

Super Typhoon (STY) 09W (Imbudo)*



First Poor : 0600Z 14Jul 03

First Fair : 0600Z 15 Jul 03

First TCFA : 0930Z 16 Jul 03

First Warning : 1800Z 16 Jul 03

Last Warning : 1200Z 24 Jul 03

Max Intensity : 130 kts, gusts to 160 kts

Landfall : Yangjiang, China

Total Warnings : 32

Remarks:

1) Super Typhoon (STY) 09W was initially detected and monitored as an area of heavy convection very near Chuuk on 13 July 2003. Subsequently, another area of convection developed southwest of Chuuk around 15 July. For the next 48 hours this second area increased in organization and a first warning was issued by 1800Z on 16 July. The cyclone began to rapidly organize and track northwest along the southwestern periphery of the mid-level steering ridge. Favorable upper tropospheric synoptic flow and warm sea temperatures allowed for a steady rate of intensification slightly greater than climatological. A period of rapid development caused by an increase in equatorward outflow and increased outflow towards a TUTT cell to the northeast occurred from 0000Z on 19 July to 1200Z on 20 July resulted in an intensity increase of 2.5 Dvorak T-Numbers in just 36 hours.

The system then tracked northwest over Luzon, making landfall near 0300Z on 22 July with an estimated intensity of 110 knots and weakened only slightly over central Luzon. After emerging into the South China Sea, STY 09W tracked west-northwest at a rapid 15 knots and reintensified to 90 knots. The cyclone made landfall for a second time on the coast of China at approximately 0000Z on 24 July with an intensity of 85 knots. STY 09W then weakened over land and dissipated within 24 hours.

2) International news agencies reported 21 persons killed in the Philippines and as many as 20 casualties were reported in southern China. In the Philippines, crop damages were estimated at \$37 million. In Southern China, reports indicated that several small coastal reservoirs were damaged, many homes damaged or destroyed and significant losses in livestock experienced in some locations.

*Named by WMO Designated RSMC

Statistics for JTWC on STY09W

DTG	WRN	BEST TRACK		wind	POSITION ERRORS								WIND ERRORS							
	NO.	LAT	LONG		00	12	24	36	48	72	96	120	00	12	24	36	48	72	96	120
03071500		3.6N	150.0E	15																
03071506		3.6N	148.9E	15																
03071512		3.6N	147.7E	15																
03071518		3.7N	146.5E	15																
03071600		4.3N	145.6E	20																
03071606		5.1N	144.9E	20																
03071612		5.8N	144.1E	20																
03071618	1	6.6N	143.2E	25	33	73	113	161	205	253			0	5	-5	0	5	-5		
03071700	2	7.4N	142.2E	30	8	48	101	148	173	204			0	0	0	5	10	-15		
03071706	3	8.2N	141.1E	30	16	34	95	148	175	200			0	-5	-5	-5	-5	-25		
03071712	4	8.8N	140.2E	40	21	36	90	129	149	188	278	488	0	0	5	5	-5	-35	-30	15
03071718	5	9.3N	139.4E	45	5	48	77	118	128	183	347	503	0	0	0	0	-5	-35	-25	5
03071800	6	9.7N	138.6E	50	31	42	70	88	72	129	253	406	0	5	5	-5	-15	-40	-20	5
03071806	7	9.9N	137.7E	55	37	12	51	53	51	135	231	336	0	0	0	-10	-25	-30	5	5
03071812	8	10.1N	136.9E	55	8	30	43	47	82	174	299	385	0	0	-10	-15	-40	-30	15	5
03071818	9	10.4N	136.1E	65	8	22	17	24	71	225	337	390	0	-5	-15	-30	-40	-15	25	40
03071900	10	10.4N	135.3E	65	8	8	12	39	105	265	372	434	0	-15	-25	-50	-40	-5	25	20
03071906	11	10.5N	134.6E	75	5	13	6	39	102	213	281	389	0	-10	-25	-40	-25	30	30	30
03071912	12	10.7N	133.9E	85	11	17	18	60	117	234	296	361	-10	-20	-45	-35	-25	30	5	35
03071918	13	11.1N	133.2E	90	21	38	69	103	152	280	329	380	-10	-20	-35	-20	-10	25	30	45
03072000	14	11.6N	132.4E	100	13	41	82	112	168	304	314	402	-10	-25	-15	-5	10	10	30	20
03072006	15	12.1N	131.5E	110	0	30	75	110	173	271	316	501	5	0	10	20	45	35	-5	-10
03072012	16	12.6N	130.5E	130	13	45	83	133	201	265	309	480	0	15	20	30	55	30	5	-10
03072018	17	13.1N	129.4E	130	13	38	78	142	192	263	331		0	15	20	40	25	35	15	

03072100	18	13.7N	128.2E	130	5	23	75	151	218	259	374		0	5	0	20	-10	0	15	
03072106	19	14.3N	127.0E	125	8	37	102	152	205	258	310		5	10	35	10	10	5	-15	
03072112	20	15.0N	125.8E	125	0	29	87	143	179	238	266		5	15	20	10	20	5	-10	
03072118	21	15.7N	124.4E	120	5	42	92	149	181	249			10	30	0	15	5	-15		
03072200	22	16.4N	123.0E	115	5	46	100	128	137	239			15	10	15	5	0	-10		
03072206	23	17.0N	121.3E	90	16	53	88	107	139	306			0	15	5	0	-10	-5		
03072212	24	17.6N	119.8E	80	8	54	83	75	155	295			0	0	-10	-25	-25	-5		
03072218	25	18.1N	118.3E	90	20	50	74	76	130				0	5	15	-20	-10			
03072300	26	18.5N	116.8E	90	16	42	36	70	147				0	5	-10	-15	-20			
03072306	27	18.9N	115.4E	90	5	31	18	53					0	-5	-30	-20				
03072312	28	19.4N	114.2E	90	13	25	37	81					-5	-10	-20	-20				
03072318	29	19.8N	113.0E	85	8	85	81	100					5	10	0	-15				
03072400	30	21.2N	111.9E	85	6	56	89	101					5	-5	-5	-10				
03072406	31	22.0N	110.2E	75	5	17	50						5	-5	-5					
03072412	32	22.8N	108.9E	55	12	79							0	-5						
03072418		23.3N	107.5E	45																
03072500		23.5N	106.1E	40																
03072506		23.8N	104.7E	35																
03072512		24.7N	103.7E	30																
			AVERAGE		12	39	67	101	146	235	308	420	3	9	13	17	19	20	18	19
			BIAS										1	0	-4	-6	-5	-3	6	16
			# CASES		32	32	31	30	26	24	17	13	32	32	31	30	26	24	17	13

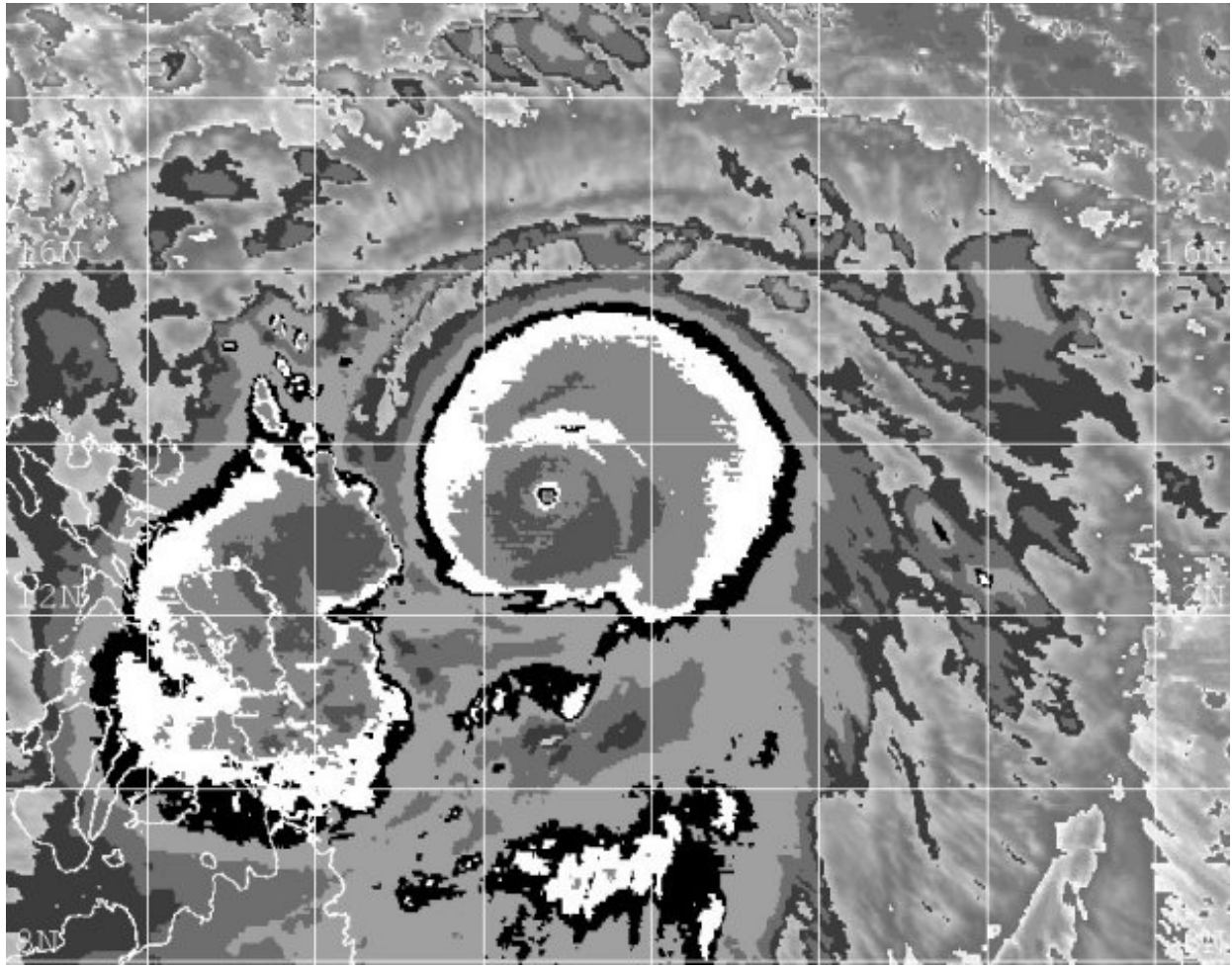


Figure 1-09W-1. 202025Z July 2003 GOES-9 enhanced infrared imagery of STY 09W (Imbudo), the small eye was located 155 nm east of Luzon, Philippines in the south china sea at its peak intensity of 130 knots.

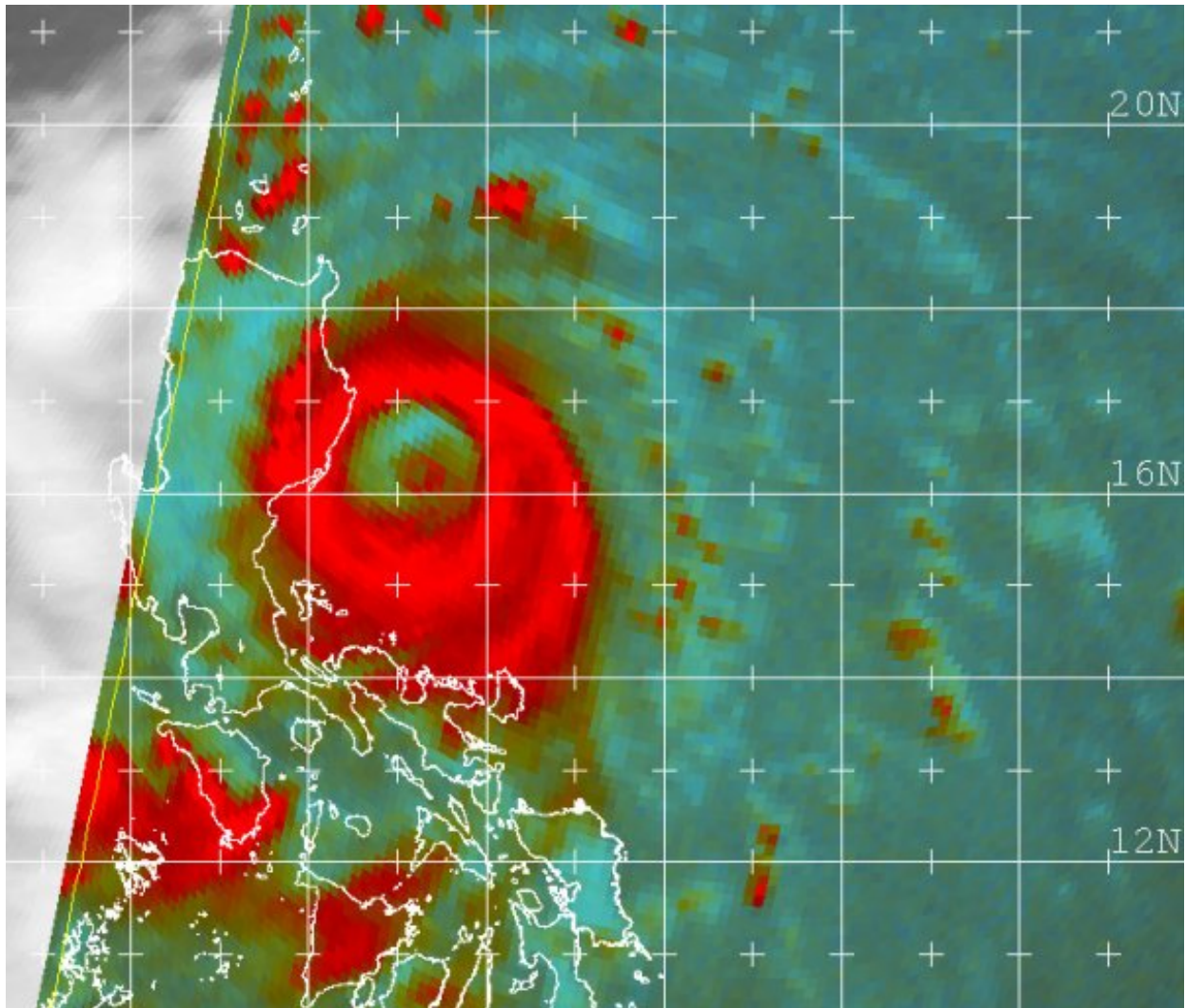


Figure 1-09W-2. 212206Z July 2003 GOES-9 SSM/I color composite imagery of STY 09W (Imbudo), the system was undergoing a concentric eyewall cycle. Located 440 nm east southeast of Luzon, Philippines at its peak intensity of 130 knots.

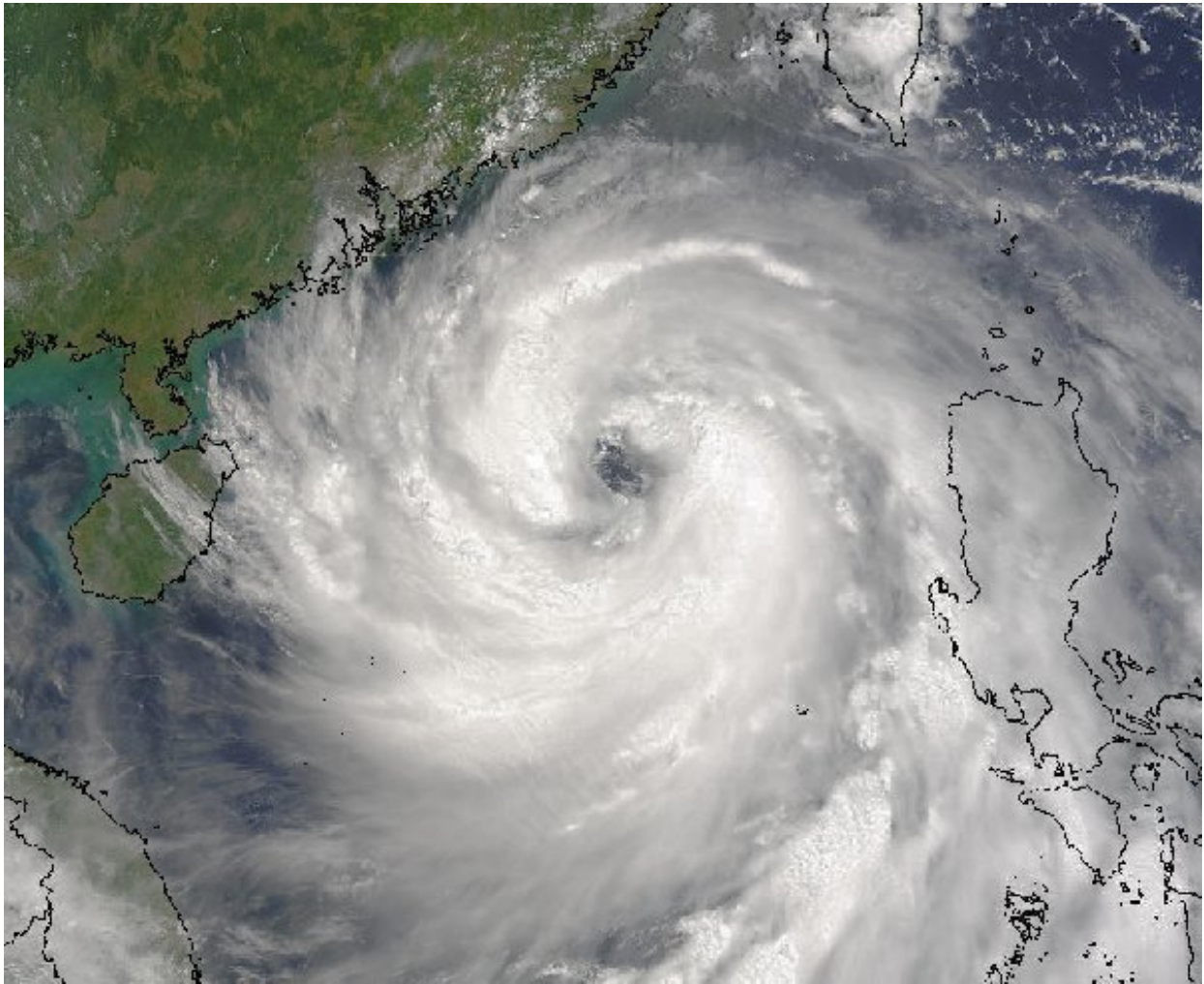
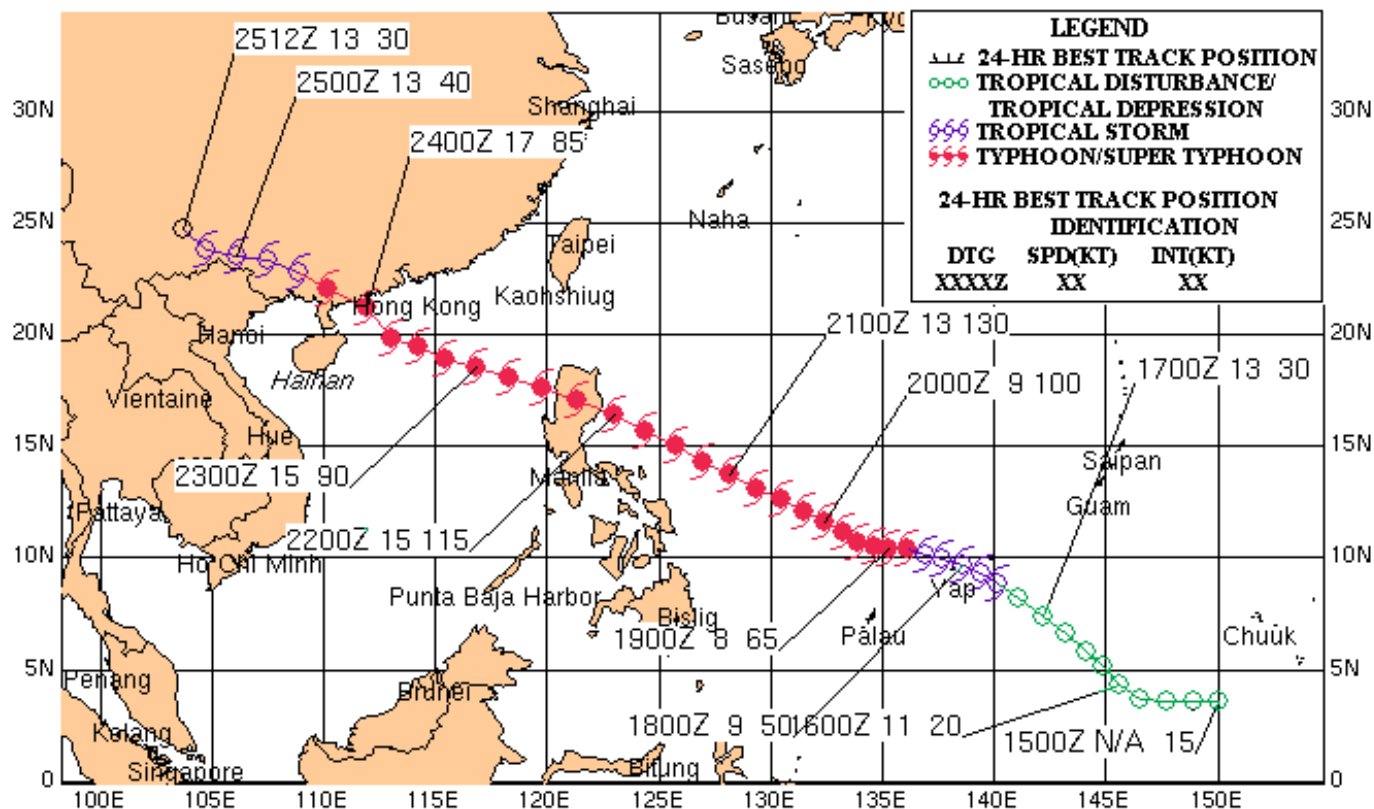


Figure 1-09W-3. 230255Z July 2003 MODIS true-color image of STY 09W (Imbudo), located in the South China Sea, with an intensity of 90 knots.

SUPER TYPHOON 09W (IMBUDO)

15 - 25 JULY 2003



Time Intensity for 09W

Intensity (kts)

