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# Explosive production of Higgs particles and implications for heavy dark matter

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In this talk, we propose a new Higgs-portal dark matter scenario considering the Higgsplosion effect, which is a hypothesis of the significant production rate of high multiplicity of Higgs particles at high $\sqrt{s}$. Our scenario allows heavy Higgs-portal dark matter of $m_\chi$
$gtrsimcalO(1)$ TeV, while the typical scenario indicates the order of $calO(10-100)$ GeV. We show that the multiplicity can be as large as $calO(200)$ for the parameters of the Standard Model Higgs, independently of the kinematics of the particle production process. Our result is applicable to a wider class of models with other scalar fields, opening a new window for heavy DM.

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