Hierarchy of Planck constants and dark matter

Hierarchy of Planck constants

1. was motivated by
   (a) the "impossible" quantal effects of ELF em fields on vertebrate bracyclotron energies $E = hf = \hbar \times eB/m$ are above thermal energyin requiring that which is possible only if $\hbar$ has value much larger than its standard value
   (b) Nottale's finding that planetary orbits migh be understood as Bohr orbits for a gigantic gravitational Planck constant
2. would mean that the values of Planck constant come as integer multiples of ordinary Planck constant: $h_{eff} = n \times h$
3. could be realized in basic TGD in terms of space-time surfaces which can be regarded as surfaces in singular n-fold coverings of imbedding space
   (a) expressible as as product of n_1 -fold covering of M^4 and n_2 -fold covering of CP_2 meaning analogy with multi-sheeted Riemann surfaces and that M^4 coordinates are n_1 -valued functions and CP_2 coordinates n_2 -valued functions of space-time coordinates for $n = n_1 \times n_2$.
   (b) multifurcations of space-time surfaces due to the failure of strict determinism for Kähler action meaning "second quantization" for the sheets of n-furcation: not only one but several sheets can be realized. This leads to connections with quantum criticality and hierarchy of broken conformal symmetries, p-adicity, and negentropic entanglement.
4. has several applications such as
   (a) cyclotron Bose-Einstein condensates with cyclotron energies $E = h_{eff} \times f$ being arbitrary high although cyclotron frequencies are typically low: this explains the quantal effects of ELF em fields on vertebrate brain
   (b) cell membrane as Josephson junction with arbitrarily low Josephson frequency $f = ZeV/h$ but but Josephson energy ZeV which for Z=2 is slightly higher than thermal energy so that Josephson photons are not masked by thermal radiation
   (c) superconductivity at magnetic flux tubes with large value of h_{eff} . The members of Cooper pair would be at flux tubes of parallel pair of flux tubes carrying fluxes in opposite directions so that binding energy the pair would be large.
   (d) seems to make possible negentropic quantum entanglement in the sense that $h_{eff} = n \times h$ corresponds to negentropic entanglement with density matrix proportional to $n \times n$ identity matrix. Unitary entanglement matrices of quantum computers have unit density matrix.