
Subject: 1D array problem for butterworth.pro

Posted by [kagoldberg](#) on Wed, 06 Jan 2016 07:18:14 GMT

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I stumbled across a major problem with calculating 1D butter worth filters in IDL 8.5. (This bug was not in IDL 8.3. I don't know about 8.4.)

When you ask for 1D output, butterworth.pro extracts a 1D vector from the dist(x) function, which is a 2 dimensional, square array. As you might guess, as the array size gets large, IDL has to calculate a 2D dist() result with N^2 points! IDL 8.3 did not do this.

It brought my computer to its knees a few times before I was able to isolate it, and replace the built-in butterworth.pro with my own kludge.

Instead of `(dist(x))[*],0]`, they should have used `dist(x,1)` and... problem solved.
