

Hydro-gravitational-dynamics of the cosmological big bang and the biological big bang

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From the hydrogravitational cosmology HGD [1,2], primordial hydrogen and helium-4 gas planets in million-star-mass clumps fragment at the plasma to gas transition 300,000 years after the cosmological big bang, forming the missing mass of galaxies. Thirty million Earth-mass frozen-gas-planets (micro-brown-dwarfs μ BD) exist per star in a galaxy from HGD, not 8-10 as usually assumed. All stars come from mergers of these planets within their clumps. Mergers are by frictional accretion, first forming larger planets and finally stars. The clumps are termed proto-globular-star-clusters, or PGCs, since globular-star-clusters result when the supply of planets is exhausted.

HGD cosmology renders Λ CDMHC cosmology obsolete. The cosmological constant Λ is not needed to supply anti-gravitational forces of the big bang, since these arise from large but temporary turbulence and gluon-viscosity negative stresses of inflation [3]. Observations of Λ from supernovae 1a are systematic dimming errors from evaporated μ BD near carbon stars over-fed by planets. Photon-viscous fragmentation of the plasma epoch begins at 30,000 years after the big bang to form proto-supercluster-voids, proto-cluster-voids and finally proto-galaxy voids at the plasma-gas transition. Cold-dark-matter CDM and hierarchical clustering HC to form CDM halos are misleading, unnecessary, and meaningless concepts that are replaced by HGD cosmology [4].

First stars, first supernovae, first chemicals C,N,O,P,Si,Fe and first life result from HGD cosmology soon after the plasma to gas transition. The first water oceans form on the 10^{80} planets of the big bang at 2 million years when the temperature of the universe matches the critical temperature of water 647 K. Comets and other fragments of planet mergers should transmit information widely among the planets and galaxies about efficient mechanisms of auto-catalytic self-replicating carbon-based reactions (life) in this promordial cosmic soup kitchen, vindicating the Fred Hoyle and Chandra Wickramasinghe concepts about cometary panspermia. The water oceans freeze at 8 million years when the universe temperature cools to 273 K, ending the biological big bang but not evolution [4].

<http://sdcc3.ucsd.edu/ir118/Leiden2010/indexLeiden.html>, arXiv:1105.1509 for color.

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