PART 2: UFOs -- ASTRONOMICAL ASPECTS

The astonishing thing would be if they did not exist.

Jean Cocteau

We saw in Part 1 that the historical aspects suggest an extra-terrestrial explanation to UFOs. While it has not been established that the contemporary phenomena are extensions of the historical, there does seem to be a continuity in the descriptions of the phenomena described. We shall therefore look at contemporary astronomical knowledge and theories and ascertain the likelihood of the existence of other highly developed life forms.

To begin with, the observable universe -- that is, the distance to which we can observe luminous objects -- is several billion light-years in radius (a light year is the distance light travels in a year at a rate of 186,300 miles per second. The sun is 8 light minutes from the earth. The next-nearest star is 4.2 light years away). Within this vast volume we find hundreds of millions of galaxies. Our own (Milky Way) galaxy is similar to many of those we see at great distances. It is a lens-shaped assemblage of some 100 billion stars having a diameter of about 100,000 light years. The sun is but one of its component stars, and lies about 30,000 light years from the center, close to the plane of symmetry.

Now let us just consider the stars in our own galaxy -- specifically excluding those in neighboring or distant galaxies. We would like to estimate the number of stars having planets roughly similar to the Earth. From the statistics of stars within 15 light years of the sun we find that only about one-third are single, the rest binary or multiple. Since planetary orbits are often unstable in multiple systems (depending on the details of the configuration) we will say that only 30 billion stars in our galaxy now have a dynamical environment that permits planets to exist around them. Will these stars have planets? We cannot state with assurance that they will; however, current knowledge supports the theory that planetary formation is a natural adjunct to formation of the star itself from the interstellar gas cloud.