T 99: Andere Gebiete der Theorie

Zeit: Donnerstag 16:45–18:30 Raum: P1

T 99.1 Do 16:45 P1

Why the Standard Model is a Scientific Dead End — •Alexander Unzicker — Pestalozzi-Gymnasium München

A methodological and historical review of particle physics is given. Since 1930, fundamental physics has changed from a search for the fundamental laws of nature to a technology-oriented description of measurements. The current paradigm doesn't reflect any more the convictions of Einstein, Schrödinger and Dirac on which their findings were based.

As fundamental questions are concerned, it is argued that postwar high energy physics is a futile enterprise in its entirety. The following key points will be addressed:

1) The standard model, particularly the number of its free parameters, has grown to an incredible complication. 2) None of the great riddles of physics that have persisted for a century have been solved. 3) History strongly suggests that the current model is a symptom of a Kuhnian crisis. 4) Ever-more intricate experimental techniques such as triggering, filtering of weak signals and targeted modeling, have brought scientists to assign a meaning to poorly specified, aritrary and ultimately banal events. 5) Cognitive biases and other sociological and psychological aspects of how scientific convictions form are disregarded in the community, while the established opinions are dominated by faith in expert opinions, group-think and the lack of an open discussion culture. 6) The data analysis is far too complex to be overseen by anybody. Basic scientific requirements such as repeatability, transparency and ultimately falsifiablility are missing.

T 99.2 Do 17:00 P1

From prompt neutron discovery to new physics — •Christian Ythier and Genevieve Mouze — Faculté des Sciences,Université de Nice, 06108 Nice cedex 2,France

Seventy-five years ago physicists announced that more than one neutron were liberated per fission and that a chain reaction could be conceived [1,2]. The emission law of these prompt neutrons was formulated eighteen years later [3], but explained only two years ago as resulting from an uncertainty in the neutron number N of the products of 2.54 mass units; indeed, they are formed in less than 0.17 yoctosecond [4]: it is the lifetime of a new state of nuclear matter occurring also in transfer reactions and high-energy collisions and characterized by the disappearance of any proton charge and an energy density of 3.87 GeV [5]. We suggest that the energy-time uncertainty relation is nothing else but a relation between impulse and coordinate in a 3D-time at the border lines of 3D-space and that the inertial mass of a body results from the rotational motion in time of its leptons and quarks. [1] H. v.Halban et al., Nature 143 (1939) 470. [2] H.L. Anderson et al., Phys.Rev. 55 (1939) 797. [3] J. Terrell, Phys. Rev. 108 (1967) 783. [4] G. Mouze et al., http://arxiv.org/abs/1004.1337. [5] C. Ythier et al., http://arxiv.org/abs/1212.3091.

T 99.3 Do 17:15 P1

Fireballs of GRBs and Lorentz-Interpretation (LI) of GRT — •Jürgen Brandes — Karlsbad, Germany

LI of GRT has a close connection to Higgsfields which has consequences for explaining fireballs of GRBs [1].

LI of GRT expands GRT [1]. Counterarguments [2]. Main differences with GRT (though using the same formulas): (a) Free falling particles decrease their rest mass, loose it when reaching the event horizon and because of that become a wave, s. formula $E = mc^2\sqrt{(1-2GM/c^2r)}$ of [2]. This means: While Higgsfields *give* elementary particles a rest mass, gravitational fields *take* rest mass *away*. (b) Gravitational fields only exist if there are particles with rest mass $\neq 0$. (c) Black holes only exist as a limiting case.

Assume a collapsing dust star reaching the event horizon. Then, using (a) and (b) all the particles loose their rest mass, become waves and all together form a fireball with zero rest mass at $t = 0$ which expands on account of (b) and (c). This is the (over)simplified idea of fireballs of GRBs seen by LI and needs more explanation in the talk. Some details s. [2].

[1] J. Brandes, J. Czerniawski: *Spezielle und Allgemeine Relativitätstheorie für Physiker und Philosophen - Einstein- und Lorentz-Interpretation, Paradoxien, Raum und Zeit, Experimente*, 4. Aufl. 2010 p. 316 ff, [2] Website www.grt-li.de

T 99.4 Do 17:30 P1

The alpha / beta rule for exact calculation of particle masses — •Karl Otto Greulich — Fritz Lipmann Institut, Jena, Germany

Masses of particles (electron, proton, quarks and Higgs- boson) can be calculated as: m(particle) = a**-n * ß**m * Q * 27,2 eV/c**2 where "a" is the fine structure constant, ß is the proton/electron mass ratio. Q = 1 in most cases and Q = 4/3 for the Strange-, Charm- and Top-quark. The numerical value on the right is the two fold Rydberg mass. The range of n is from 0 to 14, m = -1, 0, 1. The formula covers 27 orders of magnitude in mass, from the two fold Rydberg mass up to the Planck mass and is essentially exact. It contains, apart from the simple and plausible Q-factor, only established quantities of physics and running numbers n and m, which resemble quantum numbers. Thus, the alpha/beta rule should be considered as a valid complementation of existing approaches for understanding particle masses.

Reference: KO. Greulich, What are Particles? A lesson from the photon. 2013 proceedings of SPIE 8832-43 (for download see http://www.fli-leibniz.de/kog, then click "here" and subsequently click "Physics")

T 99.5 Do 17:45 P1

The Lepton Family as Resulting from the GUT Extension of Quantum Gravity. Pauli's Exclusion principle by "Internal" Forces — •Claus Birkholz — D-10117 Berlin, Seydelstr. 7

Pauli's exclusion principle is shown to be consistent with the assumption of a mediating particle interacting, replacing the traditional anti-commutator argumentation.

The GUT extension of QG is adding 4 additional fundamental forces to the traditional 4 ones. By assuming its "leptonic" one to have an especially small "horizon", lepton generations are arising.

Leptons reveal to to be antiparticles, antileptons particles. Their internal structure is identified to resemble that of an atom: A "leptonucleus", too tiny yet to have shown up directly in experiment, is surrounded by a single shell quant of ordinary quantum numbers. Lepton flavours are structure differences in how this leptonucleus is tied up in a lepton.

These structure differences explain the solar neutrino conundrum in terms of scattering on single dark matter constituents.

For more information on QG and GUT see www.q-grav.com.

T 99.6 Do 18:00 P1

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

The detection of the "Higgs" boson has caused great excitement among physicists. However, it is widely overlooked that the corresponding theory is in no way able to explain inertial mass.

On the one hand, the theory does not provide a means of determining the mass of an individual particle. The necessary Yukawa coupling does not result from the theory. On the other hand, cosmological investigations show that the necessary Higgs field does not in fact exist. The discrepancy between Higgs theory and any actual existing vacuum field is of the order of at least 10^57.

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 if the size of the particle is used. This model also predicts the relativistic increase of a mass in motion and, as a consequence, the famous relationship E=mc^2. In addition, it is able to explain the magnetic moment and the spin of a particle without the use of QM.

For further info: www.ag-physics.org/rmass

T 99.7 Do 18:15 P1

Die Exzeptionelle E8-Gruppe und die LHC-Ergebnisse. — •Norbert Sadler — Wasserburger Str. 25a; 85540 Haar

Die Anwendung der Exzeptionellen E8-Grp.auf den Mikrokosmos ist das "mathematische Analogon" zum LHC. Die E8-Grp. kann als "Quantenmikroskop" betrachtet werden, dass bei hoher Energie und Auflösung die Zustände der Elementarteilchen lokalisiert, quantifiziert und interpretiert.

Die E8-Grp. besitzt 248 Freiheitsgrade in der Drehung eines 57-dim.

geom. Objektes, bei einer Reynolds-Zahl Re=861 im Energiedichte-Feld der hellen (0.0458) und der dunklen (0.24) Materie des Univ. E8=(4Pi x 248)/(Betrag Prot. Rad.)=8.61x10**17

Das "E8-Experiment" im Vergleich mit den LHC-Ergebnissen:

Bei den LHC-Kollisionen wurde die 248er-Symmetrie des Protonen Confinementes destabilisiert, zwei 57 dim. Objekte energetisch angeregt und mit ca. 125GeV abgestrahlt.

2x((57 dim. Obj.) x e**(4Pi alfa(QED))) x 1GeV=125GeV.

Der helle Materie-Aufwuchs (0.0458) erfolgt über das Trägheitsfeld des 57 dim. Obj. im Gravitationsfeld des Univ. unter Berücksichtigung der Reynolds-Zahl des Univ. Re=861=(e**0.0458 x 57)/(0.24 x 0.288).

Wird das 57 dim. Obj. die (56+1) M-SUSY-Teilchen finden?

Information unter: www.cosmology-harmonices-mundi.com