

Contributed Talk

Splinter Populations

4MOST - *The* FACILITY TO SPECTRALLY EXPLORE STELLAR
POPULATIONS IN AND AROUND THE MILKY WAY

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4MOST is a major new wide-field, high-multiplex spectroscopic survey facility under development for the VISTA telescope of ESO. 4MOST has a broad range of science goals ranging from Galactic archeology and stellar physics to the high-energy sky, galaxy evolution, and cosmology. Starting in 2022, 4MOST will deploy 2436 fibres in a 4.1 square degree field-of-view using a positioner based on the tilting spine principle. The fibres will feed one high-resolution ($R\sim 20,000$) and two medium-resolution ($R\sim 6500$) spectrographs with fixed 3-channel designs with identical 6k x 6k CCD detectors. After a brief introduction of the instrument and its operation concept, I will present the four Galactic Archeology Surveys and the Magellanic Clouds Survey that are being prepared by the 4MOST Consortium. These surveys are expected to deliver about 10–15 million spectra at $R\sim 6500$ and 3–4 million at $R\sim 20,000$ of a large variety of stellar targets (e.g., local White Dwarfs, extended Solar neighbourhood stars, Disk and Bulge FGK dwarfs and giants, halo Giants, extremely metal-poor stars, Magellanic Clouds Giants and variable stars). Some of the key scientific goals are: Near-field cosmology tests, Chemo-dynamical characterisation of the major Milky Way stellar components to derive its assembly history, the Formation of the Galactic Halo and Milky Way satellites, and Discovery and characterisation of the earliest Milky Way stellar populations.