

LAMOST Galactic Surveys

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Abstract

LAMOST (also named the Guoshoujing Telescope) is a quasi-meridian reflective Schmidt telescope with an effective aperture of 4m. It is equipped with 16 spectrographs fed by 4,000 optical fibers distributed in a field of view of 20 sq.deg. The spectra cover the wavelength range 370 – 910nm at a resolving power of 1800. The LAMOST Galactic surveys were initiated in the fall of 2012. By June 2014, over 3.23 million stellar spectra of signal-to-noise ratios larger than 10 have been collected, and stellar parameters, radial velocities, effective temperatures, surface gravities and metallicities, have been deduced from over 2.11 million spectra for about 1.73 million unique stars, with an accuracy of about 5 km/s, 150 K, 0.25 dex and 0.15 dex, respectively. By the end of the five-year surveys, we expect to collect at least 7 million quality spectra. In this talk, I will present a short review of the scientific motivations, target selections, survey status, data reduction and products, as well as the early scientific results of the surveys.