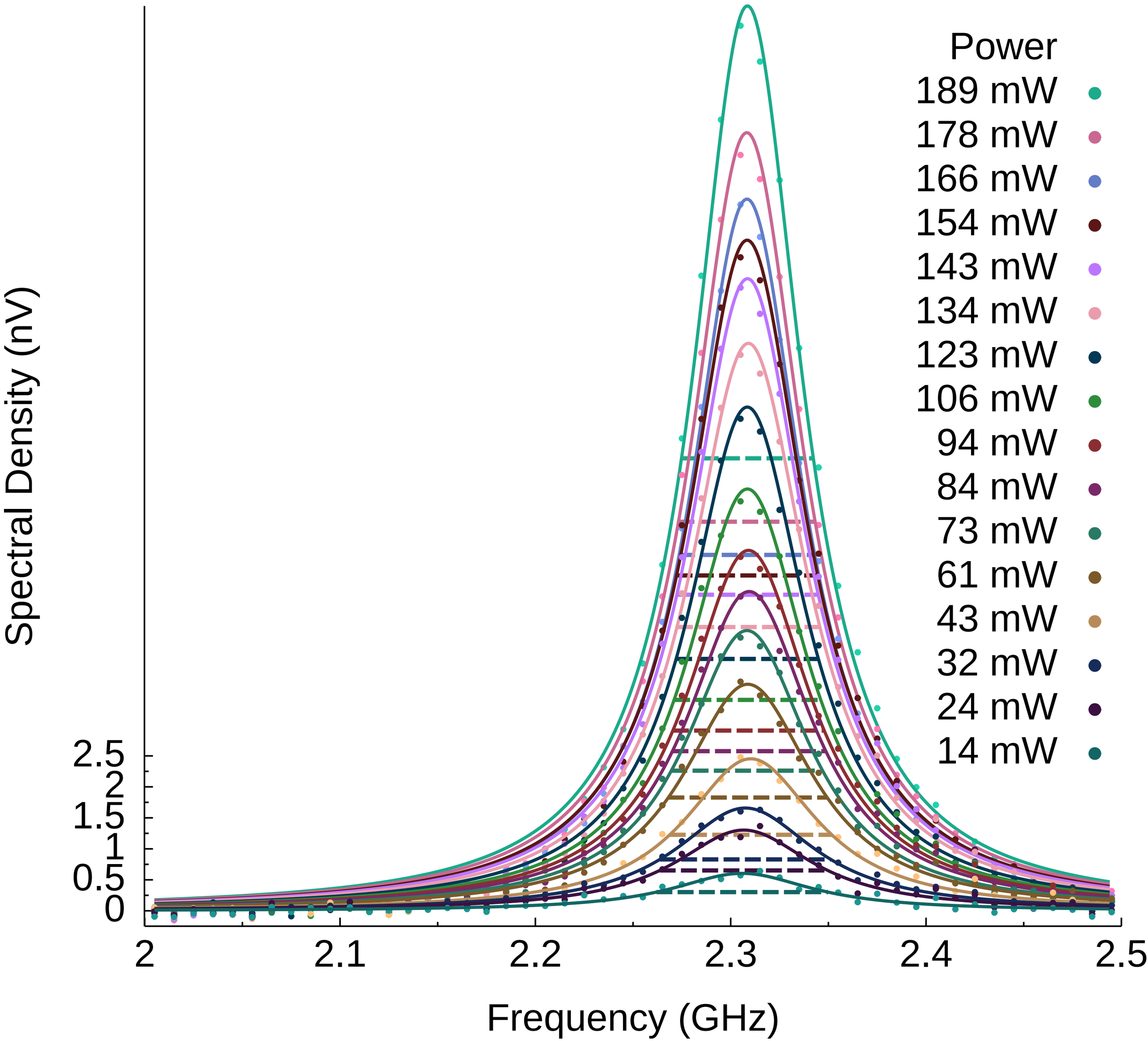Liquid-Core Stokes