Subject: Re: detrend
Posted by envi35@yahoo.ca on Sun, 06 Jun 2010 15:16:47 GMT
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Thanks for the reply, Craig. I'll try to remove a linear trend first,
hopefully that is all I need to do with my data.
Jenny

On Jun 6, 1:19 am, Craig Markwardt <craig.markwa...@gmail.com> wrote:
> On Jun 5, 10:50 pm, Jenny <env...@yahoo.ca> wrote:
>
>> Dear All,
>
>> I'm looking for an IDL routine to apply detrend on time series
>> data. Any ideas?
>
> It really matters a lot what kind of detrending you want to do, and
> how you expect it to affect your data. There is a fine line between
> "detrending" your data, and removing the real signal. Basically any
> type of detrending will involve a filtering step and a removal step.
> The filtering step is key, because it determines how much signal is
> removed.
>
> For reasonably regularly sampled data where you are interested in the
> high frequency variations, you could do a high-pass filter,
> Y = ... original data ...
> Y_SMOOTH = smooth(Y,10,/edge) ;; Smoothed version (smoothed over 10
> samples)
> Y_DETREND = Y - Y_SMOOTH ;; High-pass version
>
> If you want to remove a linear trend, the filtering step could be a
> linear least squares fit,
> AB = LINFIT(X,Y) ;; Fit linear trend
> Y_DETREND = Y - AB[0] - AB[1]*X ;; Remove linear trend
> More sophisticated analysis would add error bars; or a higher order
> polynomial fit with POLY_FIT() if appropriate.
>
> Good luck,
> Craig