Kim Ven

Title: Stellar abundances in dwarf galaxies, and beyond.

Abstract: *Chemical abundance ratios in stars are used to study the chemical evolution history of their host stellar population. In the case of dwarf galaxies, deviations from the halo field stars, globular clusters, and even other dwarf satellites suggest a rich diversity of conditions and events in the early Universe. In this talk, I will discuss recent results from high resolution spectroscopy of individual red giants in dwarf galaxies, particularly the constraints provided by the neutron capture elements. Early results in the search for metal-poor stars in the Galactic Centre are also providing a fresh approach to studying galaxy formation scenarios. Results and uncertainties from the relatively new capability of detailed elemental abundances from high resolution spectroscopy of the integrated light of globular clusters are also promising. Each of these methods will benefit from the power of the next generation of large telescopes; not only will the E-ELT HIRES and MOS) reach fainter and more crowded targets, but the analysis of lower luminosity stars can directly test the effects of stellar evolution in those systems on our current results.*