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■ Title

Studies on Mira variable stars in the JASMINE observation area

■ Summary

Mira variable stars (simply Miras, hereinafter) are long-period, large-amplitude pulsating variable stars that appear in the late stages of evolution of intermediate-mass stars. They serve as useful objects for tracing the properties of stellar populations distributed in the complex central region of the Galaxy. In the JASMINE's astrometry survey of the Galactic central region, Miras are expected to play a crucial role in the pursuit of JASMINE's core target: "exploration of the central nucleus structure of the Galaxy". However, the survey of Miras in the Galactic central region is still significantly incomplete. Therefore, using the PRIME telescope constructed at the South African Astronomical Observatory, this research aims to discover and catalog Miras around the JASMINE's survey area. Providing basic information on Miras therein, it will be possible to smoothly initiate scientific research with JASMINE data and to start early research that provides additional value such as spectroscopic follow-up observations. In particular, one of the goals of this research is to select targets from Miras for a Subaru/PFS spectroscopic survey and to develop appropriate observation plans.