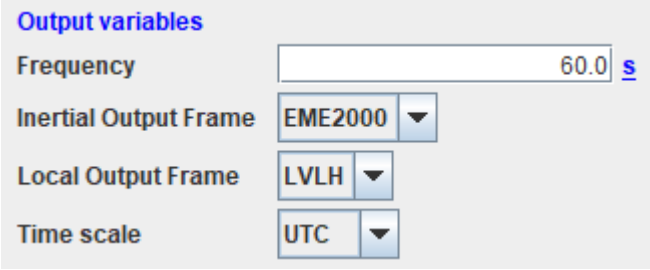
Output

De Wiki
Aller à : navigation, rechercher
Output

Sommaire

Output variables

This tab allows to the user to specify how output data will be stored with the frequency, the inertial frame used for output data (could be different of the propagation frame) as well as local frame.



Note: time scale information is only available since V11.4.

Plots

But, in the same tab, the user will have access to graphical displays (only available after propagation has occurred).

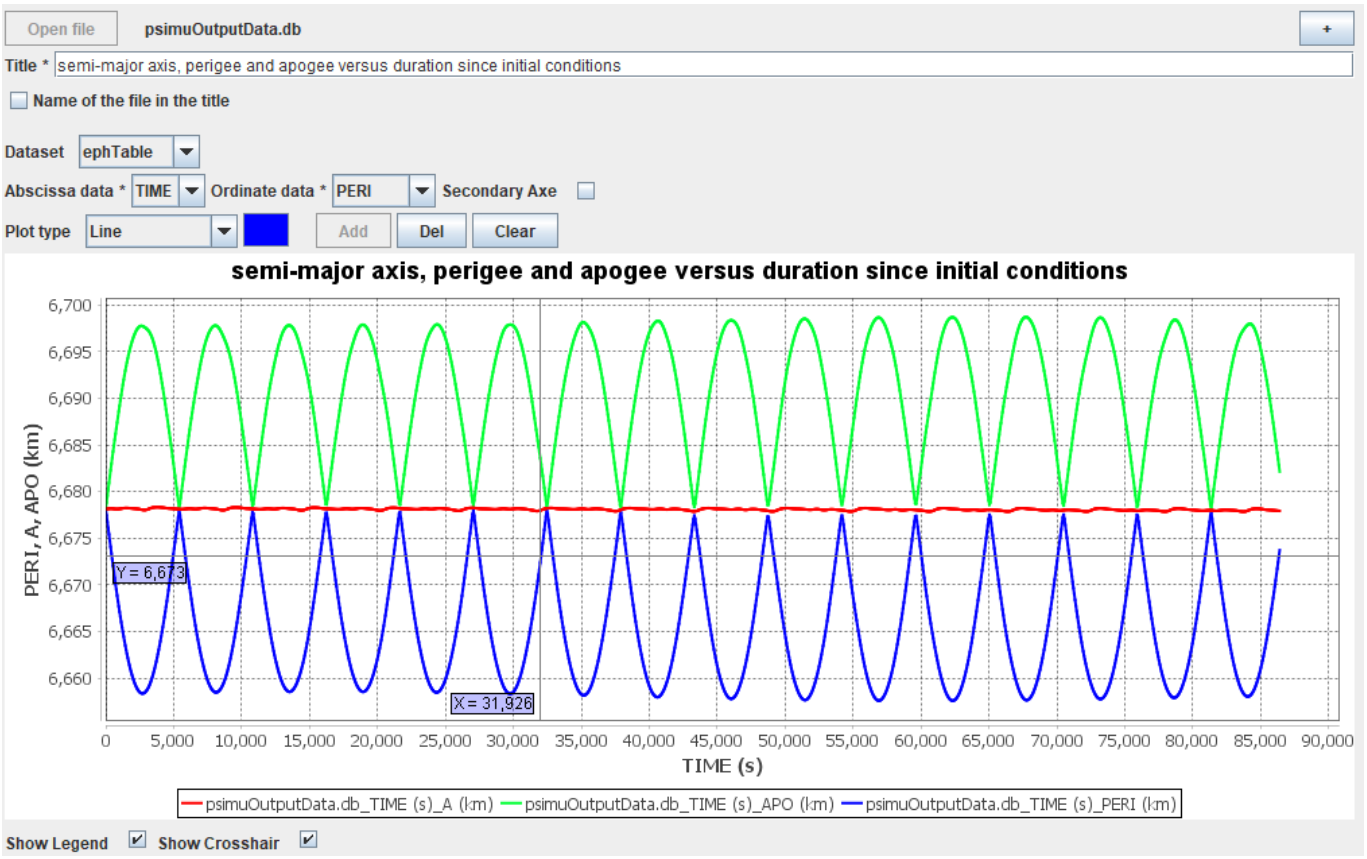
Note : in V11.0 version, the binary file that includes all output data is not reset when propagation has exited in error mode. So the user will have to be careful not to plot the results of a previous simulation!

Custom plots

A first panel allows to plot whichever output variable listed int the table below.

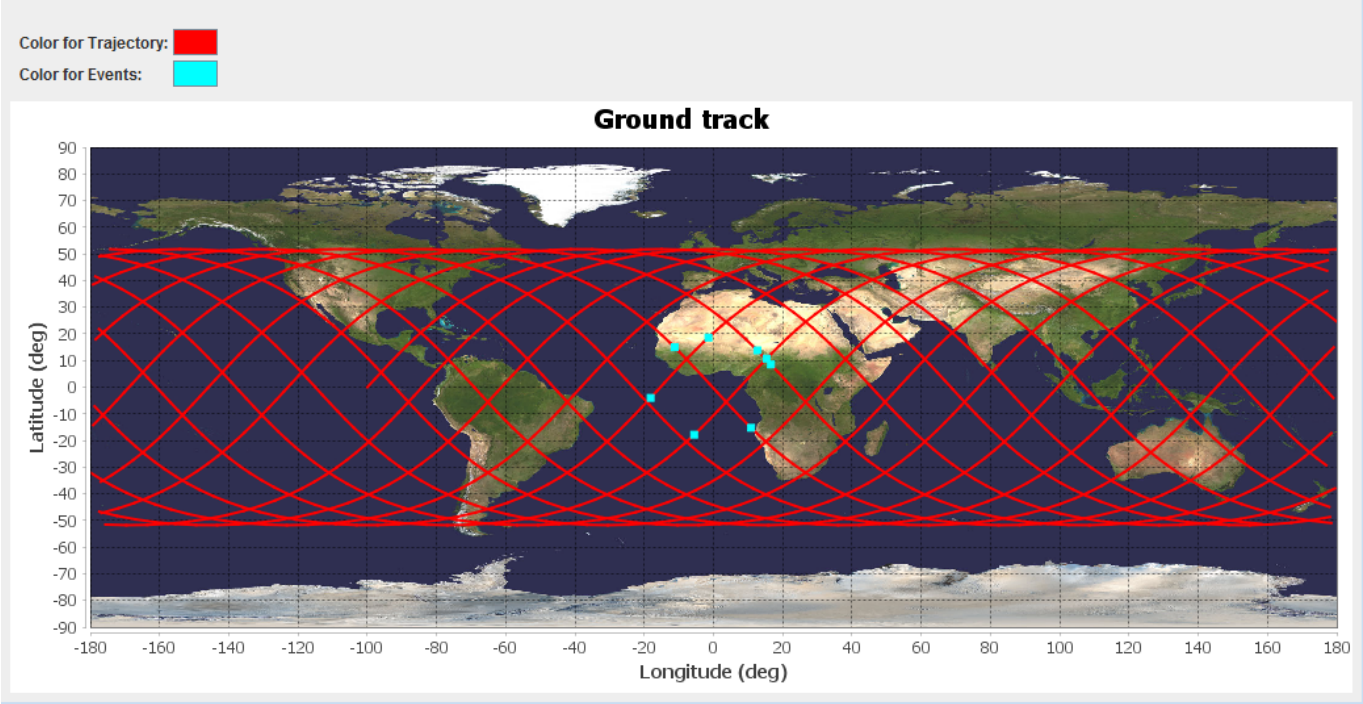
Note that these displays only correspond to the current propagation. Thus, a reset is automatically done every time a new propagation is executed.

Anyway, if you want to plot previously saved files, it is possible to use this little utility here (or getting it with the full GENIUS package, since V1.9 version) allowing plotting either ephemeris files (only files since **V11.3** due to a bug in the **V11.2**; see here) or SQLite ones (see "*Set configuration*" options int he "*Conf*" menu).



Ground track

But, since the V11.3 version, it is now possible to plot directly the ground track with computed orbital events:



List of available variables

The table below lists all the available output variables ...

Acronym	Description	Unit
DATE	Date (TAI)	-
TIME	Duration since initial conditions	sec
TMASS	Total mass	kg
PMASS	Propellant mass	kg
XIN	Inertial x coordinates	m
YIN	Inertial y coordinates	m
ZIN	Inertial z coordinates	m
VXIN	Velocity in inertial x coordinates	m/s
VYIN	Velocity in inertial y coordinates	m/s
VZIN	Velocity in inertial z coordinates	m/s
POSIN	Position norm in inertial frame	m
VIN	Velocity norm in inertial frame	m/s
XREL	X component of the relative position in rotating frame	m/s
YREL	Y component of the relative position in rotating frame	m/s
ZREL	Z component of the relative position in rotating frame	m/s
VXREL	X component of the relative velocity in rotating frame	m/s
VYREL	Y component of the relative velocity in rotating frame	m/s
VZREL	Z component of the relative velocity in rotating frame	m/s
VREL	Relative velocity in rotating frame	m/s
A	Semi-major axis	km
E	Eccentricity	-
I	Inclination	deg
AOP	Argument of perigee	deg
RAAN	Right ascension of the ascending node	deg
TA	True anomaly	deg
MA	Mean anomaly	deg
EA	Eccentric anomaly	deg
EX	First component of the eccentricity vector	-
EY	Second component of the eccentricity vector	-
HX	First component of the inclination vector	-
HY	Second component of the inclination vector	-
TAOL	True argument of latitude	deg
MAOL	Mean argument of latitude	deg
EAOL	Eccentric argument of latitude	deg
PERI	Periapsis radius	km
APO	Apoapsis radius	km
PERIALT	Periapsis altitude	km
APOALT	Apoapsis altitude	km
LATG	Geodetic latitude	deg
LON	Longitude	deg
ALTG	Geodetic altitude	km
LATS	Geocentric latitude	deg
ALTS	Geocentric altitude	km

AZIA	Absolute velocity azimuth	deg
FPAA	Absolute Flight path angle	deg
AZIR	Relative velocity azimut (vs rotating frame)	deg
FPAR	Relative flight path angle (vs rotating frame)	deg
PSI	First elementary rotation in inertial frame (Cardan ZYX)	deg
THETA	Second elementary rotation in inertial frame (Cardan ZYX)	deg
PHI	third elementary rotation in inertial frame (Cardan ZYX)	deg
PSIL	First elementary rotation in local frame (Cardan ZYX)	deg
THETAL	Second elementary rotation in local frame (Cardan ZYX)	deg
PHIL	Third elementary rotation in local frame (Cardan ZYX)	deg
Q0	Scalar part of the attitude quaternion in inertial frame (always positive)	-
Q1	First component of the vector part of the attitude quaternion in inertial frame	-
Q2	Second component of the vector part of the attitude quaternion in inertial frame	-
Q3	Third component of the vector part of the attitude quaternion in inertial frame	-
AOA	Angle of attack	deg
BETA	Sideslip angle	deg
BANK	Bank angle	deg
YAW	Yaw in aircraft frame	deg
PITCH	Pitch in aircraft frame	deg
ROLL	Roll in aircraft frame	deg
SPIN	Spin rate	deg/s
XSPIN	Spin rate about x satellite axis	deg/s
YSPIN	Spin rate about y satellite axis	deg/s
ZSPIN	Spin rate about z satellite axis	deg/s
ACCN	Newtonian acceleration in propagation frame	m/s2
ACCNX	X component of the Newtonian acceleration + in propagation frame	m/s2
ACCNY	Y component of the Newtonian acceleration in + propagation frame	m/s2
ACCNZ	Z component of the Newtonian acceleration in + propagation frame	m/s2
ACCP	Earth potential acceleration in propagation frame (without central term)	m/s2
ACCPX	X component of the earth potential acceleration in propagation frame (without central term)	m/s2
ACCPY	Y component of the earth potential acceleration in propagation frame (without central term)	m/s2
ACCPZ	Z component of the earth potential acceleration in propagation frame (without central term)	m/s2
ACCM	Moon acceleration in propagation frame	m/s2
ACCMX	X component of the moon acceleration in propagation frame	m/s2
ACCMY	Y component of the moon acceleration in propagation frame	m/s2
ACCMZ	Z component of the moon acceleration in propagation frame	m/s2
ACCS	Sun acceleration in propagation frame	m/s2
ACCSX	X component of the sun acceleration in propagation frame	m/s2
ACCSY	Y component of the sun acceleration in propagation frame	m/s2
ACCSZ	Z component of the sun acceleration in propagation frame	m/s2
ACCA	Aerodynamic acceleration in propagation frame	m/s2
ACCAX	X component of the aerodynamic acceleration in propagation frame	m/s2

ACCAY	Y component of the aerodynamic acceleration in propagation frame	m/s2
ACCAZ	Z component of the aerodynamic acceleration in propagation frame	m/s2
ACCR	Solar radiation pressure acceleration in propagation frame	m/s2
ACCRX	X component of the solar radiation pressure acceleration in propagation frame	m/s2
ACCRY	Y component of the solar radiation pressure acceleration in propagation frame	m/s2
ACCRZ	Z component of the solar radiation pressure acceleration in propagation frame	m/s2
ACCT	Thrust acceleration in propagation frame	m/s2
ACCRX	X component of the thrust acceleration in propagation frame	m/s2
ACCRY	Y component of the thrust acceleration in propagation frame	m/s2
ACCRZ	Z component of the thrust acceleration in propagation frame	m/s2
THRUST	engine thrust	N
USED_DV	Cumulated velocity increment (since V11.4)	m/s
RHO	Atmospheric density	kg/m3
CX	Drag coefficient	-
CZ	Lift coefficient	-
MACH	Mach number	-
MLT	Mean local time in TIRF	h
TLT	True local time in TIRF	h
LSSAT	Percentage of the illuminated surface of the spacecraft	%
LSPAN	Percentage of the illuminated surface of the solar panels	%
AM	Mean (secular Lyddane model) semi-major axis	km
EM	Mean (secular Lyddane model) eccentricity	-
IM	Mean (secular Lyddane model) inclination	deg
AOPM	Mean (secular Lyddane model) argument of perigee	deg
RAANM	Mean (secular Lyddane model) right ascension of the ascending node	deg
MAM	Mean (secular Lyddane model) anomaly	deg
F107	Solar flux (since V11.4)	-
AP	Geomagnetic index (since V11.4)	-

Menu de navigation

Outils personnels

- 3.137.175.83
- Discussion avec cette adresse IP
- Créer un compte
- Se connecter

Espaces de noms

- Page
- Discussion

Variantes

Affichages

- Lire
- Voir le texte source
- Historique
- Exporter en PDF

Plus

Rechercher

Rechercher Lire

PSIMU

- Welcome
- Quick start
- News

GUI Mode

- Overall presentation
- Initial Orbit
- Earth features
- Vehicle
- Forces
- Maneuvers
- Attitude
- Integrator
- Events
- Output
- Console

Batch mode

- How to call it

Java interface

- Basic principle
- Data initialization
- Propagation
- Printing results
- Customize output variables

Evolutions

- Main differences between V11.7.3 and V11.7.4
- Main differences between V11.7.2 and V11.7.3
- Main differences between V11.7.1 and V11.7.2
- Main differences between V11.6.2 and V11.7.1
- Main differences between V11.5 and V11.6.2
- Main differences between V11.4.1 and V11.5
- Main differences between V11.4 and V11.4.1
- Main differences between V11.3 and V11.4
- Main differences between V11.2 and V11.3
- Main differences between V11.1 and V11.2
- Main differences between V11.0 and V11.1

Training

- Tutorials package for V11.7.x
- Tutorials package for V11.6
- Tutorials package for V11.5
- Tutorials package for V11.4
- Tutorials package for V11.3
- Tutorials package for V11.2
- Tutorials package for V11.0

Links

- CNES freeware server

Outils

- Pages liées
- Suivi des pages liées
- Pages spéciales
- Adresse de cette version
- Information sur la page
- Citer cette page

- Dernière modification de cette page le 7 mai 2020 à 07:16.

- Politique de confidentialité
- À propos de Wiki

- Avertissements
-