/A	45	5	N/A	N/A	N/A
87072112	20	26.0N	121.6E	36.9	N/A	N/A	N/A	35	5	N/A	N/A	N/A
87072118	21	27.3N	121.6E	22.1	N/A	N/A	N/A	30	0	N/A	N/A	N/A

Typhoon Wynne (07W)

	00h	24h	48h	72h
Average	16	107	218	332
# Cases	40	36	30	30

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87072206	1	10.1N	168.8E	72	43	115.7	272.6	45	-5	0	-10	-30
87072212	2	10.7N	167.5E	38	90.8	83.7	246.9	45	-5	-5	-15	-35
87072218	3	10.9N	165.8E	30.6	60.8	176.4	366.8	45	0	-5	-20	-35
87072300	4	10.8N	164.2E	30.1	25.2	195.1	362.8	50	0	-5	-25	-40
87072306	5	10.8N	162.4E	18.9	120.7	277.8	475.5	50	0	-10	-40	-60
87072312	6	11.2N	160.7E	30.6	144.4	289.9	435.2	55	-5	-5	-35	-45
87072318	7	11.6N	159.2E	18.9	129.7	287.4	410.4	60	-5	-15	-40	-35
87072400	8	12.1N	157.6E	8.4	96	216	294.1	65	-5	-25	-30	-5
87072406	9	12.8N	156.2E	0	126	234.3	318.8	70	-5	-30	-30	0
87072412	10	13.6N	154.7E	18	115.3	225.6	367.1	75	-5	-20	-10	5
87072418	11	14.2N	153.1E	37.7	132.1	254.3	402.2	85	0	-10	0	15
87072500	12	15.0N	151.5E	13.1	144.1	255.1	284.5	95	0	-10	5	10
87072506	13	15.7N	150.0E	26	151	163.6	192.9	105	0	-5	5	5
87072512	14	16.4N	148.4E	13	85.2	142.8	218.4	110	-5	-5	0	10
87072518	15	17.1N	146.8E	18.9	79.6	172.5	249.2	115	-5	0	0	5
87072600	16	17.8N	145.3E	17.1	83.1	210.7	402.7	120	0	5	-5	-5
87072606	17	18.4N	143.7E	11.4	68.8	154.4	248.8	125	0	5	-5	5
87072612	18	18.9N	142.0E	6	81.7	200	261.4	125	0	0	-5	10
87072618	19	19.4N	140.7E	11.3	86.6	198.5	229.3	120	0	0	0	15
87072700	20	20.0N	139.3E	5.6	27.6	109.9	161.4	115	0	-15	-20	15
87072706	21	20.6N	138.1E	5.6	52.6	126.5	115.8	115	-5	-20	-10	5
87072712	22	21.3N	136.8E	5.6	64.6	142.9	105.9	120	-10	-10	5	5
87072718	23	22.1N	135.7E	0	44.9	123.3	172.4	115	-5	-5	15	5
87072800	24	23.0N	134.7E	12	76.1	237.3	483.2	110	5	15	50	35
87072806	25	23.9N	133.9E	16.3	99.6	285.8	557.3	110	5	25	45	40
87072812	26	24.8N	133.2E	13.2	97.3	312.1	575.6	105	10	35	35	35
87072818	27	25.7N	132.6E	5.4	86.4	314.3	545.7	100	15	35	25	25
87072900	28	26.8N	132.3E	5.4	56.5	248	364.1	95	15	40	15	5
87072906	29	27.9N	132.1E	6	144.5	397.1	461.5	85	20	30	15	5
87072912	30	29.4N	132.4E	26.2	186.8	417.4	406.4	75	15	10	10	10
87072918	31	30.7N	133.1E	12	206.7	N/A	N/A	65	10	-15	N/A	N/A
87073000	32	31.7N	134.3E	7.9	238.5	N/A	N/A	50	10	-15	N/A	N/A
87073006	33	32.2N	135.9E	16.4	265.1	N/A	N/A	55	5	-15	N/A	N/A
87073012	34	32.2N	138.3E	6	100.3	N/A	N/A	60	0	-5	N/A	N/A
87073018	35	32.3N	140.8E	7.9	117.9	N/A	N/A	60	0	-5	N/A	N/A
87073100	36	32.3N	143.1E	7.9	132.8	N/A	N/A	55	0	-10	N/A	N/A
87073106	37	32.5N	145.5E	16.3	N/A	N/A	N/A	50	0	N/A	N/A	N/A
87073112	38	32.6N	147.8E	7.8	N/A	N/A	N/A	45	-5	N/A	N/A	N/A
87073118	39	32.7N	150.2E	20.2	N/A	N/A	N/A	45	-10	N/A	N/A	N/A
87080100	40	33.6N	152.2E	24	N/A	N/A	N/A	45	-15	N/A	N/A	N/A

Typhoon Alex (08W)

	00h	24h	48h	72h
Average	15	111	204	330
# Cases	22	20	16	12

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87072300	1	10.3N	134.4E	6	102.5	261.5	418	30	0	-5	-5	5
87072306	2	10.6N	132.9E	6	130.9	271.6	461.6	35	0	0	5	0
87072312	3	10.9N	131.3E	18.9	251.1	373.1	517.9	35	0	-5	-20	-10
87072318	4	11.7N	130.1E	13.4	196.4	345.6	553.6	40	0	-10	-20	-10
87072400	5	12.7N	129.3E	48.4	175.9	342	552.6	45	-5	-10	-25	-10
87072406	6	13.9N	128.9E	13.3	61.1	191.1	229.1	50	-10	-10	-25	-10
87072412	7	14.9N	128.1E	8.3	67.2	160.1	206.7	55	0	-5	-10	0
87072418	8	15.7N	127.1E	13	99	154.8	144.4	60	0	-5	-10	5
87072500	9	16.5N	126.0E	34.6	158.6	282.1	305.6	60	5	-5	5	15
87072506	10	17.5N	125.1E	47.3	162.2	177.6	N/A	60	0	-25	-30	N/A
87072512	11	18.4N	124.4E	8.3	32.6	42	N/A	65	0	0	-10	N/A
87072518	12	19.4N	123.7E	5.7	49.4	102.9	N/A	65	0	-5	-5	N/A
87072600	13	20.3N	123.0E	11.3	72.9	146.3	N/A	65	0	-5	0	N/A
87072606	14	21.4N	122.6E	8.2	63.8	126.8	174.5	65	0	-5	15	10
87072612	15	22.6N	122.3E	12	78.6	155.1	191.6	65	0	0	20	15
87072618	16	23.8N	122.1E	6	67.4	134.1	213	65	0	0	15	10
87072700	17	25.2N	121.7E	0	136.6	N/A	N/A	60	0	5	N/A	N/A
87072706	18	26.5N	121.0E	26.3	185.5	N/A	N/A	60	0	10	N/A	N/A
87072712	19	27.8N	120.7E	16	67.5	N/A	N/A	55	0	10	N/A	N/A
87072718	20	29.2N	120.7E	16.8	63.9	N/A	N/A	50	0	10	N/A	N/A
87072800	21	30.7N	120.8E	12	N/A	N/A	N/A	40	5	N/A	N/A	N/A
87072806	22	32.2N	121.1E	19.4	N/A	N/A	N/A	30	0	N/A	N/A	N/A

Super Typhoon Betty (09W)

	00h	24h	48h	72h
Average	7	91	197	257
# Cases	32	30	26	17

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87080900	1	10.2N	132.2E	6	31.8	8.4	113.8	35	0	-10	-45	-45
87080906	2	10.4N	132.1E	13.2	79.1	74.1	130.7	40	5	0	-35	-15
87080912	3	10.7N	131.9E	5.9	8.4	121.8	235.9	45	5	-15	-55	-20
87080918	4	10.9N	131.8E	13.4	37.2	178.9	315.7	45	5	-25	-55	-15
87081000	5	11.3N	131.7E	5.9	94	235.8	362.7	55	0	-45	-55	-15
87081006	6	11.6N	131.6E	8.4	141.8	302.8	437.3	65	0	-50	-35	10
87081012	7	11.9N	131.1E	5.9	83.8	184.4	290.5	85	-5	-40	-10	-5
87081018	8	12.1N	130.4E	0	93.3	186.8	293.4	95	-5	-30	-5	-25
87081100	9	12.2N	129.6E	5.9	67.8	112.9	185.9	110	0	-5	10	-25
87081106	10	12.2N	128.6E	8.4	50.7	124.4	147.3	125	0	10	25	-30
87081112	11	12.2N	127.6E	8.4	42.5	97.6	156	140	0	20	-15	-25
87081118	12	12.3N	126.5E	0	55.6	123.2	310.1	140	0	15	-20	-25
87081200	13	12.4N	125.5E	0	66.6	133.7	184.5	135	0	0	-15	-20
87081206	14	12.7N	124.2E	16.8	59.4	144.4	181.1	125	0	-15	-25	-5
87081212	15	12.9N	122.9E	11.7	54.6	160.8	315.5	120	-5	10	0	10
87081218	16	13.3N	121.7E	8.4	75.8	208.3	342.1	115	-10	-10	-25	-20
87081300	17	13.7N	120.5E	5.8	96.1	231.8	370.5	110	-15	5	-5	-10
87081306	18	14.1N	119.0E	13.3	123.2	289.2	N/A	95	10	5	-15	N/A
87081312	19	14.4N	117.6E	16.7	90.7	303.4	N/A	100	5	-25	-45	N/A
87081318	20	14.8N	116.2E	12	175.5	344.9	N/A	105	0	-25	-30	N/A
87081400	21	15.3N	115.1E	6	151	339.5	N/A	105	0	-25	-25	N/A
87081406	22	15.7N	114.0E	8.3	103.4	287.1	N/A	115	-10	-25	-15	N/A
87081412	23	15.8N	112.7E	0	78.2	241.8	N/A	115	0	-10	5	N/A
87081418	24	15.8N	111.6E	0	54.6	70.2	N/A	115	-5	-10	15	N/A

87081500	25	16.3N	110.8E	13	64	281.9	N/A	115	-5	5	40	N/A
87081506	26	16.7N	110.1E	0	74.5	343.9	N/A	105	-5	10	30	N/A
87081512	27	17.0N	109.2E	5.7	104.3	N/A	N/A	95	-5	15	N/A	N/A
87081518	28	17.3N	108.3E	0	116	N/A	N/A	90	-10	20	N/A	N/A
87081600	29	17.5N	107.5E	0	189.3	N/A	N/A	80	-10	15	N/A	N/A
87081606	30	17.7N	106.8E	0	278.3	N/A	N/A	65	-5	15	N/A	N/A
87081612	31	18.0N	105.6E	23.6	N/A	N/A	N/A	45	0	N/A	N/A	N/A
87081618	32	18.1N	104.3E	62.4	N/A	N/A	N/A	30	0	N/A	N/A	N/A

Typhoon Cary (10W)

	00h	24h	48h	72h
Average	15	89	159	247
# Cases	39	36	33	29

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87081300	1	13.6N	134.0E	6	39.9	79.9	159.4	40	10	20	35	55
87081306	2	14.3N	133.1E	18.4	58.2	120.3	210	45	10	25	40	55
87081312	3	14.9N	132.2E	5.8	78	125.1	208	50	-5	5	15	25
87081318	4	15.3N	131.3E	28.9	125	209.3	317.9	55	0	20	25	35
87081400	5	15.5N	130.4E	23.1	132.5	258.8	410.2	55	10	25	40	40
87081406	6	15.8N	129.6E	31.3	121.8	234.6	426	55	10	20	30	20
87081412	7	16.0N	128.8E	17.3	101.6	243.9	454.5	60	5	10	15	15
87081418	8	16.1N	128.3E	46.5	100.9	236.1	458.8	60	5	5	10	15
87081500	9	16.2N	127.8E	24.7	24	72.2	255.1	65	0	10	5	5
87081506	10	16.3N	127.2E	12	18.2	133.1	284.2	65	0	10	-5	10
87081512	11	16.5N	126.6E	13	78.7	235.9	403.8	65	0	0	0	25
87081518	12	16.7N	126.1E	34.6	67.5	167.7	307.3	70	-5	-20	-30	0
87081600	13	16.9N	125.7E	0	91.6	168.4	302.2	65	0	-10	-10	10
87081606	14	17.0N	125.2E	18.2	96.7	198.3	287	65	5	-10	5	20
87081612	15	16.9N	124.7E	18.2	172.2	249.2	243.8	70	5	-10	20	25
87081618	16	16.8N	124.2E	21	167.7	270	274.2	75	0	-5	20	30
87081700	17	16.5N	123.8E	23.8	94	192.1	259.7	80	-5	0	20	25
87081706	18	16.4N	123.5E	5.8	71.6	174.5	266.9	85	-5	15	15	15
87081712	19	16.2N	123.0E	0	73	168.8	261.2	80	0	10	10	20
87081718	20	16.1N	122.5E	11.5	130.2	210	248.4	75	0	0	15	15
87081800	21	16.0N	121.8E	18.3	122.4	203.2	253.8	70	0	15	20	15
87081806	22	15.7N	120.9E	23.1	87.8	185.7	194.4	60	0	10	10	5
87081812	23	15.4N	120.1E	8.3	59	83.1	46.7	50	0	15	15	-5
87081818	24	15.2N	118.8E	11.6	69.5	153.4	131.1	55	0	15	0	-5
87081900	25	15.2N	117.8E	6	6	93.7	12.9	55	5	20	10	0
87081906	26	15.4N	117.0E	6	26	77.7	29.1	55	5	15	5	0
87081912	27	15.7N	116.2E	13	70.6	43.9	167.3	55	0	0	-5	-5
87081918	28	15.8N	115.1E	25	90.2	78.8	193.3	55	5	5	-10	-5
87082000	29	15.8N	114.2E	18.9	101.7	45.4	106.9	55	0	-15	-25	-10
87082006	30	15.8N	113.4E	11.5	52.1	61.8	N/A	60	-5	-20	-25	N/A
87082012	31	15.9N	112.8E	5.8	56.7	143	N/A	60	5	-20	-20	N/A
87082018	32	16.2N	112.3E	18.9	96.7	134.2	N/A	65	-5	-15	-10	N/A
87082100	33	16.4N	111.7E	6	111	212.1	N/A	65	-10	-20	-5	N/A
87082106	34	16.8N	111.1E	0	108.8	N/A	N/A	70	-15	-20	N/A	N/A
87082112	35	17.4N	110.3E	6	133.9	N/A	N/A	70	-15	-20	N/A	N/A
87082118	36	18.1N	109.1E	12.9	168.7	N/A	N/A	65	-20	-15	N/A	N/A
87082200	37	18.4N	107.8E	24.7	N/A	N/A	N/A	65	-25	N/A	N/A	N/A
87082206	38	18.5N	106.6E	13.3	N/A	N/A	N/A	65	-25	N/A	N/A	N/A
87082212	39	18.7N	105.6E	6	N/A	N/A	N/A	60	-30	N/A	N/A	N/A

Super Typhoon Dinah (11W)

	00h	24h	48h	72h
Average	17	96	172	222
# Cases	42	38	34	30

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87082100	1	12.2N	149.9E	95.1	219.7	357.7	326	25	0	-5	0	-5
87082106	2	12.2N	149.0E	70.4	201.5	193.2	54.6	30	-5	0	10	5
87082112	3	11.8N	148.0E	60	174.9	213.7	213.4	30	0	5	15	10
87082118	4	11.3N	147.0E	40.1	76.2	95	152	35	-5	0	10	15
87082200	5	11.1N	145.7E	30	42.4	85.3	143.4	40	0	20	25	25
87082206	6	11.1N	144.2E	24.7	87.1	105.2	159.6	40	5	25	25	15
87082212	7	11.1N	142.6E	18.7	94.7	139.2	215.5	40	5	25	30	15
87082218	8	11.3N	141.2E	5.9	181.9	188.3	270.7	45	5	25	30	5
87082300	9	11.4N	140.3E	11.8	155.2	208.1	260.5	45	5	-5	5	-15
87082306	10	11.6N	139.7E	23.5	88	151.7	245.5	45	10	5	-5	-5
87082312	11	11.8N	139.0E	17.6	84.3	129.3	165.6	50	5	-5	-25	-15
87082318	12	12.2N	138.2E	18.9	97.3	108.2	136	55	5	5	-25	0
87082400	13	12.8N	137.1E	36.5	75.7	105	124.1	60	0	-5	-30	5
87082406	14	13.5N	135.9E	8.4	55	175.4	254.5	65	0	-20	-25	5
87082412	15	14.0N	134.8E	8.4	71.2	187.3	249.3	70	0	-25	-20	5
87082418	16	14.6N	133.7E	5.8	81	192.1	235.5	75	0	-30	-10	5
87082500	17	15.2N	132.8E	0	51.7	150.6	224.2	85	5	-15	15	15
87082506	18	15.9N	131.8E	8.3	107.8	176.7	255.8	100	0	5	15	15
87082512	19	16.7N	131.1E	8.3	66	114.9	205.2	110	0	15	15	20
87082518	20	17.3N	130.6E	6	46.8	74	144.4	120	5	20	15	30
87082600	21	17.9N	130.2E	16.6	29.4	41.3	81.6	130	0	25	25	35
87082606	22	18.5N	130.0E	5.7	39.8	98.1	108.1	125	-5	-15	-20	-10
87082612	23	19.0N	129.8E	0	55.6	134.8	140.7	120	5	0	-10	-5
87082618	24	19.5N	129.5E	5.7	84.8	148.9	160.7	115	5	-5	-5	-10
87082700	25	19.9N	129.0E	11.3	85.9	149.8	165.3	115	5	5	5	-5
87082706	26	20.1N	128.6E	22.5	65.9	108.1	193.8	115	0	0	0	-10
87082712	27	20.4N	128.2E	5.6	36.8	81.1	282.6	115	0	0	5	-10
87082718	28	20.6N	127.8E	17.9	35.4	110.9	366	115	-5	0	0	-5
87082800	29	21.0N	127.4E	8.2	17.6	144.5	503.3	110	0	10	5	15
87082806	30	21.3N	127.0E	8.2	24.6	180	628	110	-5	5	0	15
87082812	31	21.6N	126.8E	11.2	138	401.9	N/A	105	-5	5	-5	N/A
87082818	32	22.2N	126.5E	6	84.1	266.2	N/A	95	0	-5	-10	N/A
87082900	33	23.0N	126.3E	17.6	129.6	396	N/A	90	5	-5	0	N/A
87082906	34	24.1N	126.2E	12	122.7	456.4	N/A	90	5	-10	10	N/A
87082912	35	25.2N	126.0E	18.8	173	N/A	N/A	85	5	-10	N/A	N/A
87082918	36	26.6N	126.0E	12	158.3	N/A	N/A	85	0	-10	N/A	N/A
87083000	37	28.1N	126.2E	8	166.6	N/A	N/A	85	0	0	N/A	N/A
87083006	38	30.0N	126.6E	12	169.4	N/A	N/A	85	0	-5	N/A	N/A
87083012	39	31.8N	127.0E	15.3	N/A	N/A	N/A	85	-10	N/A	N/A	N/A
87083018	40	34.0N	128.7E	23.2	N/A	N/A	N/A	75	-5	N/A	N/A	N/A
87083100	41	36.8N	130.9E	41.5	N/A	N/A	N/A	65	0	N/A	N/A	N/A
87083106	42	39.6N	133.0E	N/A	N/A	N/A	N/A	55	N/A	N/A	N/A	N/A

Tropical Storm Ed (12W)

	00h	24h	48h	72h
Average	33	120	219	278
# Cases	12	10	6	5

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87082200	1	9.8N	160.8E	36	60.8	192.8	218	25	5	5	25	30
87082206	2	10.3N	159.7E	13.2	41.9	191.2	211.9	25	5	10	20	30
87082212	3	10.8N	158.7E	16.8	90.9	232.7	249	30	0	15	35	55
87082218	4	11.3N	157.7E	13.2	169.6	281.8	302.1	30	0	20	35	55

87082300	5	12.2N	157.1E	35.2	215.7	282.2	411.5	30	-5	15	20	30
87082306	6	12.9N	156.7E	50.7	N/A	N/A	N/A	25	N/A	N/A	N/A	N/A
87082618	7	16.1N	149.1E	37.8	178.6	138.5	N/A	35	-5	15	35	N/A
87082700	8	16.4N	148.4E	54.3	165.6	N/A	N/A	35	0	25	N/A	N/A
87082706	9	17.2N	147.7E	61.1	152.9	N/A	N/A	30	5	20	N/A	N/A
87082712	10	17.8N	146.8E	26.6	36.2	N/A	N/A	30	0	15	N/A	N/A
87082718	11	18.2N	145.9E	18.9	92.4	N/A	N/A	30	0	20	N/A	N/A
87082800	12	18.4N	145.2E	50.7	N/A	N/A	N/A	25	0	N/A	N/A	N/A

Typhoon Freda (13W)

	00h	24h	48h	72h
Average	16	81	181	327
# Cases	50	47	42	34

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87090418	1	12.3N	145.0E	164.1	293.3	579.7	731.2	25	0	-10	-20	-20
87090500	2	13.0N	144.0E	24.7	29.6	286.3	432.4	30	0	-5	0	10
87090506	3	13.6N	142.8E	33.5	70.5	283.8	457.4	35	0	0	5	15
87090512	4	14.3N	141.8E	23.3	317.5	578	798.5	40	0	-5	10	10
87090518	5	14.9N	141.0E	31.4	304.2	552.2	782.6	45	-5	-15	0	-5
87090600	6	14.7N	140.7E	16.7	177.9	307.1	378.3	50	0	5	5	0
87090606	7	14.5N	140.9E	42.3	139.4	234.2	273.7	55	0	5	5	-5
87090612	8	14.6N	141.3E	18.4	110.1	189.3	233.3	60	0	10	15	0
87090618	9	15.0N	141.4E	11.6	23.9	60.3	111.4	65	0	15	15	0
87090700	10	15.2N	141.4E	16.7	23.9	18	85.5	65	0	0	-5	-15
87090706	11	15.3N	141.3E	17.4	33.3	24.9	51.9	70	-5	-10	-25	-25
87090712	12	15.5N	141.2E	18.3	29.2	21.4	69.7	70	0	-10	-25	-20
87090718	13	15.6N	141.0E	16.7	6	18.2	80.4	75	0	0	-15	-5
87090800	14	15.7N	140.8E	0	58.8	29.3	109.3	80	0	-10	-20	10
87090806	15	15.8N	140.7E	6	75	34.4	126.3	85	0	-15	-20	15
87090812	16	16.1N	140.3E	5.8	70	29.5	153.9	90	0	-15	-10	20
87090818	17	16.4N	139.7E	11.5	30	98.2	274.2	95	-5	-20	-5	25
87090900	18	16.4N	139.0E	6	89.3	264.8	510.5	100	0	-15	10	35
87090906	19	16.5N	138.5E	0	92.4	285.3	540.4	110	5	5	30	45
87090912	20	16.7N	138.1E	'13	50	200.7	391.2	115	0	10	30	45
87090918	21	16.9N	137.8E	5.7	94.6	258	467.3	120	0	5	15	25
87091000	22	17.0N	137.5E	13	103.1	273.1	488.1	125	0	10	20	30
87091006	23	17.2N	137.2E	0	74.2	251.2	444.6	125	0	10	20	25
87091012	24	17.3N	137.1E	12.9	97.1	273.8	431.8	120	0	15	25	25
87091018	25	17.5N	137.0E	11.4	121.9	291.9	445.9	115	5	5	15	20
87091100	26	17.7N	137.0E	12.9	105.4	238.4	382.3	110	5	10	20	20
87091106	27	17.9N	137.1E	13.3	94.9	158.8	233.1	105	-5	5	15	20
87091112	28	18.3N	137.3E	8.3	63.3	128.3	188.1	100	-5	5	10	10
87091118	29	18.6N	137.6E	16.5	74	139.2	208	95	-10	0	10	10
87091200	30	19.0N	137.9E	13.3	62.1	122	252.9	90	-10	5	10	15
87091206	31	19.4N	138.3E	12	37.7	101.5	217.5	85	-10	0	5	5
87091212	32	19.8N	138.6E	13.3	58.4	137.4	285.5	80	-10	-5	0	0
87091218	33	20.2N	138.9E	13.3	58.4	142	280.1	75	-10	-5	-5	-5
87091300	34	20.8N	139.2E	8.2	52.8	124.4	225.8	70	-5	-5	0	-5
87091306	35	21.3N	139.4E	6	13.2	96.6	N/A	65	0	0	-5	N/A
87091312	36	22.0N	139.6E	6	24.6	91.5	N/A	65	0	-5	-10	N/A
87091318	37	22.6N	139.8E	12	40.3	129.7	N/A	60	5	-5	-10	N/A
87091400	38	23.3N	139.9E	6	56.9	192.6	N/A	60	-5	-5	-10	N/A
87091406	39	24.0N	140.1E	0	68.8	154.3	N/A	55	0	-5	-10	N/A
87091412	40	24.8N	140.2E	6	94.6	141.4	N/A	55	0	0	-5	N/A
87091418	41	25.6N	140.2E	13.2	84.3	59.7	N/A	55	-5	-5	0	N/A
87091500	42	26.6N	140.2E	18	57.9	43.9	N/A	50	0	0	10	N/A
87091506	43	27.6N	140.1E	8	90.1	N/A	N/A	50	0	-5	N/A	N/A

87091512	44	28.6N	139.9E	12.1	46.6	N/A	N/A	50	0	-5	N/A	N/A
87091518	45	29.6N	140.0E	8	43.2	N/A	N/A	50	0	-5	N/A	N/A
87091600	46	30.4N	140.3E	5.2	26	N/A	N/A	45	0	0	N/A	N/A
87091606	47	31.1N	140.7E	16.5	75.1	N/A	N/A	45	0	10	N/A	N/A
87091612	48	31.9N	141.4E	6	N/A	N/A	N/A	45	0	N/A	N/A	N/A
87091618	49	32.6N	142.3E	30	N/A	N/A	N/A	40	0	N/A	N/A	N/A
87091700	50	33.4N	143.0E	18.7	N/A	N/A	N/A	30	0	N/A	N/A	N/A

Typhoon Gerald (14W)

	00h	24h	48h	72h
Average	20	97	163	193
# Cases	24	20	18	14

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87090418	1	16.3N	126.3E	21.4	167.8	263.2	294.2	35	-10	-10	-30	-45
87090500	2	16.6N	126.6E	71.3	184.2	262.6	265	35	-5	-15	-30	-45
87090506	3	16.9N	126.5E	53.2	143.9	230.9	240.7	40	-5	0	-10	-25
87090512	4	17.1N	126.5E	51.8	122.3	155.9	94.1	45	-5	-10	-15	-30
87090518	5	17.3N	126.5E	17.2	70.7	63.9	82.9	45	-5	-10	-20	-35
87090600	6	17.4N	126.5E	30.5	79.8	54.3	138.1	50	-5	-5	-15	-25
87090606	7	17.5N	126.5E	24.7	48.3	66.7	156.8	55	-5	-5	-15	-15
87090612	8	17.6N	126.4E	13.3	12	102.7	170	60	-5	-10	-30	-10
87090618	9	17.8N	126.4E	6	66.4	105.1	134.2	60	-5	-15	-35	-5
87090700	10	18.0N	126.3E	12.9	115.7	198.6	206.8	65	-5	-15	-25	20
87090706	11	18.4N	126.0E	11.4	105.3	200.6	245.5	70	-5	-10	-15	40
87090712	12	19.0N	125.6E	12.8	100.3	186.7	232.6	75	-5	-20	-5	70
87090718	13	19.5N	125.1E	8.2	87.5	138.7	208	80	5	0	35	70
87090800	14	20.0N	124.7E	13.3	78.7	155	241.8	85	5	0	45	65
87090806	15	20.2N	124.0E	13.3	106.4	178.7	N/A	90	0	5	40	N/A
87090812	16	20.4N	123.2E	12.7	74.7	212.7	N/A	100	0	20	70	N/A
87090818	17	20.6N	122.4E	0	78.2	156.3	N/A	105	-5	0	30	N/A
87090900	18	20.9N	121.9E	16.8	98	199.3	N/A	105	0	10	20	N/A
87090906	19	21.3N	121.2E	8.2	100.2	N/A	N/A	100	0	20	N/A	N/A
87090912	20	21.7N	120.5E	8.2	111	N/A	N/A	90	0	40	N/A	N/A
87090918	21	22.5N	120.0E	16.6	N/A	N/A	N/A	80	0	N/A	N/A	N/A
87091000	22	23.2N	119.5E	12.6	N/A	N/A	N/A	70	-5	N/A	N/A	N/A
87091006	23	24.1N	119.0E	12.5	N/A	N/A	N/A	55	0	N/A	N/A	N/A
87091012	24	25.0N	118.5E	12.4	N/A	N/A	N/A	30	0	N/A	N/A	N/A

Super Typhoon Holly (15W)

	00h	24h	48h	72h
Average	23	122	275	455
# Cases	43	34	33	31

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87090506	1	12.2N	168.3E	11.7	60.6	65.1	78.9	30	0	-20	-45	-55
87090512	2	12.2N	167.8E	34.8	113.3	95.8	106.1	35	-5	-25	-50	-55
87090518	3	12.3N	167.1E	56.2	130.7	108.3	131.9	45	-10	-25	-50	-55
87090600	4	12.4N	166.2E	12	72.2	183.6	306.1	45	0	-15	-30	-25
87090606	5	12.6N	165.5E	37.1	120.2	258.9	421	55	-5	-20	-30	-30
87090612	6	12.9N	164.6E	6	49.4	150.1	333.4	65	-5	-30	-35	-50
87090618	7	13.3N	163.7E	26.3	110.5	221.6	428.9	70	-5	-20	-25	-35
87090700	8	13.8N	163.0E	26.7	106.6	211.9	423.2	80	-10	-25	-25	-20
87090706	9	14.3N	162.2E	21.4	112.1	225.6	466.1	90	-5	-10	-15	0
87090712	10	14.8N	161.4E	32.2	122.4	269.6	569.3	100	-5	0	-10	10
87090718	11	15.3N	160.7E	25	124.7	313.9	643.6	105	0	0	-5	15
87090800	12	15.8N	159.9E	8.3	67.6	310.9	675.3	110	-5	0	0	10
87090806	13	16.3N	159.2E	13	72.5	344.4	737.5	115	-5	-5	5	15

87090812	14	16.8N	158.4E	5.7	109.6	413.6	810.4	115	0	-10	10	20
87090818	15	17.3N	157.6E	5.7	173.2	439.5	755.5	120	-5	-10	10	30
87090900	16	17.8N	156.8E	13.3	191.8	490.7	757	125	0	0	15	40
87090906	17	18.3N	156.2E	23.6	192.3	505.2	743.1	135	-5	10	20	45
87090912	18	18.6N	155.9E	21.3	135.6	392.1	568.8	140	-5	20	30	65
87090918	19	18.9N	155.8E	26.6	144	350	506.4	140	-5	15	35	65
87091000	20	19.4N	155.6E	18	132.9	292.1	395.5	135	5	15	35	35
87091006	21	19.9N	155.5E	12.8	134.8	242.3	376.7	130	5	10	30	25
87091012	22	20.5N	155.5E	12	121.9	233.6	378.7	125	5	15	45	45
87091018	23	21.2N	155.6E	8.2	118.7	146.4	288.6	125	5	15	40	45
87091100	24	22.0N	155.8E	8.2	76	168.1	340.3	120	10	10	10	15
87091106	25	23.1N	156.0E	6	113.8	442.1	445.8	115	10	15	5	10
87091112	26	24.0N	156.0E	12	161.6	334.8	495.1	110	5	20	10	15
87091118	27	24.8N	155.7E	13.2	159.6	314.9	482	100	5	15	15	20
87091200	28	25.6N	155.3E	18	170.4	334.3	448.3	90	5	10	20	20
87091206	29	26.0N	155.2E	10.8	117.4	264.7	330.9	80	10	5	15	20
87091212	30	26.4N	155.2E	12.3	131.5	263.2	334.1	70	15	15	20	15
87091218	31	26.7N	155.4E	24.1	138.7	234.3	349.8	65	10	15	20	15
87091300	32	26.9N	155.6E	16.1	102.1	157.1	N/A	65	0	10	15	N/A
87091306	33	27.2N	156.0E	144	135.5	297.9	N/A	65	0	5	10	N/A
87091312	34	27.4N	156.5E	55.7	125.4	N/A	N/A	55	0	5	N/A	N/A
87091318	35	27.7N	157.1E	27.2	N/A	N/A	N/A	50	0	N/A	N/A	N/A
87091400	36	28.0N	157.5E	49.1	N/A	N/A	N/A	45	0	N/A	N/A	N/A
87091406	37	28.3N	157.9E	51.7	N/A	N/A	N/A	45	0	N/A	N/A	N/A
87091412	38	28.6N	158.2E	31.9	N/A	N/A	N/A	35	10	N/A	N/A	N/A
87091418	39	28.9N	158.3E	12.1	N/A	N/A	N/A	30	10	N/A	N/A	N/A
87091500	40	29.2N	158.5E	16.8	N/A	N/A	N/A	30	5	N/A	N/A	N/A
87091506	41	29.5N	158.5E	20.8	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87091512	42	29.8N	158.6E	5.2	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87091518	43	30.0N	158.7E	15.9	N/A	N/A	N/A	25	0	N/A	N/A	N/A

Typhoon Ian (16W)

	00h	24h	48h	72h
Average	14	82	201	344
# Cases	33	27	23	21

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87092306	1	16.2N	146.8E	53.2	100.5	155.5	241.8	25	0	-15	-35	-50
87092312	2	16.3N	146.4E	21	58.7	116.3	213.7	30	0	-15	-40	-40
87092318	3	16.2N	146.0E	8.3	91.6	180.8	288.1	35	0	-15	-45	-30
87092400	4	16.3N	145.5E	29.4	117	203.7	278	45	-5	-20	-50	-20
87092406	5	16.7N	144.9E	25.9	117.3	221.9	270.1	50	-5	-25	-40	-15
87092412	6	17.4N	144.4E	8.3	68.2	186.1	257	55	-5	-35	-30	0
87092418	7	17.8N	143.8E	18.9	83	222.2	304.4	60	-10	-35	-15	10
87092500	8	18.3N	143.3E	5.7	70.3	212.4	297.8	70	-5	-25	5	30
87092506	9	18.7N	142.7E	6	66.2	175.3	264.2	80	-10	-15	10	35
87092512	10	19.3N	142.1E	12	79.8	123	223.3	90	0	20	45	50
87092518	11	20.0N	141.4E	13.3	53.6	154.9	327.7	100	5	30	35	40
87092600	12	20.6N	140.8E	5.6	50.8	240.5	483.7	110	0	0	-5	0
87092606	13	21.3N	140.3E	8.2	112.9	335.3	593.2	105	0	0	-5	-5
87092612	14	22.0N	139.7E	6	152.5	366.7	626.1	100	0	-5	-5	-10
87092618	15	22.6N	139.0E	6	150	358.9	625.6	95	0	-10	0	-5
87092700	16	23.1N	138.6E	12	157.5	373.1	646.6	90	0	-5	0	-10
87092706	17	23.2N	138.3E	6	111	246.5	425.3	90	0	0	-5	-10
87092712	18	23.2N	138.1E	8.1	81.2	159.4	285.9	85	-5	0	-5	-5
87092718	19	23.3N	138.0E	25.1	109.3	177	248.8	85	-10	0	0	-5
87092800	20	23.4N	138.0E	17.6	77	154.7	197.9	80	-5	-5	-5	-10
87092806	21	23.5N	138.0E	22.8	60.7	101.4	128.2	75	-5	-5	-5	-10

87092812	22	23.6N	138.0E	5.5	30.5	88.3	N/A	70	-5	-10	-5	N/A
87092818	23	23.7N	138.0E	12	24.6	72.7	N/A	65	-5	-10	-10	N/A
87092900	24	23.8N	137.8E	21.1	8.1	N/A	N/A	65	-5	-15	N/A	N/A
87092906	25	23.9N	137.5E	11	31.9	N/A	N/A	65	-10	-20	N/A	N/A
87092912	26	23.9N	137.3E	8.1	24.9	N/A	N/A	65	-10	-15	N/A	N/A
87092918	27	24.0N	137.1E	17.5	N/A	N/A	N/A	60	-10	N/A	N/A	N/A
87093000	28	24.2N	136.9E	8.1	149.4	N/A	N/A	60	-15	-20	N/A	N/A
87093006	29	24.5N	136.8E	12	N/A	N/A	N/A	60	-20	N/A	N/A	N/A
87093012	30	24.8N	136.7E	6	N/A	N/A	N/A	55	-15	N/A	N/A	N/A
87093018	31	25.3N	137.1E	12.4	N/A	N/A	N/A	55	-20	N/A	N/A	N/A
87100100	32	26.1N	137.9E	12	N/A	N/A	N/A	55	-20	N/A	N/A	N/A
87100106	33	26.9N	138.3E	18.8	N/A	N/A	N/A	55	-25	N/A	N/A	N/A

Tropical Depression 17W

	00h	24h	48h	72h
Average	21	81	N/A	N/A
# Cases	7	3	0	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87092418	1	17.0N	161.3E	68.9	155.5	N/A	N/A	30	0	15	N/A	N/A
87092500	2	17.0N	160.7E	17.2	45.7	N/A	N/A	30	0	5	N/A	N/A
87092506	3	16.9N	160.1E	8.3	43.5	N/A	N/A	30	-5	15	N/A	N/A
87092512	4	16.8N	159.4E	13	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87092518	5	16.8N	158.7E	8.3	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87092600	6	16.7N	157.9E	23.8	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87092606	7	16.4N	157.3E	8.3	N/A	N/A	N/A	25	0	N/A	N/A	N/A

Tropical Storm June (18W)

	00h	24h	48h	72h
Average	33	165	66	N/A
# Cases	9	2	2	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87092900	1	23.7N	155.8E	18.8	169.8	84.7	N/A	35	0	5	0	N/A
87092906	2	25.2N	155.0E	54	161.4	47.6	N/A	40	-5	5	5	N/A
87092912	3	26.8N	154.1E	49.2	N/A	N/A	N/A	35	-5	N/A	N/A	N/A
87092918	4	28.0N	152.3E	40.1	N/A	N/A	N/A	35	-5	N/A	N/A	N/A
87093000	5	28.2N	149.7E	29.1	N/A	N/A	N/A	35	-5	N/A	N/A	N/A
87093006	6	28.1N	148.7E	63.5	N/A	N/A	N/A	35	-5	N/A	N/A	N/A
87093012	7	28.4N	148.6E	5.3	N/A	N/A	N/A	35	0	N/A	N/A	N/A
87093018	8	29.2N	148.7E	31.8	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87100100	9	29.9N	149.1E	7.9	N/A	N/A	N/A	30	0	N/A	N/A	N/A

Typhoon Kelly (19W)

	00h	24h	48h	72h
Average	16	110	183	289
# Cases	28	25	21	17

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87101000	1	12.8N	137.4E	34.8	213.1	305.3	459.2	30	0	-5	-5	0
87101006	2	13.3N	137.6E	68.7	243.1	396.9	587.8	35	-5	-10	-5	0
87101012	3	14.0N	137.7E	26.2	152.5	283	440.8	40	-5	0	5	15
87101018	4	14.7N	137.8E	16.7	54.9	190.2	323.7	45	0	5	20	25
87101100	5	15.3N	137.9E	25	145.2	286.7	413.8	50	0	5	15	25
87101106	6	15.7N	137.7E	18.9	141.1	265.9	410.8	55	0	10	20	30
87101112	7	16.0N	137.6E	5.8	45.6	81.1	138.7	55	5	0	15	25
87101118	8	16.2N	137.3E	26	120.5	174.6	216.1	60	5	10	15	25
87101200	9	16.4N	137.2E	18.3	92.9	157.5	207	65	0	10	20	25

87101206	10	16.8N	137.2E	23	41.5	94.6	92.2	65	0	10	20	25
87101212	11	17.3N	137.2E	8.3	24.7	117.3	148.2	70	0	20	20	20
87101218	12	17.8N	137.1E	6	47.7	147.8	169.1	70	5	20	25	25
87101300	13	18.3N	136.8E	8.3	76.8	174	182.7	75	5	10	20	0
87101306	14	18.9N	136.4E	8.3	44.9	92.1	177.9	75	0	-15	-35	-45
87101312	15	19.5N	136.1E	8.2	88.5	103.3	276.8	75	0	-20	-40	-35
87101318	16	20.2N	135.7E	12	102.8	92.5	335.6	80	-5	-20	-40	-25
87101400	17	21.3N	135.2E	8.2	97.9	88	336.9	80	-5	-20	-30	0
87101406	18	22.1N	134.5E	16.4	80.1	88.2	N/A	80	-5	-20	-30	N/A
87101412	19	23.0N	133.7E	13.2	90.7	193.1	N/A	85	-10	-25	-25	N/A
87101418	20	24.0N	133.0E	12.5	53.1	216.7	N/A	85	-10	-30	-20	N/A
87101500	21	25.0N	132.2E	5.4	38.7	294.4	N/A	90	-5	-15	10	N/A
87101506	22	25.8N	131.9E	6	151.6	N/A	N/A	90	-5	-15	N/A	N/A
87101512	23	26.7N	131.8E	6	126.1	N/A	N/A	95	-15	-10	N/A	N/A
87101518	24	27.7N	131.9E	10.6	211.5	N/A	N/A	95	-15	-5	N/A	N/A
87101600	25	29.0N	132.4E	28.8	279.7	N/A	N/A	90	-20	5	N/A	N/A
87101606	26	30.4N	133.0E	16.6	N/A	N/A	N/A	90	-30	N/A	N/A	N/A
87101612	27	32.2N	133.4E	19.4	N/A	N/A	N/A	80	-25	N/A	N/A	N/A
87101618	28	34.2N	134.4E	N/A	N/A	N/A	N/A	70	N/A	N/A	N/A	N/A

Super Typhoon Lynn (20W)

	00h	24h	48h	72h
Average	17	89	184	298
# Cases	44	41	39	31

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87101606	1	13.0N	155.3E	35.1	238.8	341.6	412.8	35	0	-10	-15	-30
87101612	2	13.2N	153.9E	24.1	147.2	170.7	248.3	35	0	-5	-5	-20
87101618	3	13.3N	153.2E	13.1	72.6	68.1	164.5	40	0	-5	-5	-25
87101700	4	13.3N	152.3E	16.7	36.5	114.1	126.1	45	0	0	-5	-30
87101706	5	13.3N	151.3E	8.4	76.7	144.5	133.1	55	-10	-5	-15	-30
87101712	6	13.2N	150.1E	23.4	100.9	157	145.8	55	-5	-10	-30	-30
87101718	7	13.3N	148.9E	8.4	99	166.6	190.9	60	-5	-10	-35	-25
87101800	8	13.6N	147.6E	12	146.8	223.4	251.2	65	-5	-10	-45	-25
87101806	9	14.0N	146.6E	5.8	26	12.9	53.7	70	-5	-15	-40	-5
87101812	10	14.6N	145.7E	13.1	34.5	37.3	89	75	-5	-20	-35	-15
87101818	11	15.1N	145.0E	11.6	6	13.3	131.3	80	-10	-35	-40	-10
87101900	12	15.7N	144.3E	16.7	40.1	98	245.8	90	-5	-40	-30	20
87101906	13	16.2N	143.5E	8.3	26.6	149.4	353.7	100	-10	-35	-10	25
87101912	14	16.6N	142.7E	6	39.9	145.7	256.6	115	-20	-25	-5	20
87101918	15	16.9N	141.8E	8.3	49.6	173.1	280.2	125	-10	-5	20	25
87102000	16	17.3N	141.1E	13.3	107.5	290.9	472.6	140	0	5	40	40
87102006	17	17.6N	140.2E	18.9	148.7	332.3	530.4	140	0	15	25	25
87102012	18	17.8N	139.2E	11.4	146.5	378.9	559	140	0	15	25	20
87102018	19	18.0N	138.0E	17.1	168.1	392.4	558.7	140	-5	10	20	10
87102100	20	18.0N	136.7E	30.9	145.9	342.6	466.6	140	-10	20	20	5
87102106	21	18.0N	135.3E	24.8	140.4	308.5	395.7	125	0	15	15	5
87102112	22	18.0N	134.0E	11.4	81.8	117.9	118.9	125	-5	10	5	5
87102118	23	18.0N	132.5E	26.6	74.4	34.5	146.7	115	0	10	0	5
87102200	24	18.0N	130.9E	8.3	36.4	99.6	270.2	100	5	5	-15	-5
87102206	25	18.0N	129.3E	5.7	62.4	162.2	347.7	100	0	-10	-25	-20
87102212	26	18.1N	127.8E	6	45.9	198	393.6	100	-5	-20	-15	-15
87102218	27	18.1N	126.3E	12.9	97.8	297.3	530.8	95	-5	-25	-10	-10
87102300	28	18.3N	124.9E	12.9	113.6	315.8	514	90	0	-25	-10	-10
87102306	29	18.5N	123.6E	6	107.5	260	391	90	0	-20	-5	5
87102312	30	18.8N	122.5E	11.4	118.5	235.5	N/A	90	-5	-10	-5	N/A
87102318	31	19.1N	121.6E	17	118.2	257.5	N/A	90	-5	0	5	N/A
87102400	32	19.4N	120.9E	12.8	75.3	174.2	229.4	90	-5	0	10	5

87102406	33	19.7N	120.3E	16.5	98.4	178.9	230.8	85	-5	0	15	5
87102412	34	20.0N	119.9E	0	78.6	149.1	N/A	75	0	5	15	N/A
87102418	35	20.3N	119.6E	30.6	126.4	196.6	N/A	65	5	10	0	N/A
87102500	36	20.6N	119.3E	28.7	95.6	147.4	N/A	65	0	5	0	N/A
87102506	37	20.9N	119.1E	24.6	17.8	68.1	N/A	60	5	10	5	N/A
87102512	38	21.1N	119.0E	12.7	69.7	179.4	N/A	55	5	10	5	N/A
87102518	39	21.3N	118.9E	12.7	91	N/A	N/A	45	10	5	N/A	N/A
87102600	40	21.5N	118.7E	12.7	68.7	49.3	N/A	45	0	-5	-5	N/A
87102606	41	21.7N	118.2E	23.1	73.4	N/A	N/A	40	-5	-10	N/A	N/A
87102612	42	21.6N	117.8E	66.9	N/A	N/A	N/A	35	-5	N/A	N/A	N/A
87102618	43	21.5N	117.6E	73.5	N/A	N/A	N/A	35	-5	N/A	N/A	N/A
87102700	44	21.3N	117.3E	11.2	N/A	N/A	N/A	35	-10	N/A	N/A	N/A

Tropical Storm Maury (21W)

	00h	24h	48h	72h
Average	27	107	162	183
# Cases	29	19	13	12

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87111106	1	14.7N	133.5E	8.3	133.4	217.2	339.6	30	0	25	35	30
87111112	2	15.0N	132.9E	23.2	141.9	223.6	279.7	30	0	30	35	45
87111118	3	15.0N	132.4E	13.3	159.7	288.9	324.9	25	5	15	20	35
87111200	4	14.5N	132.3E	42	N/A	N/A	N/A	20	5	N/A	N/A	N/A
87111306	5	13.7N	127.6E	18.9	92.6	151.9	171.5	30	0	15	15	20
87111312	6	13.6N	126.9E	66.7	221.7	349.7	395.1	30	0	10	20	15
87111318	7	13.5N	126.2E	88.4	221.8	304.3	317.1	30	0	0	10	5
87111400	8	13.5N	125.6E	5.8	25.1	88.5	141.8	30	0	5	0	0
87111406	9	13.5N	125.0E	16.7	83.7	N/A	N/A	25	0	0	N/A	N/A
87111412	10	13.5N	124.3E	8.4	N/A	N/A	N/A	25	0	N/A	N/A	N/A
87111418	11	13.4N	123.6E	26.2	N/A	N/A	N/A	25	0	N/A	N/A	N/A
87111500	12	13.2N	122.7E	13.1	N/A	N/A	N/A	25	0	N/A	N/A	N/A
87111506	13	13.0N	122.0E	21.3	46.8	111.6	50.1	25	5	10	0	20
87111512	14	12.8N	121.0E	13.1	76.9	102.2	50.7	25	5	5	10	25
87111518	15	12.8N	119.9E	12	76.8	47.4	42.4	25	5	0	10	30
87111600	16	12.8N	118.6E	21.3	87.1	52.9	40	30	0	0	10	20
87111606	17	12.9N	117.3E	12	72.6	62.9	47.3	30	0	-5	15	10
87111612	18	13.3N	116.1E	30.6	42.5	113.8	N/A	35	0	5	0	N/A
87111618	19	13.5N	115.1E	12	78.8	N/A	N/A	40	-5	0	N/A	N/A
87111700	20	13.5N	114.2E	29.5	144.3	N/A	N/A	40	-5	5	N/A	N/A
87111706	21	13.4N	113.3E	72.5	200.5	N/A	N/A	45	-10	-5	N/A	N/A
87111712	22	13.0N	112.8E	110.5	N/A	N/A	N/A	40	-5	N/A	N/A	N/A
87111718	23	13.0N	112.3E	30.6	N/A	N/A	N/A	40	-10	N/A	N/A	N/A
87111800	24	13.0N	111.9E	39.4	N/A	N/A	N/A	35	-5	N/A	N/A	N/A
87111806	25	13.0N	111.5E	8.4	42.6	N/A	N/A	35	5	5	N/A	N/A
87111812	26	12.9N	110.9E	5.8	88.7	N/A	N/A	35	5	10	N/A	N/A
87111818	27	12.8N	110.3E	8.4	N/A	N/A	N/A	30	5	N/A	N/A	N/A
87111900	28	12.7N	109.6E	21.3	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87111906	29	12.3N	108.8E	18.9	N/A	N/A	N/A	25	0	N/A	N/A	N/A

Super Typhoon Nina (22W)

	00h	24h	48h	72h
Average	17	138	235	279
# Cases	40	36	32	30

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87111912	1	4.6N	159.0E	37.8	289	544.1	725.9	30	0	0	10	25
87111918	2	4.8N	157.7E	48.2	279.4	492.6	592	35	0	-5	15	25
87112000	3	5.2N	156.2E	49.3	217	391.8	520.3	40	5	5	25	25

87112006	4	5.8N	154.6E	8.5	182.6	353	466.7	45	0	5	25	25
87112012	5	6.5N	152.9E	13.3	114	224.7	281.4	50	-5	0	15	25
87112018	6	7.2N	151.3E	6	148.8	222.5	236.7	60	-15	0	10	20
87112100	7	8.0N	149.6E	18.8	148.6	257.9	240.5	60	-5	5	5	25
87112106	8	8.7N	147.8E	30.3	129.7	206.1	155.3	60	-5	0	0	15
87112112	9	9.5N	146.0E	13.4	81	180.3	194.8	65	-10	-5	-5	0
87112118	10	10.0N	144.3E	29.5	34.8	78.9	156.1	65	-5	0	0	-5
87112200	11	10.3N	142.7E	8.4	64.5	114.2	162.1	65	0	-5	5	-15
87112206	12	10.7N	141.0E	0	84.2	148.2	206.3	70	0	-5	0	-20
87112212	13	11.0N	139.3E	12	69.5	150.5	235.1	75	0	5	5	-30
87112218	14	11.1N	137.8E	24.7	56.8	146.9	213.7	80	5	10	0	-15
87112300	15	11.2N	136.1E	6	100.5	165	115.3	85	5	20	-10	5
87112306	16	11.5N	134.6E	13.4	137	180.2	77.6	90	0	0	-35	-15
87112312	17	11.8N	133.4E	13.2	76.9	63	110.9	90	0	-20	-70	-30
87112318	18	11.9N	132.5E	6	42	97.4	179.6	95	-5	-30	-55	-35
87112400	19	11.9N	131.6E	5.9	36.5	122.2	219.5	90	0	-30	-30	-35
87112406	20	12.0N	130.6E	6	46.4	187	276.7	100	-10	-55	-30	-35
87112412	21	12.1N	129.6E	8.4	63.2	205	304.7	105	-20	-70	-30	-30
87112418	22	12.3N	128.5E	5.9	111.7	241.6	290.7	115	-20	-30	-20	-10
87112500	23	12.6N	127.4E	18.6	181.3	329.1	309.1	125	-30	-10	-15	0
87112506	24	12.8N	126.1E	5.9	188	333.5	264.5	135	-20	10	5	10
87112512	25	13.0N	124.5E	13.1	108.8	199.4	281.2	145	-10	5	15	30
87112518	26	13.2N	122.8E	13.1	92.8	228.5	356.1	130	0	5	10	30
87112600	27	13.5N	121.0E	8.4	106.9	162.6	205.1	110	0	-5	5	45
87112606	28	14.0N	119.3E	13.1	99.8	156.9	240.9	95	0	0	-10	45
87112612	29	14.6N	117.8E	6	72.2	137.3	361.9	95	-10	-5	-15	10
87112618	30	15.2N	116.4E	5.8	96.7	215.9	400	100	0	5	10	10
87112700	31	15.9N	115.1E	6	195.8	539.8	N/A	100	0	-5	5	N/A
87112706	32	16.7N	113.8E	8.3	249.3	N/A	N/A	95	5	-15	N/A	N/A
87112712	33	17.5N	113.0E	0	311.1	N/A	N/A	95	-5	-20	N/A	N/A
87112718	34	18.6N	112.7E	5.7	238.9	N/A	N/A	95	0	10	N/A	N/A
87112800	35	19.3N	112.8E	5.7	226.2	448.2	N/A	95	5	30	20	N/A
87112806	36	19.8N	113.1E	8.2	301.8	N/A	N/A	100	0	35	N/A	N/A
87112812	37	20.3N	114.0E	11.3	N/A	N/A	N/A	80	-5	N/A	N/A	N/A
87112818	38	20.0N	115.0E	37	N/A	N/A	N/A	60	10	N/A	N/A	N/A
87112900	39	19.1N	115.4E	169.8	N/A	N/A	N/A	50	10	N/A	N/A	N/A
87112906	40	18.2N	115.4E	N/A	N/A	N/A	N/A	40	N/A	N/A	N/A	N/A

Tropical Storm Ogden (23W)

	00h	24h	48h	72h
Average	26	99	N/A	N/A
# Cases	4	2	0	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87112406	1	12.0N	111.3E	13.2	94	N/A	N/A	35	-5	5	N/A	N/A
87112412	2	12.3N	110.4E	18.6	104.1	N/A	N/A	40	-10	10	N/A	N/A
87112418	3	12.7N	109.4E	47.5	N/A	N/A	N/A	45	-10	N/A	N/A	N/A
87112500	4	13.5N	108.5E	26.7	N/A	N/A	N/A	35	-10	N/A	N/A	N/A

Typhoon Phyllis (24W)

	00h	24h	48h	72h
Average	16	129	171	196
# Cases	34	25	13	13

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87121018	1	7.3N	146.1E	21.6	122.3	169.3	232.9	25	5	10	25	50
87121100	2	8.1N	144.6E	8.4	131.6	246.1	300.4	30	0	5	25	35
87121106	3	8.9N	143.5E	13.3	152.9	N/A	N/A	30	0	5	N/A	N/A
87121112	4	10.0N	142.9E	8.4	172.2	N/A	N/A	30	0	5	N/A	N/A

87121118	5	10.9N	142.2E	18.7	182.3	N/A	N/A	35	0	10	N/A	N/A
87121200	6	11.6N	141.3E	6	226.9	N/A	N/A	35	0	10	N/A	N/A
87121206	7	12.2N	140.7E	0	163	N/A	N/A	35	0	10	N/A	N/A
87121212	8	12.5N	140.6E	32.2	198.1	N/A	N/A	35	0	0	N/A	N/A
87121218	9	12.7N	140.5E	55.2	261.7	N/A	N/A	35	0	0	N/A	N/A
87121300	10	12.9N	140.4E	66	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87121306	11	13.2N	140.2E	54.3	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87121312	12	13.3N	139.4E	18.5	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87121318	13	13.1N	138.6E	11.7	N/A	N/A	N/A	30	-5	N/A	N/A	N/A
87121400	14	12.9N	137.5E	5.8	N/A	N/A	N/A	30	-5	N/A	N/A	N/A
87121418	15	11.7N	132.3E	0	67	146.9	184.1	45	0	-25	-40	5
87121500	16	11.3N	130.6E	5.9	54.3	132.6	130.2	55	0	-40	-35	15
87121506	17	11.4N	128.9E	6	80.5	169.3	171.2	65	-5	-35	-25	15
87121512	18	11.5N	127.3E	6	119.6	234.2	218.2	75	0	-25	5	45
87121518	19	11.7N	125.7E	26.4	203.6	310.6	270.3	90	-15	-20	30	40
87121600	20	11.8N	124.8E	16.8	75.7	8.4	35.6	100	0	5	45	40
87121606	21	12.2N	124.1E	8.4	75.6	168.6	132.4	90	-5	-5	35	20
87121612	22	12.6N	123.4E	5.9	79.7	132.5	128.7	85	-5	5	25	15
87121618	23	12.8N	122.8E	8.4	64.4	150.7	200.8	80	0	35	25	15
87121700	24	12.9N	122.2E	8.4	105.8	168.3	251.2	75	0	35	20	20
87121706	25	12.9N	121.6E	11.7	163.6	188.8	294.9	70	5	35	25	20
87121712	26	12.9N	121.0E	11.7	63.8	N/A	N/A	60	0	10	N/A	N/A
87121718	27	12.7N	120.3E	13.4	N/A	N/A	N/A	40	0	N/A	N/A	N/A
87121800	28	12.2N	119.3E	37.9	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87121806	29	11.7N	118.1E	5.9	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87121812	30	12.2N	117.1E	6	71.1	N/A	N/A	30	0	5	N/A	N/A
87121818	31	12.6N	116.3E	0	60.6	N/A	N/A	35	0	5	N/A	N/A
87121900	32	12.9N	115.6E	13.1	144.4	N/A	N/A	35	0	10	N/A	N/A
87121906	33	12.9N	114.8E	26.7	203.3	N/A	N/A	30	0	10	N/A	N/A
87121912	34	12.7N	114.1E	13.4	N/A	N/A	N/A	25	5	N/A	N/A	N/A

Typhoon Peke (02C)

	00h	24h	48h	72h
Average	19	145	310	247
# Cases	23	18	11	5

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 WE	48 WE	72 WE
87092800	1	23.5N	180.3E	12.5	39.5	215.5	300.9	75	5	-30	-40	-40
87092806	2	23.9N	180.0E	6	105.2	294	295.1	75	0	-30	-35	-25
87092812	3	24.4N	179.4E	12	105.2	273.3	192	75	0	-30	-35	-20
87092818	4	24.7N	178.4E	6	117.3	228.1	N/A	90	-20	-40	-45	N/A
87092900	5	25.2N	177.2E	10.9	146.1	205.7	232	100	-20	-25	-25	-10
87092906	6	25.7N	176.0E	12	168.7	162.3	219.4	100	-20	-25	-15	-5
87092912	7	26.4N	174.7E	17.2	115.9	157.9	N/A	100	-20	-30	-15	N/A
87092918	8	27.2N	173.2E	12.2	78.4	N/A	N/A	100	-25	-40	N/A	N/A
87093000	9	28.4N	171.9E	48	83.7	254	N/A	100	-25	-35	-20	N/A
87093006	10	29.4N	170.7E	5.2	163.4	503.8	N/A	100	-25	-25	-20	N/A
87093012	11	30.2N	169.9E	20.7	223.5	560.8	N/A	100	-25	-15	-15	N/A
87093018	12	30.9N	169.2E	13.1	195.1	558.1	N/A	95	-25	-10	-15	N/A
87100100	13	31.4N	169.0E	18	253.3	N/A	N/A	90	-25	-20	N/A	N/A
87100106	14	31.8N	169.1E	13	238.4	N/A	N/A	80	-15	-15	N/A	N/A
87100112	15	31.9N	169.5E	6	210.1	N/A	N/A	75	-10	-10	N/A	N/A
87100118	16	31.7N	170.0E	7.9	149.8	N/A	N/A	65	-10	-15	N/A	N/A
87100200	17	31.0N	170.4E	27.3	122.2	N/A	N/A	65	-10	-10	N/A	N/A
87100206	18	30.4N	170.8E	33.8	111	N/A	N/A	60	-10	-5	N/A	N/A
87100212	19	29.8N	171.5E	15.9	N/A	N/A	N/A	55	-15	N/A	N/A	N/A
87100218	20	29.4N	172.1E	24.6	N/A	N/A	N/A	50	-15	N/A	N/A	N/A
87100300	21	28.9N	172.6E	42	N/A	N/A	N/A	45	-10	N/A	N/A	N/A
87100306	22	28.0N	173.4E	67.9	N/A	N/A	N/A	35	-5	N/A	N/A	N/A
87100312	23	27.9N	174.6E	16	N/A	N/A	N/A	35	-5	N/A	N/A	N/A

b. NORTH INDIAN OCEAN

This section includes verification statistics for each warning in the North Indian Ocean during 1987. Pre- and post- warning best track positions are not printed, but are available on floppy diskettes by request.

JTWC FORECAST TRACK AND INTENSITY ERRORS BY WARNING

TROPICAL CYCLONE 01B

	00h	24h	48h	72h
Average	23	77	90	254
# Cases	11	10	6	2

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 ER	48 ER	72 ER
87020100	1	8.7N	85.2E	34.7	181.6	254.1	311.1	75	0	0	20	40
87020106	2	9.6N	85.4E	38.1	133.1	129.5	197.1	35	0	-5	20	30
87020112	3	10.6N	85.8E	26.5	73.3	74.5	N/A	40	0	0	30	N/A
87020118	4	11.6N	86.3E	18.6	17.4	29.1	N/A	45	-5	5	30	N/A
87020200	5	12.5N	86.8E	17.6	28.8	21.3	N/A	50	0	20	40	N/A
87020206	6	13.5N	87.4E	17.5	74.9	34.4	N/A	55	0	15	20	N/A
87020212	7	14.4N	87.8E	21.2	66.3	N/A	N/A	50	5	15	N/A	N/A
87020218	8	15.3N	88.1E	25	54.3	N/A	N/A	45	5	15	N/A	N/A
87020300	9	16.1N	88.4E	34	34.4	N/A	N/A	40	10	20	N/A	N/A
87020306	10	16.9N	89.1E	11.5	111.7	N/A	N/A	35	10	20	N/A	N/A
87020312	11	17.7N	89.7E	12.9	N/A	N/A	N/A	30	0	N/A	N/A	N/A

TROPICAL CYCLONE 02B

	00h	24h	48h	72h
Average	33	166	N/A	N/A
# Cases	12	7	0	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 ER	48 ER	72 ER
87060206	1	17.0N	89.3E	34.9	95.7	N/A	N/A	35	-5	15	N/A	N/A
87060212	2	17.2N	88.7E	34.4	159.9	N/A	N/A	35	0	15	N/A	N/A
87060218	3	17.5N	88.5E	28.6	203.9	N/A	N/A	35	0	10	N/A	N/A
87060300	4	18.0N	88.5E	54.5	247.9	N/A	N/A	35	5	-5	N/A	N/A
87060306	5	18.5N	88.6E	37.7	261.7	N/A	N/A	40	0	-25	N/A	N/A
87060312	6	19.1N	89.1E	46.4	147.4	N/A	N/A	40	-5	-20	N/A	N/A
87060318	7	19.7N	89.6E	34.4	49	N/A	N/A	45	-5	-5	N/A	N/A
87060400	8	20.3N	90.1E	12	N/A	N/A	N/A	50	-5	N/A	N/A	N/A
87060406	9	21.1N	90.6E	8.2	N/A	N/A	N/A	55	0	N/A	N/A	N/A
87060412	10	21.9N	90.8E	33.2	N/A	N/A	N/A	50	5	N/A	N/A	N/A
87060418	11	22.8N	90.8E	40.8	N/A	N/A	N/A	40	5	N/A	N/A	N/A
87060500	12	23.7N	90.9E	32	N/A	N/A	N/A	30	0	N/A	N/A	N/A

TROPICAL CYCLONE 03A

	00h	24h	48h	72h
Average	62	165	183	208
# Cases	18	12	12	12

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 ER	48 ER	72 ER
87060506	1	16.1N	62.2E	28.8	42.1	107.2	150	45	0	10	20	35
87060512	2	16.1N	62.6E	13	98.9	134.8	123.3	45	0	5	15	35
87060518	3	16.1N	63.0E	62.4	126	90.6	337.1	45	5	10	20	45

87060600	4	16.1N	63.5E	44.2	40.6	169.6	291.5	50	0	10	20	45
87060606	5	16.1N	64.2E	51.9	127.3	209.6	139	50	5	20	25	25
87060612	6	16.1N	64.9E	80.9	175.6	198	95.4	50	5	15	25	25
87060618	7	16.1N	65.7E	126.8	223.5	234.9	109.3	50	5	10	20	20
87060700	8	17.0N	66.2E	116.8	234	206.3	99.7	50	0	0	15	20
87060706	9	17.9N	66.1E	90.7	247.1	245.1	220.5	50	0	5	15	25
87060712	10	18.9N	66.0E	102.2	217.9	208.8	255.4	50	0	15	30	45
87060718	11	19.8N	65.9E	92.8	211.1	204	313.2	50	0	20	25	25
87060800	12	20.6N	65.5E	132.6	236.3	195.4	363.7	50	0	15	25	20
87060806	13	21.0N	64.9E	45	N/A	N/A	N/A	45	0	N/A	N/A	N/A
87060812	14	21.0N	64.3E	32	N/A	N/A	N/A	40	0	N/A	N/A	N/A
87060818	15	20.9N	63.7E	28.7	N/A	N/A	N/A	35	0	N/A	N/A	N/A
87060900	16	20.4N	63.4E	32	N/A	N/A	N/A	35	0	N/A	N/A	N/A
87060906	17	19.9N	63.7E	37.5	N/A	N/A	N/A	35	0	N/A	N/A	N/A
87060912	18	19.9N	64.3E	13.3	N/A	N/A	N/A	30	0	N/A	N/A	N/A

TROPICAL CYCLONE 04B

	00h	24h	48h	72h
Average	12	N/A	N/A	N/A
# Cases	3	0	0	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 ER	48 ER	72 ER
87101500	1	14.5N	83.7E	13.1	N/A	N/A	N/A	35	0	N/A	N/A	N/A
87101518	2	16.0N	81.5E	17.3	N/A	N/A	N/A	45	0	N/A	N/A	N/A
87101600	3	16.6N	80.5E	8.3	N/A	N/A	N/A	35	0	N/A	N/A	N/A

TROPICAL CYCLONE 05B

	00h	24h	48h	72h
Average	31	193	541	872
# Cases	14	9	1	1

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 ER	48 ER	72 ER
87103100	1	10.7N	88.0E	5.9	251.3	540.7	872	30	5	5	10	0
87103106	2	11.9N	87.6E	59.1	408.7	N/A	N/A	30	5	0	N/A	N/A
87103112	3	13.0N	86.7E	6	358.2	N/A	N/A	35	5	-5	N/A	N/A
87103118	4	13.6N	85.7E	13.1	271.9	N/A	N/A	40	0	-15	N/A	N/A
87110100	5	13.9N	84.9E	13.1	90.2	N/A	N/A	45	-5	-15	N/A	N/A
87110106	6	13.9N	84.2E	37.8	104.2	N/A	N/A	50	-10	-20	N/A	N/A
87110112	7	13.9N	83.6E	13.3	25.1	N/A	N/A	55	-5	-10	N/A	N/A
87110118	8	13.9N	82.8E	24.1	96.6	N/A	N/A	55	-5	-25	N/A	N/A
87110200	9	13.9N	82.1E	35.5	N/A	N/A	N/A	55	-10	N/A	N/A	N/A
87110206	10	14.1N	81.5E	44.6	132.4	N/A	N/A	55	-10	10	N/A	N/A
87110212	11	14.3N	81.0E	71.1	N/A	N/A	N/A	55	-10	N/A	N/A	N/A
87110218	12	14.5N	80.6E	50.1	N/A	N/A	N/A	55	-10	N/A	N/A	N/A
87110300	13	14.8N	80.0E	21.4	N/A	N/A	N/A	40	0	N/A	N/A	N/A
87110306	14	15.3N	79.1E	N/A	N/A	N/A	N/A	25	N/A	N/A	N/A	N/A

TROPICAL CYCLONE 06B

	00h	24h	48h	72h
Average	16	113	N/A	N/A
# Cases	6	2	0	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 ER	48 ER	72 ER
87111118	1	14.7N	87.3E	8.3	185.3	N/A	N/A	35	-5	0	N/A	N/A
87111200	2	14.6N	85.5E	13.3	42	N/A	N/A	35	0	-10	N/A	N/A
87111206	3	14.2N	84.0E	13.3	N/A	N/A	N/A	40	-5	N/A	N/A	N/A
87111212	4	14.4N	82.5E	12	N/A	N/A	N/A	45	0	N/A	N/A	N/A
87111218	5	15.3N	81.2E	24.7	N/A	N/A	N/A	50	0	N/A	N/A	N/A
87111300	6	16.3N	80.0E	29.4	N/A	N/A	N/A	40	0	N/A	N/A	N/A

TROPICAL CYCLONE 07A

	00h	24h	48h	72h
Average	38	119	307	421
# Cases	14	11	6	6

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 ER	48 ER	72 ER
87120812	1	10.9N	70.7E	0	129.1	326	483.2	35	0	15	0	5
87120818	2	11.2N	70.3E	16.8	176.3	356.3	485.1	35	0	10	0	10
87120900	3	11.6N	70.0E	37.3	220.7	402.2	517.3	35	0	10	5	10
87120906	4	12.0N	69.9E	23.5	160.8	286.3	381.2	35	0	5	10	20
87120912	5	12.6N	70.0E	84.3	254.8	336.3	407.9	35	0	0	10	20
87120918	6	13.3N	70.1E	60.3	96	139.7	256.5	40	-5	0	15	25
87121000	7	13.9N	70.3E	84.8	109.3	N/A	N/A	40	-5	-10	N/A	N/A
87121006	8	14.3N	70.6E	8.4	5.8	N/A	N/A	45	-10	-5	N/A	N/A
87121012	9	14.7N	71.0E	21.4	37.5	N/A	N/A	45	-10	-5	N/A	N/A
87121018	10	15.0N	71.3E	24	54.3	N/A	N/A	45	0	5	N/A	N/A
87121100	11	15.4N	71.6E	36.5	74	N/A	N/A	40	0	-5	N/A	N/A
87121106	12	15.9N	71.9E	37.8	N/A	N/A	N/A	35	0	N/A	N/A	N/A
87121112	13	16.4N	72.3E	45.4	N/A	N/A	N/A	35	-5	N/A	N/A	N/A
87121118	14	16.9N	72.7E	54.3	N/A	N/A	N/A	30	-5	N/A	N/A	N/A

TROPICAL CYCLONE 08B

	00h	24h	48h	72h
Average	123	192	N/A	N/A
# Cases	5	3	0	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	72 ER	BT WN	WW ER	24 ER	48 ER	72 ER
87121800	1	10.7N	82.6E	24.7	159	N/A	N/A	30	0	10	N/A	N/A
87121806	2	10.5N	82.2E	76	N/A	N/A	N/A	30	0	N/A	N/A	N/A
87121812	3	10.4N	81.8E	128.2	176.1	N/A	N/A	30	0	0	N/A	N/A
87121818	4	10.3N	81.4E	181.9	240.6	N/A	N/A	30	0	0	N/A	N/A
87121900	5	10.5N	81.1E	206.6	N/A	N/A	N/A	25	0	N/A	N/A	N/A

c. SOUTHERN HEMISPHERE

This section includes verification statistics for each warning in the South Indian and western South Pacific Oceans from 1 July 1986 to 30 June 1987. Pre- and post-warning best track positions are not printed, but are available on floppy diskettes by request.

JTWC FORECAST TRACK AND INTENSITY ERRORS BY WARNING

Tropical Cyclone 01S

	00h	24h	48h
Average	25	90	196
# Cases	4	3	1

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
86080112	1	7.6N	78.3E	24.5	91	196.4	40	0	30	40
86080200	2	7.6N	76.9E	8.4	81.5	N/A	35	5	5	N/A
86080212	3	7.4N	75.5E	32.3	99.2	N/A	30	5	0	N/A
86080300	4	6.9N	74.0E	36.5	N/A	N/A	30	-5	N/A	N/A

Tropical Cyclone 02P

	00h	24h	48h
Average	33	141	292
# Cases	6	4	2

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
86112218	1	12.7N	168.8E	21.5	29	196.9	35	-5	-15	-10
86112306	2	13.6N	168.7E	8.4	75.3	388.2	45	-10	-5	5
86112318	3	14.7N	169.2E	31.4	212.7	N/A	50	0	20	N/A
86112406	4	15.7N	170.1E	40.9	250.3	N/A	55	5	25	N/A
86112418	5	16.7N	172.3E	53.1	N/A	N/A	55	5	N/A	N/A
86112506	6	17.4N	175.3E	43.9	N/A	N/A	55	-5	N/A	N/A

Tropical Cyclone 03P

	00h	24h	48h
Average	42	160	340
# Cases	6	4	2

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
86121418	1	13.0N	168.0E	59.7	169.5	343.3	35	0	0	30
86121506	2	14.2N	167.4E	38	232.2	338	50	5	25	50
86121518	3	16.0N	166.3E	55	148.7	N/A	55	10	40	N/A
86121606	4	18.1N	166.0E	39.9	91.6	N/A	50	25	55	N/A
86121618	5	19.7N	166.4E	34.5	N/A	N/A	45	15	N/A	N/A
86121706	6	22.0N	167.5E	28.4	N/A	N/A	35	10	N/A	N/A

Tropical Cyclone 04P

	00h	24h	48h
Average	35	171	333
# Cases	18	16	14

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
86122318	1	12.1N	176.3E	8.4	274.1	606.8	35	0	5	5
86122406	2	12.7N	176.1E	66.8	366	640.1	35	5	-5	5
86122418	3	13.6N	177.6E	17.5	66.7	204.7	45	0	0	5
86122506	4	14.4N	179.0E	46.9	117.2	312	55	0	5	-5
86122518	5	14.9N	180.6E	41	51	216.6	55	0	10	5
86122606	6	14.9N	182.2E	21.4	134.7	353.3	55	5	0	-10
86122618	7	14.9N	182.6E	12	268.2	552.1	55	10	5	-20

86122706	8	14.9N	182.3E	18.4	159.6	404.6	65	5	0	-15
86122718	9	15.0N	181.6E	11.6	78.2	82.8	65	10	0	-10
86122806	10	15.0N	180.8E	35.3	151.9	292.1	75	0	0	-20
86122818	11	15.2N	180.2E	8.3	158.8	362.5	80	0	-5	-15
86122906	12	16.1N	180.1E	5.8	75.3	196.1	80	5	-15	0
86122918	13	17.4N	180.4E	0	102.5	256.1	90	0	-5	35
86123006	14	19.0N	181.2E	8.3	127.1	186	90	-5	5	20
86123918	15	21.2N	182.0E	22.4	175.3	N/A	90	-5	20	N/A
86123106	16	23.6N	183.1E	36	434.2	N/A	65	0	10	N/A
86123118	17	25.0N	183.4E	44.3	N/A	N/A	45	0	N/A	N/A
87010106	18	25.0N	182.0E	238	N/A	N/A	30	5	N/A	N/A

Tropical Cyclone 05P

	00h	24h	48h
Average	41	139	281
# Cases	16	14	11

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
86122800	1	14.7N	196.8E	41.8	98.3	161	30	10	15	15
86122812	2	15.3N	196.8E	17.4	168.3	418.5	35	15	20	10
86122900	3	15.9N	196.8E	26.6	170.8	432.7	45	20	15	-5
86122912	4	16.6N	196.9E	13.3	82.4	203.2	50	15	15	0
86123000	5	17.0N	197.4E	40.2	157.2	193.3	55	25	10	5
86123012	6	17.1N	198.2E	46.7	151	154.8	60	20	15	10
86123100	7	17.0N	199.0E	18.9	144.5	311.9	65	10	0	-5
86123112	8	16.4N	198.8E	11.5	72	111.3	60	15	25	20
87010100	9	17.2N	198.5E	45.4	42	92.3	60	15	15	15
87010112	10	17.8N	198.5E	39.9	118.3	376.1	55	15	20	10
87010200	11	18.8N	198.8E	45.4	272.2	638.3	55	10	5	0
87010212	12	19.8N	199.7E	43.5	225	N/A	50	20	5	N/A
87010300	13	20.7N	201.3E	65.6	117.9	N/A	50	15	5	N/A
87010312	14	21.8N	203.6E	83.4	129.1	N/A	50	15	15	N/A
87010400	15	23.2N	205.7E	97.8	N/A	N/A	45	5	N/A	N/A
87010412	16	24.8N	207.8E	29	N/A	N/A	40	0	N/A	N/A

Tropical Cyclone 06S

	00h	24h	48h
Average	38	203	365
# Cases	5	4	4

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87010712	1	7.1N	76.6E	21.6	172.7	312.1	35	-5	10	-5
87010800	2	8.0N	76.5E	24.5	287.2	460	35	0	15	25
87010812	3	9.4N	77.9E	37.5	162.8	313.5	35	0	10	10
87010900	4	10.9N	79.1E	29.7	189.4	376.3	35	10	10	-5
87010912	5	11.2N	79.7E	78.9	N/A	N/A	35	0	N/A	N/A

Tropical Cyclone 07S

	00h	24h	48h
Average	24	119	194
# Cases	5	3	2

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87011012	1	9.1N	97.5E	11.8	64.5	63.2	50	0	25	35
87011100	2	10.7N	98.2E	43	189.6	325.9	50	-5	-5	0
87011112	3	11.7N	99.0E	8.4	103.5	N/A	45	-5	-10	N/A
87011200	4	12.5N	99.3E	21.5	N/A	N/A	45	-10	N/A	N/A
87011212	5	12.6N	99.4E	36.5	N/A	N/A	45	-15	N/A	N/A

Tropical Cyclone 08P

	00h	24h	48h
Average	25	119	194
# Cases	9	7	5

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87011600	1	10.7N	189.0E	26.7	163	229.6	35	5	10	-25
87011612	2	10.9N	189.7E	41.7	42.6	91.4	45	0	-10	-35
87011700	3	10.7N	189.7E	21.4	115.6	291.3	55	0	-20	-15
87011712	4	11.8N	190.0E	24.3	120.4	265.5	70	-5	-20	15
87011800	5	13.6N	190.4E	13.1	202.1	392.2	90	-10	5	50
87011812	6	15.3N	191.4E	47.8	5.7	N/A	100	-10	15	N/A
87011900	7	17.4N	192.9E	8.3	79.8	N/A	90	-5	25	N/A
87011912	8	19.5N	194.1E	18.9	N/A	N/A	70	-5	N/A	N/A
87012000	9	21.5N	196.4E	28.7	N/A	N/A	40	5	N/A	N/A

Tropical Cyclone 09S

	00h	24h	48h
Average	37	188	422
# Cases	12	8	5

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87011618	1	13.9N	66.9E	35.5	303.9	630.7	45	-10	-10	5
87011706	2	14.8N	67.3E	13.1	249.5	619.7	55	-15	-15	15
87011718	3	15.6N	68.2E	64.7	265.7	514.3	65	-15	5	40
87011806	4	17.2N	68.9E	12	103.3	208.8	75	-15	25	35
87011818	5	19.1N	69.9E	46.4	128.3	138.8	65	0	40	20
87011906	6	20.4N	70.7E	39.8	140.5	N/A	55	-5	0	N/A
87011918	7	21.7N	71.1E	17.8	N/A	N/A	40	0	N/A	N/A
87012006	8	23.3N	71.2E	84.3	N/A	N/A	35	0	N/A	N/A
87012206	9	26.5N	63.2E	21	103.3	N/A	65	-15	15	N/A
87012218	10	29.2N	63.5E	5.2	217.4	N/A	55	5	-10	N/A
87012306	11	33.0N	66.5E	70.5	N/A	N/A	55	-5	N/A	N/A
87012318	12	36.8N	72.0E	36	N/A	N/A	55	-15	N/A	N/A

Tropical Cyclone 10S

	00h	24h	48h
Average	15	92	201
# Cases	6	5	4

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87011712	1	17.2N	120.9E	23.7	54.3	106.2	30	5	0	15
87011800	2	17.8N	120.5E	8.3	43.5	102.6	45	-5	0	0
87011812	3	18.7N	119.7E	5.7	47.6	196.8	55	-5	15	15
87011900	4	19.6N	118.7E	13.3	100.9	397.6	55	-15	0	20
87011912	5	20.7N	117.9E	30.5	215.8	N/A	50	15	15	N/A
87012000	6	22.1N	117.6E	11.1	N/A	N/A	50	-10	N/A	N/A

Tropical Cyclone 11P

	00h	24h	48h
Average	13	17	N/A
# Cases	3	1	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87011918	1	13.0N	137.7E	13.3	17.4	N/A	30	5	10	N/A
87012006	2	13.4N	136.5E	8.4	N/A	N/A	30	10	N/A	N/A
87012018	3	14.2N	134.8E	18.5	N/A	N/A	30	10	N/A	N/A

Tropical Cyclone 12S

	00h	24h	48h
Average	35	138	135
# Cases	9	7	5

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87020100	1	15.6N	123.4E	121.5	236.3	298.6	35	0	15	20
87020112	2	16.0N	122.7E	18.3	121.3	97.1	40	5	20	35
87020200	3	16.3N	122.8E	34	77.3	42.7	40	0	0	0
87020212	4	16.5N	122.5E	13.3	69.1	46.1	40	0	0	10
87020300	5	17.5N	121.1E	5.7	66.2	193.6	45	0	0	50
87020312	6	17.8N	119.9E	72.3	275.9	N/A	45	5	5	N/A
87020400	7	17.9N	118.9E	45.7	125.4	N/A	50	0	15	N/A
87020412	8	18.0N	118.0E	0	N/A	N/A	40	5	N/A	N/A
87020500	9	18.2N	117.3E	6	N/A	N/A	30	10	N/A	N/A

Tropical Cyclone 13P

	00h	24h	48h
Average	36	139	N/A
# Cases	3	2	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87020400	1	16.0N	189.7E	46.1	91.6	N/A	40	0	15	N/A
87020412	2	16.0N	191.1E	18.3	186.9	N/A	40	0	20	N/A
87020500	3	15.8N	192.7E	45.4	N/A	N/A	35	0	N/A	N/A

Tropical Cyclone 14P

	00h	24h	48h
Average	347	101	256
# Cases	8	6	4

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87020500	1	13.2N	163.3E	24.1	102	190.9	35	5	-10	-10
87020512	2	13.7N	164.3E	12	96.2	180.8	45	0	-5	35
87020600	3	14.7N	165.2E	24	92.9	243.8	65	0	0	40
87020612	4	15.9N	166.1E	18.3	64.5	409.9	70	0	25	45
87020700	5	17.0N	167.0E	13.3	68.7	N/A	75	5	45	N/A
87020712	6	18.3N	168.2E	23.6	182.3	N/A	55	25	45	N/A
87020800	7	20.2N	170.4E	43.4	N/A	N/A	35	25	N/A	N/A
87020812	8	22.0N	175.0E	101.8	N/A	N/A	25	25	N/A	N/A

Tropical Cyclone 15P

	00h	24h	48h
Average	27	120	369
# Cases	12	8	2

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87020706	1	13.2N	140.3E	51.2	102.6	223.2	30	5	15	-30
87020718	2	13.2N	139.5E	41.9	146.6	N/A	35	5	-10	N/A
87020806	3	13.2N	138.6E	52.6	18.9	N/A	40	10	-15	N/A
87020818	4	13.2N	137.5E	37.8	N/A	N/A	50	-10	N/A	N/A
87020906	5	13.1N	136.8E	5.8	78.9	N/A	55	-10	-30	N/A
87020918	6	12.9N	136.3E	25.1	17.6	N/A	55	-15	-35	N/A
87021006	7	12.6N	136.0E	11.7	N/A	N/A	60	-20	N/A	N/A
87021018	8	12.3N	135.5E	5.9	205.9	514.8	60	-20	-15	5
87021106	9	13.0N	135.4E	18	282.8	N/A	65	-25	-5	N/A
87021118	10	13.9N	137.0E	24.1	106.8	N/A	60	-20	-5	N/A
87021206	11	14.9N	138.4E	18.4	N/A	N/A	50	15	N/A	N/A
87021218	12	15.7N	140.0E	34	N/A	N/A	40	30	N/A	N/A

Tropical Cyclone 16P

	00h	24h	48h
Average	67	424	N/A
# Cases	3	1	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87020818	1	18.5N	173.6E	45.5	424.1	N/A	25	20	30	N/A
87020906	2	21.9N	177.7E	13.2	N/A	N/A	25	5	N/A	N/A
87020918	3	26.1N	180.8E	144.3	N/A	N/A	25	5	N/A	N/A

Tropical Cyclone 17S

	00h	24h	48h
Average	51	109	227
# Cases	10	7	6

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87021106	1	21.1N	53.8E	84.2	79.7	81.1	30	5	10	5
87021118	2	21.0N	54.0E	83.8	125.1	147.9	35	0	0	5
87021206	3	20.9N	54.3E	21.2	45	131.7	35	5	5	15
87021218	4	20.8N	54.8E	18.9	95.1	285	45	10	20	15
87021306	5	20.9N	55.6E	28.7	16.4	229.5	45	10	25	25
87021318	6	20.9N	56.4E	12.7	171.4	486.9	45	5	15	15
87021406	7	20.7N	56.4E	55.1	233.7	N/A	40	10	5	N/A
87021418	8	21.1N	55.7E	119.3	N/A	N/A	35	0	N/A	N/A
87021506	9	22.1N	54.6E	23	N/A	N/A	30	5	N/A	N/A
87021518	10	23.0N	53.0E	68.7	N/A	N/A	30	5	N/A	N/A

Tropical Cyclone 18S

	00h	24h	48h
Average	11	147	369
# Cases	7	6	4

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87022212	1	15.6N	123.0E	6	106.6	389.7	30	0	10	15
87022300	2	15.8N	121.4E	0	175.2	6812.6	35	0	5	5
87022312	3	15.8N	120.7E	8.3	178.9	317.4	40	0	5	5
87022400	4	16.2N	121.2E	29.3	198.9	427.8	45	0	0	20
87022412	5	17.2N	121.6E	16.6	29.4	N/A	45	0	-15	N/A
87022500	6	18.6N	121.2E	5.7	193.3	N/A	55	0	0	N/A
87022512	7	19.9N	121.0E	12.8	N/A	N/A	55	0	N/A	N/A

Tropical Cyclone 19P

	00h	24h	48h
Average	5	332	N/A
# Cases	3	1	0

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87022818	1	14.9N	197.9E	0	332.1	N/A	35	0	5	N/A
87030106	2	18.5N	200.0E	0	N/A	N/A	35	0	N/A	N/A
87030118	3		202.8E	16.3	N/A	N/A	40	-5	N/A	N/A

Tropical Cyclone 20P

	00h	24h	48h
Average	47	146	286
# Cases	9	6	4

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87030112	1	13.5N	187.4E	55.5	183.9	244.3	35	0	-10	-15
87030200	2	13.9N	190.5E	83.3	170.8	261.5	40	0	-5	-15

87030212	3	15.3N	193.3E	34.7	157	306.3	45	-5	-20	-25
87030312	4	20.5N	194.5E	89.6	185.4	333.6	60	-5	-15	-20
87030400	5	22.2N	195.3E	51.5	108	N/A	65	-10	-15	N/A
87030412	6	23.5N	196.5E	24.6	76.3	N/A	65	0	-20	N/A
87030500	7	24.9N	198.2E	16.2	N/A	N/A	55	0	N/A	N/A
87030512	8	26.2N	200.3E	36	N/A	N/A	65	0	N/A	N/A
87030600	9	28.1N	203.6E	36.5	N/A	N/A	65	0	N/A	N/A

Tropical Cyclone 21S

	00h	24h	48h
Average	47	188	307
# Cases	25	20	18

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87030300	1	13.7N	71.5E	34.7	242.5	449.6	30	5	15	25
87030312	2	13.2N	71.4E	8.4	108.9	277.2	35	10	25	25
87030400	3	12.5N	71.5E	44.8	307.4	566.7	40	10	20	25
87030412	4	13.0N	72.1E	72.6	273.2	468.5	40	15	25	30
87030500	5	13.0N	72.7E	123.4	327.6	449	40	25	30	40
87030512	6	13.5N	74.3E	62.7	282.9	493	40	20	10	0
87030600	7	13.7N	75.5E	42	288.4	431.8	40	10	10	-5
87030612	8	13.0N	75.6E	104.3	247.1	286.8	35	15	5	-20
87030700	9	12.1N	76.7E	21.5	136.6	157	35	0	-5	-40
87030712	10	12.0N	76.6E	119	358.7	N/A	35	0	-25	N/A
87030800	11	12.1N	75.9E	59.2	242.1	345.7	40	-5	-35	-35
87030812	12	12.7N	75.1E	12	24.7	54.9	55	-10	-10	0
87030900	13	13.4N	74.0E	16.7	94.1	197.1	70	-10	10	0
87030912	14	14.5N	73.1E	13.3	13	136.3	70	0	0	-5
87031000	15	15.3N	72.4E	5.8	62.9	232.9	65	0	-10	-20
87031012	16	16.4N	71.9E	23.8	154.2	332.5	65	-5	-15	-15
87031100	17	17.0N	71.7E	18	115.6	279.7	65	-10	-20	-10
87039112	18	17.7N	72.0E	41.8	191.6	189.7	65	-10	-15	-15
87031200	19	18.8N	72.9E	61.7	202.9	188.2	65	-15	-20	-15
87031212	20	20.1N	74.4E	51.1	84.7	N/A	55	-5	-20	N/A
87031300	21	22.1N	75.3E	45.7	N/A	N/A	50	-5	N/A	N/A
87031312	22	23.6N	74.9E	89.8	N/A	N/A	50	-10	N/A	N/A
87031400	23	24.6N	73.9E	18	N/A	N/A	45	-5	N/A	N/A
87031412	24	25.5N	73.4E	63.8	N/A	N/A	40	-5	N/A	N/A
87031500	25	27.2N	73.5E	42.3	N/A	N/A	40	-10	N/A	N/A

Tropical Cyclone 22P

	00h	24h	48h
Average	50	96	212
# Cases	7	5	3

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87030818	1	16.6N	163.9E	29.2	109.6	243.7	40	-5	-20	0
87030906	2	17.3N	163.7E	18.9	74	138	65	-10	5	35
87030918	3	17.9N	163.6E	39.9	132.5	256.1	65	0	-5	5
87031006	4	18.2N	163.7E	11.4	41.3	N/A	65	-10	0	N/A
87031018	5	18.8N	164.3E	13.3	124	N/A	55	0	10	N/A
87031106	6	19.5N	165.0E	22.6	N/A	N/A	40	5	N/A	N/A
87031118	7	20.2N	167.2E	216.2	N/A	N/A	35	0	N/A	N/A

Tropical Cyclone 23P

	00h	24h	48h
Average	25	90	166
# Cases	17	12	12

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87040812	1	8.6N	138.0E	5.9	109.5	120.9	35	0	10	10
87040900	2	9.3N	136.3E	16.9	67.7	111.8	40	10	15	72
87040912	3	10.3N	134.4E	21.4	59.6	158	45	10	15	10
87041000	4	11.1N	132.6E	18.9	96	123.1	45	10	15	5
87041012	5	11.2N	130.9E	38.1	110.4	125.6	45	10	10	5
87041100	6	11.7N	128.5E	18.6	66	115.2	45	10	-5	15
87041112	7	12.4N	126.2E	25.2	77.6	180.6	45	15	5	20
87041200	8	13.4N	124.2E	5.8	159.1	334.7	50	10	5	25
87041212	9	14.0N	122.8E	71.2	117.6	220.8	55	5	5	25
87041300	10	14.6N	121.4E	8.3	75.8	170.4	65	-5	20	30
87041312	11	14.9N	120.6E	5.8	69.3	177.7	55	5	5	N/A
87041400	12	14.8N	119.3E	21.4	71.5	157.9	55	-5	0	N/A
87041412	13	14.8N	117.9E	23.2	N/A	N/A	45	-10	N/A	N/A
87041500	14	15.1N	115.9E	8.3	N/A	N/A	45	0	N/A	N/A
87041512	15	15.8N	113.6E	39	N/A	N/A	45	0	N/A	N/A
87041600	16	16.6N	111.6E	54.4	N/A	N/A	35	5	N/A	N/A
87041612	17	18.4N	109.9E	43.7	N/A	N/A	35	0	N/A	N/A

Tropical Cyclone 24S

	00h	24h	48h
Average	35	209	509
# Cases	8	6	4

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87042300	1	27.1N	42.2E	8	122.8	486.4	45	-15	-40	-30
87042312	2	27.6N	41.6E	32	208.7	494.1	55	-20	-25	-20
87042400	3	28.5N	42.4E	51.8	339.5	633.8	70	-25	-15	-5
87042412	4	29.8N	44.1E	39.3	243.5	461.5	70	-5	-15	-10
87042500	5	30.8N	47.5E	16.6	105.1	N/A	65	0	-5	N/A
87042512	6	31.3N	50.6E	31.3	238.4	N/A	60	0	0	N/A
87042600	7	31.3N	53.7E	73.9	N/A	N/A	50	0	N/A	N/A
87042612	8	31.0N	56.1E	31.7	N/A	N/A	40	0	N/A	N/A

Tropical Cyclone 25P

	00h	24h	48h
Average	49	136	273
# Cases	7	5	4

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87042300	1	11.9N	189.6E	65.7	143.5	310.4	35	10	5	20
87042312	2	13.6N	190.5E	6	64.2	150.9	45	-10	-20	-10
87042400	3	15.3N	191.3E	40	107.6	322.1	55	-10	5	15
87042412	4	17.0N	192.1E	30.5	135.3	311.8	50	-5	5	10
87042500	5	19.0N	193.1E	95.5	229.6	N/A	45	5	10	N/A
87042600	6	24.0N	198.6E	30.5	N/A	N/A	30	15	N/A	N/A
87042612	7	26.2N	202.2E	80.3	N/A	N/A	25	-5	N/A	N/A

Tropical Cyclone 26S

	00h	24h	48h
Average	47	161	344
# Cases	5	3	1

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87042412	1	15.0N	74.2E	11.6	144.9	344.2	40	-5	5	35
87042500	2	14.6N	74.9E	62.6	156.1	N/A	40	-5	0	N/A
87042512	3	13.9N	74.8E	54	182.9	N/A	45	-5	25	N/A
87042600	4	13.3N	74.4E	101.3	N/A	N/A	35	10	N/A	N/A
87042612	5	12.9N	73.9E	5.8	N/A	N/A	25	5	N/A	N/A

Tropical Cyclone 27P

	00h	24h	48h
Average	22	93	138
# Cases	7	5	5

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87052218	1	12.3N	159.4E	13.4	87.7	67.7	35	-5	10	20
87052306	2	13.7N	158.6E	13.1	45.8	155.7	40	-5	0	10
87052318	3	15.0N	158.1E	23.9	99.6	255.6	45	0	5	10
87052406	4	15.9N	157.5E	8.3	102.6	108.6	45	0	10	15
87052418	5	16.6N	157.1E	37.8	132.1	101.7	45	10	25	20
87052506	6	16.6N	156.8E	24.7	N/A	N/A	35	5	N/A	N/A
87052518	7	17.5N	156.3E	33.2	N/A	N/A	30	0	N/A	N/A

Tropical Cyclone 28S

	00h	24h	48h
Average	56	194	450
# Cases	5	3	1

DTG	W#	BT LAT	BT LON	POS ER	24 ER	48 ER	BT WN	WW ER	24 WE	48 WE
87062500	1	8.0N	87.4E	165.7	321.3	449.6	30	5	30	N/A
87062512	2	7.4N	87.3E	16.9	55.1	N/A	30	5	15	N/A
87062600	3	7.6N	86.7E	45.4	206.9	N/A	25	10	0	N/A
87062612	4	8.5N	85.8E	18.8	N/A	N/A	30	5	N/A	N/A
87062700	5	9.9N	86.6E	36.5	N/A	N/A	30	0	N/A	N/A