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α-quantized Einstein masses for leptons, quarks, hadrons, gauge bosons, and Higgs constants MALCOLM MAC GREGOR, Lawrence Livermore National Laboratory (Retired) — The Einstein particle mass ε_i is defined by the equation $\varepsilon_i = \mathrm{E}_i \,/\, \mathrm{c}^2$. The basic particle ground states have unique additive Einstein masses (energies), and they interleave in α-quantized ($\alpha^{-1} = 137$) energy plots to form distinctive excitation patterns. The $\varepsilon_{u,d,s,c,b,t}$ Einstein masses are *constituent-quark* masses. Particle generation proceeds via "α-boosted" *boson*, *fermion*, and *gauge-boson* "unit masses," which are "bundled" together to form particles and quarks. The Einstein mass equations extend throughout the entire range of particle masses. Lederman and Hill[1] note that the scalar Higgs and Fermi fields are at the 175 GeV energy scale of the top quark t, and they suggest the Higgs coupling constant equation $g_e = m_e/m_t = 0.0000029$, which matches the Einstein mass expression $g_e = \alpha^2/18$.

[1]L. M. Lederman and C. T. Hill, *Symmetry* (Prometheus Books, Amherst, 2004), p. 282.

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