

SWAN Standard names

For the complete list where we have to get names from, or have them added to is: <http://cf-pcmdi.llnl.gov/documents/cf-standard-names/>
 This table is under construction, please fill in any missing UD units or CF standard names, using on the [CF guidelines for construction of names](#) . For the lay-out of SWAN netCDF files where these standard names will appear, refer to the [Spectral grids](#) page of this wiki.

OVKEYW	OVSNAM	OVLNAM	OVUNIT	OVLIM	OVULIM	OVEXCV	new: OVCFUD (UD units)	new: OVCFSN (standard name)
XP	Xp	X user coordinate	UL	-1000000000 0	10000000000	-10000000000	m	projection_x_coordinate,longitude
YP	Yp	Y user coordinate	UL	-1000000000 0	10000000000	-10000000000	m	projection_y_coordinate,latitude
DIST	Dist	distance along output curve	UL	0	10000000000	-99		
DEP	Depth	Depth	UH	-100	100	-99		sea_floor_depth_below_sea_level
VEL	Vel	Current velocity	UV	-2	2	0		sea_water_x_velocity + sea_water_y_velocity alias: x_sea_water_velocity + y_sea_water_velocity
UBOT	Ubot	Orbital velocity at the bottom	UV	0	1	-10		
DISS	Dissip	Energy dissipation	(in W/m2 or m2 /s, depending on command INPUT.SET)	0	0.1	-9		
QB	Qb	Fraction breaking waves		0	1	-1		
LEA	Leak	Energy leak over spectral boundaries	m2/s	0	100	-9		
HS	Hsig	Significant wave height	UH	0	10	-9	m	sea_surface_wave_significant_height alias: significant_height_of_wind_and_swell_waves, sea_surface_wind_wave_significant_height, alias: significant_height_of_wind_waves
TM01	Tm01	Average absolute wave period	UT	0	100	-9		sea_surface_wave_mean_period_from_variance_spectral_ density_first_frequency_moment, sea_surface_wind_wave_mean_period_from_variance_sp ectral_density_first_frequency_moment
RTP	RTpeak	Relative peak period	UT	0	100	-9		
DIR	Dir	Average wave direction	UDI	0	360	-999	degrees_true if nautical	sea_surface_wave_from_direction
PDI	PkDir	direction of the peak of the spectrum	UDI	0	360	-999		
TDI	TDir	direction of the energy transport	UDI	0	360	-999		
DSPR	Dspr	directional spreading	UDI	0	60	-9		
WLEN	Wlen	Average wave length	UL	0	200	-9		
STEE	Steepn	Wave steepness		0	0.1	-9		
TRA	Transp	Wave energy transport	m3/s	-10	10	0		
FOR	WForce	Wave driven force per unit surface	UF	-10	10	0		
AAAA	AcDens	spectral action density	m2s	0	100	-99		
EEEE	EnDens	spectral energy density	m2	0	100	-99		
AAAA	Aux	auxiliary variable		-1000000000 0	10000000000	-10000000000		
XC	Xc	X computational grid coordinate		0	100	-9	m	projection_x_coordinate,longitude
YC	Yc	Y computational grid coordinate		0	100	-9	m	projection_y_coordinate,latitude
WIND	Windv	Wind velocity at 10 m above sea level	UV	-50	50	0	m	wind_speed
FRC	FrCoef	Bottom friction coefficient		0	1	-9		
RTM01	RTm01	Average relative wave period	UT	0	100	-9		
EEEE	EnDens	energy density integrated over direction	m2	0	100	-99		
DHS	dHs	difference in Hs between iterations	UH	0	1	-9		
DRTM01	dTm	difference in Tm between iterations	UT	0	2	-9		
TM02	Tm02	Zero-crossing period	UT	0	100	-9	s	sea_surface_wave_zero_upcrossing_period, sea_surface_wind_wave_zero_upcrossing_period, sea_surface_wave_mean_period_from_variance_spectral_ density_second_frequency_moment, sea_surface_wind_wave_mean_period_from_variance_sp ectral_density_second_frequency_moment
FSPR	FSpr	Frequency spectral width (Kappa)		0	1	-9		

URMS	Urms	RMS of orbital velocity at the bottom	UV	0	1	-9		
UFRI	Ufric	Friction velocity	UV	0	1	-9		
ZLEN	Zlen	Zero velocity thickness of boundary layer	UL	0	1	-9		
TAUW	TauW			0	1	-9		
CDRAG	Cdrag	Drag coefficient		0	1	-9		
SETUP	Setup	Setup due to waves	m	-1	1	-9		
TIME	Time	Date-time		0	1	-99999		
TSEC	Tsec	Time in seconds from reference time	s	-100000	1000000	-99999		time
PER	Period	Average absolute wave period	UT	0	100	-9		sea_surface_wind_wave_period, alias: wind_wave_period
RPER	RPeriod	Average relative wave period	UT	0	100	-9		
HSWE	Hswell	Wave height of swell part	UH	0	10	-9		sea_surface_swell_wave_significant_height alias: significant_height_of_swell_waves
URSELL	Ursell	Ursell number		0	1	-9		sea_surface_swell_wave_period, alias: swell_wave_period
ASTD	ASTD	Air-Sea temperature difference	K	-10	10	-99		
TMM10	Tm_10	Average absolute wave period	UT	0	100	-9		sea_surface_wave_mean_period_from_variance_spectral_density_inverse_frequency_moment, sea_surface_wind_wave_mean_period_from_variance_spectral_density_inverse_frequency_moment
RTMM10	RTm_10	Average relative wave period	UT	0	100	-9		
DIFPAR	DifPar	Diffraction parameter		-10	10	-99		
TMBOT	TmBot	Bottom wave period	UT	0	100	-9		
WATL	Watlev	Water level	UH	-100	100	-99		
BOTL	Botlev	Bottom level	UH	-100	100	-99		
TPS	TPsmoo	Relative peak period (smooth)	UT	0	100	-9		
DISB	Disbot	Bottom friction dissipation	(in W/m2 or m2 /s, depending on command INPUT.SET)	0	0.1	-9		
DISSU	Dissrf	Wave breaking dissipation	(in W/m2 or m2 /s, depending on command INPUT.SET)	0	0.1	-9		
DISW	Diswcp	Whitcapping dissipation	(in W/m2 or m2 /s, depending on command INPUT.SET)	0	0.1	-9		
DISM	Dismud	Fluid mud dissipation	(in W/m2 or m2 /s, depending on command INPUT.SET)	0	0.1	-9		
WLENMR	Wlenmr	Average wave length with mud real part	UL	0	200	-9		
KI	ki	Average wave number with mud imag part	rad/m	0	1	-9		
MUDL	Mudlayer	Mudlayer thickness	UH	0	100	-99		
VaDens	VaDens	spectral variance density	m2/Hz	0	100	-99	m2 s	sea_surface_wave_variance_spectral_density
VaDens	VaDens	spectral variance density	m2/Hz/degr	0	100	-99	m2 s degr-1	sea_surface_wave_directional_variance_spectral_density
Swind	Swind	wind source term	m2	0	100	-99		integrated in sp1
Swcap	Swcap	whitcapping dissipation	m2	0	100	-99		
Sfric	Sfric	bottom friction dissipation	m2	0	100	-99		
Smud	Smud	fluid mud dissipation	m2	0	100	-99		
Ssurf	Ssurf	surf breaking dissipation	m2	0	100	-99		
Snl3	Snl3	triad interactions	m2	0	100	-99		
Snl4	Snl4	quadruplet interactions	m2	0	100	-99		
KIMAG	KIMAG	Wave number with mud imag part	rad/m	NaN	NaN	NaN		
KREAL	KREAL	Wave number with mud real part	rad/m	NaN	NaN	NaN		
NDIR							s-1	
CDIR							s-1	
AFREQ							s-1	wave_frequency, sea_surface_wave_frequency
RFREQ							s-1	wave_frequency, sea_surface_wave_frequency

QP		peakedness of the wave spectrum (dimensionless).								
BFI		Benjamin-Feir index (dimensionless).								
PROPA	PROPAGat	sum of PROPXy, PROPTHETA and PROPSIGMA	(in W/m2 or m2 /s, depending on command INPUT.SET).							
PROPX	PROPXy	energy propagation in geographic space; sum of x- and y-direction, terms	(in W/m2 or m2 /s, depending on command INPUT.SET).							
PROPT	PROPTHeta	energy propagation in theta space	(in W/m2 or m2 /s, depending on command INPUT.SET).							
PROPS	PROPSigma	energy propagation in sigma space	(in W/m2 or m2 /s, depending on command INPUT.SET).							
GENE	GENErat	total energy generation	(in W/m2 or m2 /s, depending on command INPUT.SET).							
GENW	GENWind	energy generation due to wind	(in W/m2 or m2 /s, depending on command INPUT.SET).							
REDI	REDist	total energy redistribution	(in W/m2 or m2 /s, depending on command INPUT.SET).							
REDQ	REDQuad	energy redistribution due to quadruplets	(in W/m2 or m2 /s, depending on command INPUT.SET).							
REDT	REDTriad	energy redistribution due to triads	(in W/m2 or m2 /s, depending on command INPUT.SET).							
RADS	RADStr	energy transfer between waves and currents due to radiation stress	(in W/m2 or m2 /s, depending on command INPUT.SET).							

This table was generated with the (OpenEarthTools) Matlab code:

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[D,D0] = swan_quantity % part of Openearth.eu[addrowcol(char(D0.OVKEYW),0,[-1 1],'|') char(D0.OVSNAM) addrowcol(char(D0.OVLNAM),0,[-1 1],'|') char(D0.OVUNIT) addrowcol(num2str(cell2mat(D0.OVLEXP')),0,[-1 1],'|') addrowcol(num2str(cell2mat(D0.OVHEXP')),0,[1],'|') addrowcol(num2str(cell2mat(D0.OVEXCV')),0,[1],'| | |')]
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