ScanNav Documentation
SNTides Module (Water Heights)

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Introduction

The "SNTides" water height module is an integral part of the ScanNav software. It is included in the base license of ScanNav, from version 10.0 onwards with up to date licenses.

The calculation of the water levels is provided by the SHOM tidal prediction kernel: SHOMAR - © SHOM 2010 - France - Contract n ° 114/2010 - http://www.shom.fr

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The title bar clearly indicates the source of the data. For the SHOMAR implementation, the data are official for the French responsibility areas.

An alternative implementation allows Navionics data to be used when Navionics charts are loaded on the area. In order to avoid miss-interpretation, the graph is then drawn in red, and the title bar includes the mention [Navionics].

Main window

The predictions are presented in the form of a dynamic window including the tides graph, and indication of water height and the hours / height / coefficients of the high and low tides.
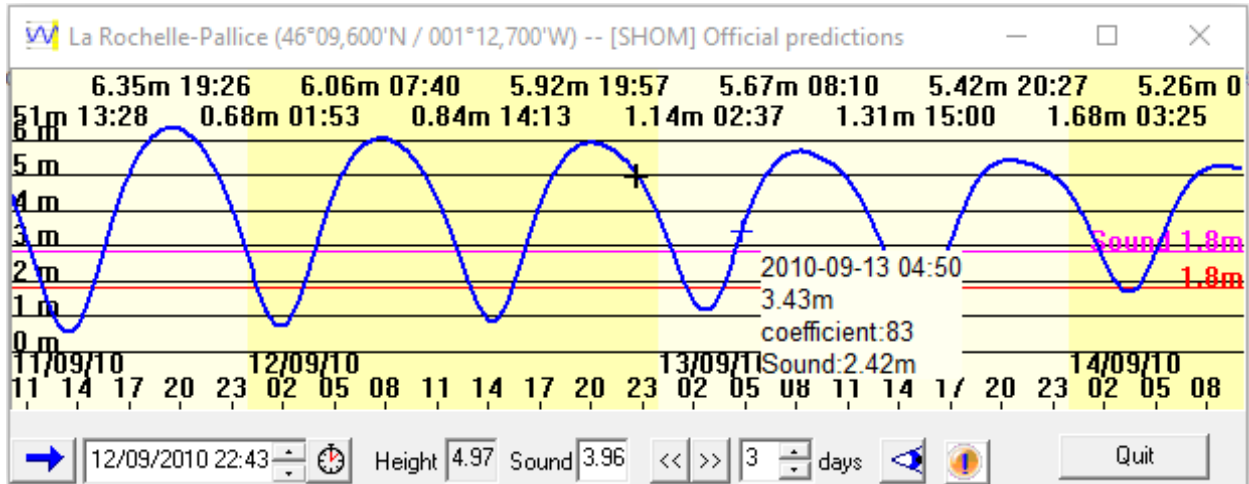

The displayed period can go from one to 30 days (the window can be enlarged as needed). Just click on the curve to instantly know the height and coefficient at a given moment in a popup window, or use the appropriate fields to choose a date in the calendar, or move from stall to stall. The selected date in the lower part is shown with a thick cross on the curve, thresholds can be displayed according to the user's preferences (one threshold with respect to the hydrographic zero and one with respect to a sound). The user can easily change scale or move the displayed period by using the mouse wheel, dragging the mouse while holding down the middle mouse button, using 2 fingers in touch mode, or using keyboard shortcuts.

The time system can be set in the preferences. Heights are always indicated in meters. The background color varies to better visualize changes of days.

Note on the coefficients: For better accuracy on the tidal currents, SNTides takes into account a coefficient for the falling tides which is generally not indicated in the official tables. Nevertheless, **the official coefficient of a tide remains that of the rising tide**.

Description of the toolbar
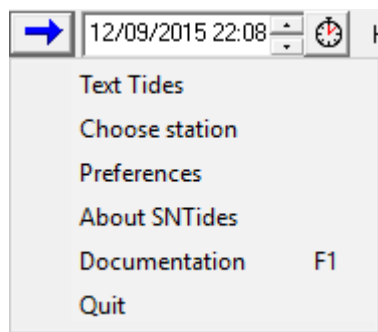
 The blue arrow opens a menu to perform several actions.

- Text Tides: displays a window with tide schedules and any threshold crossings.
- Choose station: allows you to choose the port from a list
- Preferences: opens the preferences window
- About SNTides: Provides version information
- Documentation: Displays this document.
- Quit: Exits the application

The selected date sets the next height and sounding fields, and is marked with a thick cross on the graph. To modify it, double-click in the date field to open a calendar, or modify the values directly in text. You can also double-click on the curve. It is also possible to select each individual component and use the up / down arrows to scroll. See also "keyboard shortcuts" below. When used in accordance with the ScanNav Currents module, this date also indicates the date chosen for the representation of the currents on the map view.

To keep synchronized with the present date, use the state button. When pressed, the date

automatically updates every minute. Just click again on this button to switch to un-pressed state, and disable synchronization..

The "**Height**" field indicates the height in meters at the selected date relative to the hydrographic zero.

The "**Sound**" field allows you to enter a sound value read from your sounder, or on the chart. It will then be updated continuously according to the selected time, and will also appear in the tooltips window. It makes it possible to predict the height of water with respect to a given sound at any time.

1. Fill-in sensor information: Enter the sensor value directly as it is read on your sonar, making sure before hand to have selected the current time. This allows, for example when anchoring, to check that you will have enough water at low tide, or if not, at what time you need to leave.

2. Fill-in information read on a map: Enter the sounding preceded with the letter "S" (case insensitive). For example :
   - "S3,3" : For a positive sounding (does not uncover) of 3.3m
   - "S-3,3" : For a negative sounding (uncovers) of 3.3m

   As soon as you validate the change, the edit field will revert to the value of the corresponding real time sounding, and will evolve with time as in case 1. This lets you easily know the water level at any time over a given location by entering the sound value on the map. A second threshold is also materialized in magenta on the graph, in order to quickly visualize the possible hours of crossing it, depending on the height marker set in the preferences.

[<< >>] These two buttons allow you to switch quickly from stall to stall backwards or forward.

[3 ▲▼ jours] : Number of days represented on the curve (from 1 to 30). You can also use the mouse wheel by rotating it forward or backward, or with 2 fingers in touch mode, or using the keyboard shortcuts.
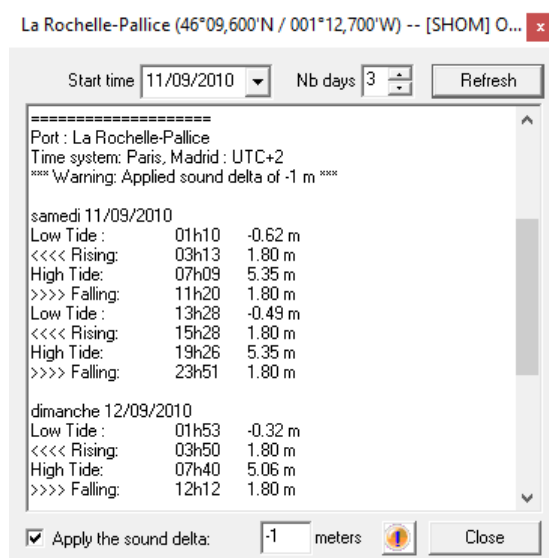
[◄] : Click on this button to center the map in ScanNav on the location of the currently selected port, and at the highest available chart scale.

[◉] : This button appears when a nota exists for the selected port. Click on it to display the nota. This nota is also displayed automatically when the text tides window is opened.

Text Tides window:

The "Text Tides" window shows the times and heights of the tides, as well as the passages of the threshold set in the preferences.

"Apply the sound delta" allows to know the height on a given sound. **Warning, when checked, the heights are not the official ones, but those corrected for a given sounding.** The sounding value is initialized according to the sound indicated in the main window.

It is possible to modify the starting date and the number of calculated days (initialized from the parameters of the main window at launch)

Stations list:
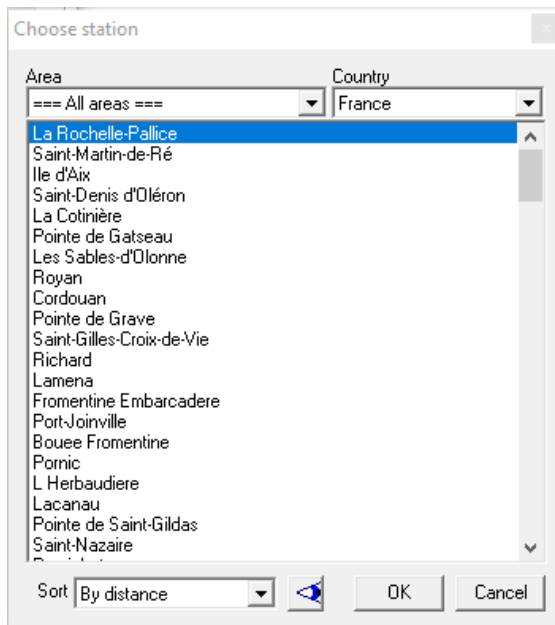
This window lets you choose a port by its name. The list can be sorted alphabetically, or by distance from the currently selected port.

You can filter the displayed ports by Area and / or country.

Button ◁ centers the map in ScanNav on the location of the selected (highlighted in blue in the list) port, at the highest available chart scale

Note: You may also change port directly from ScanNav:

- Right-Click on the map at the desired location, then, in the menu, choose « Water levels » and then « SOMAR source »
- ==> The nearest port to the clicked point will be selected in the SNTide window.

Preferences window:

This window allows you to define the general parameters

- Time system: can be specified in UTC +/- a fixed value, or follow the current parameters of the PC. In the latter case, the time takes into account the system parameters of the PC, including those of the winter / summer time.
- Always visible: Indicates that the window always appears above all others. Allows the display to be above ScanNav even when the latter has the focus.
- Water mark: Enter a threshold that will be taken into account when displaying the graph and text tides, corrected or not with a sound indicated in the main window.
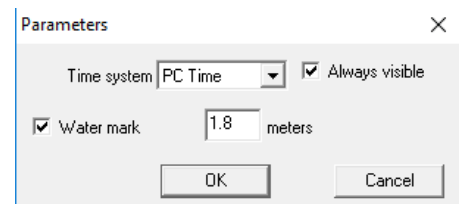
Keyboard shortcuts:

- Left and Right arrows: Scroll right or left. Combine with the <Shift> key to scroll faster.
- Up and Down Arrows: Scroll the date / time cursor in time:
  - default one hour step
  - combined with the <shift> key: one day step
  - combined with the <ctrl> key: 5 minutes step
- <PgDn> and <PgUp> keys: Increase / Decrease the number of days displayed (minimum 1 day, maximum 30 days)
- <Home> key : Resets the time cursor to the current time.
- <F1> key : displays this document.

Interactions between ScanNav and SNTides:

When opening the Currents module in ScanNav or selecting the "Automatic" entry in the time selection, SNTides is positioned on the reference port corresponding to the Tidal currents file. If SNTides is not already started, ScanNav launches it.

It is then possible to select the time either in the tidal currents control window of ScanNav, or by double-clicking on the curve of SNTides. The 2 programs will synchronize, ScanNav displaying the currents, and SNTides the water level of the corresponding reference station.

Note: In previous versions, when requesting the water levels of a port while the currents module is open, the display returned unexpectedly to the reference port attached to the currents file. This problem is fixed in **version 23.1**: a specific instance of SNTides is attached to the currents module, and independent requests for displaying the water heights of a port open in a new window. It is thus possible to have several ports displayed without having to launch independent instances of ScanNav.

The SHOMAR kernel is limited to the 2 consecutive years following the edition date. In order to calculate currents and/or water levels after this limit, you can use WXTide as in previous versions. For this, Open the tidal currents module, and click on ⚙ button to open the settings window, then on the « General » tab, and set source to WXTides Nevertheless, be aware that precision on time and height are much less accurate and vary from one port to the other. You therefore need to double-check the validity of information using the official paper documents.
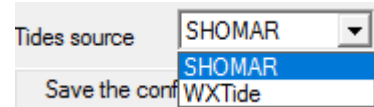
Don't forget to re-position it to SHOMAR when done, so as to benefit of a better precision for dates within the limits..