Subject: Re: Approximate convolution - for loop problem
Posted by Wout De Nolf on Mon, 22 Dec 2008 09:31:01 GMT
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On Sun, 21 Dec 2008 09:32:40 -0800 (PST), samuel.leach@gmail.com
wrote:

> nsamp=n_elements(signal)
> const1 = exp(-tsamp/taubolo)
> const2 = 1.-const1
>
> bolo_signal = const2*signal
> for ii= 1L,nsamp-1L do begin
> bolo_signal[ii] += const1*bolo_signal[ii-1]
> endfor
>
> where tsamp and taubolo are scalars. Is there any way to avoid the for
> loop in this case? The hope is to speed up the execution.

This is without loop. Not sure it's faster though.

```
a=[1.,2.,3.,4.]
c=0.5
n=n_elements(a)

 a=reform([reform(rebin([a,0],n+1,n-1,/sample),n*n-1),a[0]],n ,n)
i=REBIN(LINDGEN(n), n, n)
j=REBIN(TRANSPOSE(LINDGEN(n)), n, n)
a*= i ge j

c=rebin(c^reverse(indgen(n)),n,n,/sample)
a=reverse(total(a*c,1))
print,a
```