

Space Resources Real Estate

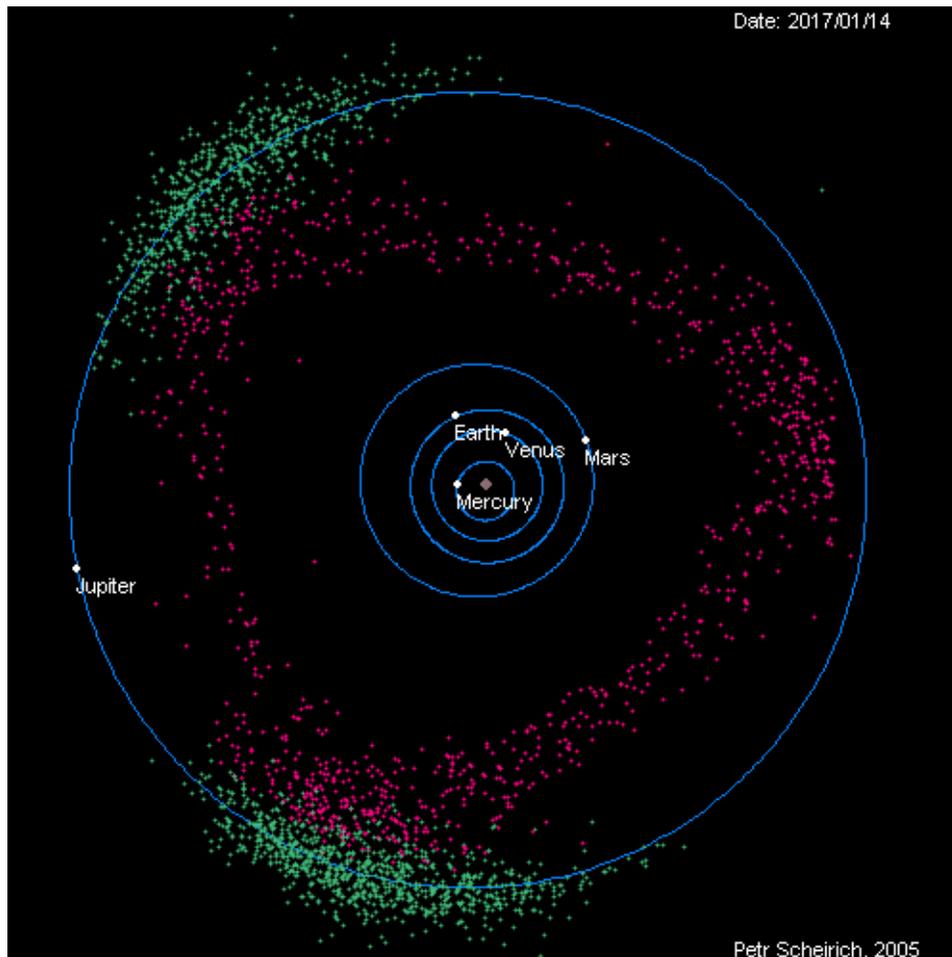
Seems simple enough. What where is valuable ?

There are locations that are immediately useful such as Low Earth Orbit (beneath the Van Allen Radiation Belt), in a 12 hour earth orbit (like the GPS Constellation), 24 hour Equatorial orbit (Geostationary Comsats etc) and assorted transportation locations such at the Lagrange points about pairs of celestial objects. But for resources, we pretty much mean mining and that suggests planets, moons and the small bodies.

If we take the small number of planets and moons as 'Taken' in the not to distant future, we are left with just the small bodies. Since they are always being discovered, numbers are somewhat just current guesses, so here are pictures !

1) First the Asteroids

Solar power (Distal Fusion?) is possible and the travel times are not too bad. If travel costs are as high as expected, then local refining will become important and settlements become practical.

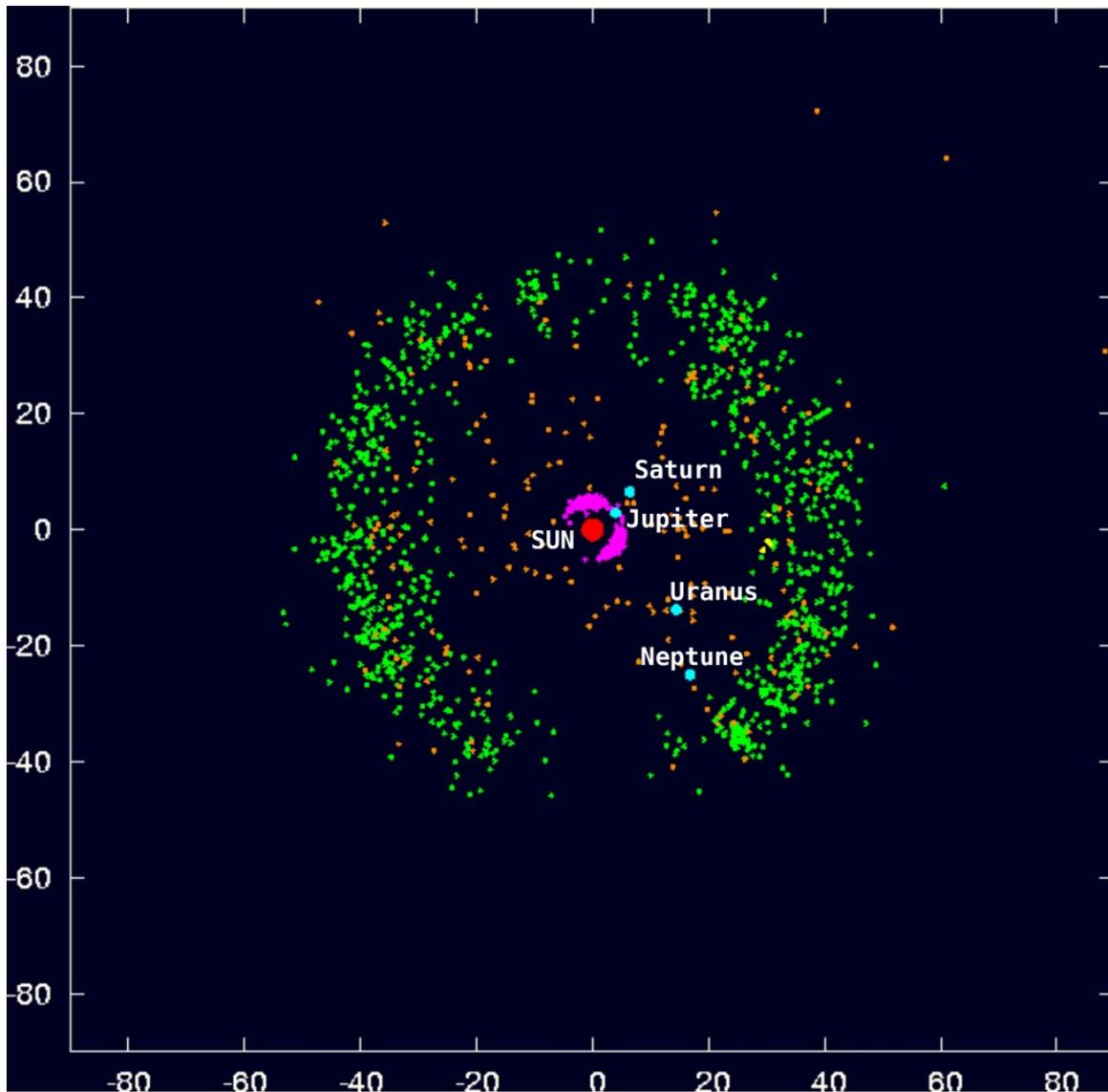


The Main Asteroid Belt with their odd orbits.

Asteroids are all over the solar system, many are located between the orbits of Mars and Jupiter. Jupiter plays havoc on their orbits and is probably responsible for them not forming a planet of their own. 200

asteroids are known over 100km and approximately a million with a size of 1km.

2) When simple, cheap, small nuclear fusion is available (!) the outer planetoids become more useful. The Kuiper Belt objects are plentiful but the distances become much greater.



Kuiper Belt in comparison to Asteroid Belt and outer planets.

The Kuiper belt extends from past Neptune at about 30 AU to about 50 AU. There are several dwarf planets out there and probably about 100,000 objects over 100 km in size. Neptune probably plays some roles in the edges considering the resonant orbits, similar to the moons and rings of Saturn.

3) Even farther out, where the orbital plane of the planets is somewhat meaningless. Distances between objects are measured in dozens or hundreds of AU. The Oort cloud is probably a spherical volume between 2000 and 200,000 AU from the Sun. (Conjecture Varies)



Oort Cloud in comparison to Kuiper belt.

There are perhaps Trillions of 1km objects, and Billions of 20km objects.

So, if human population eventually pushes outward into the planetoids, a bunch of growth is possible. Furthermore, the settling of nearby solar systems might be as uneventful as merely the next rock to grab happens to turn a little toward the neighboring star rather than Sol.

Reference: I forget where I got these pictures. I should have printed the entire articles, but just grabbed the jpgs. A while ago, cleaning the computer, I discovered them and put them here. I'd love to attribute them !