T 616: Theorie Allgemein

Zeit: Freitag 16:45–17:45 Raum: HS Mathematik

T 616.1 Fr 16:45 HS Mathematik

Formale, mathemat. Berechnung der Elementarteilchen/ u. Materie — •Norbert Sadler — Wasserburger Str. 25A ; D- 85540 Haar

Formale, mathematische Berechnung und Darstellung der Elementarteilchen und der Massen über die lineare Dichte des Universums und des Quantenkosmos/-Vakuums sowie über den Higgs-Mechanismus, mit: m(HiggsBos.)=m(Proton)/(3*epsilonStrich/epsilon);sowie der Elementarteilchen,; beispielhaft: m(Proton)=(9/4)* (lineare Dichte des Universums); das Proton ist die (9/4)-fache Verdichtung der lin.-Dichte des Universums. m(Elektron)=(4/9)*(eps.Str./eps.)*(lin.Dichte Univ.); das Elektron ist die (4/9)-fache Streckung, Verdünnung der CP-verletzten lin Dichte des Universums. m(Photon)=(5/3)*Betrag(e-Ladung)*m(Graviton); das Photon ist der über die totale Quarkladung transformierter Dichte-ausgleich zwischen dem Quantenraum und dem Univ./Laborsyst. m(Z-Bos.)=1/(alfa(QED)*6*Univ.-Radius); m(Planckmasse)=lPlanck/lin.Dichte des Uiniv. ; die Planck-masse, das "Größte Elementarteilchen" ist die Schnittmenge der lin.Dichte des Univ. mit der Plancklänge.

T 616.2 Fr 17:05 HS Mathematik

An empirical one - parameter equation for elementary particle masses — •Karl Otto Greulich — Fritz Lipmann Institut ,Jena, Germany

Calculating the masses of elementary particles is still difficult and requires precise knowledge on a number of parameters. For example the masses of quarks which constitute the hadrons are known only within a considerable uncertainty. Here it is shown that the simple formula

m / me = 0.5 n * (re * mp/ 2)**3

gives the masses in multiples of the electron mass of 18 major elementary particles (except the muon) with an error of 0 to 10.2 %, 9 of them with better than 1%. Thereby, the dimensionless term re is the electron radius in multiples of the Planck length, the dimensionless term mp is the proton mass in multiples of the Planck mass and n = 1, 2, 3 ..... For the masses obtained with k = 3, 9, 17, 19 and 21, no particles are found, suggesting that some short living particles may have such masses. Thus, as an empirical rule of thumb, the masses of many particles can be estimated with one single free parameter without the need of knowing quark masses and binding terms with high accuracy.

T 616.3 Fr 17:25 HS Mathematik

The Origin of Mass — •Albrecht Giese — Taxusweg 15, 22605 Hamburg

The origin of the particle mass is one of the paramount problems in present physics. The search for Higgs Bosons - without success yet - is an attempt of a solution.

However, we find a working solution with quantitatively correct results, if we use the Basic Particle Model of elementary particles, which is a completion of Schrödinger‘s detection of the ‘Zitterbewegung‘ (1930). The inertia is not in the particles themselves but in the field which binds the basic particles within an elementary particle.

Two particles bound to each other so that a specific distance is maintained build an inertial system, even if the particles do not have any mass at all. This is because the binding field propagates at the finite speed of light ‘c‘; so at the acceleration of one particle, the other one follows with a delay. This requires a force to perform the acceleration.

The relativistic increase of a mass at motion and Einstein‘s energy-mass relation follow in an elementary way. As further consequences we get a physical understanding of Planck‘s constant ‘h‘ and the fine structure constant ‘alpha‘.

For details refer to www.ag-physics.org/rmass