

filters. Photometric results with SNU system will be compared with Johnson's standard system for 25 stars. A brief discussion will be given to the filter characteristics of the first trial set.

## SMALL GRAINS EXPERIENCING TEMPERATURE FLUCTUATION UNDER DIFFUSE INTERSTELLAR RADIATION FIELD

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Temperature history of very small interstellar dust particles is followed under diffuse radiation from stars in interstellar space. Because of extremely small thermal capacities of these grains in a few tens Å range, they are to experience strong fluctuations in temperature whenever they are hit by interstellar ultra-violet photons. Fluctuating temperature can inhibit these small grains from growing into core-mantle particles of submicron sizes by continuously evaporating atoms and molecules adsorbed on their surfaces. This is interpreted as a possible physical reason for the bimodal size nature of interstellar grains. A brief discussion is also given to the far infrared emission properties of such small grains in interstellar dust clouds.

## AN UNSUCCESSFUL ATTEMPT TO OBSERVE LUNAR OCCULTATION

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The process and the results of the first trial to measure the lunar occultations photoelectrically at Sobaeksan Observing Station will be reported. The result is unsuccessful because of limited memory space of computer and difficulties in locating stars when they emerge from the dark side of the moon. The ways to overcome these difficulties will be discussed.

## 12 표준성의 UBV 광전측광 관측

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소백산천체관측소에 설치된 61-cm반사망원경에 UBV광전측광기를 부착하고 12개의 표준성에 대하여 이를 밤동안에 243개의 관측치를 얻었다. 2차흡수 계수  $k''$ 를 얻기 위하여 6 Lac(4<sup>m</sup>.5, B3)와 11 Lac(4<sup>m</sup>.6, KO)를 찍지워  $k''_v=0.028$ ,  $k''_{(B-v)}=-0.027$ ,  $k''_{(U-B)}=0.023$ 을 얻었고 1차흡수 계수  $k'$ 는 별에 따라 다소 차이는 있으나 대략  $k'_v=0.25$ ,  $k'_{(B-v)}=0.15$ ,  $k'_{(U-B)}=0.50$ 을 얻었다. 이를 이용하여 8개의 별의 기계등급  $v_0$ ,  $(b-v)_0$ ,  $(u-b)_0$ 를 구하였다.