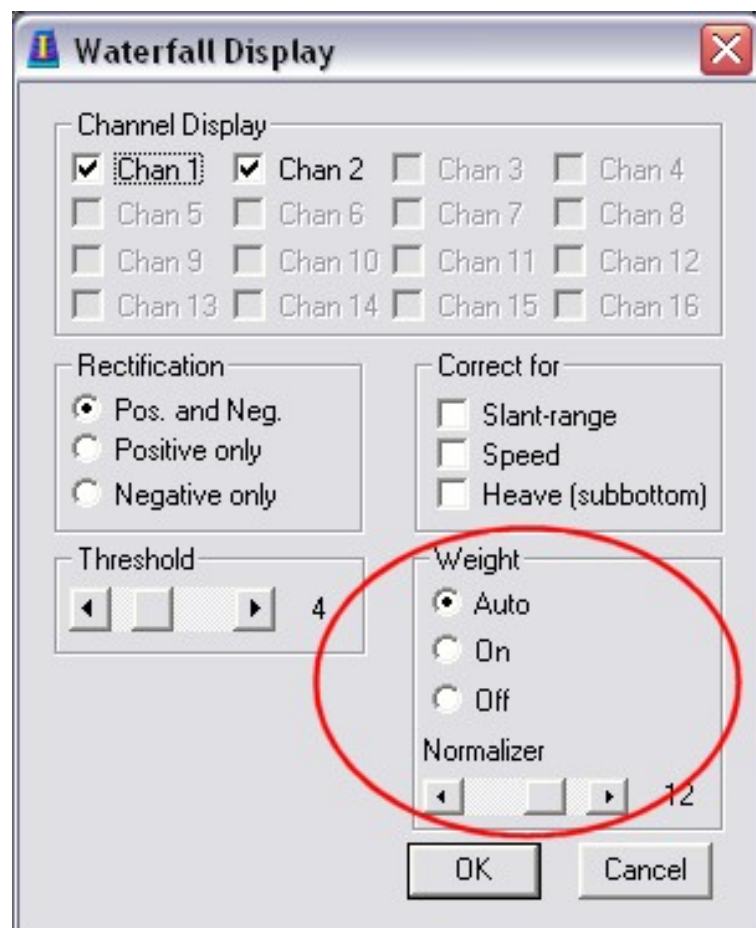


Edgetech Weighting factor.

Triton Isis and Triton SS-Logger now support (from v7.1) the logging and replay of XTF data with the Edgetech weighting factor. Storing and using weighting in the XTFPINGCHANHEADER allows the data to be processed through floating point expansion, in this case the displayed sample value is equal to the 16bit sample value * Pow(2, -Weight) This allows for floating point granularity in the data while storing the data as 16 bit integers.

From the users point of view this means that there is now no need to manually set a fixed gain in the 4200 server. The bar graphs associated with that setting have disappeared from the 4200 server.

The other difference is that there is now a second **Normalize** slider that is accessed from the **Waterfall Display** dialog (right click in the Waterfall window). The control will only be available when Isis detects that the sonar type supports weighting. XTF files recorded with other sonar types are unaffected. The normal setting will be **Auto**, however the user also has the ability to force the weighting to be **On** or **Off**:



At the time of writing the setting defaults to zero which usually results in a completely black record, normal settings will need to be determined by the user, however most data seen so far requires the slider to be set around 13 or 14.

Isis cannot determine if the data actually contain weighted data. It will always assume that data from Edgetech sonars that support weighting will have weighting, so the slider will be enabled. However, in a file from an

Edgetech sonar that supports weighting but does not have weighted data the weighting read from the XTF file will be a constant value of zero. The Normalization slider will simply change the perceived gain of the display in a similar way to the Threshold slider.

However, playing back a file that has weighting and forcing the weight to OFF will result in bands of strong and weak data where the 16bit weighted signal value is changing but the appropriate weighting value is not being applied (see below)

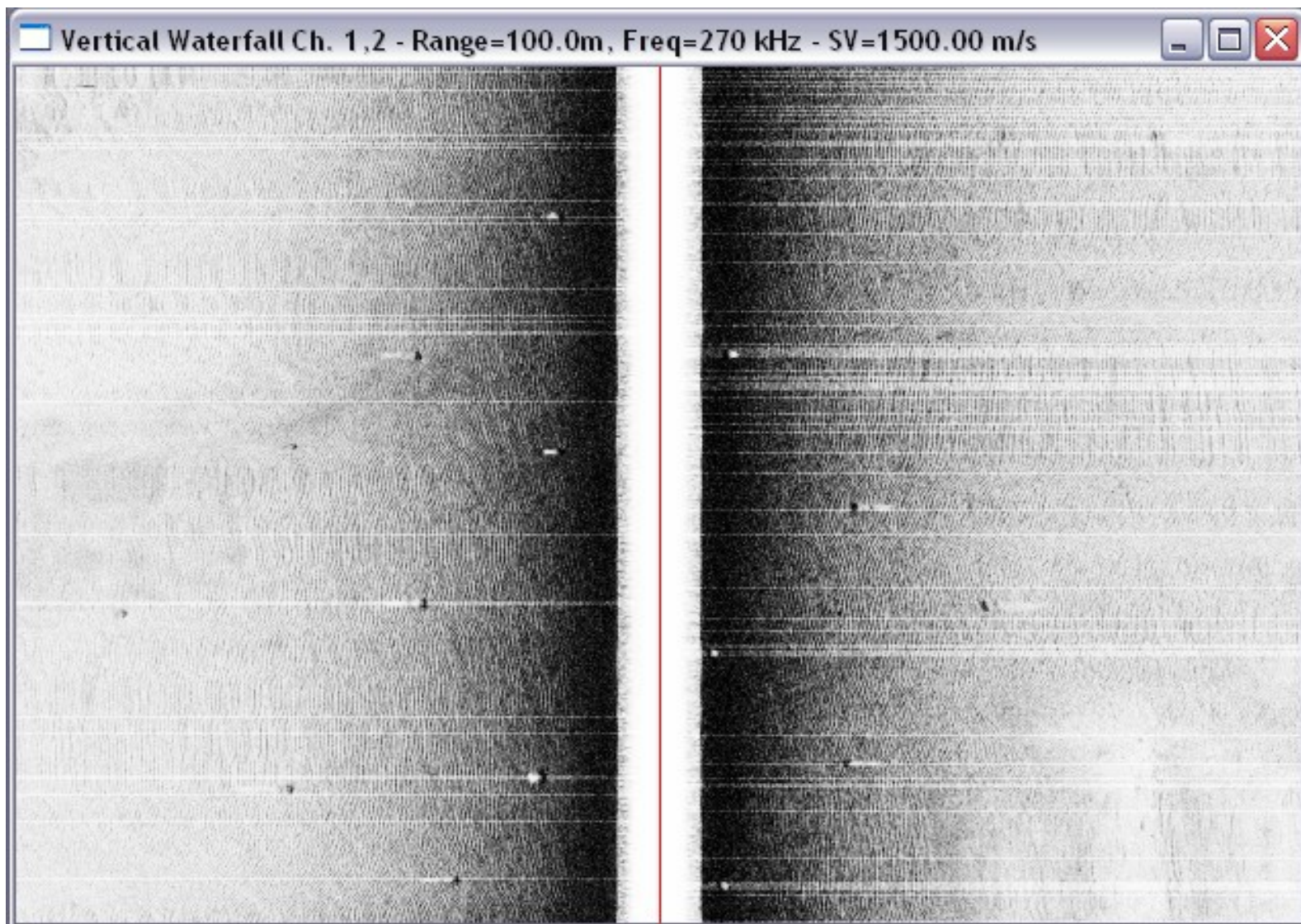


Fig 1 File with weighting played back with weighting OFF

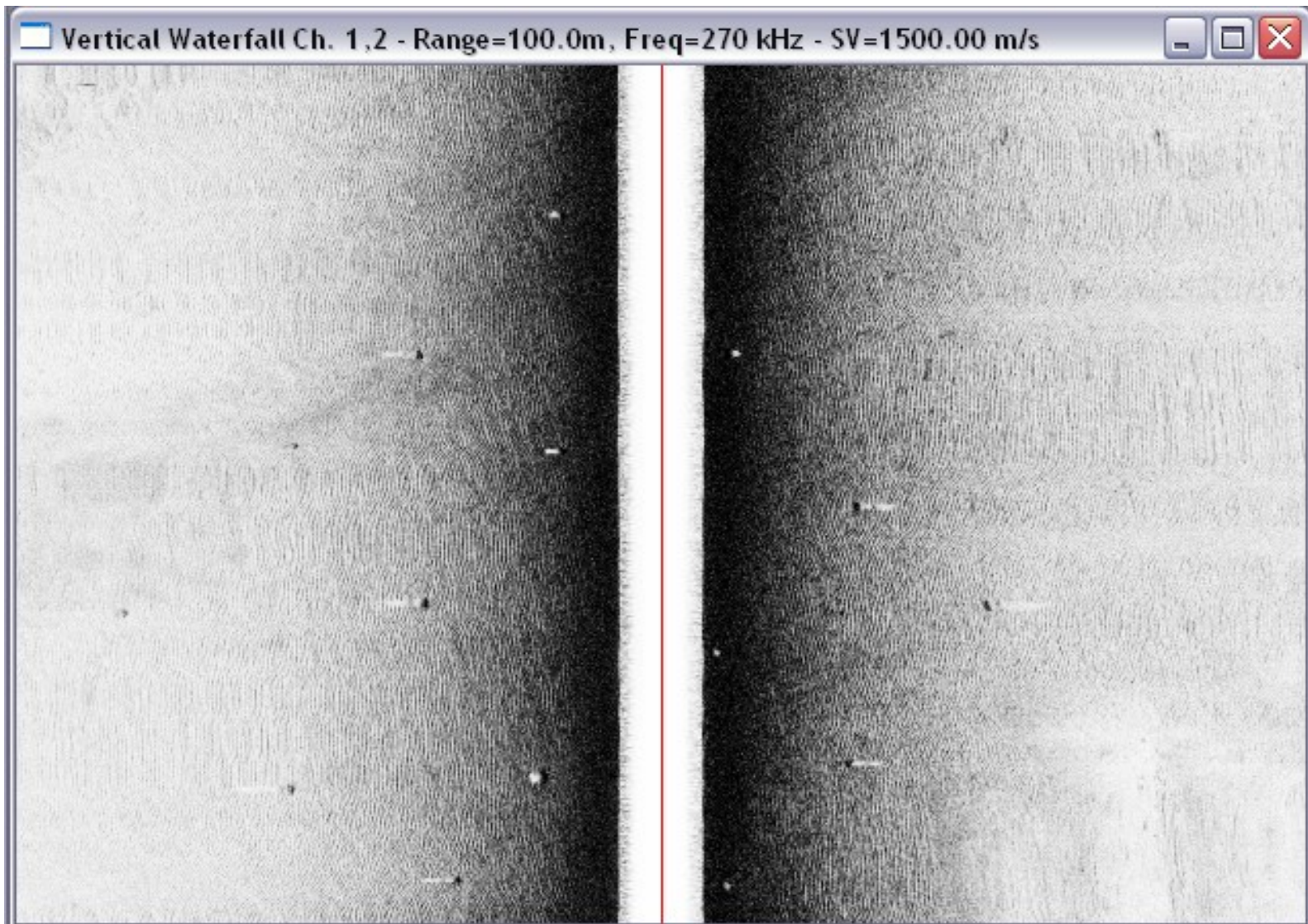


Fig 2 The same file with weighting ON

Important note

In record mode the user has no control over the raw data written to the XTF file, if the sonar supports weighting the data will be logged with weighting values. If an incorrect Normalize setting should used during logging this has no affect on the data logged to the XTF file, since it is simply a waterfall display function.

Of course, using earlier versions of Isis or SS-Logger to play back Edgetech data stored with a weighting value will result in a display similar to Figure 1.

