

To regrid a wave into another framework, use the following functions. For example you might have one curve, defined by a certain x- and y-wave (xwave1, ywave1). Let's say there are 10 points in these waves, and the maximum is 20 (and extreme case of length discrepancy). Another curve is defined by two other x- and y-waves, also with a maximum of 20, but with 20 points each (xwave2, ywave2). It is important that they have approximately the same bound values, or it will have a hard time interpolating between them.

If I want to look at the first curve in terms of the second x-wave, you have to regrid the first y-wave into the x-wave of the second. This can be done in two ways, and that is dependent on which initial set of waves has more data points. If the wave you want to regrid into has more points than the original, then use the first of these functions (Interp_1). If the opposite is true (wave you want to regrid to has less points) use the second function (Interp_2). They can be run as is, after changing the wave names appropriately. The [p] refers to each point, and should stay with this syntax (replacing it with a number refers only to that specified cell).

```
Function Interp_1 ()
  Wave xwave1, ywave1, xwave2 //ywave2 is not used
  duplicate/o xwave2 ywave_regrid
  ywave_regrid = ywave1 [binarysearchinterp(xwave1, xwave2[p])]
  appendtotable ywave_regrid
End Function
```

```
Function Interp_2 ()
  Wave xwave1, ywave2, xwave2
  duplicate/o xwave1 ywave_regrid
  ywave_regrid = xwave1 [fAverageXY(xwave2, xwave1, xwave2[p-1], xwave2[p])]
End Function
```