

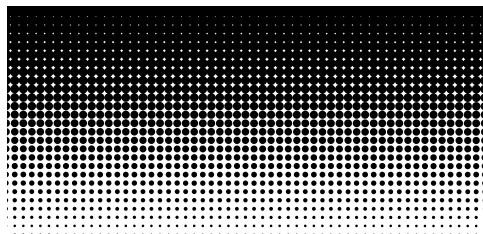


Covering and filling factors

- ◆ **Covering factor**
 - AGN3 ...
- ◆ **Filling factor, how to do clumps**
 - AGN3, hazy1

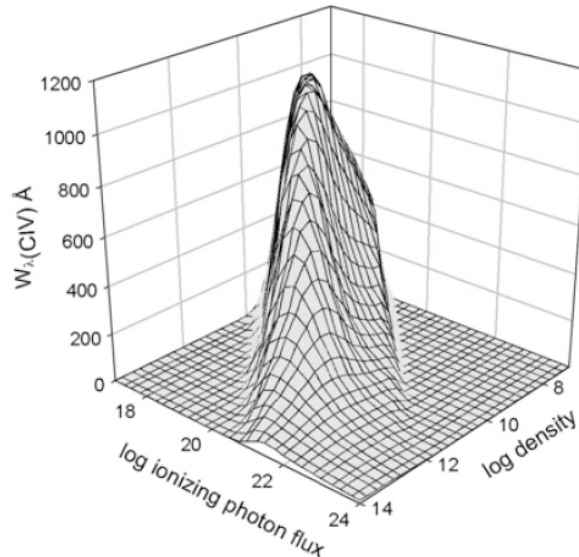
Clumping

- ◆ **Filling factors, when clumps smaller than photon scale length**
 - AGN3 Chap 5.9
 - Hazy 1, Sec 2.3.5



Clumping

- ◆ Add together distinct clouds, when clumps larger than photon scale length
 - Balwin+ 1995 ApJ **455**, L119+

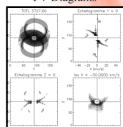


Volume elements in larger structures

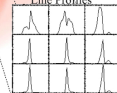
Cloudy_3D

$I(\lambda)/I(\text{H}\beta)$ Through the slit	
HeI	0.160
HeII	0.006
[NII]	0.355
[OII]	0.663
[OIII]	5.913

PV Diagrams



Line Profiles



Emission line images



<http://sites.google.com/site/cloudy3d/>

We see the densest regions

- ◆ **A telescope is a linear detector**
- ◆ 8.6 Fluctuations density period . . .