Subject: Approximate convolution - for loop problem
Posted by samuel.leach on Sun, 21 Dec 2008 17:32:40 GMT
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Hello everyone, I'm trying to execute a 1-d convolution of an array, signal.

Using an analytic approximation, obtaining the convolved bolometer signal, bolo_signal, at time step ii, is given by the following:

```
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.

Many thanks for your help

Sam Leach