

Re: GPSMAP 60Cx or 76Cx?

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Terje Mathisen <terje.mathisen@xxxxxxxxxxxxxx> writes:

If you want to do trig "right", then you probably want to return exact (i.e. correctly rounded) results for all possible inputs: This requires you to do range reduction with a value for pi which is accurate to more than 1024 bits (which is the range of the exponent in IEEE double precision).

Thanks! That sounds more involved than I had realized. It also nicely explains something that bugged me for a while -- why the BSD math library takes input in radians.

Did you not see a significant term at half that period, i.e. 11:58? This is the GPS sat period, so the constellation should repeat with this period, but over just a few weeks, the day/night difference will probably make one of the error peaks much more noticeable than the other?

No, for the same reason Dale pointed out. There are lots of similar excursions though. I assume this is because the SV's follow each other in a fairly tight track and if there is multipath from one SV there will be similar multipath from the next one to come by in 2-3 hrs. I wonder if it is possible to look at the times for the multipath and SV positions and use ray-tracing methods to map out where the multipath is generated.

-wolfgang

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