Subject: Re: rebinning data on new time samples without loops?
Posted by K. Bowman on Fri, 12 Dec 2003 14:31:23 GMT
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In article <d916d48a.0312111543.8425684@posting.google.com>,
jbattat@cfa.harvard.edu (James) wrote:

> Hi there,
>
> I have a time series of data, y, sampled on an irregular grid, t1.
> I would like to rebin y onto an existing time series (also irregular),
> t2.
>
> for loop over t1
> dT = t2 - replicate(t1[i],nt2)
> ID = where(dT EQ min(dT))
> dump y1[i] data into y2[ID] if min(dT) < dTMax
> increment counter[ID]
> endfor loop
>
> then divide y2/counter to get the rebinned value.

Since your data is already sorted by time, you can use a binary search (VALUE_LOCATE). It is *much* faster than WHERE on long vectors.

Loop over t2 (not t1), find the points in t1 closest to t2-dt and t2+dt using VALUE_LOCATE. Then average as you are doing.

Ken bowman