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Searching for High Speed CHAMPs at the LHC TODD ADAMS, JIE CHEN, Florida State University — Charged, massive particles with long lifetimes (CHAMPs) are predicted by many new theories that extend the standard model. Traditional searches involve looking for slow moving, highly ionizing particles. However, we show that the large center of mass energy of the LHC allows for CHAMPs that that are fast. We have developed a method to separate fast CHAMPs from fast muons, thereby increasing the discovery potential of early LHC data.

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