

# Spectral Probability Density (SPD) Colour Axis Upper Limit

For hydrophone [spectral probability density plot](#) ([PNG](#) and [PDF](#)) data products only:

Spectral Probability Density Colour Axis Upper Limit ():  Automatic  0.05  0.01  0.012  0.25  0.5  1.0

## Automatic

In this *default option*, it sets the upper limit of the colour axis to a value that's the nearest 0.1 (unit-less) to the 98th percentile of the empirical probability density. The empirical probably density is generally the most relevant at values less than 0.25. Only in small data sets or extreme frequency / sound level bins does one see values approach the maximum value of 1.0. For this reason, the manual fixed limit options are clusters at the lower values. The spectral probability density plots from [Merchant et al. \(2013\)](#) all had fixed upper limit values of 0.05. The lower limit is always 0.0.

[Oceans 2.0 API filter](#): `dpo_spectralProbabilityDensityColourAxisUpperLimit=0`

## Manual fixed limit settings (0.05, 0.01, 0.012, 0.25 0.5, 1.0)

This option will cause the spectral probability density plot to use a fixed value, as chosen, for the colour axis upper limit.

[Oceans 2.0 API filter](#): `dpo_spectralProbabilityDensityColourAxisUpperLimit={0.05,0.01,0.012,0.25,0.5,1.0}`

## File-name mode field

Spectral probability density plots generated with the manual limits will have a file mode modifier added to their file names of the format: `<-CLIMIT><option>` where `<option>` is the value as chosen, but without the '.'.