Subject: Re: Orbital mechanics routines?
Posted by chris on Sun, 26 Mar 1995 02:47:20 GMT
View Forum Message <> Reply to Message

Andy Nicholas (nicholas@uap.nrl.navy.mil) wrote:
: I'm looking for routines that will give me lat/lon and radial distance
: from
: orbital parameters (inclination,apogee,perigee,...). Do they already
: exist somewhere or should I just take the plunge and code them up.
: Don't wanna re-invent the wheel.....
: Thanks,
: Andy

I wouldn't take the plunge just yet. There are a number of routines availible related to astronomy in the Johns Hopkins Library, and also in the Goddard Library (managed by Wayne Landsman) I don't know exactly what you want, but I have written a routine which drive the JPL Ephemeris & its fortran programs, from IDL. My program gives you the 3-Vector position of the Sun Earth, and Moon and All major planets, with respect to any other body (Or the solar system barycenter). However it sounds like you might want to input orbital elements of say, comets, and get their positions. I don't have anything which does this.

Another option is to look for such aprogram in another language C, or prefferably FORTRAN, and translate it. This is usually much faster than writing it yourself, assuming you have some knowledge of the other language, and that you can trust the original code. Comparison is straight forward.

-Chris

Subject: Re: Orbital mechanics routines?
Posted by zawodny on Mon, 27 Mar 1995 12:54:50 GMT
View Forum Message <> Reply to Message

In article <3kur0a$a2t@ra.nrl.navy.mil> nicholas@uap.nrl.navy.mil (Andy Nicholas) writes:
> I'm looking for routines that will give me lat/lon and radial distance
> from
> orbital parameters (inclination,apogee,perigee,...). Do they already
> exist somewhere or should I just take the plunge and code them up.
> Don't wanna re-invent the wheel.....

I have a suite of IDL routines with widget interface that do just what you want and a whole lot more. Unfortunately, we have recently been made aware here at NASA LaRC that there is a processess and set of standards for the release of Gov't developed software. Since, I do

not want to write a users manual, I may not be allowed to release it.

I'll check in to it.

--

Joseph M. Zawodny (KO4LW) NASA Langley Research Center
Internet: j.m.zawodny@larc.nasa.gov MS-475, Hampton VA, 23681-0001
TCP/IP: ko4lw@ko4lw.ampr.org Packet: ko4lw@n4hog.va.usa.na