

Spin-Top Model of galaxies and the universe

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Abstract. The most accepted model of the universe is the Big Bang Model or Theory. However, it does not explain many features of the universe and galaxies, which are being observed. A new model called “Spin-Top Model” is proposed to replace the Big Bang Model, which explains the observed features of the universe and galaxies better than the Big Bang Model.

1. Introduction

Presently, the most accepted model of the universe is the Big Bang Model. However, this model cannot explain many features of the universe, which have been observed. According to the Big Bang Model, there should be a homogenous distribution of galaxies; the observations show it to be otherwise. The Big Bang Model cannot explain why there is a string of galaxies as observed by the Hubble telescope. According to the Big Bang Model, galaxies should have spread out from each other evenly, and hence there could be no collisions between them; observations show that there are collisions between galaxies. Big Bang Theory cannot explain why heavenly bodies are rotating around themselves, around each other, and why galaxies are rotating. Big Bang Theory cannot explain why more galaxies have more left hand spins than the right hand spins. Big Bang Theory cannot explain why the universe is not spherical but flat.

A new model of galaxies and the universe, the Spin-Top Model has been developed to explain the features explained by the Big Bang Model, as well as the features of galaxies and the universe, which cannot be explained by the Big Bang Model.

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2. Spin-Top Model of Galaxies

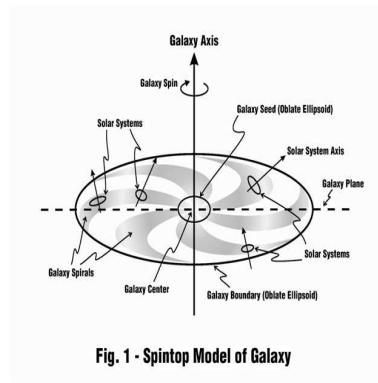
Figure 1 is a sketch of the Spin-Top Model of Galaxies. It consists of a galaxy seed (which we shall call g-seed) spinning with a left hand spin* in the form of an oblate ellipsoid with very high densities, pressures and temperatures, surrounded by hot gases. It is well known that spinning fluids, under the influence of their own gravitational forces,

*Note that if one looks at the galaxy from below, the spin looks to be a right hand spin!

take the forms of oblate ellipsoids. Out of the g-seed, galaxy spirals extend out which are also spinning with a left hand spin. The spirals contain solar systems, asteroids, heavenly bodies, particulate matter and clouds of gas, including hydrogen and helium. The outer boundary of the galaxy is also in the shape of an oblate ellipsoid.

During the original creation of the galaxy, g-seed explodes by thermonuclear reactions spilling out various nuclear particles and subparticles, which quickly join to form mostly hydrogen atoms, as well as some helium atoms. Nuclear particles, and hydrogen and helium atoms will have velocities imparted by the spinning g-seed and the explosion. These velocities will have radial components, angular components, and relatively smaller axial components. The axial components will be upward if the particle in question comes out of the upper part (i.e., above the galaxy plane) of the g-seed, and will be downward if the particle in question comes from the lower part (i.e., below the galaxy plane) of the g-seed. These spinning gases, which are moving outwardly, will start to coalesce because of the gravitational forces, forming galaxy spirals, just like rotating humid air coalesces into hurricane spirals. Within the spirals, as a result of gravitational effects, the hydrogen gas will coalesce to form stars (as well as hydrogen/helium planets), which in turn will generate all the elements to form “rocky” planets, moons and the star systems (or the solar systems), as well as asteroids and other heavenly bodies. It should be noted that, because of the angular velocity effects, as one moves out in radial directions, the spins (or rotations) of the heavenly bodies and systems will be in the opposite directions to that of the galaxy.

Eventually, the outward motion of the heavenly bodies within the galaxy spirals (i.e., star systems, other heavenly bodies, asteroids and gas clouds) will slow down because of the gravitational forces pulling them towards the galaxy center, and the radial velocity component



will reverse itself together with the axial velocity components, and they will start moving towards the galaxy center. Note that at this time the outermost envelope of the galaxy will have been defined, and it will be an oblate ellipsoid because of the velocities imparted to them at the time of the g-seed explosion. Then, the heavenly systems and bodies will start their travels towards the center of the galaxy, and begin reforming the g-seed. When about half or more of the matter in spirals reaches the galaxy center,

the g-seed will consist of space debris (made up of stars, planets, other heavenly bodies and gases) on the outside surface. As one moves to the center of the g-seed, densities, pressures and temperatures will rise, and as a result molecules will be crushed into atoms, and atoms will be crushed into nuclei. When the pressures and temperatures in the center of the g-seed reaches the critical values, a new explosion will ensue. Note that some of the heavenly systems and bodies will still be within the galaxy boundaries, and in the process of returning towards the galaxy center.

As a result of the new explosion of the g-seed, again galaxy spirals, star systems, other heavenly bodies, and gas clouds will be formed. The newly created heavenly matter will be moving away from the galaxy center, while the heavenly matter produced as a result of the previous explosion will be returning towards the galaxy center. These will cause some collisions between the outgoing heavenly bodies and systems, and the incoming heavenly bodies and systems. Such collisions will result in some astray heavenly bodies. The supernova explosions regularly observed are very likely be the g-seed explosions, rejuvenating the galaxies.

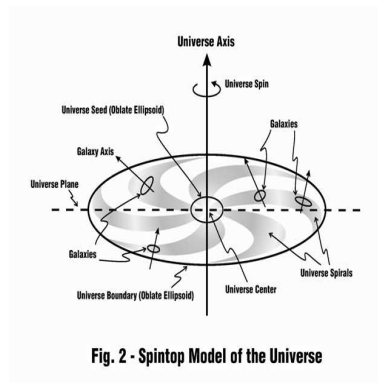
The above described galaxy activities will be repeated for eons to come.

3. Spin-Top Model of Universe

Figure 2 is a sketch of the Spin-Top Model of the Universe. It consists of a universe seed (which we shall call u-seed) spinning with a right hand spin[†] in the form of an oblate ellipsoid with extremely high densities, pressures and temperatures, surrounded by hot gases. Out of the u-seed, universe spirals extend out which are also spinning with a right hand spin. The universe spirals contain galaxies, novas, supernovas, heavenly bodies, particulate matter and clouds of gas, including hydrogen and helium. The outer boundary of the universe is also in the shape of an oblate ellipsoid.

During the original creation of the universe, the u-seed explodes by thermonucleon reactions (which is expected to be many orders of magnitude greater than thermonuclear reactions) spilling out various nuclear particles and subparticles, which quickly join to form mostly hydrogen atoms, as well as some helium atoms. Nuclear particles, and hydrogen and helium atoms will have velocities imparted by the spinning u-seed and the explosion. These velocities will have radial components, angular components, and relatively smaller axial components. The axial components will be upward if the particle in question comes out of the upper part (i.e., above the universe plane) of the u-seed, and will be downward if the particle in question comes from the lower part (i.e., below the universe plane) of the u-seed. These spinning gases, which are moving outwardly, will start to coalesce because of the gravitational forces, forming universe spirals. Within the universe spirals, as a result of gravitational effects, the hydrogen gas will coalesce to form galaxies. It should be noted that, because of the angular velocity effects, the spins (or rotations) of the galaxies will be in opposite directions to that of the universe. As described in the

[†]Note that if one looks at the universe from below, spin looks to be a left hand spin.



last section, within the galaxies stars and hydrogen/helium planets will form. In turn, stars will generate all the elements to form “rocky” planets, moons and the star systems (or the solar systems), as well as asteroids and other heavenly bodies.

Eventually, the outward motions of heavenly bodies within the universe spirals (i.e., galaxies, all the heavenly bodies and gas clouds) will slow down because of the gravitational forces pulling them towards the universe center, and the radial velocity components will reverse itself together with the axial velocity components, and they will start moving towards the universe center. Note that at this time the outermost envelope of the universe will have been defined, and it will be an oblate ellipsoid because of the velocities imparted to them at the time of the u-speed explosion. Then, the galaxies will start their travels towards the center of the universe, and begin reforming the u-seed. When about half or more of the matter in universe spirals reaches the universe center, the u-seed will consist of space debris (made up of stars, planets, other heavenly bodies and gases) on the outside surface. As one moves to the center of the u-seed, densities, pressures and temperatures will rise, and as a result molecules will be crushed into atoms, atoms will be crushed into nuclei, and nuclei will be crushed into nucleons. When the pressures and temperatures in the center of the u-seed reaches the critical values, a new explosion will ensue. Note that some of the galaxies will still be within the universe boundaries, and in the process of returning towards the universe center.

As a result of the new explosion of the u-seed, again universe spirals, galaxies, star systems, other heavenly bodies, and gas clouds will be formed. The newly created heavenly matter will be moving away from the universe center, while the heavenly matter produced as a result of the previous explosion will be returning towards the universe center. These will cause some collisions between the outgoing galaxies and the incoming galaxies. Such collisions in some cases will result in the birth of bigger galaxies by the combination of the colliding galaxies, or dismemberment of one or both of the colliding galaxies. The universe has many such examples.

The above described universe activities will be repeated for eons to come.

4. The Next Step

The next step will be for the theoretical physicists to incorporate the Spin-Top Model (i.e., conservation relationships of mass, momentum and energy for the spinning u-seed) into the equations describing the workings of the universe.

5. The Big Question

Of course, the big question is how a Spinning Universe Seed had been created in the first place. Answer to this might come from the **Uber-Humans** to be created as a result of natural selection by the mutations in the human genetic code over millions of years.

6. Conclusion

A new model for galaxies, i.e., the spin-top model of galaxies, and a new model for the universe, i.e., the spin-top model of the universe, have been developed, which are in better agreement with the observed features of the galaxies and the universe than the big bang model.

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