region of $r=12''$ and $\gamma=0.75$, $\sigma=315$km/sec for the region of $r=24''$.

The Dynamical Evolution of Globular Clusters with Stellar Mass Loss

Chang-Hwan Kim and Mun-Suk Chun

Department of Astronomy and Meteorology, Yonsei University

Kyoung W. Min

Department of Physics, Korea Institute of Technology

The dynamical evolution of globular clusters is studied using the orbit-averaged multi-component Fokker-Planck equation. The original code developed by Cohn and Kulsrud(1978) is modified to include the effect of stellar evolutions.

Plummer's model is chosen as the initial density distribution with the mass spectrum of Salpeter's initial mass function $\phi(m) \propto m^{-2.35}$. The dynamical effect of the stellar evolution is incorporated by the mass loss when stars evolve from the giant branch to white dwarfs. The mass loss rates adopted in this work follows those of Fusi-Pecci and Renzini(1976).

The stellar mass loss acts as the energy source, and thus affects the dynamical evolution of globular clusters by slowing down the evolution rate and extending the core collapse time. Our result is compared with the work by Angelleti and Giannone(1977).

行星間 空間閃光을 이용한 太陽風 探査 可能性 研究

김 수 용

한국과학기술대학

M파나 cm파의 외계 천체 신호의 관측시 알 수 있는 사실은 이 신호가 전파 매질의 영향을 받는 다는 사실이다. 따라서, 이러한 신호의 주파수 분산과 강도의 scintillation을 해석하면 태양 코로나, 星間플라즈마, 行星間 空間의 환경 즉, 태양풍의 활동을 이해할 수 있다. 여기에서는 간단한 이론 및 실험 방법을 소개한다.

Stellar Activity and Rotation Period of Lower Main Sequence Stars

Yun, Hong Sik and Park, Young Deuk

Department of Astronomy, Seoul National University

To examine relation between stellar activity and rotation we derived relations between the Rossby number R_0 and stellar activity R'_{HK}, R'_{MgII}, R'_{CII}, R'_{CIV} and R'_{X-ray} and assessed the relation by plotting R'_{HK}, R'_{MgII} and R'_{X-ray} against rotation period P_{rot} for comparison with observations.

From the comparison it is found that as far as the rotation is concerned, (1) normalized surface flux R'_{HK} is better than the surface flux F'_{HK}, in the sense that R'_{HK} differentiates the color dependence better and (2) R'_{HK} defined by Rutten (1984) describes the observations notably better than R'_{HK} of Noyes et al. (1984).

In the present study we considered only the main sequence stars in an attempt to minimize the influence of other stellar parameters such as radius, age and stellar convection on stellar activity

since they are also known to affect the magnetic field generation.

The Dependences of the Blue Region Spectral Indices on the Atmospheric Parameters

Sang-Gak Lee

Department of Astronomy, Seoul National University

Bruce W. Carney and James A. Rose

Department of Physics and Astronomy, University of North Carolina

Digital spectra of 130 field bright stars with well-determined atmospheric parameters (T_e, log g, and [Fe/H]) were obtained. The spectra have a resolution of 1Å and cover the wavelength range of $\lambda\lambda3900{\sim}4150$Å. The Spectral indices were measured by the counts in the bottoms of the absorption lines or in the neighboring pseudocontinuum peaks. Their dependences on the temperature, gravity and luminosity are discussed.