

[☞ID-07] Auto-Guiding System for McDonald Otto Struve Telescope

Eunbin Kim¹, Won-Kee Park², Jinyoung Kim¹, Heeyoung Oh¹, Changsu Choi²,
Soojong Pak¹, Myungshin Im², John Kuehne³

¹*School of Space Research, Kyung Hee University*

²*CEOU/Dept. of Physics and Astronomy, Seoul National University*

³*McDonald Observatory, University of Texas, Austin*

McDonald 2.1m Otto Struve Telescope is located in the Davis Mountains, 450 miles west of Austin, Texas. The telescope was built in 1938, but it is still in demand today. CQUEAN (Camera for QUasar in EARly uNiverse) will be attached on this telescope and perform Y-band imaging observations. Dynamics study of the telescope shows that tracking errors are 0.1 arcsec/ 100sec in declination direction and 0.4 arcsec/ 100sec in R.A. direction. In order to allow a long exposure (> a few minutes) of a target field, we are making auto-guiding system for the 2.1m telescope. The auto-guiding system of CQUEAN will be connected with TCS of the telescope. The expected number of stars on the CCD field (2.97 square arcminutes) is about 1.2 stars which are brighter than magnitude 17.5 in 2.97 square arcminutes. For more effective observation, we plan to implement moving mechanism in guiding system so that guide CCD camera can see wider off-axis fields.

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[☞ID-08] Progress report on CQUEAN (Camera for QUasars in EARly uNiverse)

Won-Kee Park¹, Eun bin Kim², Chang su Choi¹, Ju hee Lim³, Jin oung Kim³,
Hyeon ju Jeong², Hee young Oh², Soo jong Pak², Myung shin Im¹

¹*CEOU/Dept. of Physics and Astronomy, Seoul National University*

²*School of Space Research, Kyung Hee University*

³*Dept. of Astronomy and Space Sciences, Kyung Hee University*

We report the current status of CQUEAN (Camera for QUasars in EARly uNiverse) development. CQUEAN is an optical CCD camera which uses a 1024*1024 pixel deep-depletion CCD. It has an enhanced QE than conventional CCD at wavelength band around 1 μ m, thus it will be an efficient tool for observation of quasars at $z > 7$. It will be attached to the 2.1m telescope at McDonald Observatory, USA. A telescope interface containing a focal reducer is being designed to secure a larger field of view at the cassegrain focus of 2.1m telescope. Instrument control software will be written with python on linux platform. We are carrying out lab tests to investigate the characteristics of the system components in order to maximize the observational efficiency. Preliminary results of the tests will be presented. CQUEAN is expected to see the first light during summer season of 2010. This work is supported by the National Research Foundation of Korea (NRF) grant funded by the Korean Government (MEST), No. 2009-0063616.