Trottier Space Institute at McGill

ASTROPHYSICS SEMINAR SERIES

CRAQ
Understanding the Universe

Pulsar Science with CHIME

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The Canadian Hydrogen Intensity Mapping Experiment (CHIME) is a transit radio inteferometer operating at frequencies of 400-800 MHz, with an instantaneous field of view (FoV) of 120 degrees North-South and 1.3-2.5 degrees East-West. While CHIME is primarily designed to study dark energy through the measurement of the evolution of baryon acoustic oscillations, it is also home to the CHIME/FRB, CHIME/Pulsar and CHIME Slow Pulsar Search (CHIME/SPS) projects. CHIME/Pulsar takes data from 10 simultaneous and independently formed beams from CHIME that track sources as they cross CHIME's FoV to observe pulsars and FRBs. CHIME/SPS taps into the continuous 1ms resolution data stream from the CHIME Fast Radio Burst pipeline to search for new pulsars across the whole Northern Sky repeatedly. In this talk I will describe the operation, as well as the scientific goals and outputs from both systems.

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