[포AT-11] Design of Camera for QUasars in EArly uNiverse II

Nahyun Choi[1], Soojong Pak[1], Young-seok Oh[1], Hyein Lee[1],
Changsu Choi[2], Myungshin Im[2]
[1]*School of Space Research, Kyung Hee University*
[2]*CEOU/Dept. of Physics and Astronomy, Seoul National University*

Camera for QUasars in EArly uNiverse (CQUEAN) is an optical CCD camera, developed by Center for Exploration of Origin of the Universe (CEOU), which is now searching for high red shift quasar candidates. It has been operated since 2010, attached to the 2.1m Otto Struve telescope at the McDonald Observatory, USA. Based on the previous operation experiences, we present CQUEAN II system design which has a new filter wheel allowing with 20 narrow band filters. In addition, the auto guiding system will be rearranged and the interfacing units between the telescope and the instrument will become stabilized.

[포AT-12] Baffle design and test for wide-field off-axis telescopes

Sanghyuk Kim[1], Soojong Pak[1], Seunghyuk Chang[2], Geon Hee Kim[3], Sun Choel Yang[4], Sang Yong Lee[3], Myung Sang Huh[3], Myungshin Im[5]
[1]*School of Space Research, Kyung Hee University,* [2]*Samsung Electronics,* [3]*Korea Basic Science Institute,* [4]*Medical Device Development Center,* [5]*CEOU/Department of Physics and Astronomy, Seoul National University*

An off-axis telescope has several advantages in optical performance comparing with a conventional on-axis telescope. However, in general, an off-axis telescope has a narrow field of view due to the linear astigmatism caused by the asymmetric structure. It was shown in the previous work that the linear astigmatism can be eliminated by properly configuring parameters in a confocal off-axis reflector system. Furthermore, the third order aberrations of a confocal off-axis telescope can be minimized by optimizing the shape of the mirrors. Despite many advantages, the confocal off-axis telescopes have been evaded because of difficulties of off-axis mirror fabrication, alignment process and unaccustomed off-axis baffle design. The baffle for the off-axis telescope should be designed considering that the effects of stray lights are different because of the asymmetry of off-axis system. In this poster, the design, manufacturing, and test for the baffle and housing of an off-axis telescope are presented.