the thickness of high-z quasar ionization fronts as a constraint on the quasar ionizing SED

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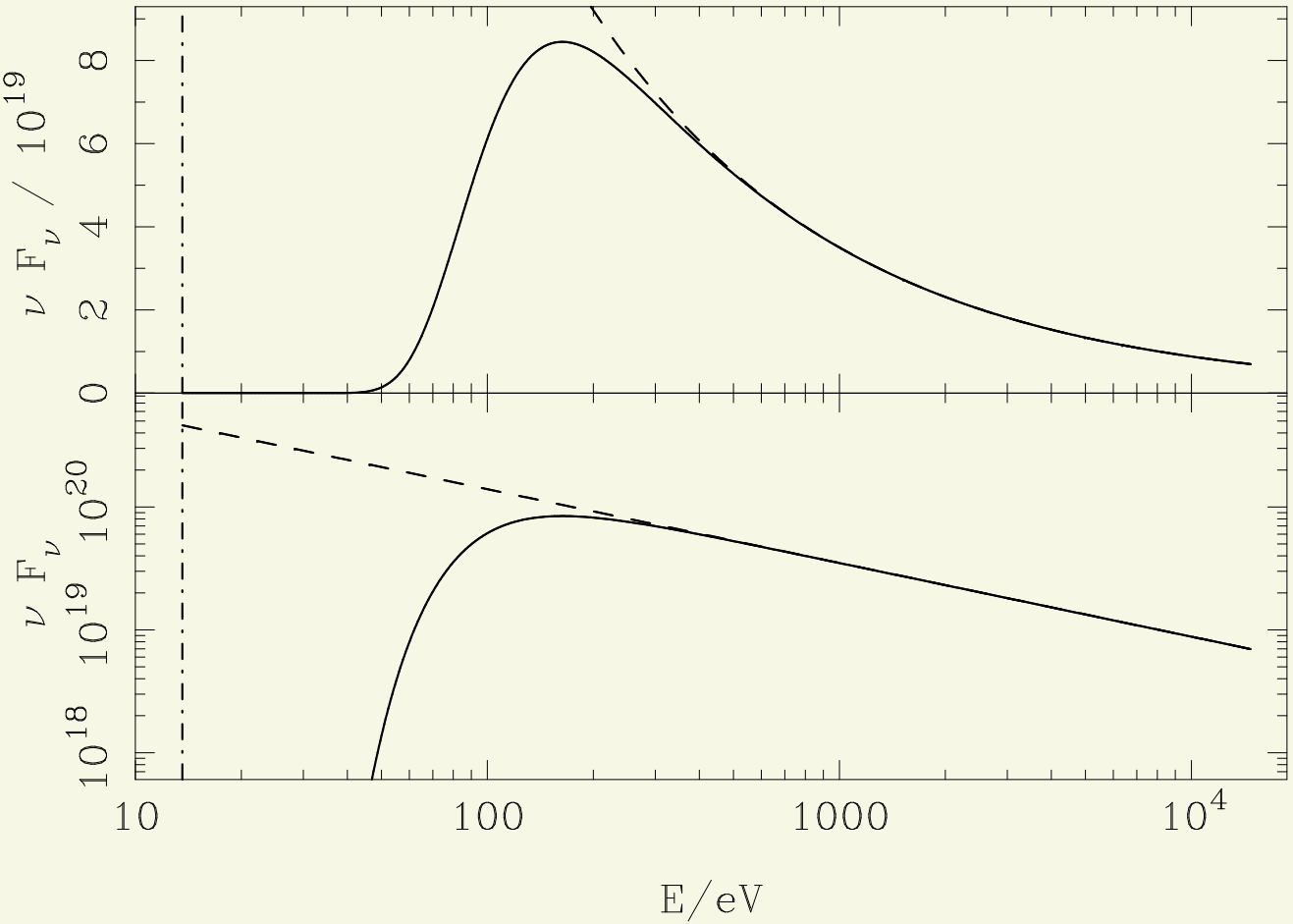
R. H. Kramer & Z. Haiman, *MNRAS*, accepted, preprint arXiv:0712.3548

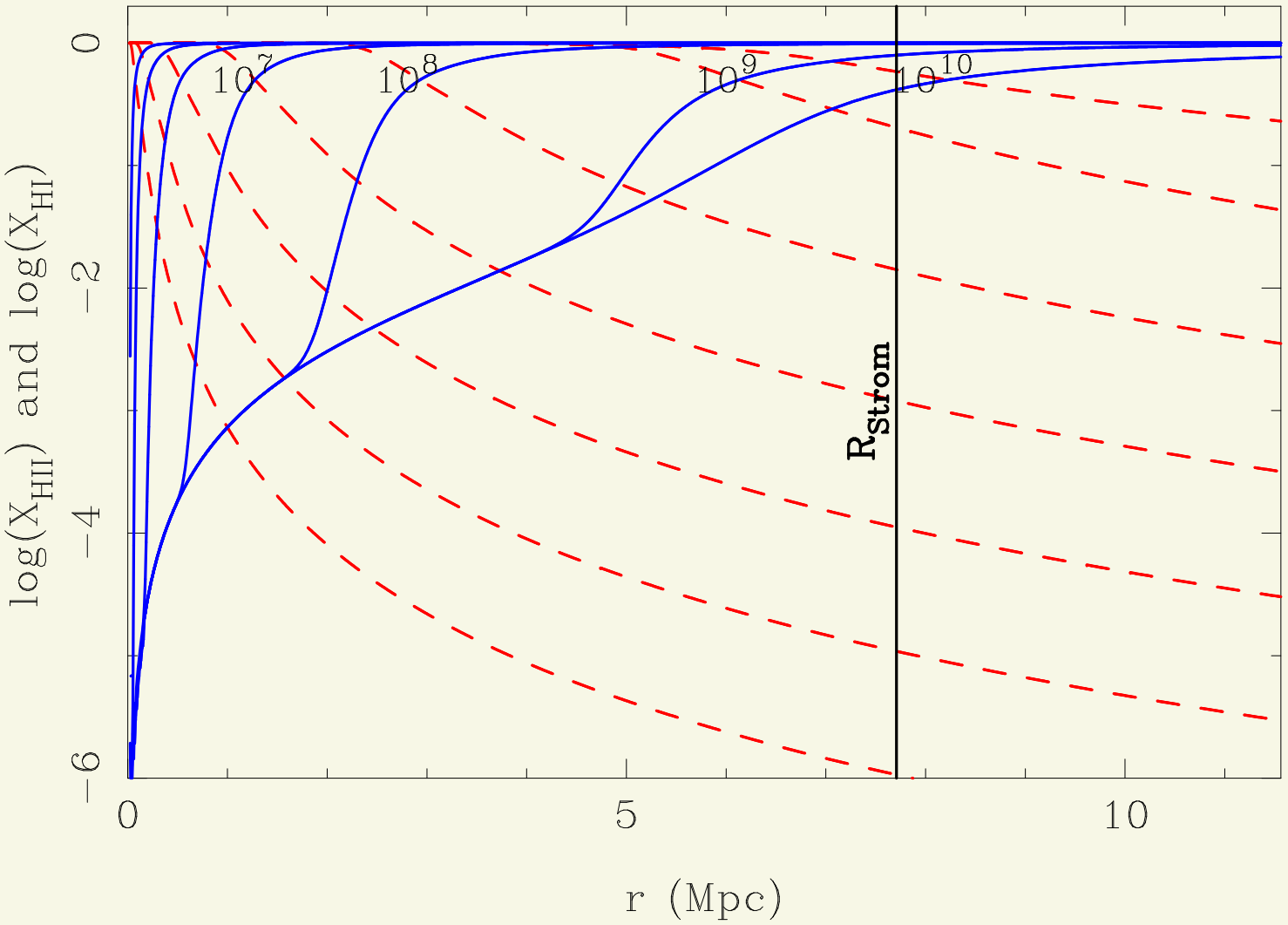
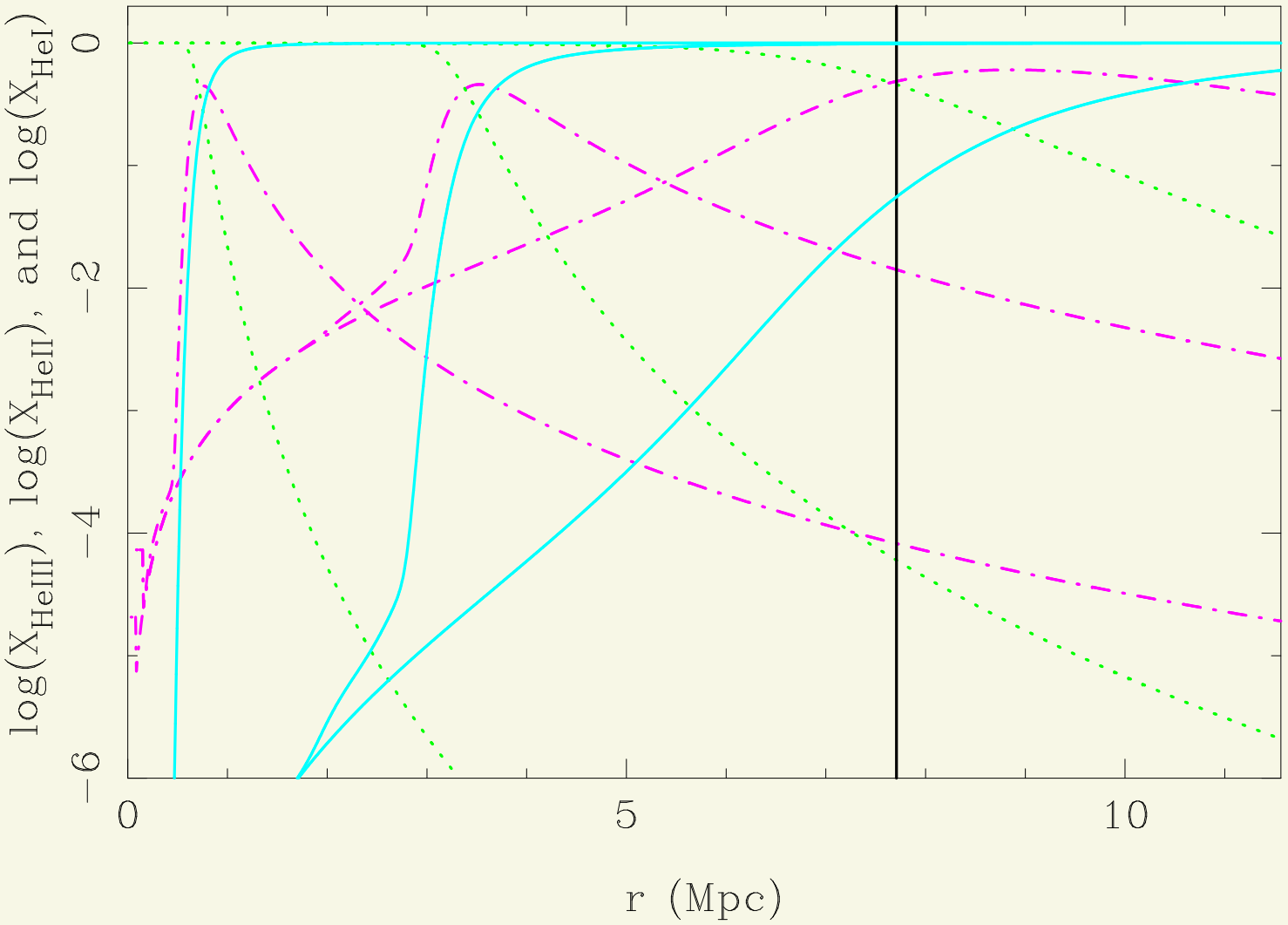
an absorbed power-law spectrum



$$L_\nu \propto \nu^{-s} \exp\left(-N_{\rm H}\left[\sigma_{\rm HI}(\nu) + \tfrac{n_{\rm He}}{n_{\rm H}}\sigma_{\rm HeI}(\nu)\right]\right)$$

with $s = 1.6$ and $N_{\rm H} = 10^{19.2}\ {\rm cm}^{-2}$

ionization front evolution with radiative transfer



ionization front evolution with radiative transfer