

Plenarvortrag PV III Di 11:45 HG X und HG Aula
Why go beyond the Standard Model? — ●HITOSHI MURAYAMA
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We are all excited that the LHC will be able to “complete” the standard model by discovering the Higgs boson. However, I’d like to argue that the discovery of Higgs would not actually “complete” it because

it leaves so many questions unanswered. Based on the analogy to the superconductivity in the laboratory, new physics beyond the standard model must exist not too far above the scale of the Higgs boson condensate. In addition, recent non-accelerator data clearly point to physics beyond the standard model: dark matter, dark energy, neutrino mass, baryon asymmetry, and density fluctuation. I will discuss some of the possibilities that may be tested in the near future.