T 93: Andere Gebiete der Theorie

Zeit: Donnerstag 16:45–18:00 Raum: VMP6 HS D

T 93.1 Do 16:45 VMP6 HS D

QCD und die kosmische Deutung der LHC-Signale — •Norbert Sadler — Wasserburger Str, 25a ; 85540 Haar

Es kann gezeigt werden, dass die QCD ein Fraktal der überlagerten Energiedichteverteilung des Universums, bei der primordinalen Nukleosynthese, ist.

alfa(QCD)=2x(E.bar. 5%)x(E.grav. 29%)x(E.dkl. 71%)=0.0206. Die gesamte Energiedichteverteilung des Universums wird auf den QCD-Mikrokosmos der Nukleonen selbstähnlich abgebildet.

Die gemessenen LHC-Signale resultieren aus der Kollision zweier Protonenenergieäquivalente von je (0.9384GeV). Dabei wird das Protonen-Confinement (2.5 GeV) angeregt und über das 57-dimensionale Objekt der E8-Symmetriegruppe perkoliert, gefiltert und in zwei Jets abgestrahlt.

57o((0.9384)x(2.5 GeV-Confinement)x(0.9384))= 125.6 GeV. Durch Anwendung der Faktorenanalyse auf das LHC-Signal kann dieses als Sublimentierung der 5% baryonischer Materie auf 2Pi verstanden werden: 2Pi/(5%bar.Mat.)=125.6. Im Umkehrschluss bedeutet dies, dass die Materiebildung und die Gravitation die Entropie der Nukleosynthese ist. Weitere Information: www.cosmology-harmonices-mundi.com

T 93.2 Do 17:00 VMP6 HS D

On the role of the fine structure constant in the alpha/beta rule for calculation of particle masses. — •Karl Otto Greulich — Fritz Lipmann Institut, Beutenbergstr.11, 07745 Jena

The masses of essentially all elementary particles are given almost exactly by the alpha/beta rule:

m = alpha to power of -n divided by or times beta*27,2 eV/c2

(K.O.Greulich, Spring meeting 2014 German Phys Society T 99.4), i.e. particle masses depend on the fine structure (Sommerfeld) constant alpha = 1/137). This is somewhat surprising since alpha is rather known as a spectroscopic constant than as a mass ratio. One key to understand this is the observation that the Bohr energy is exactly the 1 / alpha fold of the ionization energy of the hydrogen atom (Rydberg energy, 13.6 eV). Thereby the Bohr energy is the de Broglie energy of the electron in the ground state (on the Bohr radius). A second mass * or energy ratio, the ratio between the energy at rest of the electron and the Bohr energy can be derived analytically to be alpha to the power -2. Both results together suggest a general dependence of rest energies or rest masses on alpha. Simply by the hypothesis that this observation can be extrapolated to higher values of n, the alpha / beta rule follows immediately. Only the beta (1 or 1836,12) term has to be added empirically.

T 93.3 Do 17:15 VMP6 HS D

De Broglie's matter-waves are based on a logical bug — •Albrecht Giese — Taxusweg 15, 22605 Hamburg

The postulation of matter waves by Louis de Broglie in 1923 was one of the basic starting points in the development of quantum mechanics. However, his deduction contains a serious logical error.

De Broglie deduced his central formula from considerations about the relativistic behaviour of a particle. He saw a conflict in the fact that a particle set into motion increases its internal frequency, f, according to E=h*f, whereas on the other hand its frequency has to decrease due to dilation. To solve this, he assigned a new "de Broglie wave" to a particle, which is related to the momentum of the particle. Scattering experiments seemed to confirm this approach.

However, if such a scattering process is observed from a moving system, it turns out that the relationship between the wavelength and the momentum yields nonsensical results. - De Broglie's deduction is based on an incorrect understanding of relativity with respect to dilation.

We will show which results are achieved if a correct understanding is applied. And we will show why, in a normal scattering experiment, de Broglie's incorrect formula nevertheless yields the expected results.

We will further explain some of the impacts of this error on the equations of Schrödinger and Dirac, who used de Broglie's formula as a starting point. Heisenberg's uncertainty principle is also affected.

T 93.4 Do 17:30 VMP6 HS D

The origin of mass - without Higgs — •Albrecht Giese — Taxusweg 15, 22605 Hamburg

The detection of the "Higgs" boson has caused great excitement in the physical community. However, most physicists overlook the fact that the corresponding theory is in no way able to explain inertial mass.

On the one hand, the theory does not provide a means to determine the mass of an individual particle. The necessary Youkawa coupling does not follow from the theory. On the other hand, cosmological investigations show that the Higgs field needed is at least 57 orders of magnitude stronger than any actual existing vacuum field.

The inertial mass follows very simply from the fact that any extended object necessarily displays inertial behaviour. This is a consequence of the finiteness of the speed of light, by which binding forces propagate. If this mechanism is applied to existing particles, it yields the mass of the electron, for example, with a precision of better than 10^{-5}, using the size of the particle. It also covers the relativistic increase of mass due to motion, and as a consequence the famous equation $E = mc^2$.

T 93.5 Do 17:45 VMP6 HS D

Notational invariance of the standard model — •Lello Boscoverde — Istituto della Fava Pazza, Garching, Germany

We present our first investigations into the notational invariance of the standard model, including: an introduction to the principles of notational invariance, algorithms for implementing changes of notation, and examples demonstrating the invariance.