Andrews & Williams (2007). This comparison sample is appropriate because our mm flux to disk mass relation (i.e., Equation 1) has been calibrated using their disk models. The accretion rates for our comparison sample come from Natta et. (2006), and have been calculated from the luminosity of the Paβ line. This comparison sample is also appropriate because the relations between the luminosity of the Paβ line and accretion rate and between the Hα full width at 10% intensity and accretion rate (which we use for our transition disk sample) have both been calibrated by Natta et al. (2004) using the same detailed models of magnethospheric accretion.

Figure 5 shows that transition disks tend to have much lower disk masses and accretion rates than non-transition objects. We also find a strong connection between the magnitude of the mid-IR excess and both disk mass and accretion rate: objects with little ($\lesssim$ 4 mag) 24 μm excess tend to have small disk masses and low accretion rates. Among our transition disk sample, we also note that all of the mm detections correspond to accreting objects and that even some of the strongest accretors have very low disk masses (see Figure 6). In other words, massive disks are the most likely to accrete, but some low-mass disks can also be strong accretors.

These results can help reconcile the apparently contradictory findings of previous studies of transition disks. As discussed in § 1, Najita et al. (2007) studied a sample of 12 transition objects in Taurus and found that they have a median disk mass of 25 M_{JUP}, which is ~4 times larger than the rest of the disks in Taurus, while Cieza et al. (2008) found that the vast majority of their 26 transition disk targets had very small ($<$ 2 M_{JUP}) disk masses. Our results now show that transition disks are a highly heterogeneous group of objects, whose "mean properties" are highly dependent on the details of the sample selection criteria. On the one hand, the sample studied by Cieza et al. (2008) was dominated by weak-line T Tauri stars. This explains the low disk masses they found, as