Humanity's Presence in Space

At the time of *Adrift on the Starry Sky*, humanity's presence off of the Earth is in decline. More and more people are coming back to Earth, to stay. Those on the frontier are finding it harder and harder to sustain their presence.

Earth Orbit

The orbits of Earth are crowded with satellites. GPS, scientific observation, and UEC security oversight satellites are in low Earth orbit. Workshops, factories, and corporate research facilities travel in higher orbits. The UEC also has a military station at this altitude, for quick response to crises on the ground and for maintenance of its surveillance and oversight satellites. The geosynchronous orbit, where satellites remain positioned over a fixed location on the ground, is densely populated, from the giant Solar Power Satellites (SPS) that beam down microwave power to antennas in deserts on the ground, to the constellation of communication satellites that make global communication possible. There are some corporate stations in geosynchronous orbit, for maintenance of the valuable satellites in this orbit; Cosmic Lee is just one of several corporations with a maintenance station at this altitude. There are probably around 2,000 people in Earth orbit at any time, although this number is constantly changing.

The Moon

There are roughly 10,000 people on the Moon, in three settlements. The city of Tranquility is the largest settlement, by far; its primary purpose has been supplying the raw materials for the Solar Power Satellites (SPS) in orbit around the Earth. Now that practical fusion power has finally been perfected, huge new SPS efforts are no longer needed to supply electricity to the twelve billion inhabitants of Earth. It is not yet clear what this will mean for Tranquility and the people there.

The settlement at Farside is much smaller than Tranquility, and is there in support of the Larsen Telescope Array. The Telescope Array is shielded from Earth signals by the bulk of the Moon, making it the best, most sensitive collection of observatories in the system. Most exoplanet research (planets outside the solar system) is done at the Larsen Telescope Array.

The Shackleton settlement at the Lunar south pole is the United Earth Concord's (UEC) toughest prison. The Shackleton inmates mine the water ice in the permanent shadows of Shackleton Crater, purifying it for consumption at Tranquility and Farside. The water is also broken down into hydrogen and oxygen for fueling the rockets used in Lunar space.

Mars

The colony at Marineris has about 500 people, attempting to create a sustained and sustainable presence in the harsh Martian environment. There is some research being done on the ancient animal fossils found on the Valles Marineris valley floor.

Venus

There is a UEC research station of about 100 people floating in the temperate layer of the acidic Venusian atmosphere. This station, consisting of giant linked dirigibles, is doing important climate research in an attempt to find global warming solutions that might apply to the troubled Earth.

The Asteroid Belt

There are a number of robotic mining ships that seek out and exploit valuable minerals and ices in the Asteroid Belt. These autonomous robots, built primarily by Cosmic Lee, are controlled by a small UEC base on Ceres, the largest dwarf planet in the Belt. This small (~100) outpost controls, maintains, and repairs the fleet of robots that deliver valuable supplies to Earth, the Moon, and Mars.

Jupiter

There was a small outpost on Europa, one of the moons of Jupiter, there to study the creatures and environment in the ocean under the icy crust. This outpost has been powered down, left in a maintenance mode, until the time that the UEC has better methods to survive in the intense radiation surrounding Jupiter. This outpost represented the farthest human presence in the Solar System.

Saturn

There is a robotic submarine wandering through the icy sea of the Kraken Mare on Titan, Saturn’s largest moon, studying the unusual cryogenic life forms that swim there. There have been proposals to set up a human research outpost there, but they have not survived the UEC budgeting process.