

$$\begin{aligned} \xi_{\text{BF}}^{(1)}(d, z) = & \frac{\mathcal{H}}{\mathcal{H}_0} \left[ (b_{\text{B}} - b_{\text{F}}) \left[ \frac{2}{r\mathcal{H}} + \frac{\mathcal{H}'}{\mathcal{H}^2} + \Upsilon(z) \right] + 3(s_{\text{F}} - s_{\text{B}})f \left( 1 - \frac{1}{r\mathcal{H}} \right) \right. \\ & \left. + 5(b_{\text{B}}s_{\text{F}} - b_{\text{F}}s_{\text{B}}) \left( 1 - \frac{1}{r\mathcal{H}} \right) \right] f\nu_1(d, z) \end{aligned}$$