



Figure 1: Volume-weighted distribution of heating rate fluctuations ($1 + \delta_H$) with respect to the density fluctuations ($1 + \delta_{\text{gas}}$) for the galaxy bias model (upper row) and the quasar bias model (lower row) at $z = 3$ and $z = 1$. The black dashed line represents the case of uniform blazar heating. The color scale is logarithmic.