



DESCRIPTION

The Met Office runs global wave forecast models to support marine safety and operational decision making. Met Office configurations are developed to be run using the community wave model WAVEWATCH IIIITM. The global wave configuration is designed to generate accurate forecasts for open waters of the world's oceans and larger seas. The Met Office wave models are forced using wind data from the Met Office Global Atmospheric Hi-Res Model.

MET OFFICE GLOBAL WAVE MODEL

The global wave model is run to provide a five day outlook for wave characteristics defining height, period and direction of waves within a given sea-state. The model uses a refined grid system in order to better represent fetch in constrained sea areas and blocking effects of islands and headlands.

Grid type – Regular latitude-longitude

Geographic reference system – WGS84, see here for spheroid details

Reference North – True North (equivalent to grid north on regular lat-lon projection)

SW corner (cell 0,0) – 80.03906S 0.17578125E

NE corner – 80.03906N 359.82422E

Resolution – 0.3515625 lon x 0.2343750 lat; N512, ~25km at 50N

X-Y Dimensions – 1024 x 684

Longitude convention – 0 to 360

UPDATE FREQUENCY

- Forecast Run: T+144h, 0z and 12z,
- Update Run: T+66h, 6z and 18z

PARAMETERS

Variable	standard_name	long_name	file label
deptho	sea_floor_depth_below_geoid	Depth	wave_grid_depth
WSPD	wind_speed	Wind speed	wave_grid_10m_wind
WDIR	wind_from_direction	Wind direction (from)	wave_grid_10m_wind
VHM0	sea_surface_wave_significant_height	Spectral significant wave height (Hm0)	wave_significant_height
VTPK	sea_surface_wave_period_at_variance_spectral_density_maximum	Wave period at spectral peak / peak period (Tp)	wave_peak_period
VTM01	sea_surface_wave_mean_period_from_variance_spectral_density_first_frequency_moment	Spectral moments (0,1) wave period (Tm01)	wave_period_tm01
VTM02	sea_surface_wave_mean_period_from_variance_spectral_density_second_frequency_moment	Spectral moments (0,2) wave period Tm02	wave_period_tm02
VMDR	sea_surface_wave_from_direction	Mean wave direction from (Mdir)	wave_mean_direction
VHM0_WW	sea_surface_wind_wave_significant_height	Spectral significant wind wave height	wind_wave_significant_height
VHM0_SW1	sea_surface_primary_swell_wave_significant_height	Spectral significant primary swell wave height	primary_swell_wave_significant_height
VHM0_SW2	sea_surface_secondary_swell_wave_significant_height	Spectral significant secondary swell wave height	secondary_swell_wave_significant_height
VHM0_SW3	sea_surface_tertiary_swell_wave_significant_height	Spectral significant tertiary swell wave height	tertiary_swell_wave_significant_height
VTPK_WW	sea_surface_wind_wave_period_at_variance_spectral_density_maximum	Wind wave peak period	wind_wave_peak_period
VTPK_SW1	sea_surface_primary_swell_wave_period_at_variance_spectral_density_maximum	Primary swell wave peak period	primary_swell_wave_peak_period
VTPK_SW2	sea_surface_secondary_swell_wave_period_at_variance_spectral_density_maximum	Secondary swell wave peak period	secondary_swell_wave_peak_period
VTPK_SW3	sea_surface_tertiary_swell_wave_period_at_variance_spectral_density_maximum	Tertiary swell wave peak period	tertiary_swell_wave_peak_period
VMDR_WW	sea_surface_wind_wave_from_direction	Mean wind wave direction from	wind_wave_mean_direction
VMDR_SW1	sea_surface_primary_swell_wave_from_direction	Mean primary swell wave direction from	primary_swell_wave_mean_direction
VMDR_SW2	sea_surface_secondary_swell_wave_from_direction	Mean secondary swell wave direction from	secondary_swell_wave_mean_direction
VMDR_SW3	sea_surface_tertiary_swell_wave_from_direction	Mean tertiary swell wave direction from	tertiary_swell_wave_mean_direction
VSPR_WW	sea_surface_wind_wave_directional_spread	Wind wave directional spread	wind_wave_directional_spread
VSPR_SW1	sea_surface_primary_swell_wave_directional_spread	Primary swell wave directional spread	primary_swell_wave_directional_spread
VSPR_SW2	sea_surface_secondary_swell_wave_directional_spread	Secondary swell wave directional spread	secondary_swell_wave_directional_spread
VSPR_SW3	sea_surface_tertiary_swell_wave_directional_spread	Tertiary swell wave directional spread	tertiary_swell_wave_directional_spread
VPEP_WW	sea_surface_wind_wave_variance_spectral_density_maximum	Energy density at wind wave spectral maximum	wind_wave_peak_energy
VPEP_SW1	sea_surface_primary_swell_wave_variance_spectral_density_maximum	Energy density at primary swell wave spectral maximum	primary_swell_wave_peak_energy
VPEP_SW2	sea_surface_secondary_swell_wave_variance_spectral_density_maximum	Energy density at secondary swell wave spectral maximum	secondary_swell_wave_peak_energy
VPEP_SW3	sea_surface_tertiary_swell_wave_variance_spectral_density_maximum	Energy density at tertiary swell wave spectral maximum	tertiary_swell_wave_peak_energy