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Type: **Talk**

## Higgs Physics at Muon Collider

Tuesday 27 August 2024 18:00 (20 minutes)

A multi-TeV Muon Collider produces a significant amounts of Higgs bosons allowing precise measurements of its couplings to Standard Model fundamental particles. Moreover, Higgs boson pairs are produced with a relevant cross-section, allowing the determination of the second term of the Higgs potential by measuring the double Higgs production cross section and therefore the trilinear self-coupling term.

This contribution aims to give an overview of the Higgs measurements accuracies expected for the initial stage of the Muon Collider at  $\sqrt{s} = 3 \text{ TeV}$  with an integrated luminosity of  $1 \text{ ab}^{-1}$  and for the target center-of-mass energy at  $10 \text{ TeV}$  with  $10 \text{ ab}^{-1}$  integrated luminosity.

The results are obtained using the full detector simulations which include both physical and machine backgrounds.

### Internet talk

Maybe

### Is this an abstract from experimental collaboration?

Yes

### Name of experiment and experimental site

IMCC

### Is the speaker for that presentation defined?

Yes

### Details

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