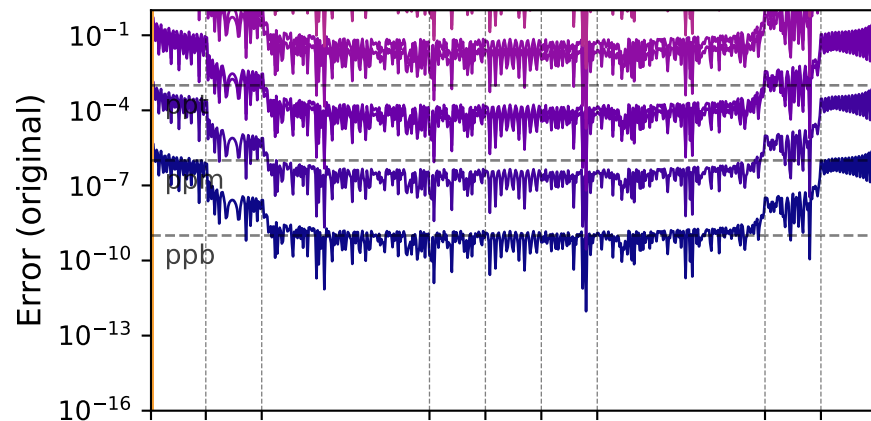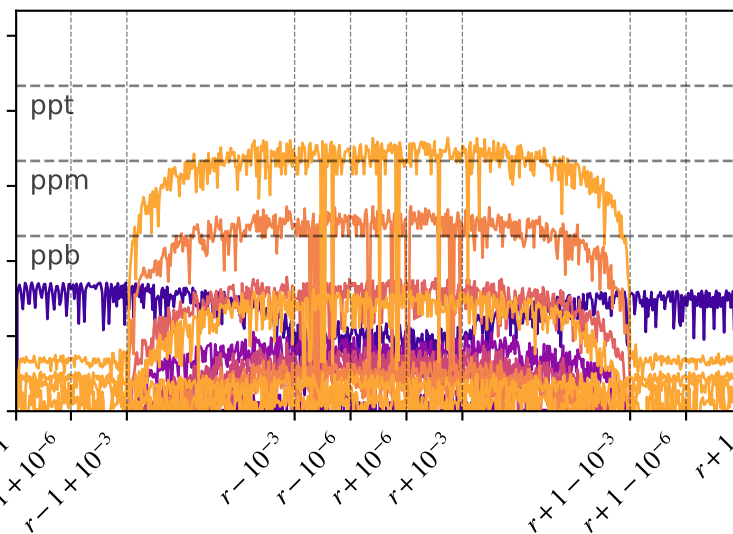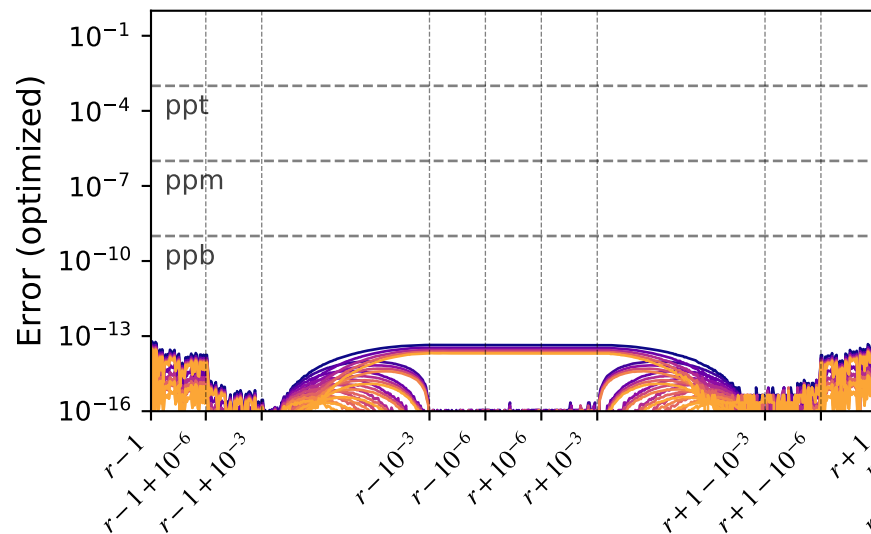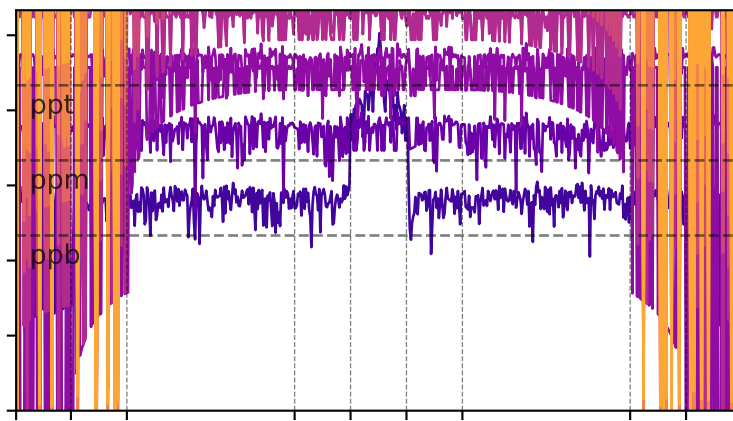r = 300.0