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## Higgs Boson disappointing



### Guido Martinelli, the Director of SISSA, explains the most complex aspect of this new discovery

We all agree on this: the discovery of this new particle, announced last 4<sup>th</sup> July at CERN, is of historical importance. But are we sure of its real identity?

The director of **SISSA**, **Guido Martinelli**, comments on this news explaining why this discovery is “somehow disappointing”.

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“If the particle revealed on 4<sup>th</sup> July at CERN really was the Higgs boson, this discovery would be somehow disappointing”, states **Guido Martinelli**, Director of **SISSA**, “because this would still leave many questions open. The current Standard Model regulating interactions among particles is very precise and the only gap which still has to be filled is the Higgs boson. The problem is that this Model does not enable to give answers to questions such as: what is the dark matter? What is the relationship between matter and antimatter? Over the years alternative theories to the



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Standard Model have been developed, to better address all the different questions. However, in those cases, the missing particles would be many more and so far the experiments have not found anything. This new particle may actually be part of an extended Standard Model. We will learn that only by doing research both from an experimental and from a theoretical point of view”.

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