Long Term RXTE Monitoring of LMC X-3: Evidence for a Warped Accretion Disk?

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The black hole candidate LMC X-3 is varying by a factor of four on a timescale of 200 or 100 days (Cowley et al., 1991). The variability has been interpreted as either due to variations in the mass transfer rate from the B3 V star companion, or by partial obscurations by a warped accretion disk. We have monitored the long term variability of LMC X-3 with RXTE in three to four weekly intervals starting in December 1996 obtaining a large observational database that might shed light on the nature of the long term X-ray variability in this source. In this contribution we present the results from this monitoring campaign. We study the correlations between the flux in the soft and power-law spectral components and we model the broad band X-ray spectrum of LMC X-3 using Monte Carlo Comptonization computations.