(f)Quasar Luminosity Functions in Host Halo Mass bins  $dex^{-1}$ All SMBHs  $13 < \log M_{
m peak} < 14$  $11 < \log M_{
m peak} < 12$  —  $14 < \log M_{
m peak} < 15$  $12 < \log M_{
m peak} < 13$ Density [Mpc<sup>-3</sup> Number 10<sup>-11</sup> z = 7.0 $10^{43}$  $10^{48}$  $10^{44}$  $10^{45}$  $10^{46}$  $10^{47}$ Bolometric Luminosity [ergs s<sup>-1</sup>]