

Table 4.1. GPS scenario simulation — Problem 1

	Orion GNSS Toolbox 2.05		Constell Constella- tion Toolbox 3.02		GPSofSoft SatNav Toolbox v. Feb 98		Navsys GPS Signal Simulation Toolbox
GPS constants							
Hardwired	Y		Y		Y		Y
GPS coordinates							
ECEF, ECI, LLA	Y	S-TM	Y	S-TM	Y	S-TM	Y
Local-level wander azimuth	Y	S-TM	Y	S-TM	Y	S-TM	Y
Body-frames	Y-WD	S-TM	Y-WD	S-TM			Y
Azi & elevation angles	Y-WD	S-TM	Y-WD	S-TM	Y		Y
Time							
GPS Time Week, TOW	Y-WD	S-TM	Y-WD	S-TM			Y
Julian Day GPS		S-TM		S-TM			Y
UTC GPS	Y	S-TM	Y	S-TM			Y
Y2K compliant	Y	S-TM	Y	S-TM			
GPS Time sim time	Y-WD	S-TM	Y-WD	S-TM			
SV orbit tools							
Approx. circular	Y-WD	S-TM	Y-WD	S-TM	Y	S-TM	Y
Alm-based GPS	Y-WD	S-TM	Y-WD	S-TM			Y
Ephm-based GPS	Y-WD	S-TM	Y-WD	S-TM			Y
GLONASS circular	Y-WD	S-TM	Y-WD	S-TM	Y	S-TM	Y
GLONASS actual	Y-WD	S-TM	Y-WD	S-TM			
Trajectory tools							
File P, V, BodyAtt & acc, AttRates	Y-WD	S-TM	Y-WD	S-TM	Y		
Motion generation					Y		
Visibility, masks							
Earth block	Y-WD	S-TM	Y-WD	S-TM	Y	S-TM	Y
Vehicle block	Y-WD	S-TM	Y-WD	S-TM			
Space capable			Y-WD				
Measurement Simulation							
LOS range	Y	S-TM	Y	S-TM	Y	S-TM	Y
User Clock & drift	Y-WD	S-TM	Y-WD	S-TM			
Doppler (Velocity)	Y	S-TM	Y	S-TM		S-TM	Y
Carrier Phase	Y	S-TM	Y	S-TM	Y	S-TM	
SA Dither	Y-WD	S-TM	Y-WD	S-TM	Y-WD	S-TM	
SA Eps	Y-WD	S-TM	Y-WD	S-TM	Y-WD	S-TM	
Ionosphere	Y	S-TM	Y	S-TM	Y	S-TM	
Troposphere	Y	S-TM	Y	S-TM	Y	S-TM	
Multipath					Y		
Scalar LADGPS	Y-WD	S-TM	Y-WD	S-TM	Y	S-TM	
Single-diff CDGPS	Y	S-TM	Y	S-TM	Y	S-TM	
Double-diff CDGPS	Y	S-TM	Y	S-TM	Y	S-TM	
GLONASS versions	Y		Y		Y		

Note: Subcategories that no vendors currently support but are of interest to the community include lever arm(t), cg(t); antenna frames; SV rotation; profgen formats; simulator formats; user antenna; terrain masking; SV clock and drift; light speed transit; LOS acceleration; LOS jerk; vector WADGPS; attitude, n ants; C/No dB Hz; phase wrap up; and L2 versions.