Subject: Re: how to use wavelet transformation function in IDL?
Posted by jkj on Tue, 13 Jan 2009 13:25:28 GMT
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On Jan 12, 11:17 am, Chris W <cwood1...@gmail.com> wrote:
> On Jan 12, 10:49 am, Hu <jha...@gmail.com> wrote:
>
>> Hi, there
>> I got a time-series data array (suppose array X), Now I want to use
>> wavelet functions in IDL library to filter the array, so that I can
>> remove the abnormal data elements and make the time-series data more
>> reasonable.
>
>> Which functions should I use?
>
>> In fact, I check some methods like WV_FN_COIFLET, or WV_DENOISE, but
>> it dose not work, and the online help has no examples about this
>> parts. So, I will be appreciate if you can give me an example. Many
>> thanks.
>
> Here are the steps I have used with the discrete wavelet transform:
> (see idl help on wv_dwt)
>
> ;;Get information about the chosen wavelet:
> ;; could use any of the wv_fn_****** functions
> info = wv_fn_symlet(12,scaling,wvx, ioff, joff)
>
> nl = 3 ;; depth of the transform
> ;;Take the wavelet transform:
> xdwt = wv_dwt(image, scaling,wvx, ioff, joff , n_levels=nl)
>
> ;;operate on xdwt, e.g, to get rid of noise
> .....
> newdwt = ...
>
> ;; inverse the transform with the inverse keyword
> idwt = wv_dwt(newdwt,scaling,wvx,ioff,joff, N_LEVELS=nl, INVERSE=1)

We have been using this IDL wavelet toolkit:

http://paos.colorado.edu/research/wavelets/

-Kevin