

# PHAS Colloquium: Metal-poor stars and the Pristine Survey



**DATE:** October 23<sup>rd</sup>, 2018

**TIME:** 2:30 PM

**LOCATION:** PSE 317

## SPEAKER

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University of Victoria

**THERE WILL  
BE SNACKS**

**ALL ARE WELCOME**

## ABSTRACT

Metal-poor stars are one of the best ways to probe the early epochs in the Universe since they presumably formed before significant star formation could pollute the pristine gas. I will present results from a new survey to find these rare stars using a narrow-band filter focused on the metallicity-sensitive Ca H & K lines being conducted with the wide-field MegaCam on the Canada-France-Hawaii Telescope. From spectroscopic follow-up, this Pristine Survey is proving to be highly efficient at finding new metal-poor stars in the Galactic halo, and even the highly extincted regions of the Galactic Bulge. The Pristine Survey has also just published its first ultra metal-poor star, which is chemically interesting, and I will discuss this and others in the context of First Stars and supernova yields. I will also discuss the use of neural networks for fast, efficient, and precise determinations of the stellar parameters and chemical abundances from spectroscopy, necessary for studying stellar nucleosynthesis and chemical tagging.

Image Description: NGC 1898

Image Credit: ESA/Hubble & NASA

Poster Designed By: Neil McCall (neilmcl@my.yorku.ca)