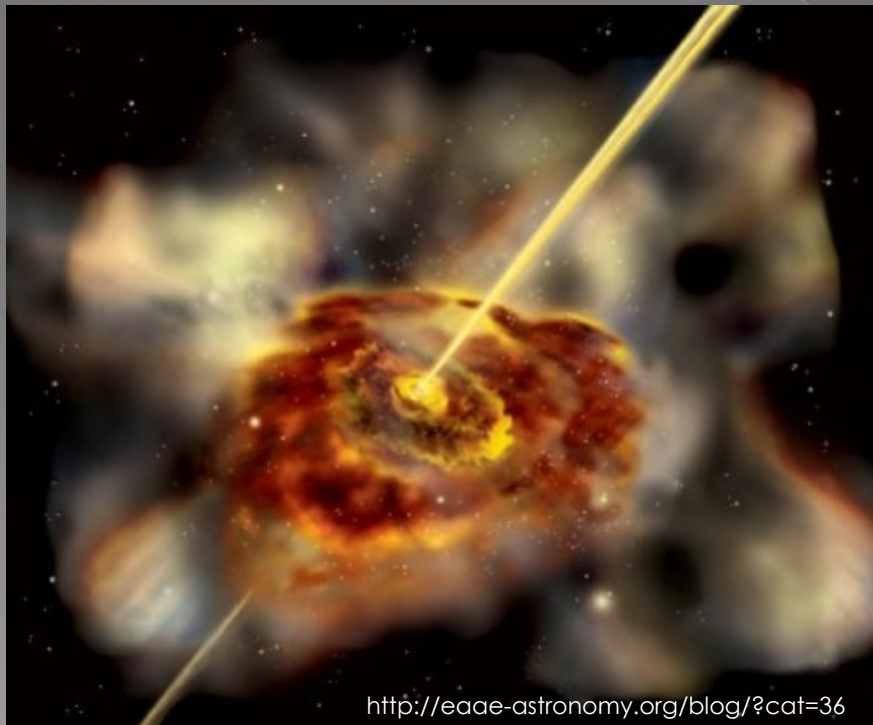


Quasar Dust Project

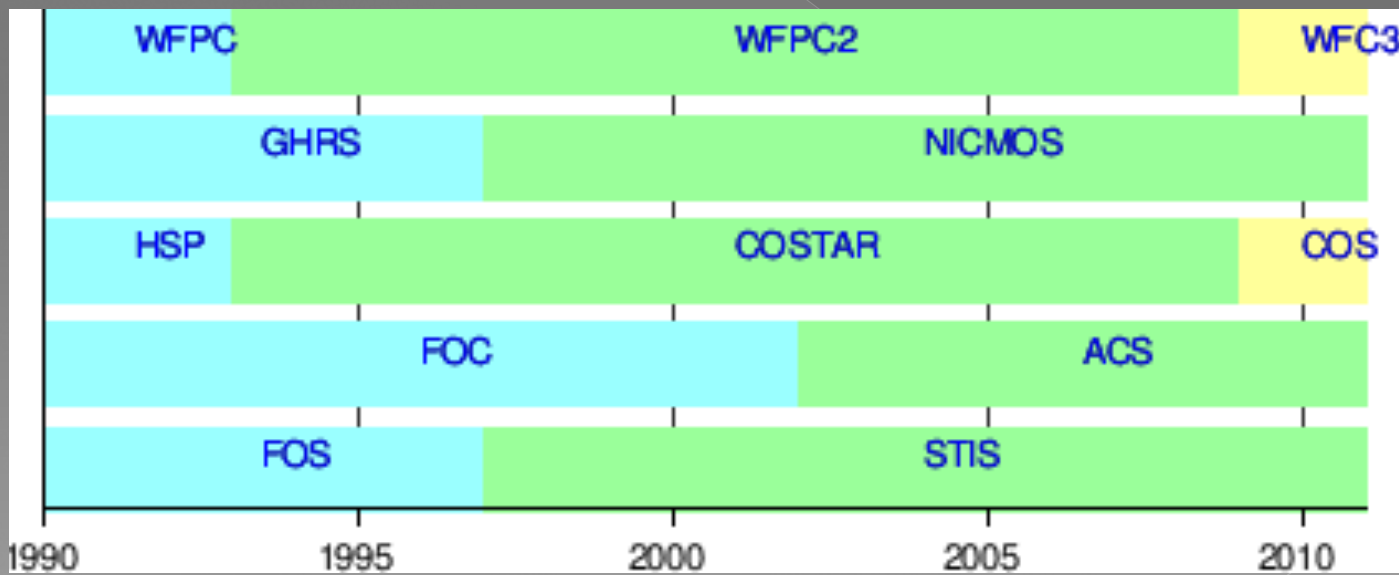
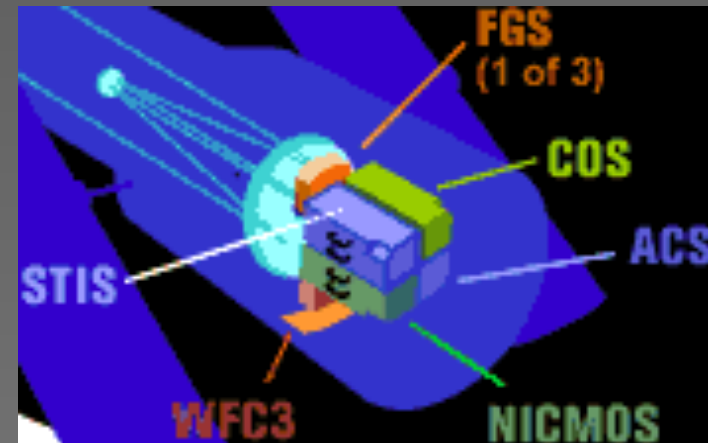
We use Hubble Space Telescope spectra of Quasars

Brittney Byars
March 27, 2010

Faculty mentor: Dr. Anca Constantin

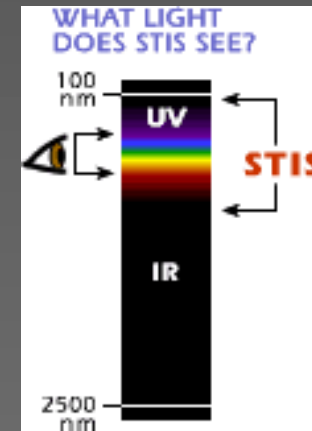


Hubble Space Telescope



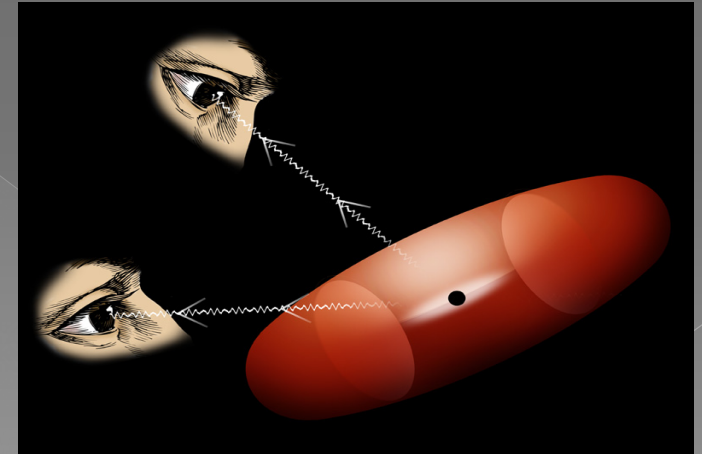
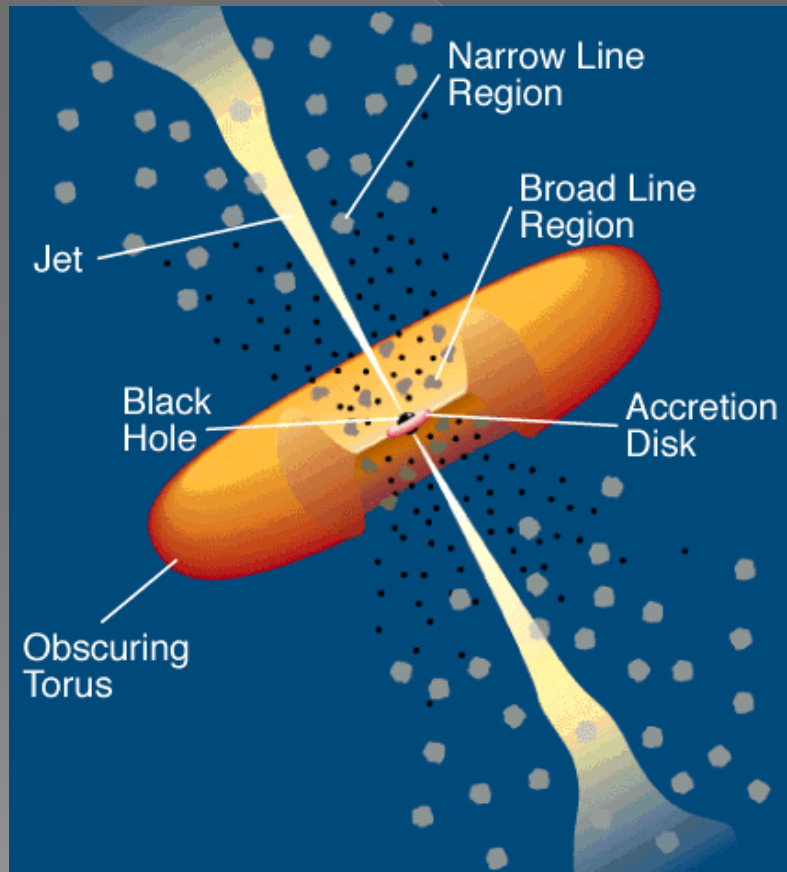
HST Spectrometers:

- HRS (High Resolution Spectrograph)
 - > UV observations 1050-3200Å
- FOS (Faint Object Spectrograph)
 - > 1150-8000 Å
- STIS (Space Telescope Imaging Spectrograph)
 - > UV, Optical, and Near-IR capabilities
- NICMOS (Near Infrared Camera/Multi-object Spectrograph)
 - > Observes in the infrared/near-infrared
- COS (Cosmic Origins)
 - > The most sensitive UV spectrograph ever built
 - > Intended to combine with NICMOS to have unprecedented coverage.



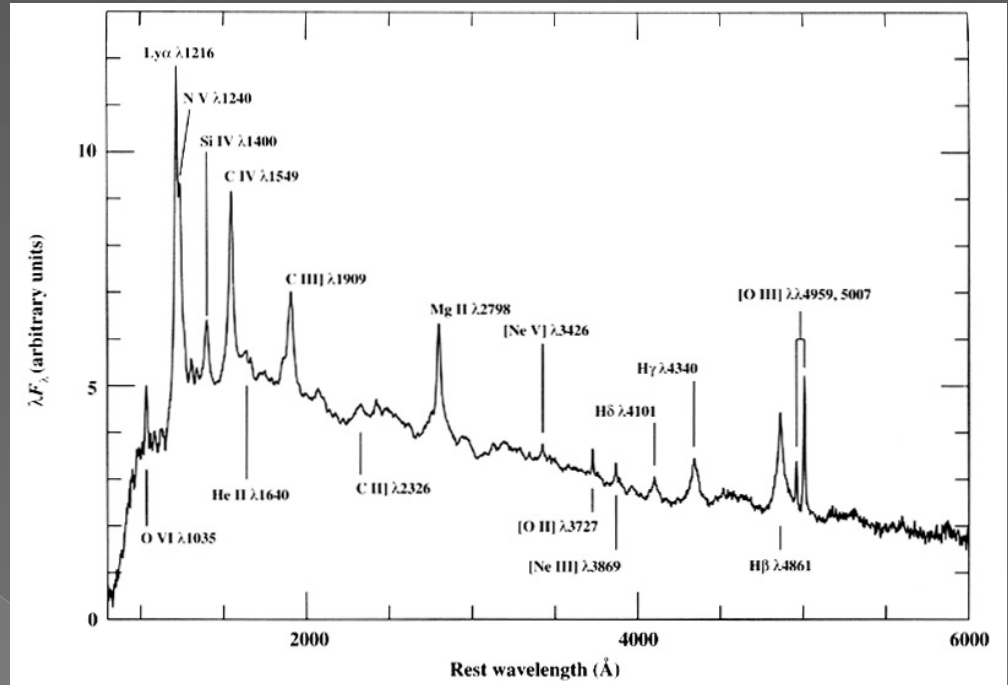
Dust

Sometimes we see
can see the center
directly. Other time
the dust will obscure
our view.

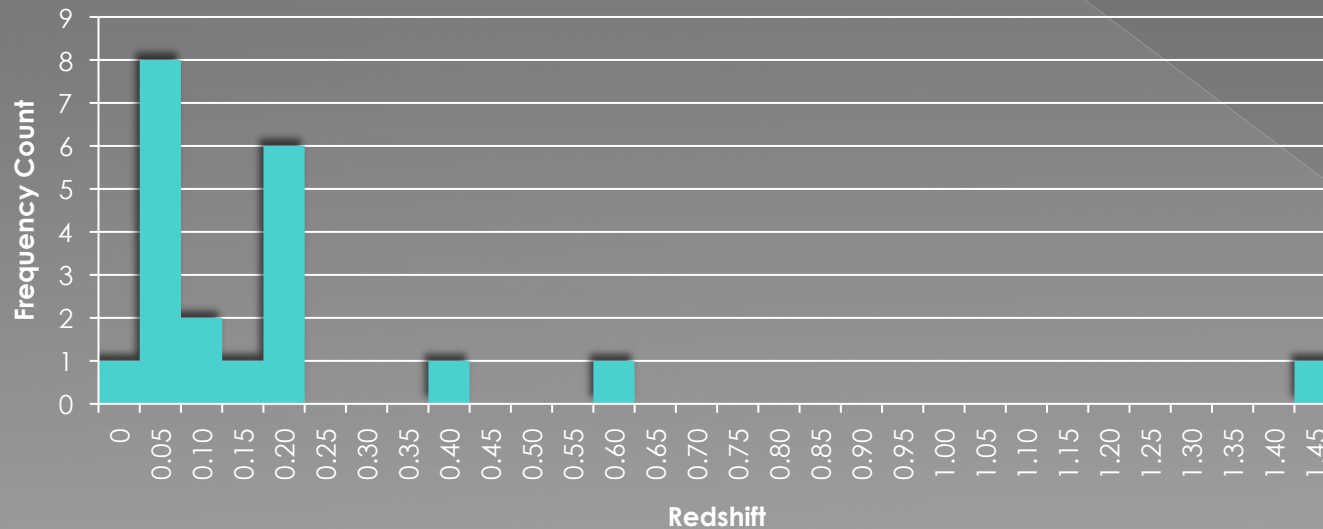


Our Project – unique sample

We want continuous spectra coverage from Ly α (1216Å) to H α (6563Å)



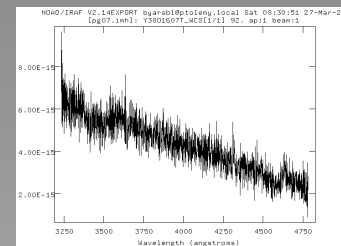
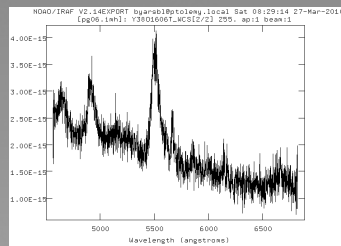
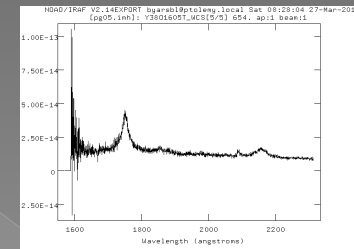
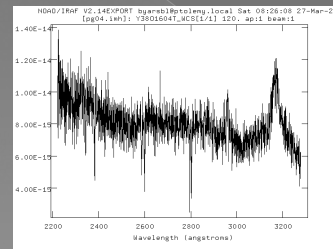
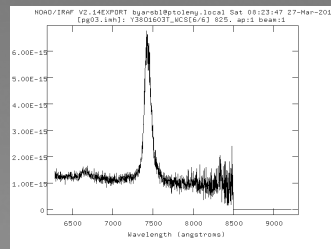
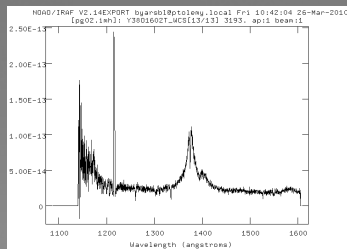
Redshift Distribution



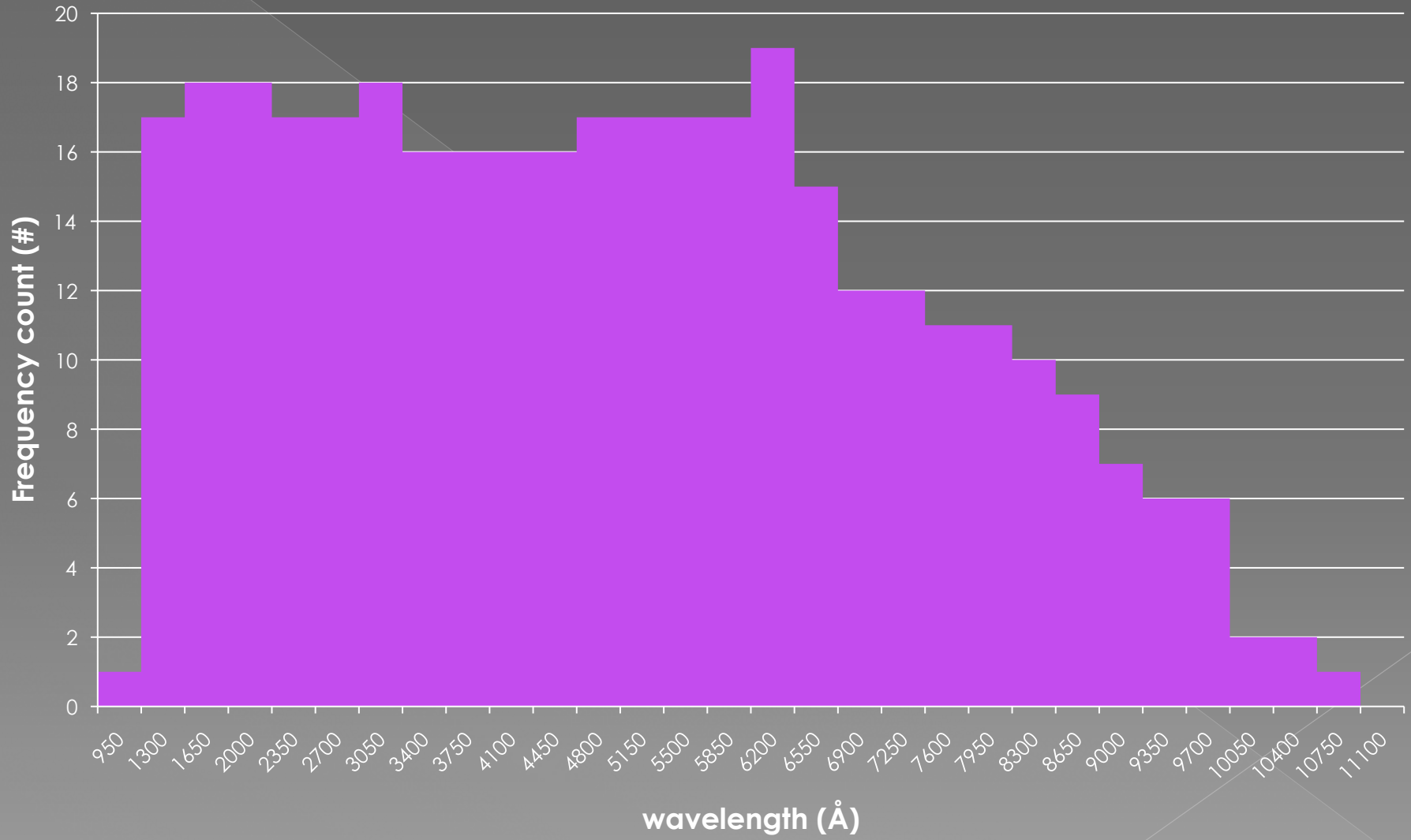
Our Data So Far...

Quasar	Name	filter	Config.	aperture	λ	date taken	obs λ	rest λ	z
PG 1626+554	FOS	Y38O1602T	G130H	BL	1	1100-1610	11/19/96	1378 1216	0.1332 α
		Y38O1605T	G190H	RD	1	1600-2300	11/19/96		
		Y38O1604T	G270H	RD	1	2200-3300	11/19/96		
		Y38O1607T	G400H	RD	1	3300-4800	11/19/96		
		Y38O1606T	G570H	RD	1	4600-6800	11/19/96		
		Y38O1603T	G780H	RD	1	6300-8500	11/19/96		

Total λ range 1100-8500
Gaps -



Wavelength coverage distribution (total sample)

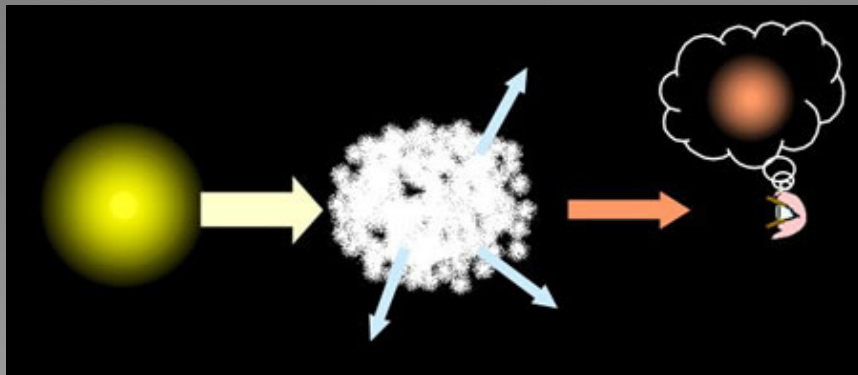
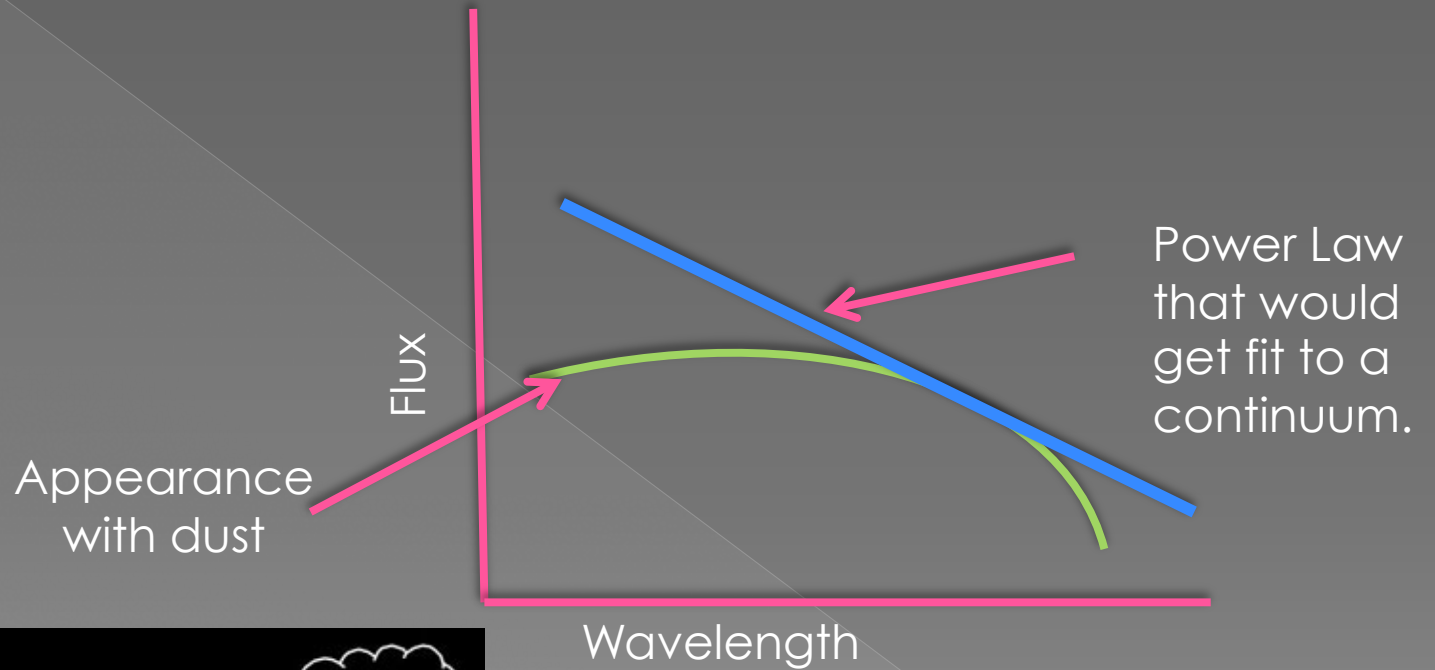


Where We're Going...

Dust Reddening

Balmer decrement

Dust modification



Come join the research
in the AGN LAIR



Images from:

<http://www.wildwildweather.com/forecastblog/wp-content/uploads/2009/05/hubble-telescope.jpg>

<http://en.wikipedia.org/wiki/HubbleSpaceTelescope>

<http://astronomy.swin.edu.au/cms/imagedb/albums/userpics/interstellarreddening1.jpg>