

사경 제작을 위한 통합 보정가공 소프트웨어를 제공하여, 사용자가 작업을 효율적으로 수행하기를 기대한다.

#### [구 AT-03] Concept Design of a K-GMT Fiber-fed Multi-Object Spectroscopy

Sungwook E. Hong (홍성욱)<sup>1</sup>, Changbom Park (박창범)<sup>1</sup>, Haeun Chung (정하은)<sup>1,2</sup>

<sup>1</sup>*School of Physics, Korea Institute for Advanced Study (고등과학원 물리학부)*, <sup>2</sup>*Department of Physics and Astronomy, Seoul National University (서울대학교 물리천문학부)*

2022년부터 가동되는 거대 마젤란 망원경(GMT)은 1시간 노출로 1 필터 24등급 이상의 어두운 천체도 관측할 수 있을 것으로 예상되며, 이 경우 10초 지름의 시계 안에 3천 개 이상의 관측 가능한 천체가 존재하게 된다. 따라서 GMT를 가장 효율적으로 사용하는 방법은 은하와 항성에 대한 광시야 분광 탐사를 수행하는 것이다. 이를 위해서는 한 번에 여러 곳에 존재하는 수천 개의 천체를 동시에 분광할 수 있는 광섬유 다천체 분광기가 필요하지만, 현재까지 제안된 GMT의 1세대 기기 중에서는 이를 동시에 만족하는 기기가 없다. 본 발표에서는 가시광선 영역의 분광기 13대를 연결하여 2천 개의 천체를 동시에 분광하는 기기의 개념 설계를 제안하고, 현재 논의되고 있는 다른 다천체 분광기 디자인과의 비교를 수행한다.

#### [구 AT-04] Status of the MIRIS Data Reduction and Analysis

Jeonghyun Pyo<sup>1</sup>, Il-Joong Kim<sup>1</sup>, Woong-Seob Jeong<sup>1,2</sup>, Dae-Hee Lee<sup>1</sup>, Bongkon Moon<sup>1</sup>, Youngsik Park<sup>1</sup>, Sung-Joon Park<sup>1</sup>, Won-Kee Park<sup>1</sup>, Duk-Hang Lee<sup>2</sup>, Uk-Won Nam<sup>1</sup>, Wonyong Han<sup>1,2</sup>, Kwang-Il Seon<sup>1,2</sup>, Toshio Matsumoto<sup>3</sup>, Min Gyu Kim<sup>1,4</sup>, Hyung Mok Lee<sup>4</sup>

<sup>1</sup>*Korea Astronomy and Space Science Institute*, <sup>2</sup>*University of Science & Technology*, <sup>3</sup>*ISAS/JAXA, Japan*, <sup>4</sup>*Seoul National University*

MIRIS (Multi-purpose InfraRed Imaging System) is a compact near-infrared space telescope launched in 2013 November as the main payload of STSAT-3 (Science and Technology Satellite 3). The main missions of MIRIS are 1) the Pa $\alpha$  line survey along the Galactic plane, 2) the large area ( $\sim 10^\circ \times 10^\circ$ ) surveys of three pole regions (north ecliptic pole, and north and south Galactic poles), and 3) the monitoring observations toward the north ecliptic pole. MIRIS started observations for the main missions in 2014 March and finished in 2015 May. While MIRIS was taking the observation data and afterward, we are continuing the analysis of data. Based on the results from analysis, the data reduction pipeline has been revised. In this

talk, we introduce the revised version of the MIRIS data reduction pipeline and the status of the data reduction and analysis.

#### [구 AT-05] Korean Contribution to All-Sky Near-infrared Spectro-Photometric Survey

Woong-Seob Jeong<sup>1,2</sup>, Jeonghyun Pyo<sup>1</sup>, Sung-Joon Park<sup>1</sup>, Bongkon Moon<sup>1</sup>, Dae-Hee Lee<sup>1</sup>, Won-Kee Park<sup>1</sup>, Duk-Hang Lee<sup>1,2</sup>, Kyeongyeon Ko<sup>1,2</sup>, Il-Joong Kim<sup>1</sup>, Minjin Kim<sup>1,2</sup>, Yujin Yang<sup>1</sup>, Jongwan Ko<sup>1</sup>, Yong-Seon Song<sup>1</sup>, Young Sam Yu<sup>1</sup>, Myungshin Im<sup>3</sup>, Hyung Mok Lee<sup>3</sup>, Jeong-Eun Lee<sup>4</sup>, Hyunjin Shim<sup>5</sup>, Toshio Matsumoto<sup>1,6</sup>, SPHEREx Korean Consortium<sup>1,2,3,4,5,6,7</sup>

<sup>1</sup>*Korea Astronomy and Space Science Institute, Korea*, <sup>2</sup>*University of Science and Technology, Korea*, <sup>3</sup>*Seoul National University, Korea*, <sup>4</sup>*Kyung Hee University, Korea*, <sup>5</sup>*Kyungpook National University, Korea*, *KAIST, Korea*, <sup>6</sup>*ISAS/JAXA, Japan*, <sup>7</sup>*Korea Institute for Advanced Study, Korea*

The SPHEREx (Spectro-Photometer for the History of the Universe Epoch of Reionization, and Ices Explorer) is one of the candidates for the Astrophysical Small Explore mission of the NASA proposed together with KASI (PI Institute: Caltech). It will perform an all-sky near-infrared spectral survey to probe the origin of the Universe and water in the planetary systems and to explore the evolution of galaxies. The SPHEREx is designed to cover wide field of view of  $3.5 \times 7$  deg. as well as wide spectral range from 0.7 to  $4.8\mu\text{m}$  by using four linear variable filters. The SPHEREx is under the Phase-A study to finalize the conceptual design and test plan of the instrument. The international partner, KASI will contribute to the SPHEREx in the hardware as well as the major science cases. The final selection will be made in the early 2017. Here, we report the current status of the SPHEREx mission.

## 성간물질

#### [구 IM-02] Core formation in different environments: Planck Galactic Cold Clumps (PGCCs) in the $\lambda$ Orionis cloud, Orion A and Orion B clouds

HeeWeon Yi<sup>1</sup>, Jeong-Eun Lee<sup>1</sup>, Tie Liu<sup>2</sup>, Kee-Tae Kim<sup>2</sup>, and Yuefang Wu<sup>3</sup>

<sup>1</sup>*School of Space Research, Kyung Hee University, Yongin-Si, Gyeonggi-Do 446-701, Republic of*