



PHYSICS AND ASTRONOMY SEMINAR

Prof. Nicolas Martin

University of Strasbourg

“First results from the Pristine CaHK survey with CFHT/MegaCam”

Abstract

I will present the first results of the Pristine survey, a Franco-Canadian photometric survey of the Milky Way halo performed with the new CaHK filter on CFHT's MegaCam. Currently covering $\sim 1,000 \text{ deg}^2$, this survey leads to an efficient metallicity decomposition of the Milky Way halo. In particular, I will show how efficient Pristine is in selecting the metal-poor end of the metallicity distribution ($[\text{Fe}/\text{H}] < -2.5$) to hunt for the very rare extremely metal-poor stars (bearer of the chemical imprint of the first stars). A dedicated part of the survey also focuses on the enigmatic very faint (and therefore metal-poor) Milky Way dwarf galaxies found over the last decade. I will show how efficient Pristine is at isolating likely member stars and how it opens a well-needed window onto the detailed study of these systems, often used as near-field cosmological probes. Our spectroscopic follow-up is just starting but already shows a very promising efficient at selecting very metal-poor stars from our photometry alone.

Wednesday, May 3, 2017

11:00 a.m.

Bob Wright Centre

Room A104