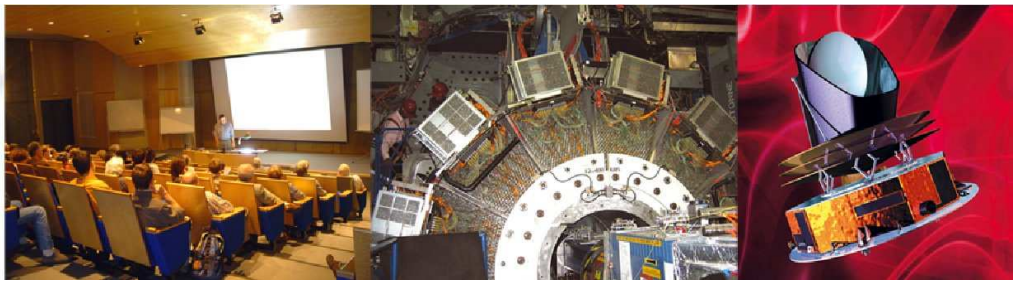
LABORATOIRE DE L'ACCÉLÉRATEUR LINÉAIRE



Séminaire du Laboratoire de l'Accélérateur Linéaire

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Jeudi 24 Octobre 2013 à 16 :00

Thoughts and Observations on Dynamical EWSB (and Flavor)

Despite the recent Nobel prize, because of the gravity of the issue of actual source of EWSB and mass generation, we consider (deferring discussion of phenomenology till later) the path of dynamical EWSB via strong Yukawa coupling λ_Q. We build up a "bootstrap" mechanism from an empirical basis with strong λ_Q as source of mass generation : the Goldstone boson in the loop is self-consistent with dynamical chiral/EW symmetry breaking, which we demonstrate by numerically solving our dynamical "gap equation". Curiously, the presence of a Higgs scalar would raise λ_Q tremendously. From scale invariance of our "empirical" gap eq., the setup could still be viable, iff the observed boson is in fact a dilaton. To exclude this possility beyond doubt, we need a convincing VBF and VH analysis, which is only possible with 2015 data. We briefly discuss a possible fascinating phenomena of heavy $Q\bar{Q}$"fireball" annihilation, and conjecture whether the old Fermi-Yang model can be realized along a non-QCD path. Connections with Flavor physics and CP violation would also be briefly touched.

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Thé et café seront servis 1/4 h avant le séminaire

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