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First On-Sky Data from SPT-SLIM : a Mm-wave Line-Intensity Mapping Spectrometer at the South Pole

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The South Pole Telescope Shirokoff Line Intensity Mapper (SPT-SLIM) is an experiment to demonstrate the use of superconducting on-chip spectrometers for millimeter-wave line intensity mapping. SPT-SLIM is optimized to detect redshifted carbon monoxide (CO) line emission from high-redshift ($0.5 < z < 2$) galaxies in the 2 mm atmospheric window as a pathfinder for future high-redshift LIM cosmology experiments. The instrument achieved first light during its deployment in the 2024-2025 austral summer and successfully completed a two-week observing campaign. In this talk, I will present an overview of the SPT-SLIM instrument design and describe its commissioning and Y1 performance. I will share early results from the initial observing run and discuss the prospects for a longer survey with upgraded instrumentation during the 2025-2026 austral summer.

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Classification de Session: Contrinbuted Talks 7: EXCLAIM/TIM/TIFUUN/SPTSLIM