

XXIX-th International Workshop on High Energy Physics: NEW RESULTS
and ACTUAL PROBLEMS in PARTICLE & ASTROPARTICLE PHYSICS and
COSMOLOGY



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Einsteinian revolution's wrong turn: lumpy interacting cosmos assumed as smooth perfect fluid: no dark energy

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Newtonian Cosmology was apparently plagued with the problem of infinite gravitational force, and Einstein's General Relativity apparently ushered in the revolutionary concept of a closed finite non-singular static universe. Later, Big Bang model (BBM) essentially incorporated non-static versions of similar relativistic model. Simultaneously the concept of a Cosmological Constant or a repulsive vacuum energy density got incorporated by either for Inflation or for Dark Energy. We dismantle this nearly century old edifice by presenting several exact proofs showing that Cosmological Constant or Dark Energy is non-existent, and Einstein's Static universe is just the Minkowski vacuum. By using the just found Schwarzschild form of the FRW metric (Mitra, Grav. Cosmo. 2013), we show that FRW metric too is actually the Minkowski vacuum! It is suggested that physical universe is quasi-Newtonian where for any given galaxy, finite gravitational potential is due to interaction of nearest neighbors while the infinite background forces cancel one another due to symmetry. Such an universe is likely to have a fractal structure as suggested by observations. The cosmic redshift might arise due to asymmetric spread of wave packets associated with line emissions from distant galaxies. The cosmic background radiation might be due to thermalization of star lights in an eternal universe as suggested by Hoyle, or it might be superposition of gravitationally redshifted quiescent Eternally Collapsing Objects", the supposed "Black Hole Candidates". The atmosphere of hot ECOs may synthesize not only light elements but infuse fresh hydrogen from flares of ECO plasma.

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