What is the stationary system

The author advanced a theory around 1995/6 that the electric fields of all elementary charged particles coexisted in space. The fact that the magnetic action of a current is described by $\vec{H} = \sum_i \vec{v}_i \wedge \vec{D}_i$ is an obvious proof of the fact that electric fields move through each other and therefore coexist in space.

Despite rigorous attempts to ignore them, experimental evidence is growing to suggest that the solar system does have a definite velocity through space. This takes two forms, the asymmetry of the background blackbody radiation and the timing of pulsar signals. Any local variations in the movement of the background such as those discussed in the days of debate about æther theory would have shown up in the pulsar measurements. If we were to contribute to the late 19th Century debate about the æther, we probably would err in favour of a dragged æther theory in which its motion is influenced by galaxies.

Coupling this with the observations showing that rulers, clocks and light are affected by gravitational potential, the author is now of the opinion that electric potential is the property of the electric field which determines the locus of the background. We can thus define the velocity of the background as:

$$\vec{s} = \frac{\sum \vec{v}_i \ |\phi_i|}{\sum |\phi_i|}$$

The nature of this summation being that the $\vec{v}_i$ may be measured in any convenient frame and the summation taken over all elementary charged particles. The result is a weighted average velocity. In practice we can replace electric potential with gravitational potential. Because of the $\frac{1}{r}$ dependence of potential, the sum is insensitive to local variation and the mass of the galactic core dominates.

We know the galaxy is spinning and this will obviously affect the summation such that we can say that the background to some extent rotates with the galaxy. In theory, a big enough laser gyro would be able to detect zero rotation relative to the background and compare this with the distant galaxies. Our analysis of inertial mass suggests that centrifugal force is proportional to rotation relative to the background. Astronomic observations indicate that centrifugal force should tear the spiral arms away from the galaxy. Astronomers have tried to explain the stable state of the galaxy with dark matter theories. A much simpler explanation is that in the region of the spiral arms, the background rotates with the galaxy, but at a slower angular velocity.