

APPENDIX A DEFINITIONS

BEST TRACK - A subjectively smoothed path, versus a precise and very erratic fix-to-fix path, used to represent tropical cyclone movement.

CENTER - The vertical axis or core of a tropical cyclone. Usually determined by cloud vorticity patterns, wind and/or pressure distribution.

EPHEMERIS - Position of a body (satellite) in space as a function of time; used for gridding satellite imagery. Since ephemeris gridding is based solely on the predicted position of the satellite, it is susceptible to errors from vehicle wobble, orbital eccentricity and the oblateness of the Earth.

EXPLOSIVE DEEPENING - A decrease in the minimum sea-level pressure of a tropical cyclone of 2.5 mb/hr for 12 hours or 5.0 mb/hr for six hours (Dunnavan, 1981).

EXTRATROPICAL - A term used in warnings and tropical summaries to indicate that a cyclone has lost its "tropical" characteristics. The term implies both poleward displacement from the tropics and the conversion of the cyclone's primary energy source from the release of latent heat of condensation to baroclinic processes. It is important to note that cyclones can become extratropical and still maintain winds of typhoon or storm force.

EYE - The central area of a tropical cyclone when it is more than half surrounded by wall cloud.

FUJIWHARA EFFECT - A binary interaction where tropical cyclones within about 750 nm (1390 km) of each other begin to rotate about one another. When tropical cyclones are within about 400 nm (740 km) of each other, they may also begin to be drawn closer to one another (Brand, 1970) (Dong and Neumann, 1983).

INTENSITY - The maximum sustained 1-minute mean surface wind speed, typically within one degree of the center of a tropical cyclone.

MAXIMUM SUSTAINED WIND - The highest surface wind speed averaged over a one-minute period of time. (Peak gusts over water average 20 to 25 percent higher than sustained winds.)

RAPID DEEPENING - A decrease in the minimum sea-level pressure of a tropical cyclone of 1.75 mb/hr or 42 mb for 24-hours (Holliday and Thompson, 1979).

RECURVATURE - The turning of a tropical cyclone from an initial path toward the west and poleward to east and poleward.

SIGNIFICANT TROPICAL CYCLONE - A tropical cyclone becomes "significant" with the issuance of the first numbered warning by the responsible warning agency.

SIZE - The areal extent of a tropical cyclone, usually measured radially outward from the center to the outermost closed isobar.

STRENGTH - The average wind speed of the surrounding low-level wind flow, usually measured within one to three degrees of the center of a tropical cyclone.

SUBTROPICAL CYCLONE - a low pressure system that forms over the ocean in the subtropics and has some characteristics of a tropical circulation, but not a central dense overcast. Although of upper cold low or low-level baroclinic origins, the system can transition to a tropical cyclone.

SUPER TYPHOON - A typhoon with maximum sustained 1-minute mean surface winds of 130 kt (67 m/sec) or greater.

TROPICAL CYCLONE - A non-frontal, migratory low-pressure system, usually of synoptic scale, originating over tropical or subtropical waters and having a definite organized circulation.

TROPICAL DEPRESSION - A tropical cyclone with maximum sustained 1-minute mean surface winds of 33 kt (17 m/sec) or less.

TROPICAL DISTURBANCE - A discrete system of apparently organized convection, generally 100 to 300 nm (185 to 555 km) in diameter, originating in the tropics or subtropics, having a non-frontal, migratory character and having maintained its identity for 12- to 24-hours. It may or may not be associated with a detectable perturbation of the wind field. It is the basic generic designation which, in successive stages of development, may be classified as a tropical depression, tropical storm, typhoon or super typhoon.

TROPICAL STORM - A tropical cyclone with maximum sustained surface winds in the range of 34 to 63 kt (17 to 32 m/sec) inclusive.

TROPICAL UPPER-TROPOSPHERIC TROUGH (TUTT) - A dominant climatological system and a daily upper-level synoptic feature of the summer season, over the tropical North Atlantic, North Pacific and South Pacific Oceans (Sadler, 1979).

TYPHOON (HURRICANE) - A tropical cyclone with maximum sustained 1-minute mean surface winds of 64 to 129 kt (33 to 66 m/sec). West of 180 degrees longitude they are called typhoons and east of 180 degrees longitude hurricanes.

WALL CLOUD - An organized band of cumuliform clouds that immediately surrounds the central area of a tropical cyclone. The wall cloud may entirely enclose or partially surround the center.

APPENDIX B

NAMES FOR TROPICAL CYCLONES IN THE WESTERN NORTH PACIFIC AND SOUTH CHINA SEA

<u>Column 1</u>	<u>Column 2</u>	<u>Column 3</u>	<u>Column 4</u>
ANGELA	ABE	AMY	AXEL
BRIAN	BECKY	BRENDAN	BOBBIE
COLLEEN	CECIL	CAITLIN	CHUCK
DAN	DOT	DOUG	DEANNA
ELSIE	ED	ELLIE	ELI
FORREST	FLO	FRED	FAYE
GAY	GENE	GLADYS	GARY
HUNT	HATTIE	HARRY	HELEN
IRMA	IRA	IVY	IRVING
JACK	JEANA	JOEL	JANIS
KORYN	KYLE	KINNA	KENT
LEWIS	LOLA	LUKE	LOIS
MARIAN	*MANNY	MIREILLE	MARK
NATHAN	NELL	NAT	NINA
OFELIA	OWEN	ORCHID	OMAR
PERCY	PAGE	PAT	POLLY
ROBYN	RUSS	RUTH	RYAN
STEVE	SHARON	SETH	SIBYL
TASHA	TIM	THELMA	TED
VERNON	VANESSA	VERNE	VAL
WINONA	WALT	WILDA	WARD
YANCY	YUNYA	YURI	YVETTE
ZOLA	ZEKE	ZELDA	ZACK

* The name Manny replaces Mike which was retired due to the impact of Super Typhoon Mike (27W).

NOTE: Names are assigned in rotation and alphabetically. When the last name in Column 4 (ZACK) has been used, the sequence will begin again with the first name in Column 1 (ANGELA).

SOURCE: CINCPACINST 3140.1T

APPENDIX C CONTRACTIONS

AB	Air Base				System
ABIO	Significant Tropical Weather Advisory for the Indian Ocean	CLIP or CLIPER	Climatology and Persistence Technique	HATTRACK	Hurricane and Typhoon Tracking and Steering Program
ABPW	Significant Tropical Weather Advisory for the Western Pacific Ocean	CM	Centimeter(s)	HPAC	Mean of XTRP and CLIM Techniques (Half Persistence and Climatology)
ACFT	Aircraft	COSM or COSMOS	Cyclops Objective Steering Model Output Statistics	HR	Hour(s)
ADP	Automated Data Processing			ICAO	International Civil Aviation Organization
AFB	Air Force Base	CPA	Closest Point of Approach	INIT	Initial
AFGWC	Air Force Global Weather Central	CPHC	Central Pacific Hurricane Center	INST	Instruction
AFTN	Airfield Fixed Telecommunication Network	CSC	Cloud System Center	IR	Infrared
AIREP	Aircraft (Weather) Report (Commercial and Military)	CSUM	Colorado State University Model	JTWC	Joint Typhoon Warning Center
AMOS	Automatic Meteorological Observing Station	CYCLOPS	Tropical Cyclone Steering Program (HATTRACK and MOHATT)	KM	Kilometer(s)
AOR	Area of Responsibility	DDN	Defense Data Network	KT	Knot(s)
APT	Automatic Picture Transmission	DEG	Degree(s)	LAN	Local Area Network
ARGOS	International Service for Drifting Buoys	DFS	Digital Facsimile System	LLCC	Low-Level Circulation Center
ATCF	Automated Tropical Cyclone Forecast System	DMSP	Defense Meteorological Satellite Program	LUT	Local User Terminal
ATCM	Advanced Tropical Cyclone Model	DOD	Department of Defense	LVL	Level
AUTODIN	Automated Digital Network	DSAT	Digital Satellite Acquisition System	M	Meter(s)
AWDS	Automated Weather Distribution System	DSN	Defense Switched Network	MAX	Maximum
AWN	Automated Weather Network	DWIPS	Digital Weather Image Processing System	MB	Millibar(s)
CCWF	Combined Confidence Weighted Forecast	FBAM	FNOC Beta Advection Model	MET	Meteorological
CDO	Central Dense Overcast	FI	Forecast Intensity (Dvorak)	MIN	Minimum
CI	Cirrifiform Cloud or Cirrus (or) Current Intensity (Dvorak)	FNOC	Fleet Numerical Oceanography Center	MM	Millimeter(s)
CINCPAC	Commander-in-Chief Pacific AF - Air Force, FLT - Navy	FT	Feet	MOHATT	Modified HATTRACK
CLD	Cloud	GMT	Greenwich Mean Time	MOVG	Moving
CLIM	Climatology	GOES	Geostationary Operational Environmental Satellite	MSLP	Minimum Sea-level Pressure
		GTS	Global Telecommunications	NARDAC	Naval Regional Data Automation Center
				NAS	Naval Air Station
				NASA	National Aeronautics and Space Administration

NEDN	Naval Environmental Data Network	OBS	Observations	TCM-90	Tropical Cyclone Motion Field Experiment
NEDS	Naval Environmental Display Station	ONR	Office of Naval Research	TD	Tropical Depression
NEPRF	Naval Environmental Prediction Research Facility	OTCM	One Way (Interactive) Tropical Cyclone Model	TDA	Typhoon Duty Assistant
NESDIS	National Environmental Satellite, Data, and Information Service	PACAF	Pacific Air Force	TDO TIROS	Typhoon Duty Officer Television Infrared Observational Satellite
NESN	Naval Environmental Satellite Network	PACDIGS	Pacific Digital Information Graphics System	TOGA	Tropical Ocean Global Atmosphere
NM	Nautical Mile(s)	PACMEDS	Pacific Meteorological Data System	TS	Tropical Storm
NMC	National Meteorological Center	PACOM	Pacific Command	TUTT	Tropical Upper-Tropospheric Trough
NOAA	National Oceanic and Atmospheric Administration	PCN	Position Code Number	TY	Typhoon
NOARL	Naval Oceanographic and Atmospheric Research Laboratory	PDN	Public Data Network	TYAN	Typhoon Analog (Program)
NOCC	Naval Oceanography Command Center	PIREP	Pilot Weather Report(s)	TYMNET	Time-Sharing Network: Commercial wide area network connecting micro- and main- frame computers
NODDES	Naval Environmental Data Network Oceanographic Data Distribution and Expansion System	RADOB	Radar Observation	ULAC	Upper-Level Anticyclone
NODDS	Navy/NOAA Oceanographic Data Distribution System	RECON	Reconnaissance	ULCC	Upper-Level Circulation Center
NOGAPS	Navy Operational Global Atmospheric Prediction System	RRDB	Reference Roster Data Base	US	United States
NRPS or NORAPS	Navy Operational Regional Atmospheric Prediction System	RSDB	Raw Satellite Data Base	USAF	United States Air Force
NSDS	Naval Satellite Display System	SAT	Satellite	USN	United States Navy
NSDS-G	Naval Satellite Display System - Geostationary	SEC	Second	UTC	Universal Time Coordinated
NWOC	Naval Western Oceanography Center	SDHS	Satellite Data Handling System	VIS	Visual
NWS	National Weather Service	SFC	Surface	WESTPAC	Western (North) Pacific
NR	Number	SGDB	Satellite Global Data Base	WMO	World Meteorological Organization
NRL	Naval Research Laboratory	SLP	Sea-Level Pressure	WRNG	Warning(s)
NTCC	Naval Telecommunications Center	SSM/I	Special Sensor Microwave/Imager	WW	Weather Wing
		SST	Sea Surface Temperature	XTRP	Extrapolation
		STNRY	Stationary	Z	Zulu Time (UTC)
		ST	Subtropical		
		STR	Subtropical Ridge		
		STY	Super Typhoon		
		TAPT	Typhoon Acceleration Prediction Technique		
		TC	Tropical Cyclone		
		TCFA	Tropical Cyclone Formation Alert		

APPENDIX D

PAST ANNUAL TROPICAL CYCLONE REPORTS

Copies of the past Annual Tropical Cyclone Reports for DOD agencies or contractors can be obtained through:

Defense Technical Information Center
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TROPICAL CYCLONE BEST TRACK DATA

TROPICAL CYCLONE FORECASTING

TROPICAL CYCLONE RECONNAISSANCE

TROPICAL CYCLONE STEERING MODELS

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