

Design of KAO Near Infrared Camera System on the SOAO 0.6m Telescope

Ho Jin¹, Soojong Park¹, In-Soo Yuk¹, Sungho Lee¹,
Bongkon Moon^{1,2}, Jeong-Yeol Han^{1,3}, Kwag-Il Seon¹,
Jina Kang¹, Kyung-Nam Kong^{1,2},
Wook-Won Nam¹, Dae-Hee Lee¹

¹Korea Astronomy Observatory

²Department of Astronomy and Space Science, Chungnam National University

³Department of Astronomy and Space Science, University of Science and Technology

In order to extend the Sobaeksan Optical Astronomy Observatory (SOAO) observation capabilities to near infrared wavelengths, we are designing and manufacturing a 512 x 512 InSb offner re-imaging infrared camera. It is a first year to develop of this camera. Since the SOAO 0.6-m telescope is optimized for observations at visible wavelengths, the background rejection capabilities of the KAONICS cold stop and baffles are of critical importance for its sensitivity. An Offner relay is chosen for this reason and will be manufactured from the same melt of aluminum alloy to ensure homologous contraction from room temperature to 80 K. The DSP-based electronics will allow readout of the entire array with double-correlated sampling with other functions. In this presentation we report on the optical, mechanical, and electronic design concept of the system.