

Cosmic Cartography 2022: Exploring the Cosmic Web and Large-Scale Structure



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The HectoMAP Redshift Survey: A Platform for studying intermediate redshift Large Scale Structures

Wednesday, 9 March 2022 10:00 (30 minutes)

HectoMAP is a dense redshift survey that yields a detailed map of the large scale structures at $z < 0.7$. HectoMAP is also covered by the Hyper Suprime Cam (HSC) Subaru Strategic Program (SSP) photometric survey enabling a range of applications that combine a dense redshift survey with both strong and weak lensing maps. Based on HectoMAP, we identify 346 galaxy clusters. We use this cluster sample to explore the dynamical connection between clusters and their brightest cluster galaxies by demonstrating the ratio between their velocity dispersions. The HectoMAP cluster catalog provides an important platform for future studies of intermediate redshift clusters. The combination of HectoMAP and future multi-wavelength surveys including e-ROSITA, complete HSC imaging, a Subaru Prime Focus Spectrograph survey will provide opportunities for increasingly sophisticated tests of cluster and large scale structure evolution.

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