

From Space to Earth

3D space consisting of Stars and Planets in orbit and Asteroids initially moving randomly. (Optionally Comets, Moons) The 3D space moves with a constant velocity and acceleration. The 3D space follows the following rules of movement mechanisms:

- Kepler's Laws of motion.
- Force of Gravity.
- Collision mechanisms that change trajectory and also mass of asteroids.
- Each object has a sphere of influence (determined by its mass or constant) beyond which it will not affect other objects.
- Plotting Duration of 31.5×10^6 seconds = approximately 1 year

Attributes of Objects:

Position coordinates, velocity, acceleration, mass and sphere of influence.

Conditions:

- Earth's solar system is kept outside the sphere of influence of any other space objects.
- Stars do not collide.
- Missiles fly straight.
- Missiles are assumed to destroy asteroids at points 3 times the radius of the Earth's Atmosphere.
- Destroyed asteroids have mass = 0 and are treated similar to neutrinos.

Inside Earth

Sphere of influence is set as the size of the solar system.

Asteroids entering the solar system are divided into 3 categories:

- Missing the atmosphere.
- Burning up in the atmosphere.
- Penetrating the atmosphere.

One missile system. (Optional multiple missile systems are various locations with variable missile count)

