clusters with $[Fe/H] \lesssim -1.0$ and the disk clusters confined within the galactocentric distance $r_G=10$ kpc and galactic plane distance $|z|=3$ kpc. In this case the abundance gradient is given by $d[Fe/H]/dr_G \approx -0.05\text{kpc}^{-1}$ and $d[Fe/H]/d|z| \simeq -0.08\text{kpc}^{-1}$ within $r_G=20$kpc and $|z|=10$kpc, respectively. According to these characteristics of the spatial distribution of globular clusters, the chemical evolution of the galactic globular clusters can be accounted for by the two-zone (disk-halo) slow collapse model when the $[Fe/H]_L$- or $[Fe/H]_{Ds}$-scale is applied. In the case of $[Fe/H]_H$-scale, the one zone fast collapse model is preferred for the evolution of globular clusters.

Variation of Non-adiabatic Term during One Period of Pulsating Star

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The equations of pulsation are determined from the radial velocity curves and the phase diagrams of five pulsating stars. With these equations, the motions of pulsation and the other physical phenomena are explained. We calculate the non-adiabatic term during one phase and compare the parameters of these equations with respect to the radius of each star.

Photoelectric Photometry of ER Vulpeculae

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The eclipsing binary ER Vulpeculae was observed in yellow and blue light with the 40cm Cassegrain reflector of Kyungpook National University Observatory during the period from October 2 to October 31, 1983. A total of 222 yellow observations and 220 blue observations of ER Vulpeculae was obtained.

From the observed time of minimum the new light elements are deduced as; J.D. Hel. Min. $I=2440182.26039+0^d.6980932E$. The variations in its period are discussed. The characteristics of the observed light curves are discussed comparing with the results of previous observers.

A Solar Dynamo Model Based on Öpik's Convection Theory

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A theoretical formulation as to how stellar dynamo operation can be incorporated into Öpik's convection theory is presented. Within the framework a solar dynamo model is constructed, taking into account the effect of the differential rotation. It is found that the solar dynamo operates very effectively toward the lower boundary of the solar convection zone, generating a fluctuating magnetic field with an amplitude of about one thousand gauss and a period of 22 years. Finally, we discuss the advantage of the Öpik's theory over the conventional mixing-length theory in dealing with stellar dynamo.