

Initial Integral

$$\tilde{F}(p) := \int_q \int_\lambda f(q, \lambda)$$

divergent

$$\int_q \longleftrightarrow \int_\lambda$$

$$\int_\lambda \left[\int_q f(q, \lambda) \right]$$

divergent

divergent

Renormalization

Dimensional
Regularization

Performed Integral

$$\int_\lambda \left[\int_q f(q, \lambda) \right]$$

finite

finite

Spectral
Regularization

$$\int_\lambda \left[\int_q f(q, \lambda) \right]$$

finite

divergent