SonarWiz Sidescan Nadir Filter

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1 SonarWiz Sidescan (SS) Nadir Filter

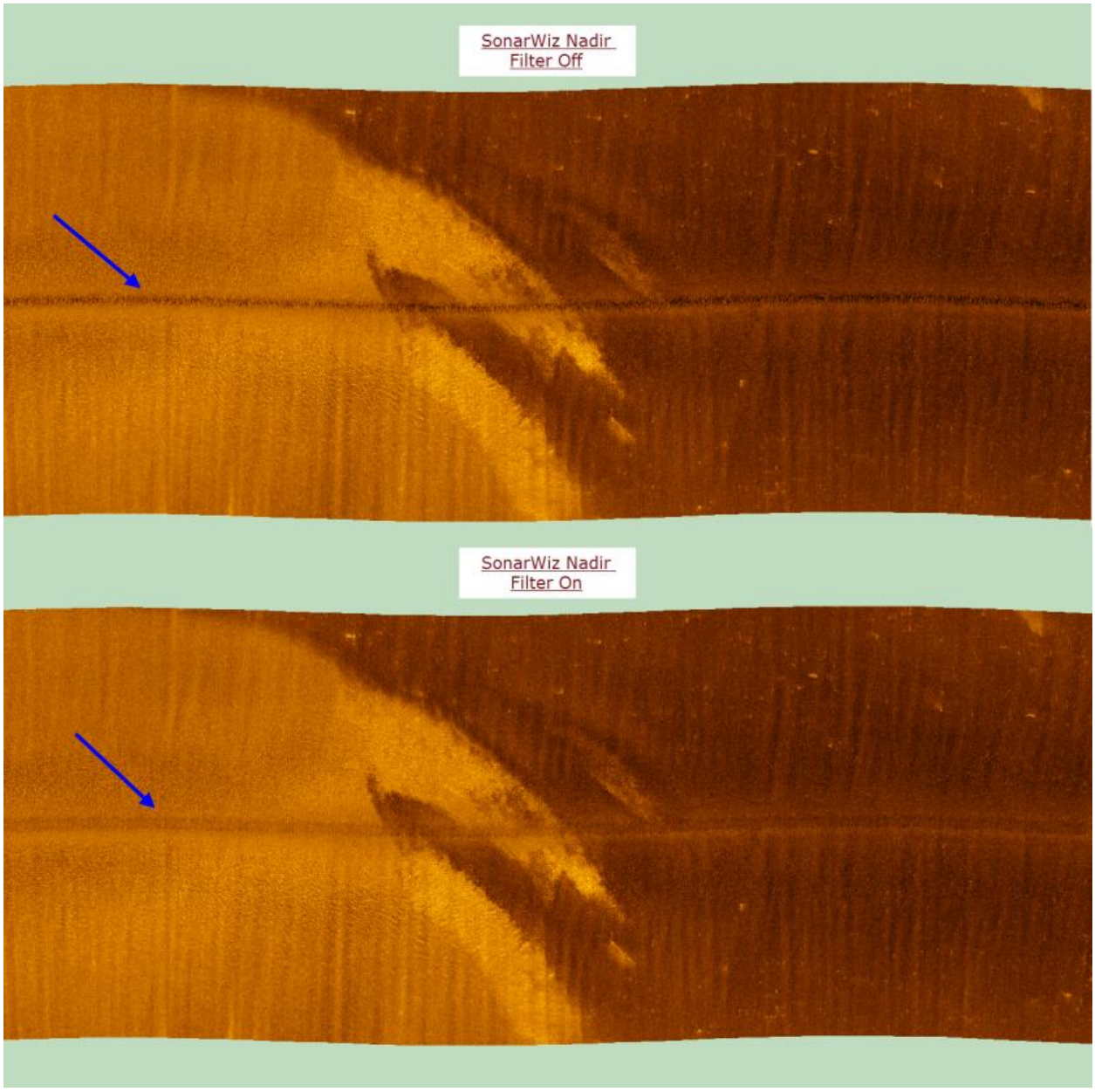
This signal-processing digital filter option first appears in SonarWiz version 6.05.0001, and is used to enhance the nadir (central portion) of any sidescan (SS) sonar data.

As a signal processing step, nadir filtering should be done in STEP 6 of the User Guide post-processing WORKFLOW sequence (see User Guide section 1.6.2), after all files have been bottom-tracked.

1.1 Why use the Nadir Filter

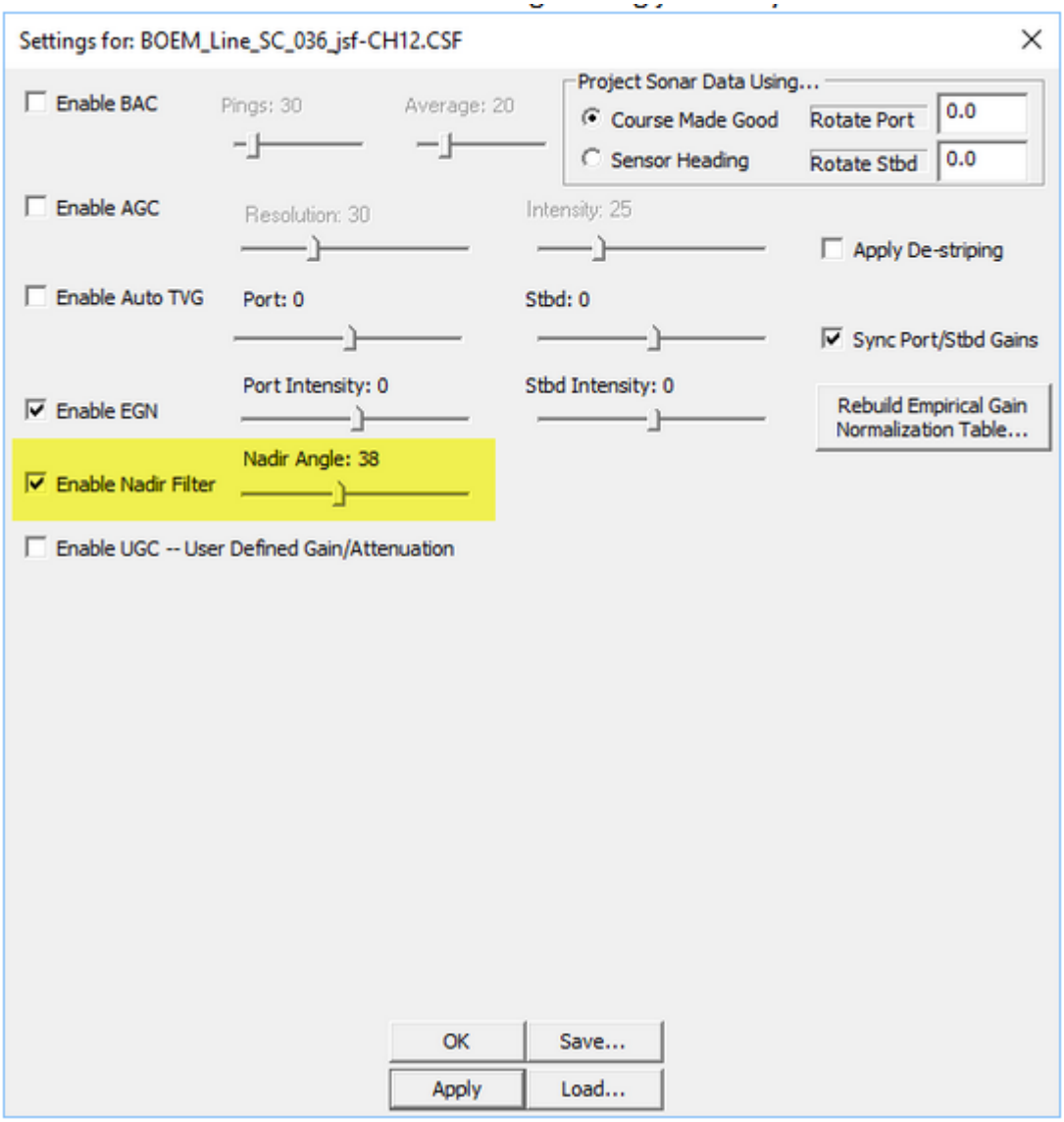
The nadir filter helps soften the nadir region (central region in SS data) It may not help clarify the data in that region though because that's a fundamental geometry issue. But what the nadir filter does do, is to soften the visual impact of the nadir line, so that the overall mosaic looks more continuous. Below a sample of the nadir filter on one of the South Carolina coastal-survey SS files, so you can see what you might expect in your own data.

1.2 Visual Example of the SS Nadir Filter



1.3 Applying the SS Nadir Filter

First bottom-track all your SS lines, then apply signal processing. Here's how to apply SS nadir filter during signal processing. This does not require new import of the SS line - just apply it like you might apply AGC or TVG or EGN after import and bottom-tracking. The SS nadir filter option appears in the SETTINGS dialog like this:



The angle setting is the aperture angle from the sonar straight down under the towfish that will be filtered. So, larger angles affect a wider nadir swath.