Universal Parity versus Universal Fractality

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Abstract

Scholastic universe description assumes its global parity. This assumption imply that fractal character of nature has no total scope. There is only one exception at sub-atomic level. This paper propose to assume universal fractal character and search for consecuences.

Introduction

Physical universe description yet assumes its global parity. This assumption imply that fractal character of nature can not has global scope. There is only one exception at sub-atomic level. The electrons are subatomic particles tree orders of magnitude smaller than protons or neutrons but if electron number must be equal than proton number then there are more "big" particles, i.e. protons and neutrons, than "small" particles, i.e. electrons.

Due we can not measure charge in whole universe we do not have evidence of global null charge in universe. Restricted systems of smaller size wok identically in a charged or neutral universe like a bird`s nervous system work similar on high voltaje wire or on neutral tree.

Proposition

I propose to asume universal fractal carácter and abandon global parity supposition. Let us to presuppose that subatomic universe is fractal like all others scales. Then electrically universe works like we can see and we can not expect any differential evidence that shows presence or absence of total charge.

This involve that there are many more electrons than protons, being both the only two stable particles. The electron excess must be unbounded, out of atoms that we see neutral. And this suppose that they do not have defined energy levels and can not exchange quanticed energy with fotons, therefore they are transparent to most fraction of light. We can not expect clear evidences from their interaction with fotons. But electrons are in big number in everywhere and we can expect mechanical or gravitational interaction with barionic matter. These effects must be more clearly evident at astrophisical scale due lack of other matter in interstellar medium that can to mask their influence.

Searching for evidences

The unaccounted mass of electron in excess must be expeted in same order or greater than barionic mass due observed ratios in other fractal scales. The unbounded electrons take form like ideal gas by repulsive interactions tending to homogeneous density but are constrained by gravity. Thus electronic cloud must be denser at galatic center and electron number is depending of radial distance. All this become the electron excess as accurate candidate for dark matter constituent.

We can see a evidence of mechanical interaction between interplanetary electronic cloud and artificial probes with so called Pioneer Anomaly. A density near 1^{-20} gr cm^{-3} at trajectory space fit to un explained fraction of this anomalous acceleration by heat radiation (around one third). Mechanism is simply collisions with momentum transference.

Other evidence of mechanical interaction with barionic neutral matter is the comets tail orientation. It is not spreaded or popularized but comet images shows that far of sun their tails pointing to antivelocity direction depending more than orbit shape than sun position both in inbound leg like outbound leg. More recent evidence is provided by interstellar comet 2I Borisov due no change of tails direction after perihelion. This point to the interplanetary space is non empty weak resistent medium like a very faint cloud.

Conclusion

Probably will be fruitful more extensive and intesive research about these and other evidences assiming proposed considerations.

Some other evidences can come from differences between thermal velocity of molecules and sound speed because if there are unbound electrons must be take part in vibrations transport thus sound transmision become faster. Or can come from disagreement between teorethical and experimental pressure of pure unique molecular type gas because presence of not considered unbounded electrons must be add a parcial pressure and show increment in measured pressure value.