

ANALYSIS OF X-RAY SPECTRUM FOR GLOBULAR CLUSTER M15 X-RAY SOURCE

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Investigation of all X-ray spectrum obtained with MPC and HRI in HEAO-B for globular cluster M15 X-ray source shows us several interesting results:

(1) If we only consider one radiation component and fit HRI data to MPC spectrum, then the results indicate that bremsstrahlung model is a little bit better than exponential one. Maybe, two radiation components should be taken into account. One is from neutron star and the other from the accretion disk around the neutron star.

(2) The column density N_H is inversely proportional to X-ray count rate (see the figure below), suggesting that photoionization mechanism plays an important role, and that low energy X-ray absorption in the system does account for some of the reduction in source flux.

(3) Lowest column density, $N_H \sim 6.3E20$, from X-ray data is consistent with the results from optical observation.

(4) If M15 X-ray source is a binary system, then the period of X-ray binary, that we can estimate, is at least 1 day.

(5) It seems that there are a few marginal soft X-ray flares during 1979 HEAO-B observation. But more observations to confirm this property are needed.

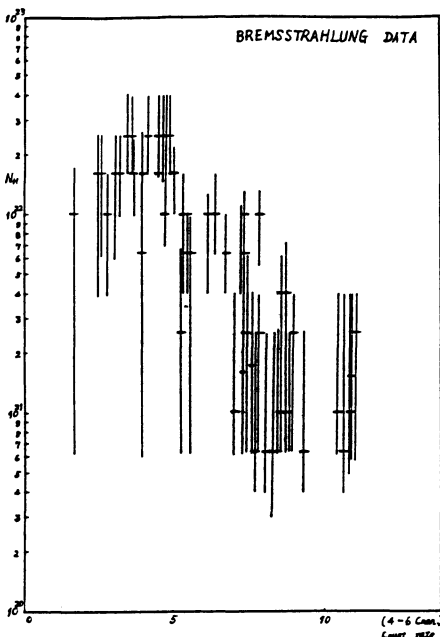


Fig 1. The column density to the globular cluster M15 X-ray source is obviously in inverse proportion to X-ray count rate.