

# Available Saildocs Grib Data

---

New data is available as of April-May 2014, see NDFD, RTOFS and OSCAR below.

"Grib" is "gridded binary", a data format originally used for computer forecast-model data but also used for observations (OSCAR) and forecaster-generated data (NDFD).

For general information about requesting grib data via email from Saildocs, send a blank email to: [gribinfo@saildocs.com](mailto:gribinfo@saildocs.com) or see the web at <http://saildocs.com/gribinfo>

## Gridded Marine Forecasts

=====

NDFD: NDFD (National Digital Forecast Database) is a US National Weather Service (NWS) project to make forecaster-generated weather forecast data available in gridded format for the NWS areas of responsibility. These data files are prepared along with the forecast charts (radiofax charts) and text bulletins. The advantage of the grib format is a much more efficient file format (and smaller files) than chart images.

NDFD is a developing project, and available data will be expanded. Currently wind and wave data is available for the Pacific from 20S to the equator and west to 120W, equator to 30N and west to 140W, 30N to 49N and west to 133W, and offshore waters around Alaska and Hawaii. The current Atlantic coverage is 03N to 31N from the Gulf eastwards to Africa, and from 31N to 50N from the coast east to 064W.

To request NDFD data use the code "NDFD", specify the lat-lon area (respecting the available areas, above). The resolution is 0.12 deg (default is 1-deg if omitted), forecasts are available out to 7 days at 3 to 6-hour increments. Files are currently updated by 01:00z (for the 00z forecast), then 07:00, 13:00, 19:00 and 23:00z.

NDFD is still in "experimental" status which means that the data may not be available or correct (which is always true for computer data).

For more info about NDFD see:

<http://www.nws.noaa.gov/ndfd/>

[http://www.opc.ncep.noaa.gov/opc\\_gridded\\_marine.php](http://www.opc.ncep.noaa.gov/opc_gridded_marine.php)

<http://www.nhc.noaa.gov/marine/grids.php>

## Computer Forecast Models:

=====

The primary source for Saildocs computer-model data is NOAA's "GFS"

global model, requested by using the code "GFS:" (or "Grib:") in a grib-request. Data from other models is also available. Here are the details for the available models:

**GFS:** The most-often used model is NOAA/NCEP's global "GFS" (Global FOrcast System) model. Data is generally available on a 0.5 x 0.5-deg grid every 3 hours out to 192 hours, and then on a 2.5-deg grid every 12 hours out to 384 hours (16 days). Note, however, that forecast accuracy becomes increasingly speculative after 4-5 days.

The request-code is "GFS:" as used in the examples in the "gribinfo" document. The code "grib:" can also be used, the difference is that for "grib:" the forecast-times are always adjusted to provide forecast-times relative to 00z. Available parameters are PRMSL,WIND,HGT500,TEMP. Data is almost always available by HH+05:00 hours ("HH" being the synoptic-time), so by 05:00z for the 00z forecast cycle.

**NAVGEN:** This is a US Navy model (formerly known as NOGAPS), with data is available on a 1-deg grid with forecasts every every 3 hours to 24, then 6 hours to 96, then 12 hours to 144, and updated every 6 hours by HH+06:00. Available parameters are PRMSL,WIND,HGT (the default is PRMSL,WIND). The general view is that GFS has better accuracy on average, but Navgem is an independent model and is valuable as a "second opinion".

**COAMPS:** This is a meso-scale (i.e. more detailed) regional model provided by the US Navy. Data is available for three regions: eastern Pacific, west Atlantic, and Carib/Central America. The syntax is the same as for a basic grib, except the request-code "coamps:" is used in place of "gfs:" or "grib:". Forecast data is available on a 0.2 x 0.2-deg grid at 6-hour intervals out to 48 hours (72 for west-Atlantic). Available (and default) parameters are PRMSL,WIND.

The areas for the currently available coamps areas are:

NE Pac: 34n,64n,172w,118w

So Cal: 22n,43n,128w,109w (wind only)

Eq. Am: 12s,32n,122w,058w (wind only)

W Atl: 20n,55n,093w,055w

Euro: 29n,66n,015w,040e

The same "coamps:" code is used for all regions, and Saildocs chooses the appropriate region based on the requested lat-lon area. Requests which fall partially outside the selected region will be trimmed at the edge of the region, and a zero-length file will result if the request is completely outside any of the regions. It is not possible to span multiple regions because data from different files does not match at the region edges, apparently a boundary-condition issue with the model.

**WW3:** This is NOAA's WW3 wave model, data is available on a 1 x 1.25 grid (lat x lon), forecasts every 3 hours out to 180, updated every 6 hours usually by HH+05:00 (5 hours after the synoptic time, or 05:00 for the 00z forecast). All of the WW3 data is available, the

default parameter is "HTSGW" (height of sig waves) or "WAVES", other WW3 parameters are defined here:

<http://polar.ncep.noaa.gov/waves/products.html>

Also, the "WAVES" parameter can be added to a GFS request and Saildocs will combine the files, adding the WW3 sig-wave data layer to the same grib file (on the 1x1.25 grid if coarser than the user-specified grid).

Regional WW3 models are also available, updated every 6 hours and available around HH+05:00, as follows:

ww3akw: 45n,75n,160e,123w 0.3 x 0.5 deg grid, to 180 hrs @ 3 hr increment

ww3enp: 05n,60n,170w,070w, 0.3 x 0.25 grid, to 180 hrs @ 3 hr inc

ww3wna: 00n,50n,098w,030w, 0.3 x 0.25 grid, to 180 hrs @ 3 hr inc

ww3med: 29n,66n,015w,045E, 0.2 x 0.2 grid, to 96 hrs @ 6 hr inc

The first three are also available as "ww3merged" to allow spanning Central America.

If the generic "WW3" code is used (or "Waves" added to a GFS request) then then Saildocs will choose the best data file for each request, i.e. whichever returns the most data points.

RTOFS: This is an ocean current forecast model from NOAA's RTOFS system, based on the HYCOM model (see

<http://polar.ncep.noaa.gov/ofs/> for more details). It is actually two different models and three overlapping areas:

The smallest-area gulf-stream dataset (code RTOFS-GS) covers 25N-48N, 083W-052W. That file has higher resolution with a data grid of 0.05 x 0.06 deg (lat x lon) and forecast times of 0,24,48,72,96,144 hours updated daily at around 15:00z.

The larger-area Atlantic file (RTOFS-ATL) goes out to 144 hours at a 6-hour increment, 0.26-deg resolution, and covers 26S to 75N, North America to Africa/Europe.

The global RTOFS model (RTOFS-GLOBAL) has a 0.08 deg resolution (data grid) and goes out to 192 hours at 24-hour increments.

The RTOFS code can be used for all regions, and Saildocs selects whichever file best covers your request (i.e. returns the most data points). The specific models can also be requested with the noted code. Available parameters are CUR (or CURRENT or UOGRD,VOGRD), WTMP (or WATER\_TEMP), DSL\_M (sea-level deviation), and SALTY (salinity). The default (if parameters are omitted) is CURRENT.

OSCAR: OSCAR (Ocean Surface Current Analysis- Realtime) is an ocean current analysis based on satellite observations (scatterometer and altitude) over a 5-day period, and updated every 5 days. Resolution is 0.33 deg, global data is provided but the focus is on the tropical Pacific. The code is "OSCAR", the forecast-time field is not used, and the default (and only) parameter is surface current (CURRENT or UOGRD,VOGRD).

For more info see <http://www.oscar.noaa.gov> when internet is available.

=====

To get general info about Saildocs send a (blank) email to:  
info@saildocs.com (auto-responder)

To get the most-recent news about the Saildocs grib-server:  
gribnews@saildocs.com (auto-responder)

For problems/questions relating to Saildocs, send an email to:  
support@saildocs.com)

Thanks for using Saildocs and Good Sailing!

(updated 2014-05-13)