Subject: Re: vectorized RK4
Posted by Kenneth Bowman on Tue, 21 Nov 2006 16:50:43 GMT
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In article <45536299$0$498$815e3792@news.qwest.net>,
"R.G. Stockwell" <no@email.please> wrote:

> I'm looking at a problem where we have to calculate
> a Runge Kutta solution for a number of particles.
>
> From some reading I did, I thought I could vectorize
> the RK4 call over the number of particles.
>
> From the help example, we have the following call,
>> RK4(Y, allders, X, H, 'differential',/double)
>
> For a single particle
> x = 0.0
> y = [4.0,6.0]
> allders is a 2 element array
> H = 0.5
> "differential" is a defined function returns a 2 element array.
>
>
> So, how does one go about vectorizing this for 1000 particles?
> Is that possible?
> I cannot just pass in vectors for x and y
> (and of course have the appropriate differential function)
>
>
> Cheers,
> bob

Bob,

You may have already solved this, but if not, RK4 is simple enough to code yourself. You lose a little flexibility, but you can vectorize across particles.

Ken Bowman