Motion File [Week Sec ECEF]
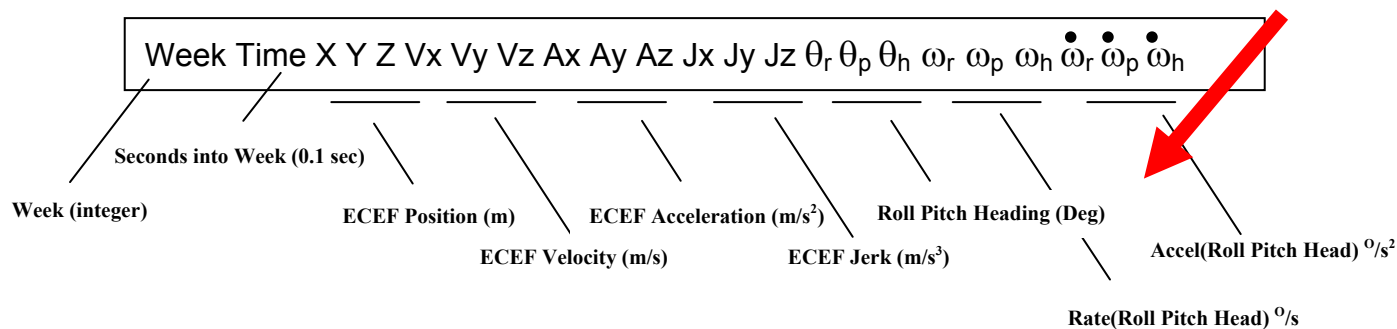
Motion File [Week Second ECEF]

This format implements a generic ASCII representation of the profile data as follows. It differs from other format in the time is expressed in **Week** **Seconds** format.

Convention/Restrictions

- The data file you import <u>must</u> <u>start</u> at least 1 second into the simulated week.

- The file must be a 10 Hz with no data gaps. Otherwise use one of the 1 Hz import controls.

NOTE: the angular units are Degrees

- The file contains time sequential *space* *delimited* records comprised of,

Week Time X Y Z Vx Vy Vz Ax Ay Az Jx Jy Jz θ_r θ_p θ_h ω_r ω_p ω_h $\dot{\omega}_r$ $\dot{\omega}_p$ $\dot{\omega}_h$

Seconds into Week (0.1 sec)

Week (integer)

ECEF Position (m)

ECEF Velocity (m/s)

ECEF Acceleration (m/s^2)

ECEF Jerk (m/s^3)

Roll Pitch Heading (Deg)

Accel(Roll Pitch Head) ^{o}/s^2

Rate(Roll Pitch Head) ^{o}/s

- The Time tag has a resolution of 0.1 seconds. To avoid <u>truncation</u> errors, provide 5 digits passed the decimal point for all other values.
  If you do not have Attitude data (θ_r …) then omit these items and the program will use the velocity vector to compute attitude.

- If the data is not based upon a continuous and differentiable model, Import this data as a Route File.

- The <u>first</u> record in the file is used as the initial state replacing the value programmed into the scenario. If you want to change the <u>time</u> or <u>Location</u> of the imported data, do so <u>after</u> you've imported the file using the Time and Location Icons located on the main Build Scenario menu.