

Intensity and energy dependent profiles of transient HMXB pulsars GRO J1008-57, 1A 1118-61 and GX 304-1

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ABSTRACT

We will present complex pulse profile evolution during the outbursts of a set of transient HMXB pulsars. All these sources also show very strong energy dependence of complex pulse profiles. The pulse profiles appear to be double peaked upto 10 keV and have a single peak at higher energy. We find that the energy spectra can be well fitted with a partial covering power-law model with high energy cutoff and an iron fluorescence line emission. The pulse phase resolved spectral analysis shows that the partial covering with high energy cutoff model parameters have significant changes with the pulse phase. We will show that this spectral model naturally explains the complex energy dependence of the pulse profiles.