Abstract Submitted
for the TSS21 Meeting of
The American Physical Society

Potential for discovery of a new dark matter WIMP at the High-Luminosity Large Hadron Collider or the Compact Linear Collider SABRINA HERNANDEZ, SPENCER ELLIS, DRUE LUBANSKI, BAILEY TALLMAN, DIEGO CRISTANCHO GUERRERO, TREVOR CROTEAU, CADEN LAFONTAINE, BRANDON TORRES, ROLAND ALLEN, Texas A&M University — We propose a new dark matter WIMP, for which the best prospect for collider discovery appears to be vector boson fusion. Since this is a 4-vertex process with a small cross-section, it then also appears that detection of this particle is likely to require a new collider with greater reach than the present LHC – either the High-Luminosity LHC or the Compact Linear Collider (CLIC). We will discuss the plans for these new colliders and how the particle proposed here can be observed, via missing transverse energy of $\sim$ 150 GeV resulting from W and Z fusion. We will also describe the very favorable features of this dark matter candidate, including consistency with the results of current direct detection experiments, indirect detection experiments, collider detection experiments, and the observed abundance of dark matter,

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Date submitted: 13 Mar 2021 Electronic form version 1.4