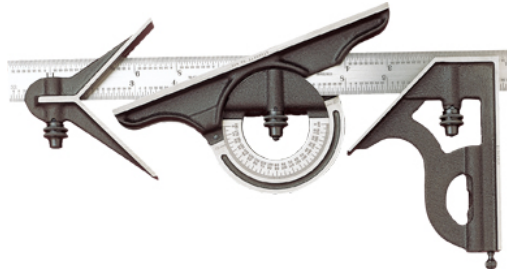


What Next: pagina del gruppo di lavoro "Standard Model"



Contribution ID: 6

Type: **not specified**

HE-LHC

I believe that the scenario for "What Next" in the SM group (and not only) should include the possibility to push for HE-LHC as an alternative to other paths.

Summary

The HE-LHC option, with a CM energy of $O(30)$ TeV should be explored as an intermediate way of exploring the SM parameters as well as (of course) pushing the reach for new physics.

The original plan that the 14 TeV should be followed by a HL phase, should be discussed against the possibility of running at Higher Energy.

What Next should include this scenario. The LHC at 14 TeV running will explore many parameters in the Higgs sector.

At this point in time we do not have any "no loose" theorem. The SM is now complete and, in order to move forward, we need access to more energy.

I include one presentation by M. Mangano who describes the physics case for a LHE (and a VHE) LHC. While a 100 TeV collider is certainly a beautiful idea, but far in time, a running with stronger magnet at 28 TeV can be better than running for 3000 fb⁻¹.

I also include (besides Michelangelo's talk) the Higgs cross section as a function of cm

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