

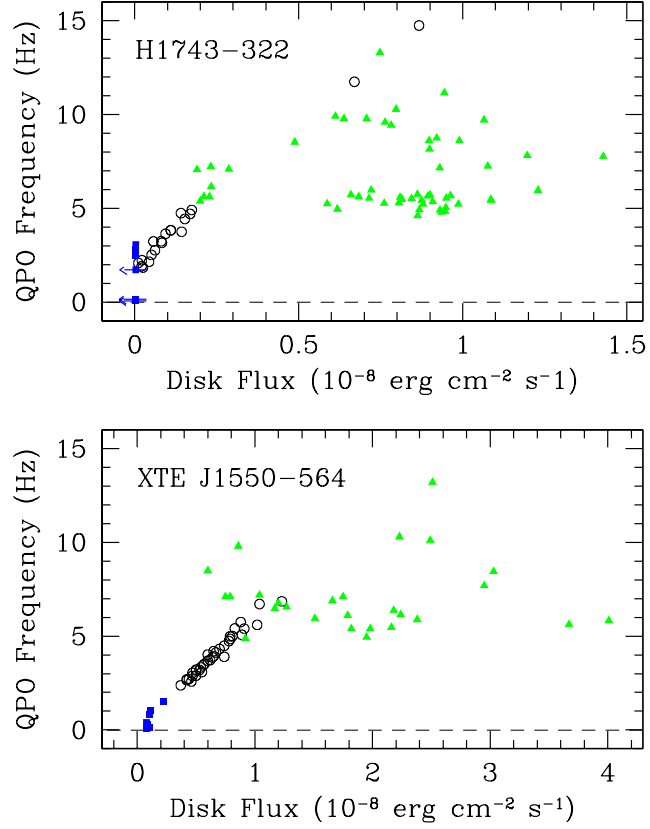


Figure 10: Quasi-periodic oscillation (QPO) frequency versus disk flux for XTE J1550–564 and H 1743–322. See Figure 4 for definitions of the symbol types. The QPO frequencies in the hard and especially the hard:SPL intermediate state are highly correlated with disk flux; these are C-type low-frequency QPOs (LFQPOs) based on their phase lags (see text). The steep power law QPOs are not correlated with disk flux, and these are A and B type LFQPOs.

6.2 High-Frequency Quasi-Periodic Oscillations

High-frequency QPOs (HFQPOs; 40–450 Hz) have been detected in seven sources (5 BHBs and 2 BHCs). These oscillations are transient and subtle ($a \sim 0.01$), and they attract interest primarily because their frequencies are in the expected range for matter in orbit near the ISCO for a $\sim 10 M_{\odot}$ BH.

As an aside, we briefly note that broad power peaks ($Q < 1$) have been reported at high frequencies in a few cases (e.g., Cui et al 2000a; Homan et al. 2003; Klein-Wolt, Homan, & van der Klis 2004). At the present time, these broad PDS features do not impact the field significantly, because they are relatively rare and poorly understood. Consequently, we do not consider these broad features further.

The entire sample of HFQPOs with strong detections ($> 4\sigma$) is shown in Figure 11. Three sources have exhibited single oscillations (Cui et al. 2000a; Homan