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## Projective and projection geometry for a new kind of unification

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or a unification of the four basic interactions I use an octonian vector space with suitable projections, add Moebius transformations to the U(1)xSU(2)xSU(3) symmetry and seven 3-dimensional Fano measures of Gleason which include Euclidean space coordinates. Everyone who believes today that the world of physics is not a projection like used for TV, having originally 4 dimensions, is kept ignorant like in the middle ages. Double up the 4 coordinates to octonion vectors by including an input vector e0, an output vector e7, two energy coordinates: e5 for mass and a Higgs field, e6 for frequencies. e1, e2, e3 and e4 are for space and time coordinates. Add for vectoral input/output poles on a bounding 2-dimensional ball sphere S2 of a nucleon the poles carrying group of Moebius transformations to the standard models of physics symmetry U(1)xSU(2) xSU(3) for including gravity in a unification. Add to the octonian Gleason measure 123 of Euclidean space e1e2e3 six octonian Fano measures (7 lines in the figure, each line has 3 octonian coordinates) 145, 167, 246, 257, 347, 356, respectively used for special relativity, electromagnetic interaction (wave character), (inner space) entropy, Schwarzschild radius and barycentrical mass (particle character, general relativity scaling), rotational whirls character (magnetic, rgb-gravitons), strong nucleon rotor (changing states) for integrating (bold notation, second derivative, accelerating) force vectors to (first derivative) potentials, speeds or for getting equilibrium state solutions. Octonian projections are in brief projective-homogeneous notation (complex division like  $e_i \cdot [1/w]$ : (i) for discrete energy input-output 1/e0e7 vectorial poles and 6 discrete vectors, attached for the energy exchange with its environment, on a system bounding hedgehog S2 containing an inner bag space (a complex 2-dimensional projective grid in spacetime) and (ii) for 1/e5e6 energies down to the vacuum space-time coordinates e1e2e3e4 of an outer Minkowski space. Particle carriers for energy exchanges (field quantums) are in alphabetical order: gluons, Higgs bosons e5, magnetic whirls e4, phonons e2, photons e7, rgb-graviton whirls e1e2e6 (in the MINTWIGRIS model, the neutral color charge of nucleons), weak bosons e1e2e3; for fermion series: the 2-polar quark brezels and the 1-polar toroidal leptons as 2and 1-Heegard decompositions of weak bosons. An energy evolution is from e0 as vectorial energy input and Higgs bosons (for setting mass) to quarks e1e5, from e1 to e2e4 (electromagnetism), from e5 to e3e6 (nucleon rotor with a gravitational pulsation), down to 8 gluons, followed by a heat chaos. e7 light as output comes from atoms decays. On nucleon base, strong and weak coordinates are in special relativistic motion for mass defects of u-quarks. As well its rescaling special relativistic factor as the general relativistic Schwarzschild factor of the Schwarzschild metric are Moebius transformations M, G and arise through central projections. The scaled matrices M, G are of order 2, 6 and generate the symmetry for the two 12 series of quarks and of leptons.

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