

## S14b A survey of new Changing-Look Quasar

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The structure and evolution of Active Galactic Nuclei (AGN) are mysterious. To learn more about these two, my current research area includes Changing-Look Quasar (CLQ). CLQ is a quasar that intrinsically changes its activity. Developing further insights into this phenomenon will enhance current understanding of the structure of AGN, the variability of the accretion disk, for example.

We have been working on a survey of a new CLQ sample by analyzing light curves. Since the changing-look of bright quasars is an unexpected phenomenon that was only recently discovered, observations of them are very poor. To find new CLQs, we selected candidates from the Sloan Digital Sky Survey DR14 quasar catalog and Catalina Real-time Transient Survey photometric data. We selected five candidates from more than 400,000 light curves of quasars that exhibited slow long-term variability. To confirm that the candidates were CLQs, we conducted the follow-up spectroscopic observations using a 2.0m telescope over eight nights. One of our candidates, SDSS1258+3519, changed its  $H\beta$  emission line flux in factor five. As a result, we found SDSS1258+3519 to be a new CLQ.