
Subject: Re: how to use wavelet transformation function in IDL?

Posted by [Chris W](#) on Mon, 12 Jan 2009 17:17:15 GMT

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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)
```
