

R25a Finding New Strong Gravitational Lens Systems from HSC Survey

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Strong gravitational lensing is a valuable phenomenon for studying astrophysics and cosmology, producing multiple images of a distant background source appears on the sky due to light rays being deflected by a massive compact object in between the source and an observer. Lensing is a unique probe of the (dark) matter distribution at large scale and also can act as a natural telescope that magnifies the background sources, allowing for detailed studies of their properties at high resolution. However, strong gravitational lenses are rare and difficult to find, requiring deep wide-area high-resolution imaging surveys. The HSC Survey is the ongoing imaging surveys, expected to cover 1400 deg^2 that can help us to increase the number of strong lensing candidates in the future. Over 300 strong gravitational lens systems have been discovered from early data release, and expected to find more at the end of survey. In this presentation, we summarize the lens searching techniques applied to and the latest science results from the HSC Survey data.