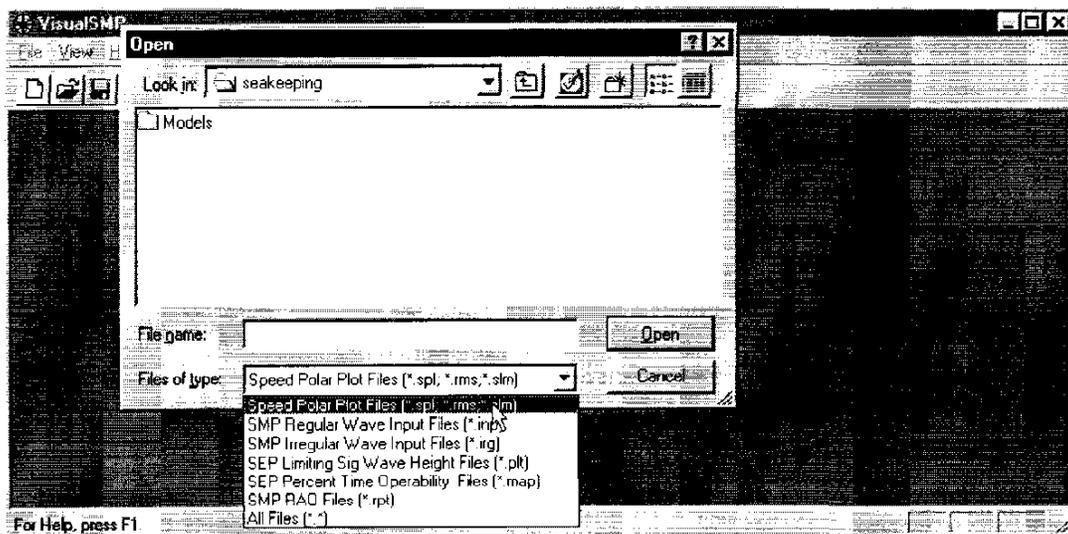


12 Postprocessor

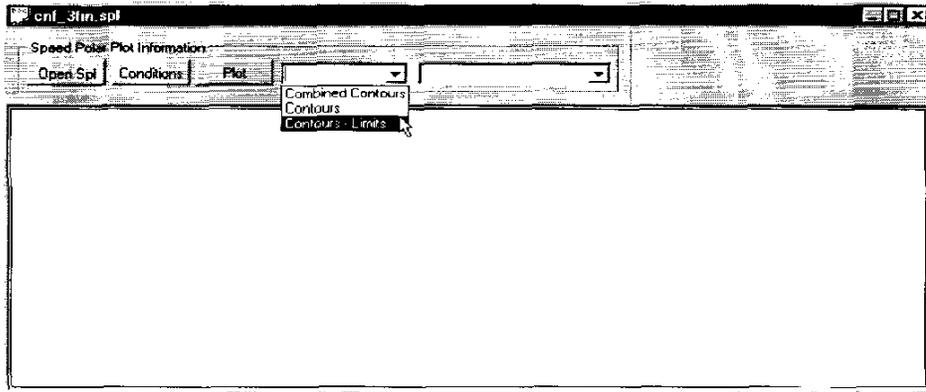
When Executed, VisualSMP creates several types of output files, depending on selections made by the user in the General Information dialog forms. File types created are:

- ◆ Speed Polar Plots (*.spl)
- ◆ RMS Velocity and Acceleration Responses (*.rms) (SWATH motions only)
- ◆ Relative motion Speed Polar Plots (*.slm)
- ◆ Limiting Significant Wave Height (*.plt) (SEP option only)
- ◆ Percent Time Operability (*.map) (SEP option only)
- ◆ RAO Files (*.rpt)
- ◆ Regular Wave Output file (*.out) (text record file, not directly accessible from VisualSMP postprocessor)
- ◆ Irregular Wave Output file (*.oot) (text record file, not directly accessible from VisualSMP postprocessor)

Output files are viewed and printed through the VisualSMP's main file menu. Output file types available are Speed Polar Plot Files, RAO Files, SEP Limiting Significant Wave Height Files, and SEP Percent Operability Files.

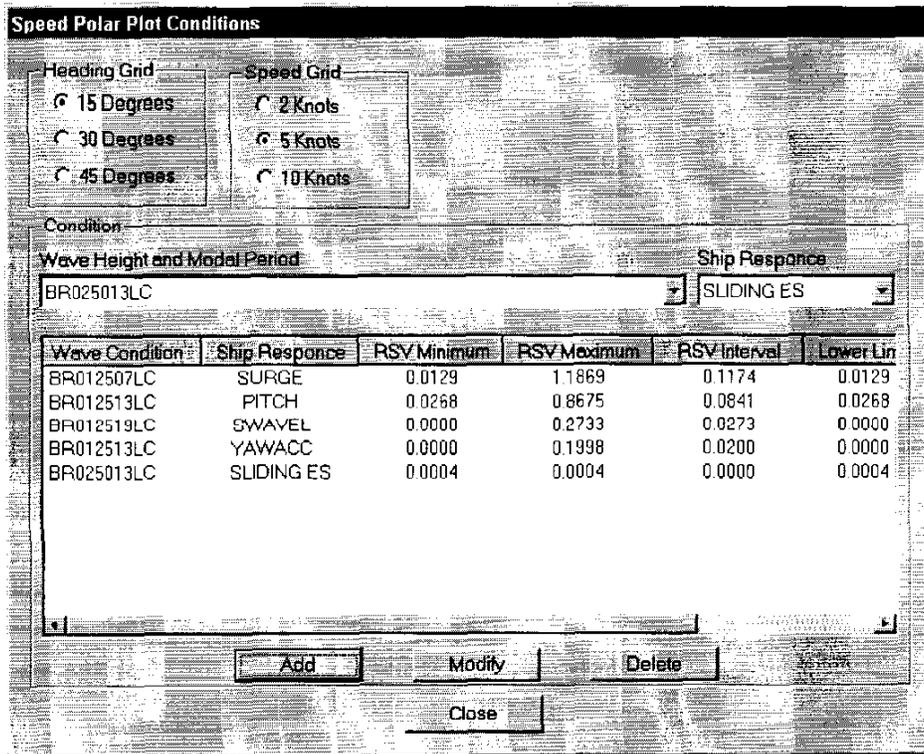


12.1 Speed Polar Plots



Speed Polar Plots are available in Combined Contours, Contours or Contours - Limits formats by selecting the desired plot format from the menu.

Clicking the 'Conditions' button brings up the form below. The user selects speed and heading increments for the plot and creates a listing of wave height/modal periods and ship responses to be available for plotting. Conditions are added to the list by selecting a wave height/modal period and a ship response from the pull down menus and then clicking the 'Add' button.



Once the conditions have been chosen, you may modify the limits and contour intervals to be shown on the plot. Select the desired condition in the Speed Polar Plot Conditions, and click on

Modify. The dialog shown below will appear, and you can enter the following data (note that you can select a different condition and ship response as well):

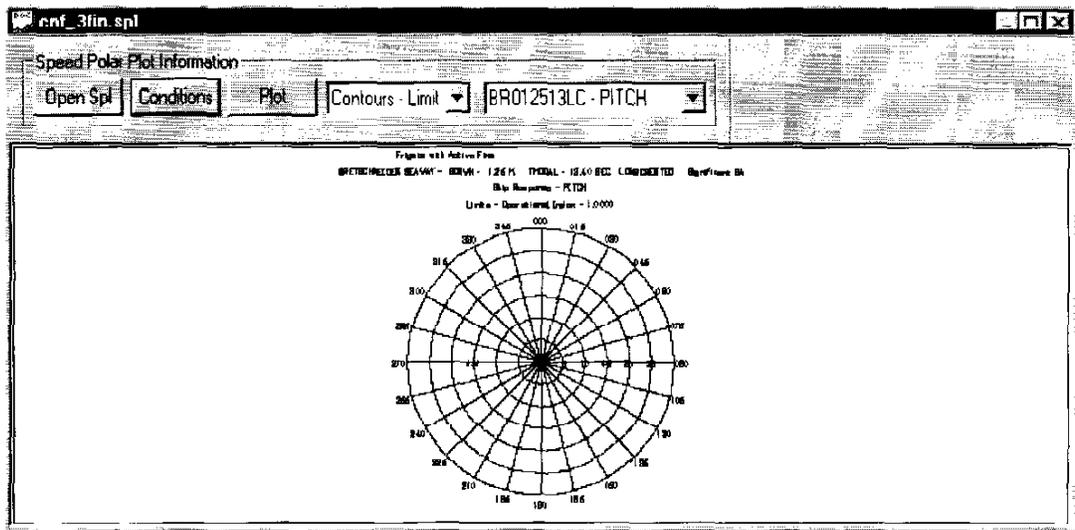
RSVMIN: The minimum response value to be plotted
RSVMAX: The maximum response value to be plotted
Lower Limit: The lower limit of the limiting criteria
Upper Limit: The upper limit of the limiting criteria
Contour Interval: Increment between contour lines
Include in Overlay: If you want this condition to be included in a composite plot with more than one ship response, check this box.

After entering this data, click on OK, and then click on CLOSE in the Speed Polar Plot Conditions dialog.

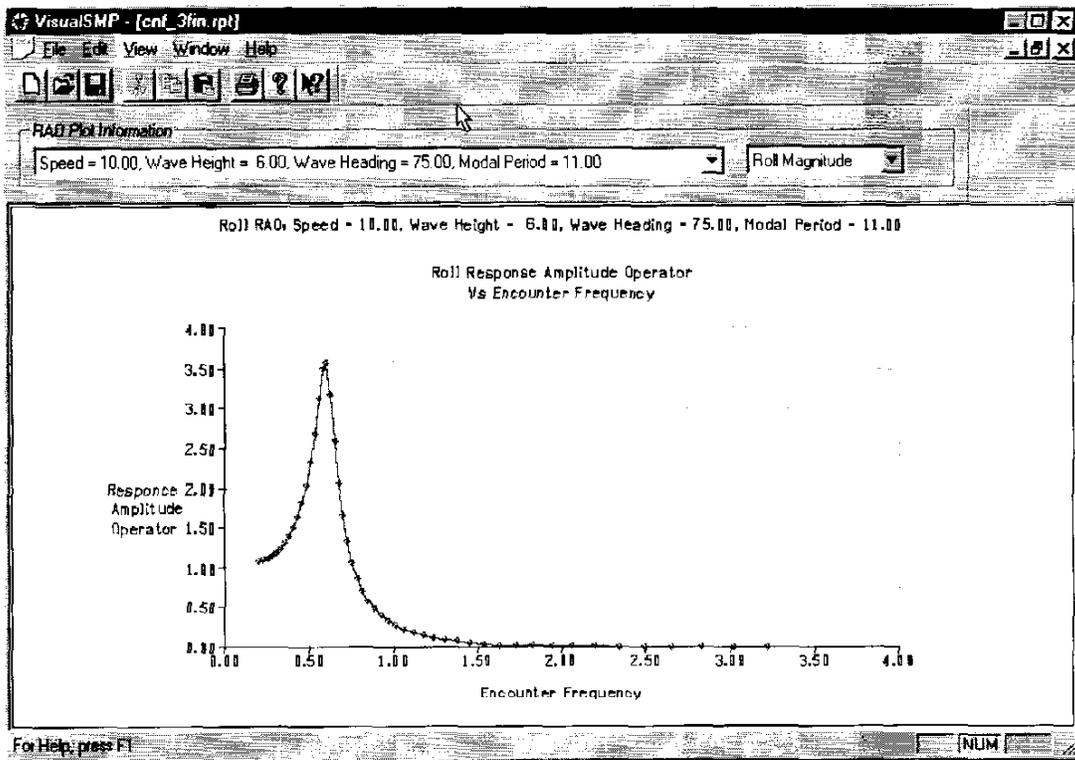
Modify SPL Condition

Wave Height and Modal Period		Ship Response	
BR012513LC		SURGE	
RSVMIN	0.0169685	Lower Limit	0.0169685
RSVMAX	0.347539	Upper Limit	0.347539
Contour Interval	0.033057	<input type="checkbox"/> Include in Overlay	
OK		Cancel	

Once the list of plot conditions and limits have been created, each condition is available from the right hand pull down list in the Speed Polar Plot Information form. Select the desired condition, the data to be shown on the plot (Contours, Limits, or Combined), and then clicking the 'Plot' button to create the desired Speed Polar Plot. This plot may then be printed by selecting File/Print.



12.2 RAO Plots



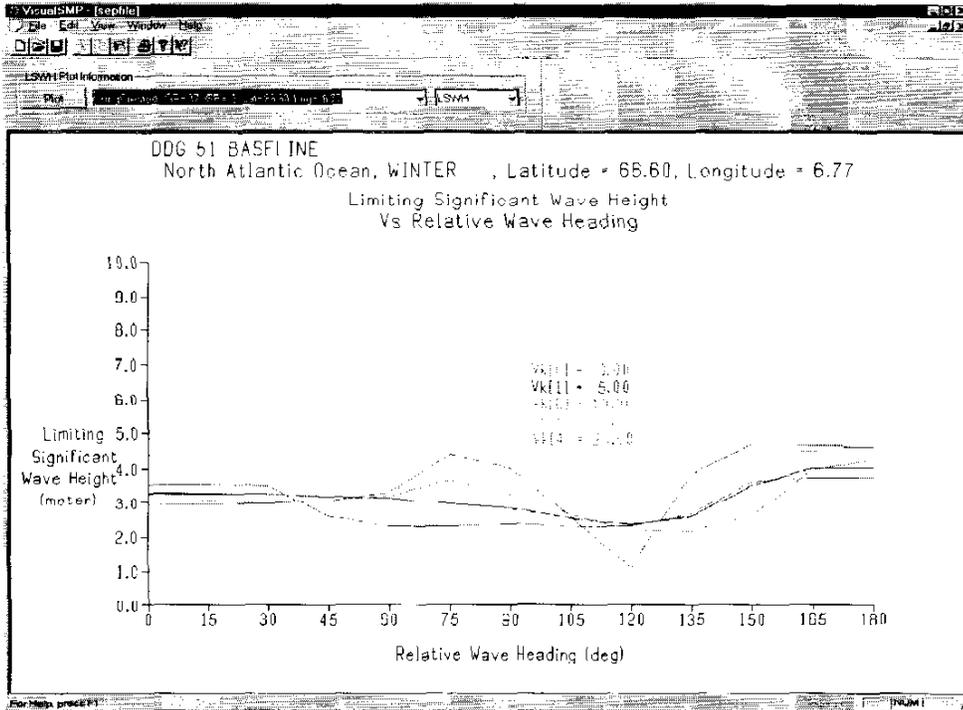
RAO plots are selected via the two drop down lists under RAO Plot Information. The left list offers selection of all combinations of speed, wave height, wave heading and modal period that were input in the regular and irregular wave analyses for the project. The right hand list offers selection of magnitude or phase for each of the six DOF. Once both selections have been made, the plot is created on screen.

12.3 Limiting Significant Wave Heights (Available only with the Seakeeping Analysis Option)

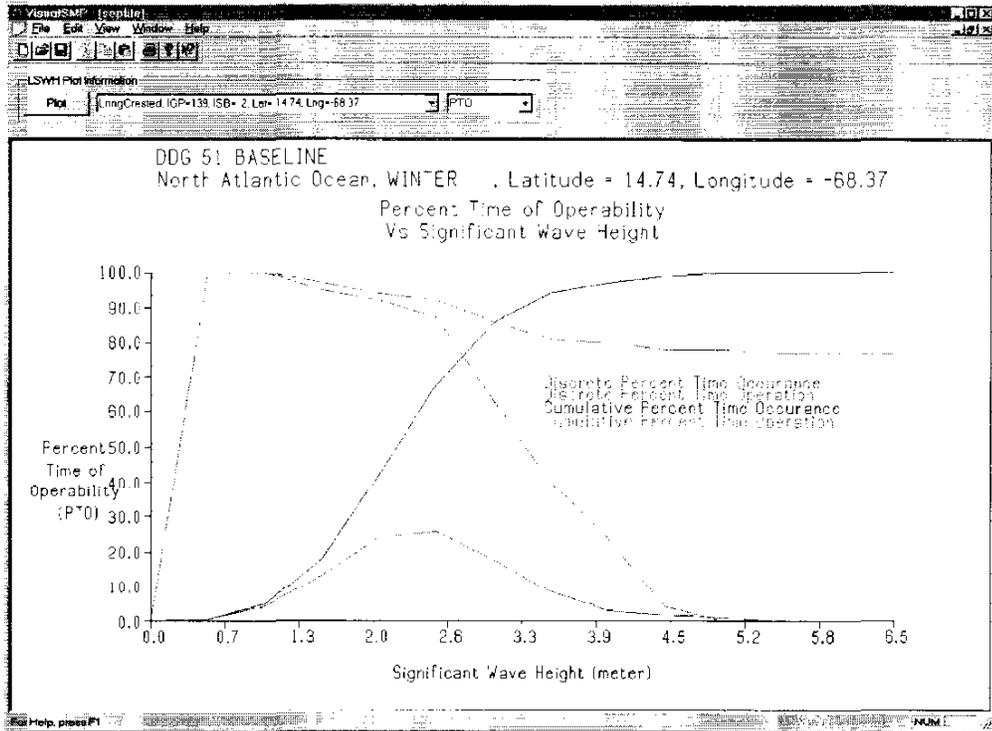
Limiting Significant Wave Height Plots are available for SEP runs that have no wind options selected. The *.plt file contains two plot types. First is the Limiting Significant Wave Height versus Relative Wave Heading, for all speed defined in the run. The second type is the Percent Time Occurrence/Operation versus Significant Wave Height; it contains curves for occurrence, operation, cumulative occurrence and cumulative operation data.

The user selects which set of curves to display via the LSWH/PTO drop down list. The grid point to be displayed is controlled via the first drop down list.

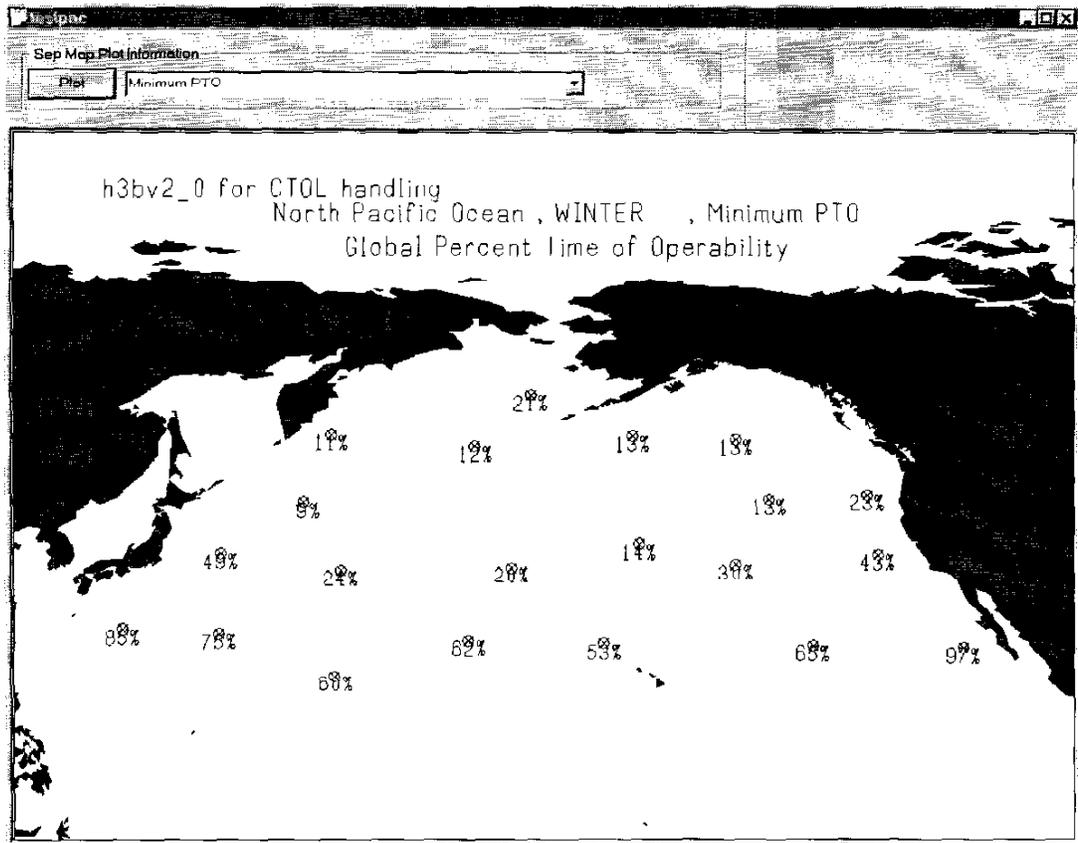
12.3.1 Limiting Significant Wave Height Versus Relative Wave Heading



12.3.2 Percent Time Occurrence/Operation Versus Significant Wave Height



12.4 Percent Time Operability World Maps



The Percent Time Operability (PTO) plots show all of the grid points for an ocean basin with a number that represents one of the following figures of merit:

1. Minimum PTO
2. Maximum PTO
3. Minimum PTO Normalized
4. Maximum PTO Normalized
5. Average PTO
6. Weighted Average PTO

The user can switch between the figures of merit by selecting a new one in the drop down list. Once selected the plot button will update the graphics on the screen.