

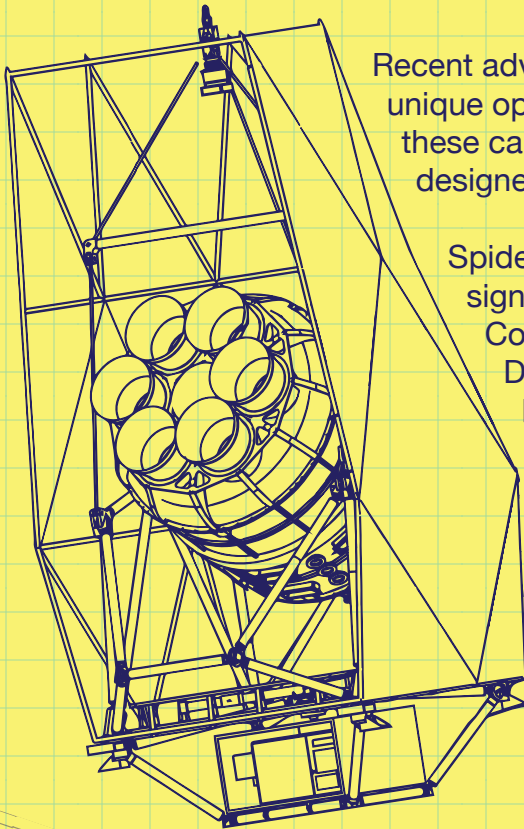
Astrophysics Seminar Series

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Cosmology from the Stratosphere:

A search for primordial gravitational waves,
and measurements of gravitational lensing from near space



Recent advances in the capabilities of stratospheric scientific balloons provide unique opportunities for cosmology and astrophysics. This talk will describe these capabilities, with a focus on two ongoing research programs that are designed to realize the scientific potential of this platform.

Spider is a millimeter wavelength polarimeter designed to probe for the signature of primordial gravitational waves in the polarization of the Cosmic Microwave Background. During the inaugural Antarctic Long Duration flight in 2015, it was the most sensitive polarimeter ever built. I will describe the experiment, the flight and the status of the cosmological analysis.

SuperBIT is a sub-arcsecond resolution, wide-field imaging telescope operating in six bands between 300-900 nm. During the course of a 100-day, mid-latitude, super pressure balloon flight SuperBIT will provide 230 mas multi-band imaging of hundreds of galaxy clusters, allowing a well characterized measure of the mass-observable relationship with tight control over systematics.

7 March 3:30 pm
Bell Room (103), Rutherford Building

For more information: msi.mcgill.ca/Seminars.html