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.

Subject: Re: 1D array problem for butterworth.pro
Posted by chris_torrence@NOSPAM on Wed, 06 Jan 2016 17:42:54 GMT
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On Wednesday, January 6, 2016 at 12:18:17 AM UTC-7, kagol...@lbl.gov wrote:
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Thanks for reporting this! I've gone ahead and fixed the code and it should be in the next release.
Cheers,
Chris

Subject: Re: 1D array problem for butterworth.pro
Posted by Ken G on Mon, 11 Jan 2016 17:10:15 GMT
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Thanks!