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Invisible Higgs from forward muons at a muon collider

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In this talk I will propose to probe the Higgs boson decay to invisible particles at a muon collider by observing the forward muons that are produced in association with the Higgs in the Z-boson fusion channel. I will argue that an excellent sensitivity is possible provided a forward muon detector is installed. We find that the resolution on the measurement of the muon energy and angle will be the main factor limiting the actual sensitivity, which poses tight requirements on the forward muon detector design.

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