*PURPOSE*

Determine the maximum impulse as a function of exit radius

*INITIALIZATION*

Set up initial rocket values and physical constants (e.g. chamber pressure, burn duration, Drag coefficient, gravity, propellant mass flow)

*MAIN*

*BINARY SEARCH (Guess exit pressure)*

Run ground level case (check elevation of las cruces)

*LOOP*

Get rocket thrust, drag, weight

Update total impulse

Use forces to get accel

Use accel to get vel

Use vel to get new pos

Update forces, (drag etc.)

Stop if burn time reached

Check against previous case (binary search)

Update new guess

Check ending conditions (impulse tolerance, max iterations, etc)

*OUTPUT*

Use exit pressure to get exit radius (use mach area relation, and isentropic equations)