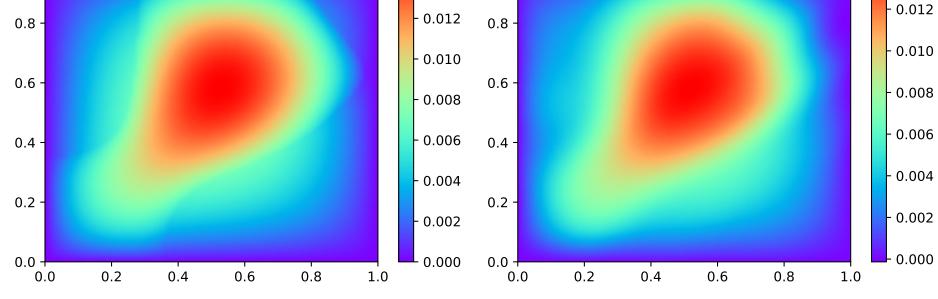case index = 135, rel err = 0.0534