



Figure 1: Comparison between two waveforms of h_+ with respect to retarded time in units of central black hole mass M . The red dashed line is the waveform under $d1=0.2$, $e=0.5$, $p=6$. The black solid line is the waveform under $d1=0$ and e , p adapted so that the orbital frequencies ω_r and ω_ϕ are the same as that of the orbit under $d1=0.2$, $e=0.5$, $p=6$. The spin of the central black hole is $0.5M$.