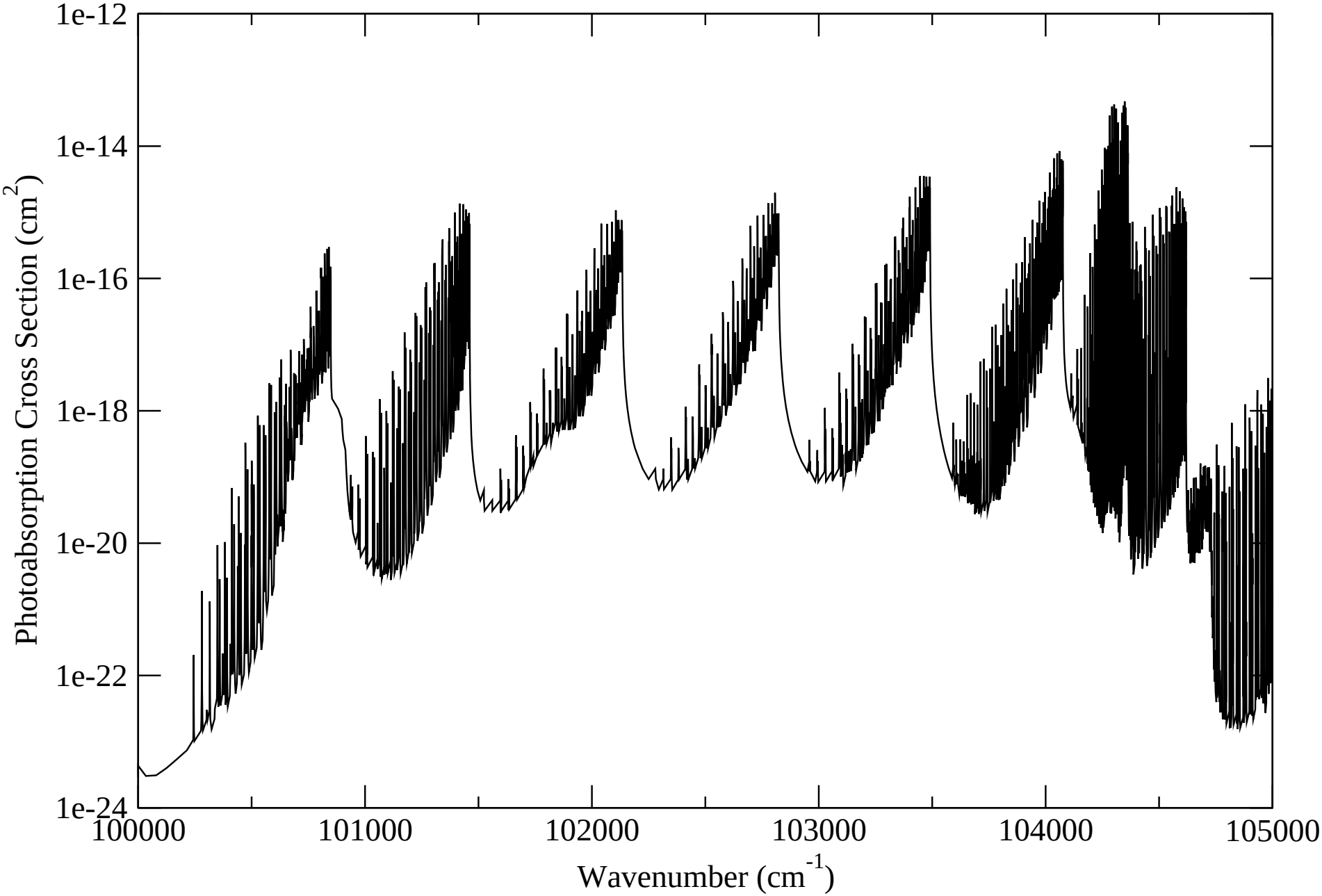Modeled $^{15}N_2$ Cross Section: 200 K