circumstellar gas being overtaken by the expanding supernova envelope. The temporal beheavior of the Hα line width and the [Fe X] flux suggests the velocity and density of the progenitor wind was enhanced less than a year before the supernova explosion. A similar effect, but on a larger scale, was seen in SN1984E and indicated enhanced mass-loss may precede most supernova events. The observed helium to hydrogen emission line flux ratio is larger than expected and implies helium abundance was enhanced in the precursor wind.

Broad, shallow,blue-shifted absorption features attributed to Hα and He I 5875Å are also seen in the spectra and indicated the velocity of the expanding supernova photosphere to be approximately $-14000 kms^{-1}$.The time series of indivisual spectra shows a rapid color evolution for the spectral range between 5500Å and 7000Å, with the steepest continuum slope occuring between March 30.5 and 30.9(UT).

Spectral Analysis of Low Mass X-ray Binary X1735-44.

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The X-ray burst source X1735-44 was observed with the Large Area Propotional Counters on board Ginga between 1991, September 27, 9:59 UT and September 28, 22:40 UT. We observed one burst during this period. We analyzed the persistent spectrum and burst spectrum. The persistent spectrum was well fitted with the two component model the power law with an exponential cut off and a blackbody. The photon index correlates with the intensity when the luminosity is not very high, while the blackbody temperature remains more or less at the constant level. The burst shows a typical type I light curve. The burst specturm shows a hard tail in the decay phase and a sharp drop of the temperature according to the expression of the photosphere.

산개성단 및 성협의 측광학적 진화 연구

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어두운 별까지 잘 관측된 산개성단 12개와 성협 3개를 선택해서 이들의 주계열성의 현재질량함수와 색-색도, 색-등급도를 제한조건으로 이용하여 각 성단이 초기질량함수를 결정하였다.

본 연구에 선택된 산개성단의 경우 초기질량함수가 성단마다 서로 다른 시간적 변화 양상을 보이는데 반해, 성협의 경우에는 산개성단의 초기질량함수와는 달리 시간에 따라 거의 변하지 않는 초기질량함수를 갖고 있는 것을 확인하였다.

관측적인 주계열성의 현재질량함수로부터 결정된 초기질량함수와 시간의존적 별생성률을 가