

We have been monitoring Sgr A*, the radio source at the center of our galaxy, continuously since G2 encounter was predicted. KaVA is a powerful High resolution imaging array at K and Q band, and it has an excellent uv-coverage for Sgr A*. Together with 1-Gbps recording, our observations have provided high-quality images of Sgr A* at Q-band. Our images reveal a scatter-broadened, elliptical Gaussian structure of the source. We found no significant flux or structural variation of Sgr A* in 2013-2014, which is consistent with recent simulations by Kawashima et al. Continuous monitoring in the coming few years would be able to capture the possible flux increase in the source caused by G2, which will lead to better understanding of the accretion process around supermassive black holes.

[구 HA-05] Variation of solar activity and atmospheric change recorded in Korean chronicles during the last millennium

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Korea has a long history in astronomy, which is proved by many observational records written in Korean chronicles. There are 43 sunspot records in Goryeo dynasty (高麗 918-1392) and 13 records in Joseon dynasty (朝鮮 1392-1910). According to analysis of Korean historical records, it is known that sunspot records in Goryeo dynasty show well in match with the well-known solar activity of 11.3 years. It means that Korean historical sunspot records show real solar phenomena. Korean sunspot records also show that solar activity decrease in Joseon dynasty compared with the previous ~500 years. In order to know the change of solar activity in detail, we examine Korean historical atmospheric records which can indicate climate change. We first analyze historical frost records. Korean chronicles have around 600 frost records during the last millennium. We find that the climate change shows sign of cooling down when check the variation of epoch that the first and last frost events in each year are written. This result is well in accord with that of historical sunspot records. Therefore, we claim that solar activity decrease during the last thousand years.

우주망원경

[초 SO-01] WSO-UV progress and SODA project

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The World Space Observatory Ultraviolet (WSO-UV) is the space mission that will grant access to the UV range in the post Hubble epoch.

WSO-UV is equipped with instrumentation for imaging and spectroscopy and it is fully devoted to UV astronomy.

In this talk, we outline the WSO-UV mission model and present the current status of the project.

Also, the NEO observing mission SODA (System of Observation of Day-time Asteroids) is also presented.

[구 SO-02] The Detailed Design of the NISS onboard NEXTSat-1

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The NISS (Near-infrared Imaging Spectrometer for Star formation history) onboard NEXTSat-1 is the near-infrared instrument optimized to the first small satellite of NEXTSat series. The capability of both imaging and low spectral resolution spectroscopy in the near-infrared range is a unique function of the NISS. The major scientific mission is to study the cosmic star formation history in local and distant universe. For those purposes, the main targets are nearby galaxies, galaxy clusters, star-forming regions and low background regions.

The off-axis optical design of the NISS with two linear variable filters is optimized to have a wide field of view (2 deg. x 2 deg.) as well as the wide wavelength range from 0.95 to 3.8 μ m. The mechanical structure is considered to endure the launching condition as well as the space