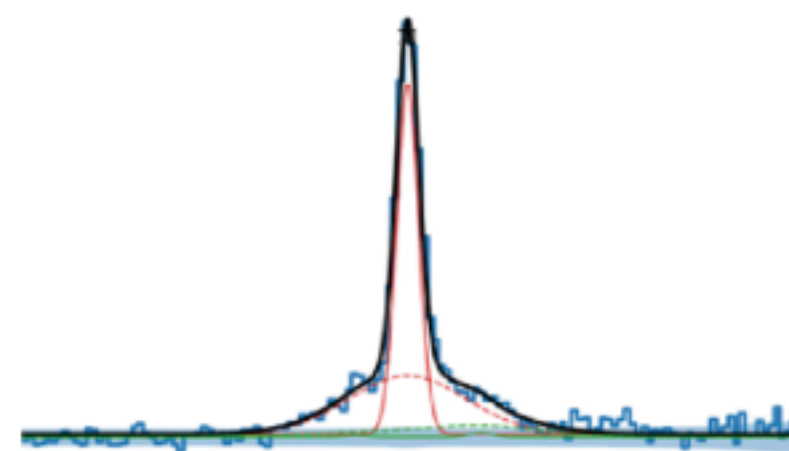
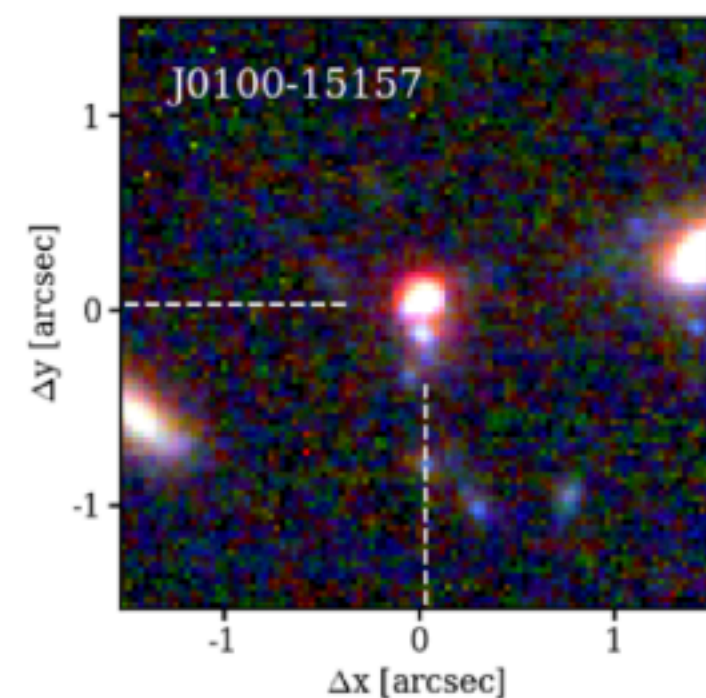


# The Little Red Dots (LRDs): A Simple Model

1: SF dominated

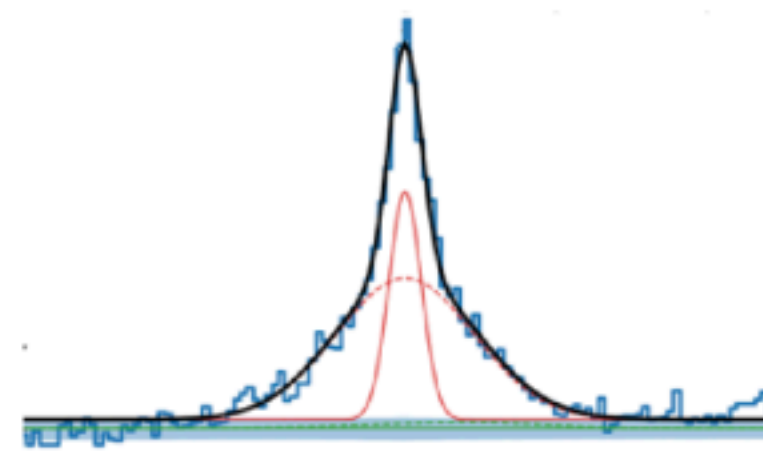
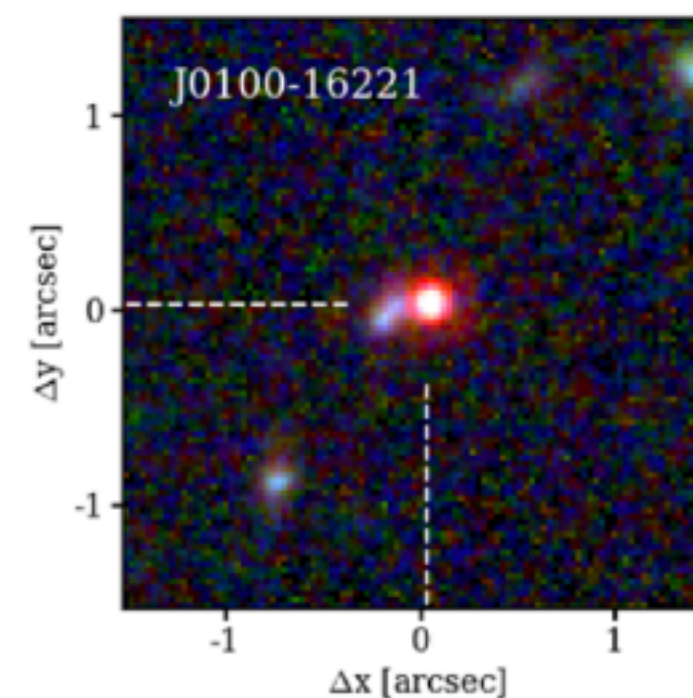


$$M_{\text{BH}} \sim 10^7 M_{\odot}$$

$$\text{VFWHM}_{\text{broad}} \sim 1500 \text{ km s}^{-1}$$

$$L_{\text{broad}}/L_{\text{Tot}} \sim 0.2$$

2: Transition into AGN

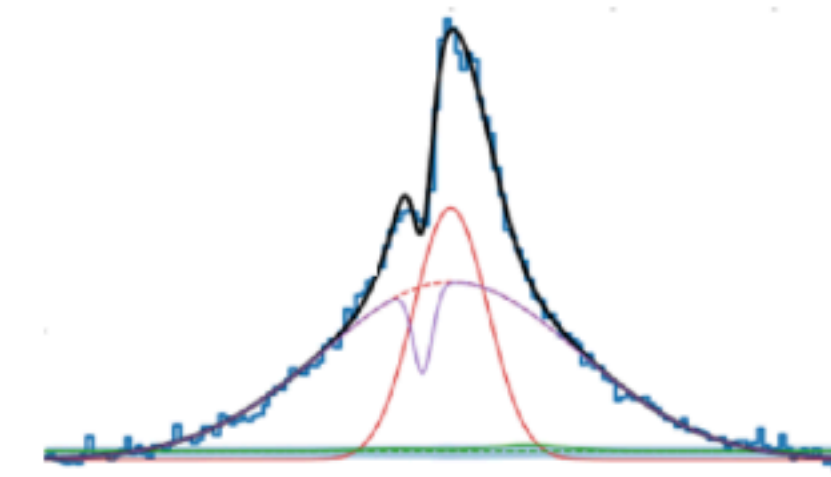
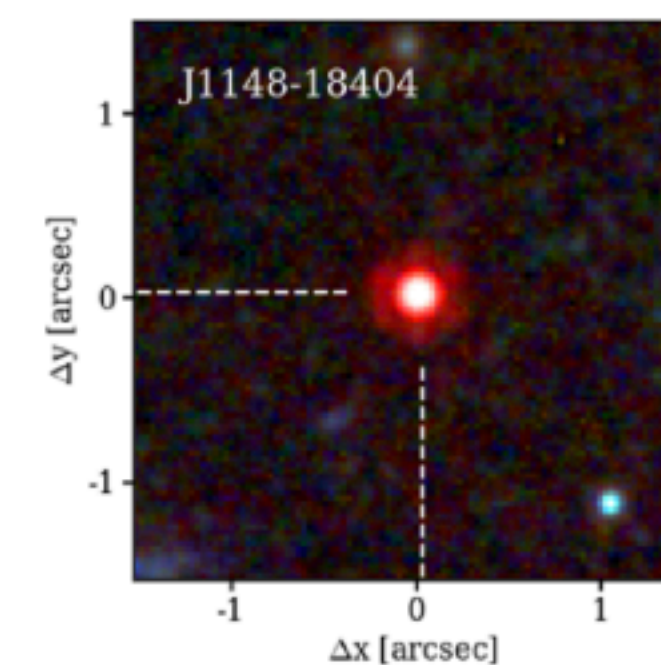


$$M_{\text{BH}} \sim 5 \times 10^7 M_{\odot}$$

$$\text{VFWHM}_{\text{broad}} \sim 2000 \text{ km s}^{-1}$$

$$L_{\text{broad}}/L_{\text{Tot}} \sim 0.5$$

3: Dusty AGN dominates

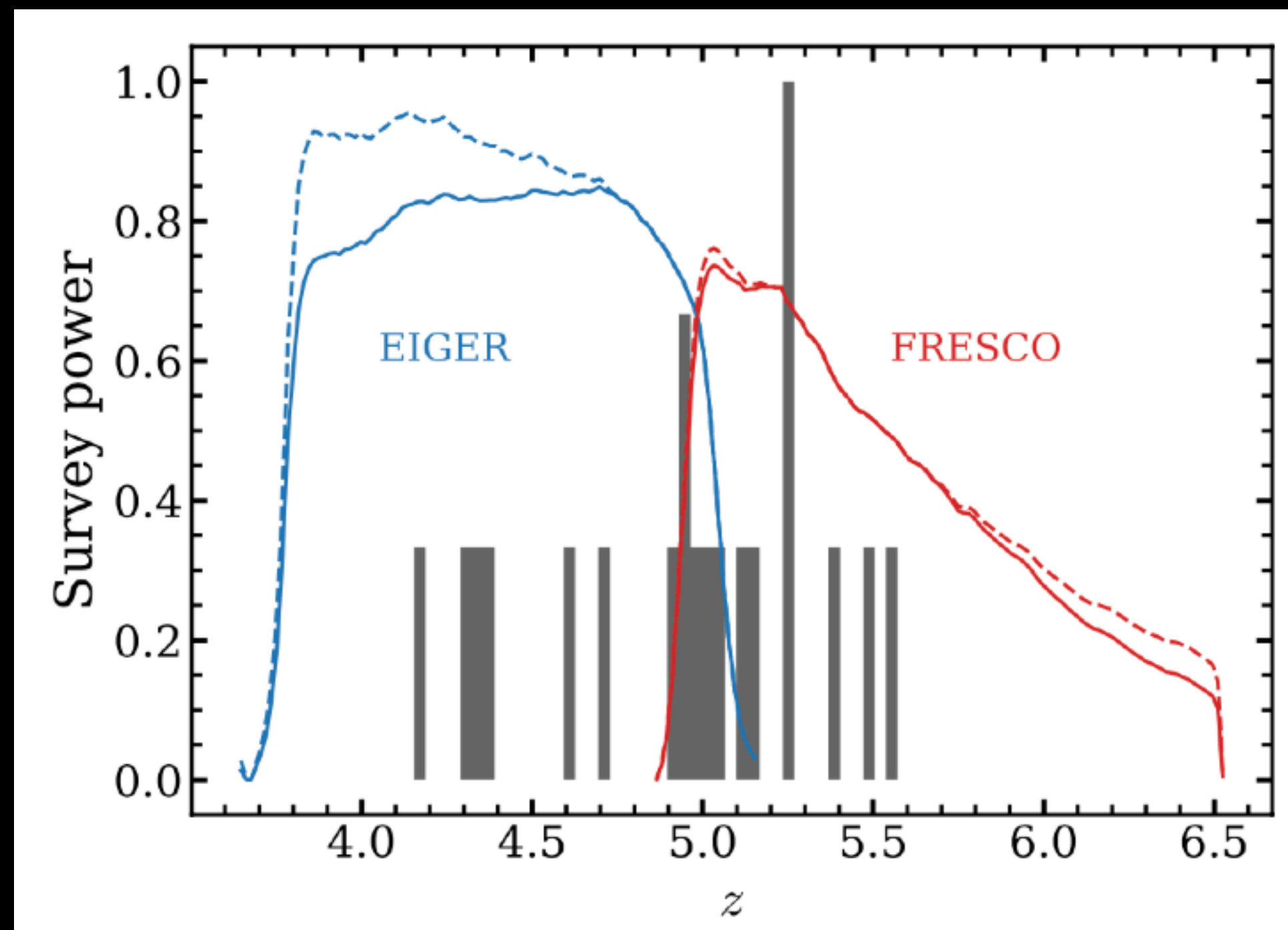


$$M_{\text{BH}} \sim 2 \times 10^8 M_{\odot}$$

$$\text{VFWHM}_{\text{broad}} \sim 3500 \text{ km s}^{-1}$$

$$L_{\text{broad}}/L_{\text{Tot}} \sim 0.8$$

# Redshift Distribution of the LRGs



Survey Power = Luminosity Sensitivity x FoV(z)

Peak @  $z=5$

number density analysis to  $z=4-6$