Subject: Seeking testers for proposed IDL wavelets astronomy library
Posted by Amara Graps on Fri, 26 Jan 2007 13:42:12 GMT
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Dear comp.lang.idl-pvwave folks,

Next week I'm submitting a NASA proposal to write, test, and suppport a large IDL wavelet library to help astronomers in their data analysis. I am seeking IDL-using scientists, especially astronomers, who might be interested to test the routines and to add to the examples that I want to provide at the end, which demonstrates the library's capabilities. There is no guarantee that this proposal will be funded, but, if I have a list of testers interested to be involved in the software, then I can say such words in the proposal, which will make my case stronger to the proposal reviewers.

This IDL library will have a heritage from Wavelab and Beamlab, the Stanford Statistics Department Matlab wavelet libraries. In addition to the basic wavelet functions that are standard in the DSP community, I want to provide some novel extensions that are especially useful for astronomers. These include transforms for unevenly-spaced data sets, denoising using thresholds that are statistically suitable for astronomical data, multidimensional nonisotropic wavelets on curves and spheres which can detect oriented features in images and cubes, and ways to set up the wavelet analysis in a data reduction pipeline.

If you like this idea, and are interested in it, please write me at [amara -at- psi.edu] or [amara -at- amara.com]

If you don't know what are wavelets, and are curious, you are welcome to visit my Wavelets web pages, beginning here:

http://www.amara.com/current/wavelet.html

Thank you!

Amara

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