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Measurement of Upsilon(1S) –> l+l- and Test of Lepton Universality

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Using a sample of 122 million Upsilon(3S) decays collected with the BaBar detector at the PEP-II asymmetric energy collider at the Stanford Linear Accelerator Center, we measure the ratio R = BR(Upsilon(1S) –> tautau)/BR(Upsilon(1S) –> mumu); the measurement is intended as a test of the lepton universality and as a possible search for a light pseudoscalar Higgs boson in NMSSM scenarios. Such a boson could appear in a deviation of the ratio R from 1. The analysis exploits the decays Upsilon(3S) –> Upsilon(1S)pi+pi-, Upsilon(1S) –> l+l-, where l=mu,tau.

Author: GUIDO, Elisa (University & INFN Genova)

Presenter: GUIDO, Elisa (University & INFN Genova)

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