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MWPC prototyping and testing for STAR Inner TPC upgrade

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STAR experiment at RHIC is upgrading the inner sectors of the STAR Time Projection Chamber (iTPC) to increase the segmentation on the inner padplane from 13 to 40 rows and to replace the inner sector Multi Wire Proportional Chamber. The upgrade will provide better momentum resolution, better dE/dx resolution, and most importantly it will provide improved acceptance at high rapidity to $|\eta| \leq 1.5$ compared to the current TPC limitation of $|\eta| \leq 1$.The enhanced measurement capabilities of STAR-iTPC upgrade are critical to physics program of the Beam Energy Scan II at RHIC during 2019-2020, in particular the QCD phase transition study.In this talk, the iTPC MWPC module fabrication and prototype testing results will be discussed.

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