

V7.7 Release Notes

- Bug Fixes and Enhancements:
 - DllMain:
 - Allow log file to store message strings that are long than 128 characters
 - Add GetInitDllNames()
 - EnvConst:
 - Fix code that determines if the user entered a valid geo string
 - TimeFunc:
 - Add TConAddOne()
 - Change ut1Rate in UTCToTConRec() from sec/day to msec/day
 - Fix UTCToTConRec()
 - Allow input dtg to have leap seconds (≥ 60 and <61)
 - Fix DTGToUTC() (when input dtg is YYYYMonDDHHMMSS.SSS or there is any blanks in YYDDD.DDDDDDDD)
 - Fix bug that caused the dd-Mon-yy information not be included in the output file when calling TConSaveFile()
 - AstroFunc:
 - Fix logic that computes height in XYZToLLH() and EFGToLLH()
 - Fix PosVelToUUVW() and PosVelToPTW() to return normal vectors instead of unit vectors
 - Fix RAEToECI() and EarthObstructionAngles()
 - TLE:
 - Add AddSatFrLinesML(), AddSatFrFieldsGP2(), AddSatFrFieldsGP2ML(), TleUpdateSatFrFieldsGP2(), TleAddSatFrFieldsSPML(), TleGetAllFieldsGP2(), TleGetSatKeyML(), TleFieldsToSatKeyML()
 - TleSaveFile() now creates new output file (empty file) if no TLEs were loaded
 - TleSaveFile() now saves TLEs as 80-character strings instead of 512-character strings
 - TleLoadFile() now skips bad TLEs and continues on instead of stopping at the first bad TLE record
 - Sgp4:
 - **Notes: Sgp4 is now available to the public and that requires the use of “Sgp4_Open_License.txt” file. The user MUST have this file in the same folder as the executable or he has to use the new function Sgp4SetLicPath() to change the path to it. Without the proper path to this file, the SGP4 DLL can’t be loaded and will not work at all**
 - **There is new enforcement for the SGP4 to work: GEO constant model needs to be set to WGS-72 and FK model to FK5. The SGP4 propagator won’t work if these models are not set to the right values**
 - Disable Sgp4GetSatPtr() and Sgp4PropMseQuick() due to safety issues

- Add Sgp4SetLicFilePath() and Sgp4GetLicFilePath()
 - Fix Sgp4ReepochTle(): it now returns the correct revNum value
- Past Releases:
 - V7.beta - SGP4, SP on Windows: 08 December 2008
 - V7.beta1 - SGP4, SP on Windows: 27 July 2010
 - V7.beta2 - SGP4, SP on Linux: 06 October 2010
 - V7.beta3 - SGP4, SP on Windows: 21 March 2011
 - V7.beta - LAMOD on Windows: 02 Jun 2011
 - V7.beta1 - LAMOD on Windows: 28 Jun 2011
 - V7.beta - COMBO on Windows: 28 October 2011
 - V7.beta4 - SGP4, SP, LAMOD, COMBO on Windows(32/64): 17 September 2012
 - V7.beta4 - SGP4, SP, LAMOD, COMBO on Linux(32/64): 25 September 2012
 - V7.beta5 - SGP4, SP, LAMOD, COMBO on Windows(32/64): 25 August 2014
 - V7.beta6 - SGP4, SP, LAMOD, COMBO, ROTAS, IOMOD, BATCHDC on Windows(32/64): 27 October 2014
 - V7.beta6 - SGP4, SP, LAMOD, COMBO, ROTAS, IOMOD, BATCHDC on Linux (32/64): 28 October 2014
 - V7.7 SGP4 official release for Windows and Linux: ?? 2015