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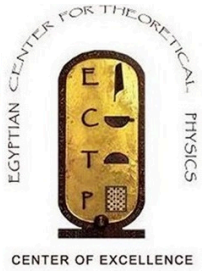

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The History of The Cosmos; From The Big-Bang to The Present-Epoch

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In 2007, Storti predicted that the value of the Cosmic Microwave Background Radiation (CMBR) Temperature may be improved by one-order-of-magnitude; from the Particle Data Group (PDG) value of [T0 = 2.725 ± 0.001 (K)] to [T0 = 2.7254 (K)]. In 2011, the PDG revised their value of CMBR to [T0 = 2.7255 ± 0006 (K)]; confirming Storti's prediction. In 2008, Storti predicted a ΛCDM Hubble Constant of [H0 = 67.0843 (km/s/Mpc)]. In the same year, the PDG published their value as being [H0 = 73 ± 3 (km/s/Mpc)]. In 2013 the PDG published a revised value of [H0] distributed via the Planck Collaboration (PC) utilising the Planck Satellite (PS) as being considerably lower [H0 = 67.3 ± 1.2 (km/s/Mpc)]; again confirming Storti's prediction. These predictions & experimental confirmations, in particular the value of [H0] being successfully predicted five (5) years in advance of the PC & without PS instrumentation, demonstrates the power of the technique applied; i.e. the Electro-Gravi-Magnetic (EGM) Photon Radiation Method (PRM). Herein, we utilise the EGM-PRM technique {constrained by the present value of CMBR [T0 = 2.7255 (K)]} to calculate the present values of: (i) the ΛCDM Hubble Constant [H0 = 67.1181447977434 (km/s/Mpc)] {whereas the PDG-2022 value is [H0 = 67.4 ± 0.5 (km/s/Mpc)]}, (ii) the Dark Energy Density Parameter [ΩΛ = 0.677345709533812] {whereas the PDG-2022 value is [ΩΛ = 0.685 ± 0.007]}, (iii) the Pressureless Matter Parameter [Ωm = 0.322654290466188] {whereas the PDG-2022 value is [Ωm = 0.315 ± 0.007]}, (iv) the Deceleration Parameter [q0 = −0.338672854766906] {whereas a PDG-2022 value is not specified} & (v), the Cosmological Constant [Λ = 0.789639109726698 10ˆ-56 (cm-2)] {whereas the PDG-2022 value is [Λ = 1.088 10ˆ-56 (cm-2)]}. The EGM-PRM is subsequently utilised to describe the complete History of The Cosmos from the instant of The Big-Bang to the Present-Epoch; in complete agreement with the Standard Model of Cosmology (SMoC) & compliant with all currently available experimental observations. In addition, Cosmological Inflation (CI) & Accelerated Cosmological Expansion (ACE) are derived organically, demonstrating that CI ceased by approximately [t = 7.8793484858429 10ˆ-23 (s)] & apparent ACE [q = 0] commenced at approximately [t = 9.63456829206598 (Gyr)]; in precise agreement with the Frieman et. al. {FermiLab: 2008} determination of [˜ 10 (Gyr)]. We also demonstrate that the PDG-ACE 2019-2022 "age when acceleration was zero"value of [7.7 (Gyr)] denotes a misinterpretation of results; that is, the PDG misinterpret [Λ = 0] for [q = 0] at [7.7 (Gyr)]. Subsequently, we assert that the PDG value proximally corresponds to our determination that [Λ = 0] at [t = 7.28426797653236 (Gyr)].

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