

- Results easily extended to light quarks masses (Ex: K -mesons)

[GdT, S. J. Brodsky and H. G. Dosch, arXiv:1405.2451 [hep-ph]]

- First order perturbation in the quark masses

$$\Delta M^2 = \langle \psi | \sum_a m_a^2 / x_a | \psi \rangle$$

- Holographic LFWF with quark masses

[S. J. Brodsky and GdT, arXiv:0802.0514 [hep-ph]]

$$\psi(x, \zeta) \sim \sqrt{x(1-x)} e^{-\frac{1}{2\lambda} \left(\frac{m_q^2}{x} + \frac{m_{\bar{q}}^2}{1-x} \right)} e^{-\frac{1}{2}\lambda \zeta^2}$$

- Ex: Description of diffractive vector meson production at HERA

[J. R. Forshaw and R. Sandapen, PRL **109**, 081601 (2012)]

- For the K^*

$$M_{n,L,S}^2 = M_{K^\pm}^2 + 4\lambda \left(n + \frac{J+L}{2} \right)$$

- Effective quark masses from reduction of higher Fock states as functionals of the valence state:

$$m_u = m_d = 46 \text{ MeV}, \quad m_s = 357 \text{ MeV}$$