Group 13

CSV Standard

Import Details

Key Terms Units Launch Latitude Degrees Launch Longitude Degrees Launch Angle Degrees Launch Angle (Std Dev) Degrees **Launch Direction** Degrees Launch Direction (Std Dev) Degrees Launch Altitude Metres °C Temperature °C Temperature (Std Dev) Pressure Pa Pressure (Std Dev) Pa Metres Launch Rod Length Motor Thrust Performance (Mean) % % Motor Thrust Performance (Std Dev) Number of Simulations Integer Parachute Deployment Time (Std Dev) Seconds Wind Altitude Step Km ms⁻¹ Wind Speed Launch Wind Speed One ms⁻¹ Wind Speed Two ms⁻¹ Wind Speed Three ms⁻¹ Wind Speed Four ms⁻¹ Wind Speed Five ms⁻¹ Wind Speed Six ms⁻¹ ms⁻¹ Wind Speed Seven Wind Speed Eight ms⁻¹ Wind Speed Nine ms⁻¹ Wind Speed (Std Dev) ms⁻¹ Wind Direction Launch Degrees Wind Direction One Degrees Wind Direction Two Degrees Wind Direction Three Degrees Wind Direction Four Degrees Wind Direction Five Degrees Wind Direction Six Degrees Wind Direction Seven Degrees Wind Direction Eight Degrees Wind Direction Nine Degrees Wind Direction (Std Dev) Degrees

Wind Direction Seven (Mean)

Wind Direction Eight (Mean)

Wind Direction Nine (Mean)

Wind Direction (Std Dev)

Group 13

CSV Standard

Export Details

Key Terms Units Launch Latitude Degrees Launch Longitude Degrees Distance From Launch Metres Mean Latitude Degrees Mean Longitude Degrees Landing Latitude Degrees Landing Longitude Degrees Launch Angle Degrees Launch Direction Degrees Pressure Pa °C Temperature Parachute Deployed Boolean Parachute Deployment Delay Seconds % Motor Thrust Performance Wind Altitude Step Km Wind Speed Launch (Mean) ms⁻¹ Wind Speed One (Mean) ms⁻¹ ms⁻¹ Wind Speed Two (Mean) Wind Speed Three (Mean) ms⁻¹ Wind Speed Four (Mean) ms⁻¹ ms⁻¹ Wind Speed Five (Mean) Wind Speed Six (Mean) ms⁻¹ Wind Speed Seven (Mean) ms⁻¹ Wind Speed Eight (Mean) ms⁻¹ Wind Speed Nine (Mean) ms⁻¹ Wind Speed (Std Dev) ms⁻¹ Wind Direction Launch (Mean) Degrees Wind Direction One (Mean) Degrees Wind Direction Two (Mean) Degrees Wind Direction Three (Mean) Degrees Wind Direction Four (Mean) Degrees Wind Direction Five (Mean) Degrees Wind Direction Six (Mean)

Degrees

Degrees

Degrees

Degrees

Degrees

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CSV Standard

Notes

- Key Terms
 - o Key terms have spaces to make them more readable in CSV files
- Import file
 - o Can be located anywhere on user device
 - o Can take specified key terms (see below)
 - Will ignore any invalid key terms
 - Values must be in specific units (see below)
- Output file
 - o Exported to directory chosen by user
 - Values are in specific units (see below)
- Wind Speed & Direction
 - o Our simulation considers wind differences between different altitudes
 - This is represented by up to 10 different altitudes, determined by the "Wind Altitude Step" parameter
 - Launch altitude is considered 0km high
 - i.e. for step of 1km, altitude 1 would be "1.0" and altitude 2 would be "2.0", etc
 - o If you only wish to use one wind speed/direction, use the "Launch" key-term
 - i.e. "Wind Speed Launch"
 - These values work sequentially, and if you miss a value then the remaining values will be ignored
 - i.e. altitude 4 is required to consider altitude 5