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Globular clusters (GCs) are known to have a very small amount of or no dark matter (DM). Several studies propose that GCs may have formed in individual dark halos. Thus, some of the current GCs might have a non-negligible DM content. Using the Fokker-Planck (FP) calculations, we investigate the dynamical evolution of the Galactic GCs residing in mini DM halo. We trace the initial amount of DM of 47 Tuc, NGC 1851, and M15, which is a 'disk/bulge' cluster, an 'old halo' cluster, and a 'young halo' cluster, respectively. We find that the three GCs have initially insignificant amounts of DM, less than 20 percent of the initial stellar mass of the each cluster.

[포 IM-04] A bright star catalog observed by FIMS/SPEAR

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FIMS/SPEAR is a dual-channel far-ultraviolet imaging spectrograph on board the Korean microsatellite STSAT-1, which was launched on 2003 September 27. While the instrument is optimized for the observation of diffuse emissions, it was able to observe a number of bright stars without much contamination from the diffuse background or other faint stars. In this paper, we present a catalog of the far-ultraviolet spectra for 543 stars observed by FIMS/SPEAR during its mission lifetime of a year and a half, covering over the 80% of the sky. Of these, 296 stars were also observed by the International Ultraviolet Explorer (IUE), which covered a wide spectral band including the FIMS wavelength band (1370--1710 Å). The stellar spectral types involved in the catalog span from B0 to A3. We compare the new spectra with those of IUE when they are available, and discuss some examples. We also revised the

effective area of FIMS that the FIMS stellar spectra are consistent with the IUE spectra.

[포 IM-05] Photometric monitoring of V1057 Cyg

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FU Orionis 형 천체는 태양 질량의 2배 이하인 T Tauri 별 중에서도 급격한 밝기 변화를 보이는 별들로서, 광도 증가폭이 최대 5등급에 이르는 것으로 알려져 있다. 이러한 현상의 원인은 FU Orionis를 둘러싼 강착 원반에서 나타나는 불안정성에 의해, 원반 안쪽의 물질이 한꺼번에 중심별로 쏟아져 내리기 때문인 것으로 분석된다. V1057 Cyg는 FU Orionis 형 천체 중 하나로, 1969년에 급격한 밝기 변화를 일으키며, 기존의 16등급에서 변화 직후 9등급 후반에 이르는 광도 증가를 보였다. 우리는 V, R, I 필터 대역에서 관측을 수행하였으며, 본 발표에서는 2013 ~ 2014년에 걸쳐 소백산, 레몬산 천문대 및 경희천문대에서 관측한 결과를 보고한다.

천문우주관측기술

[포 AT-01] CFRP - New Material for Telescope Manufacturing

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Carbon Fiber Re-enforced Polymer (CFRP) has replaced steel, especially for mobile devices. As CFRP is stiff and light-weight, it has been applied to airplane, sport car, golf clubs, semiconductor transporter, satellites, etc. In the telescope, the plastic material was introduced to the supporting tubes or rods connecting the primary mirror assembly and the secondary mirror structure. Nowadays, even the mirror itself is produced by CFRP. In this poster, material properties and production of CFRP telescopes are presented, and pros and cons are discussed.

[포 AT-02] Astrochem 코드를 활용한 천체에서의 화학반응

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