

# Astronomical ephemeris libraries

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Hi everyone.

Can anyone suggest any reasonable astronomical ephemeris libraries? Preferably ones suitable for linking to from C code, and ideally free.

I'm hoping to write some code behind a database to do certain things. Essentially I'd need to be able to predict positions of planets and asteroids (after providing orbital elements for the latter). I'd probably also want to calculate altitude/azimuth, map a position in the sky to a particular constellation, calculate moon phase, and so on.

The actual calculations for doing this are a bit beyond me, at least to the point where I'd rather not spend time focusing on them. I'd assumed there would be at least one open source library available, and although there are some open source planetarium programs (such as kstars), I haven't managed to find any nicely packaged libraries.

libastro, distributed with xephem, looks alright, but it's not well documented and the licence seems very daunting. Even if I were to get permission to use it for something other than compiling xephem, I might still want to distribute my own source in the future, and that could make things complicated.

I'd appreciate any suggestions.

Thanks.  
Mike.

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