

발생할 수 있는 본체 전압의 Transition 조건 및 벨러스트회로의 모델링 분석을 진행하였으며, 모의실험을 위한 시뮬레이션 프로그램은 Matlab/simulink 및 PSIM을 이용하였다. 최종적으로 본체 전압의 변동 조건을 Inrush, Major/minor 및 Step/Frequency 부하 변동으로 나누었고, 2-port 모델링을 통해 벨러스트 회로의 구성 및 외란에 따른 영향성을 분석하고, 시뮬레이션을 통하여 검증 하였다.

**■ Session : 천문우주 II**  
**4월 30일(금) 09:00 - 10:40 제1발표장**

**[III-1-1] New CCD BVR Photometric Studies of the Contact Binary GW Cephei**

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The BVR CCD observations of the solar-type contact binary GW Cephei, known as very active dynamically and photometrically, has been made for 20 nights from Nov. 03, 2008 to Dec. 31, 2008 with 1-m reflector of Jincheon station of Chungbuk National University Observatory. A total of 2035 measurements (B: 647, V: 722, R: 666) were obtained to secure new multi-color light curves. From our observations fifteen times of minimum light were newly determined. In this paper both a new period study and an intensive light synthesis were made. Our results will be compared and discussed with the latest thorough studies of the system by Lee et al. (2010).

**[III-1-2] 고분산 분광 관측을 통한 공생별 AG Draconis와 EG Andromedae의 특성 연구**

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보현산 천문대 1.8-m 망원경과 고분산 에셀 분광기 BOES(BOao Echelle Spectrograph)를 이용해 관측한 다년간의 공생별 관측자료 중 AG Draconis와 EG Andromedae의 방출선들을 분석하여 그 분광학적 특성을 밝혀내고자 한다. 수소 Balmer 계열 방출선들과 He I  $\lambda 5875 \text{ \AA}$ , He I  $\lambda 6678 \text{ \AA}$ , He I  $\lambda 7065 \text{ \AA}$ , He II  $\lambda 4686 \text{ \AA}$ , O VI  $\lambda 6030 \text{ \AA}$ , O VI  $\lambda 7088 \text{ \AA}$  방출선들의 단·장기 변화와 특징을 살펴보고, 그 방출선들 간의 비교를 통해 두 공생별의 특성 변화에 대해 알아본다.

**[III-1-3] Contact and Near-Contact Binaries with co-relation of Mass transfer and Asymmetric Light Curve**

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We have analyzed times of minima for six eclipsing binary systems which show asymmetric light curves. We found that

five binary systems show period decrease and one system shows cyclic period variation. Three asymmetric light curves (SV Cen, RT Scl and VW Boo) are due to hot spot caused by mass transfer. Other three asymmetric light curves (AD Phe, , EZ Hya and TY Boo) are due to cool spot on the cooler component caused by magnetic activities. We also obtain absolute dimensions from photometric solution and spectroscopic solution by analyzing their light curves and radial velocity curves, collected from literatures, using 2007 version Wilson and Devinney computer code.

**[III-1-4] Evolutionary status of seven detached binary stars**

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We have presented the evolutionary status of seven detached double line spectroscopic eclipsing binaries which are CD Tau, CM Lac, CW CMa, HS Hya, IT Cas, KM Hya, and ZZ Boo because the component stars in the binary systems still act as a single star. We determined the absolute dimensions of the binary systems using photometric and spectroscopic solutions by analyzing of the light curves and radial velocity curves. We chose evolutionary tracks of these binary systems. Using the luminosities, effective temperatures and masses. Finally we obtained ages and metallicity of the stars.

**[III-1-5] FUV Observations of The Taurus-Auriga-Perseus complex**

Tae-Ho Lim<sup>1</sup>, Kyung-Wook Min<sup>1</sup>, Jae-Woo Park<sup>1</sup>, Il-Joong Kim<sup>1</sup>, Sung-Joon Park<sup>1</sup>, Yeo-Myung Lim<sup>1</sup>, Dae-Hee Lee<sup>2</sup>, Kwang-Il Seon<sup>2</sup>  
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We present the FUV continuum map of The Taurus-Auriga-Perseus complex, which is one of the largest local association of dark clouds. The map is well consistent with the dust extinction and the CO emission map of the T-P-A region. The region is divided into 3 sub-regions by diffuse FUV intensities and the spectra of each region imply that the radiation field due to the Per OB2-association can be a main source of the H2 fluorescent emission of the nearby cloud region. We used the PDR H2 model, named CLOUD, developed by van Dishoeck & Black for the sake of comparing our results to the H2 model.

**■ Session : 초청강연 II**  
**4월 30일(금) 10:50 - 11:20 제1발표장**

**[IS-02] 우리나라의 지구관측용 광학위성 개발의**