Subject: Re: satellite orbit computation in IDL
Posted by Craig Markwardt on Mon, 19 Apr 2004 20:23:41 GMT
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"CED" <cseynat@swiftdsl.com.au> writes:

> Hello Craig,
>
> Thank you for your reply. World peace would be good as well, yes!! :-)
>
> Sorry for the delay in my reply. I do not get much time to work on this
> project, and have only been able to get back to it a few days ago.
>
> I am interested in the routines you wrote. Can I find them on your web
> site? If so, what is its address? I am also interested in the routines for
> computation of earth station position.

Cedric, I just put geopotential routines on line on my web page. They include the ability to compute the gravitational acceleration at any point outside of the earth. You need a "description" file for the geopotential model you want; some are provided, and it's easy to make new ones. You will need to download the actual model coefficients yourself. URLs are included.

As for your other desires: Lunisolar perturbations can be computed using the JPL ephemerides, routines for which can be found on the same page (JPLEPHREAD/INTERP). DDEABM is a high precision integrator.

I have some half-finished codes for atmospheric drag and earth tides, which I can send, and you can finish if you are motivated. :-) Solar radiation pressure and earth shadow models, you are on your own presently.

Yours,
Craig

P.S. http://cow.physics.wisc.edu/~craigm/idl/idl.html (under ephemerides)

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