Subject: Re: LSODE status=-1
Posted by Craig Markwardt on Mon, 21 Jan 2013 19:28:54 GMT
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On Monday, January 21, 2013 1:12:41 PM UTC-5, hal...@yahoo.com wrote:
> I am having trouble using the IDL LSODE function for solving differential equations. It returns with status=-1. The help page says "To continue, reset STATUS to a value greater than 1 and begin again (the excess work step counter will be reset to 0)." I have tried this, but I am not getting anywhere with it. Part of the problem is that it is not clear what "begin again" means. I have tried calling LSODE again with the exact same inputs, except with status set to 2 (with no modifications to Y, X, H, and Derivs since the previous call). This doesn't seem to do anything. The status keeps coming back as -1, and the result doesn't change. Am I supposed to use different input values for repeated calls? If so, which values?

If you call LSODE with the exact same inputs, I don't think it's a surprise that you get the exact same results.

My suggestion: Instead of calling LSODE with the exact same inputs, move on to the next desired integration interval. A status value of -1 indicates "success with some difficulty" which means you should just carry onwards.

Also, you might consider trying my DDEABM integrator:
http://www.physics.wisc.edu/~craigm/idl/math.html#DDEABM
I can't guarantee it will work any better, but it might.

Craig