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Searching for Cosmic Strings using SPT-3G Data[1] EBTIHAL ABDELZIZ, Fermilab — The high-precision measurements of the cosmic microwave background anisotropy we have today match the predictions given by the ΛCDM model. This data constrains the parameters defined by the Standard Model of cosmology tightly. Another interesting parameter to constrain is that of the cosmic strings. Strings are linear topological defects, remnants of inflationary-era physics that persist after the big bang. They are formed in a variety of models of inflation. In 2013, the Planck Collaboration released its constraints on the string parameter. SPT-3G has higher sensitivity to lower angular scales (the region where cosmic strings reside) and B-mode polarization measurements. These advantages SPT-3G can show that tighter constraints on the string parameter can be placed compared to Planck.

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