

$$\int_{\mathcal{F}} d\mu \, \Gamma_{(d,d)} \, \mathcal{F}(s, \kappa, 0) = (4\pi\kappa)^{1-\frac{d}{2}} \Gamma\left(s + \frac{d}{2} - 1\right) \sum_{\text{BPS}} {}_2F_1\left(s, s + \frac{d}{2} - 1; 2s; \frac{4\kappa}{P_L^2}\right) \left(\frac{P_L^2}{4\kappa}\right)^{1-s-\frac{d}{2}}$$