

## **Weather Data used in [www.passageweather.com](http://www.passageweather.com)**

**The weather data that we use to produce our weather forecast charts come from the most trusted and reliable sources available. These sources include the US National Weather Service (NWS), the National Oceanic and Atmospheric Administration (NOAA), the National Centers for Environmental Prediction (NCEP), the European Centre for Medium-Range Weather Forecasts (ECMWF) and the Marine Meteorology Division of the U.S. Naval Research Laboratory (NRL).**

**Our worldwide Surface Wind (10m above sea level), Surface Pressure, Visibility, Cloud Cover and Precipitation forecast charts are derived from the 0.25 degree GFS (Global Forecast System) model, one of the operational forecast models run at NCEP. The GFS model is run four times daily, with forecast output to 180 hours (7.5 days).**

**Our other worldwide Surface Wind (10m above sea level) and Surface Pressure forecast charts are derived from the 0.4 degree ECMWF model, the global forecast model run at the European Centre for Medium-Range Weather Forecasts. The ECMWF model is run four times a day, with forecast output to 180 hours (7.5 days).**

**For North America, we create higher-resolution Surface Wind (10m above sea level) charts using data from the 12km (~0.12 degree) NAM (North American Mesoscale) model. This model, an NCEP implementation of the WRF-NMM model, is run 4 times a day, with forecast output to 84 hours (3.5 days).**

**We run higher-resolution Surface Wind (10m above sea level) charts for parts of Western Europe and the Mediterranean Sea, using data from the 18km (~0.2 degree) COAMPS (Coupled Ocean / Atmosphere Mesoscale Prediction System) model. Developed by the NRL. This model is run twice a day, with forecast output to 96 hours (4 days).**

**Our Wave Height & Direction forecast charts are derived from the WW3 (WaveWatch III) model, the third generation of the wave model developed at NOAA/NCEP. The WW3 model is also run four times daily, with forecast output to 180 hours (7.5 days).**

**Note: The Great Lakes WW3 wave model only provides forecast output to 84 hours (3.5 days)**

**The Wave Height & Direction forecast charts for the Black Sea are derived from the WW3 wave model developed and run by the NRL. This model is run twice a day, with forecast output to 96 hours (4 days).**

**The Gulf Stream Velocity and Direction charts (as well as these regions' Sea Surface Temperature charts) use data from the Real-Time Ocean Forecast System (RTOFS), developed by the Naval Research Laboratory (NRL). The RTOFS model is run once a day, with forecast output to 144 hours (6 days).**

**We create the Sea Surface Temperature analysis charts using AVHRR + AMSR data from NASA's Earth Observing Satellite System, as well as ship and buoy SST observations. This data is produced daily, with output analysis valid the previous day.**