

# Quasars in Crisis

October 15, 2018

## Grumpy Questions

- What is the BLR? What is the origin of the soft X-ray excess/UV downturn?  
Why do disks look different at  $0.2L_{\text{Edd}}$  in AGN (big soft x-ray excess/UV downturn) than in binaries (something that looks and varies like a shakura-sunyaev disc!)  
at around eddington the NLS1 do look like a disc - but why are there discs in AGN when they are radiation pressure unstable? why are there discs in black hole binaries since they are radiation pressure unstable too (just not quite so badly as AGN!) how do we make discs vary - the NLS1 have optical/UV that change on timescales of weeks-months yet this can't be reprocessing as the x-rays are weak. what is the NLR? are warm absorbers seen in X-rays due to a thermal wind from the torus? how do we make a torus have large scale height? do all AGN have tori - do true type 2 seyferts?