

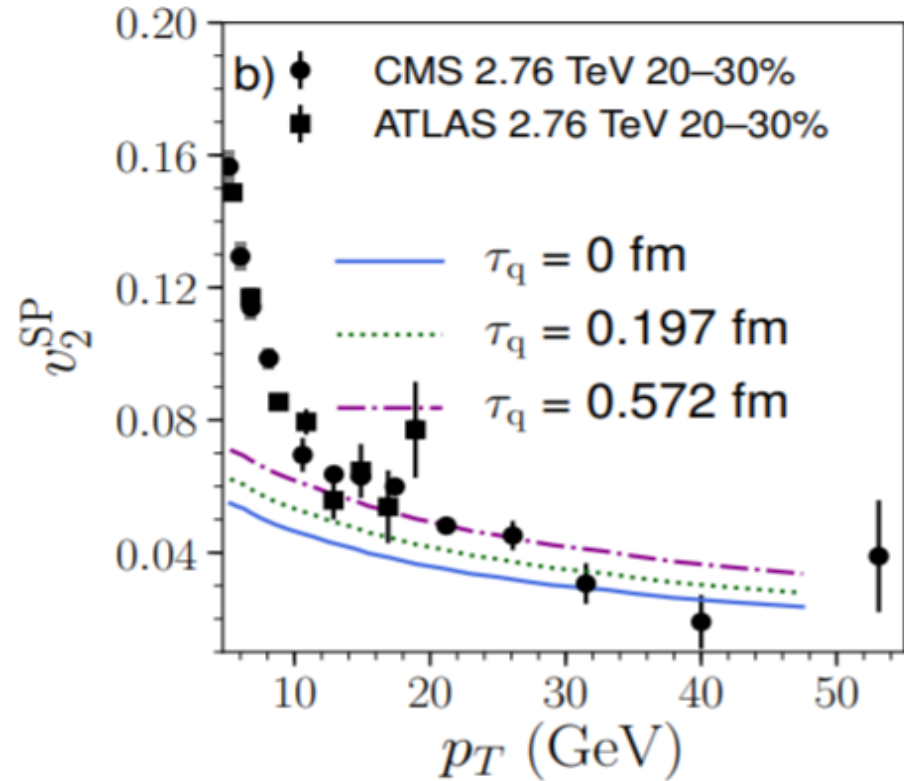
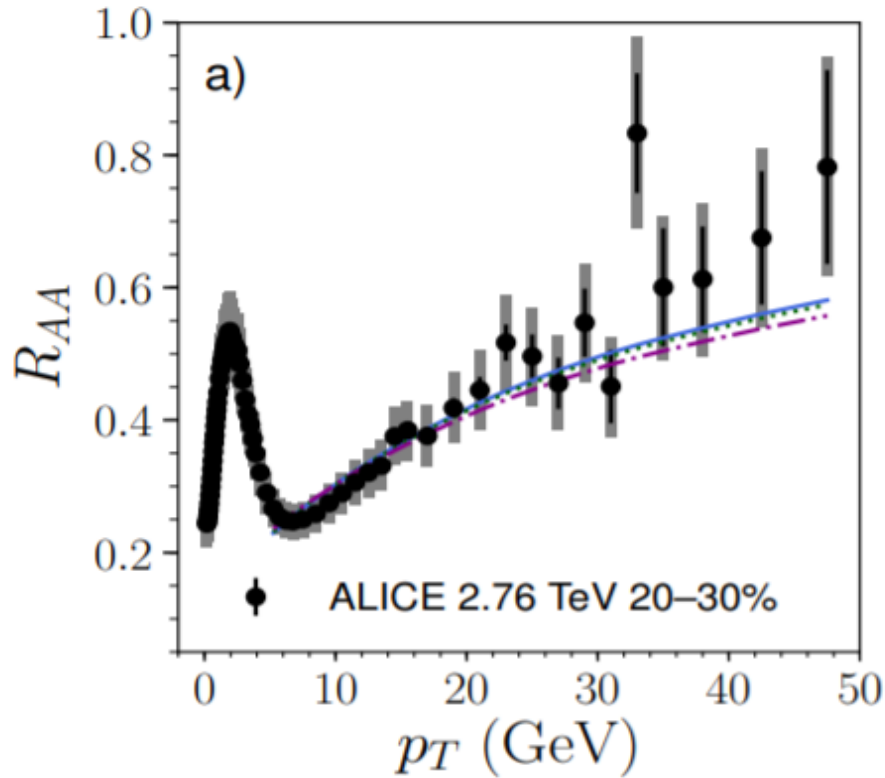
Impact of the initial stages on the medium-induced radiation spectrum

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QM2022, 6th April 2022

Carlota Andres, Liliana Apolinário, Fabio Dominguez, MGM,
Carlos A. Salgado: work in progress

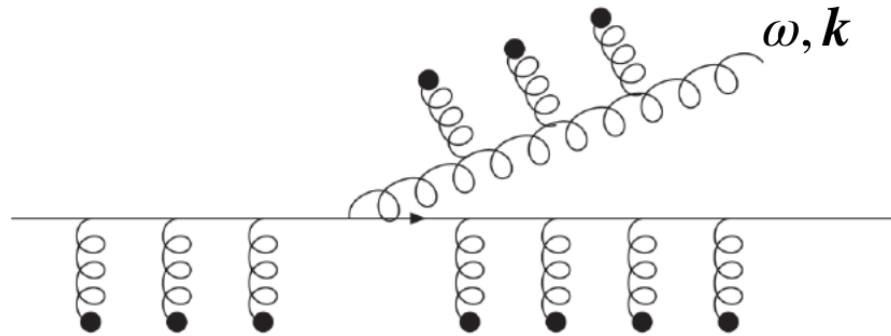


Importance of initial stages



v_2 in non central collisions: energy loss in early times modifies it a lot

Medium-induced gluon spectrum

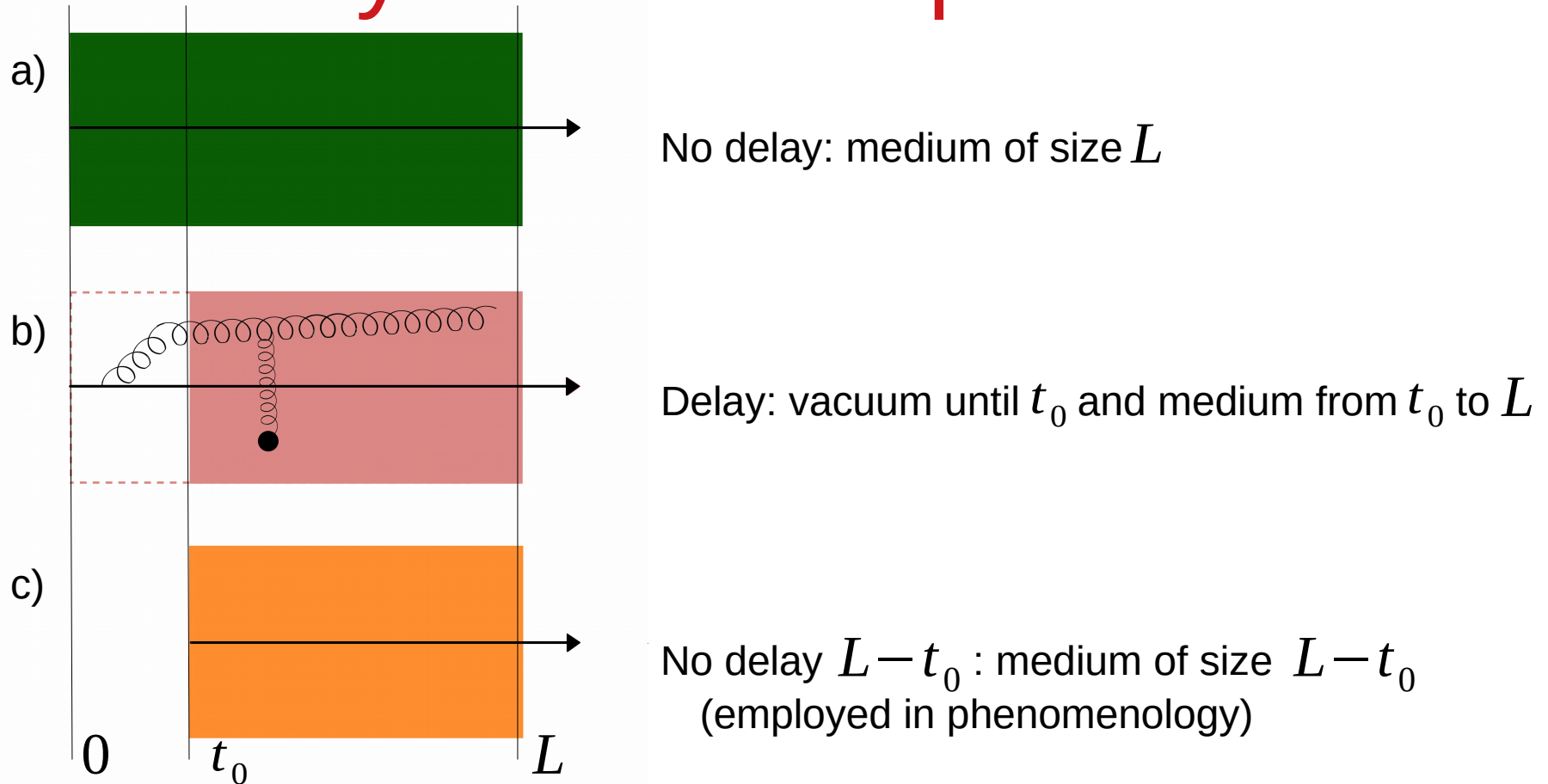


- Emission spectrum off a parton with energy E of a soft gluon (BDMPS-Z):

$$\omega \frac{dI}{d\omega d^2\mathbf{k}} = \frac{2\alpha_s C_R}{(2\pi)^2 \omega^2} \text{Re} \int_0^\infty dt' \int_0^{t'} dt \int_{pq} \mathbf{p} \cdot \mathbf{q} \tilde{\mathcal{K}}(t', \mathbf{q}; t, \mathbf{p}) \mathcal{P}(\infty, \mathbf{k}; t', \mathbf{q})$$

- Recently, new method with no analytical approximations (such as Harmonic Oscillator or First Opacity -GLV-)

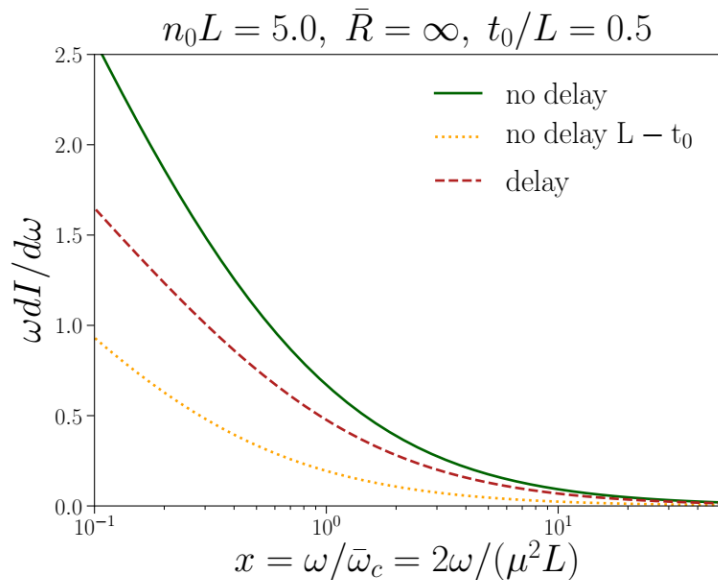
Delay in medium production



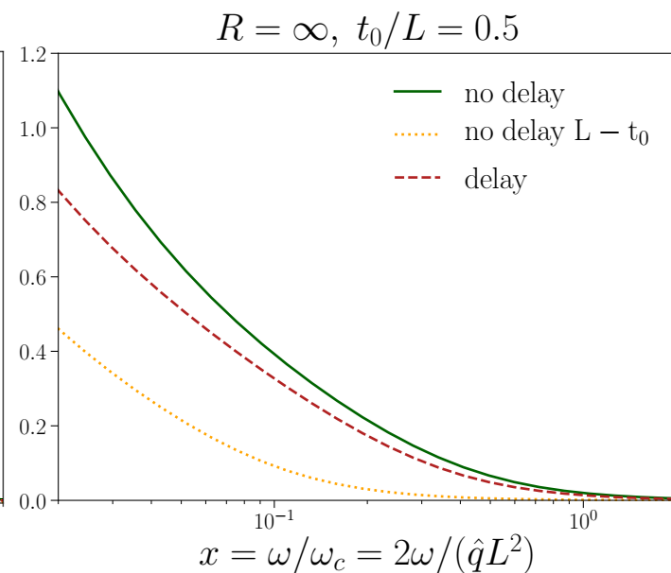
All the emissions are medium induced, pure vacuum already subtracted

$$\omega \frac{dI}{d\omega} = \int_0^\infty \omega \frac{dI}{d\omega d^2k}$$

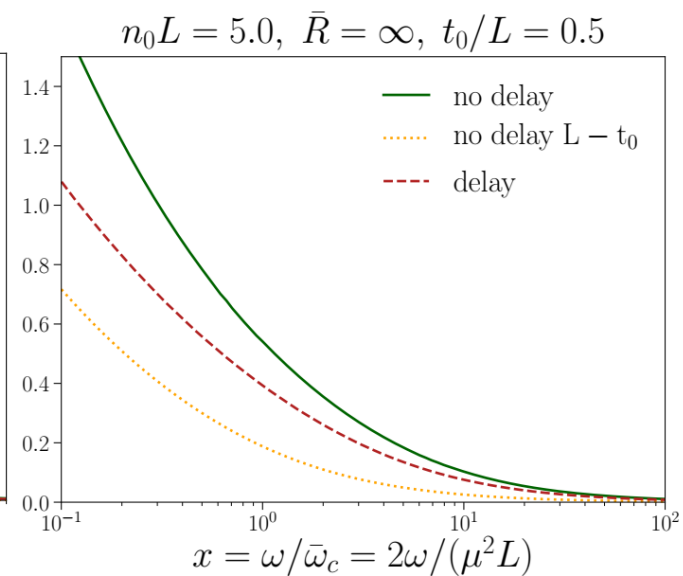
Results



GLV



HO

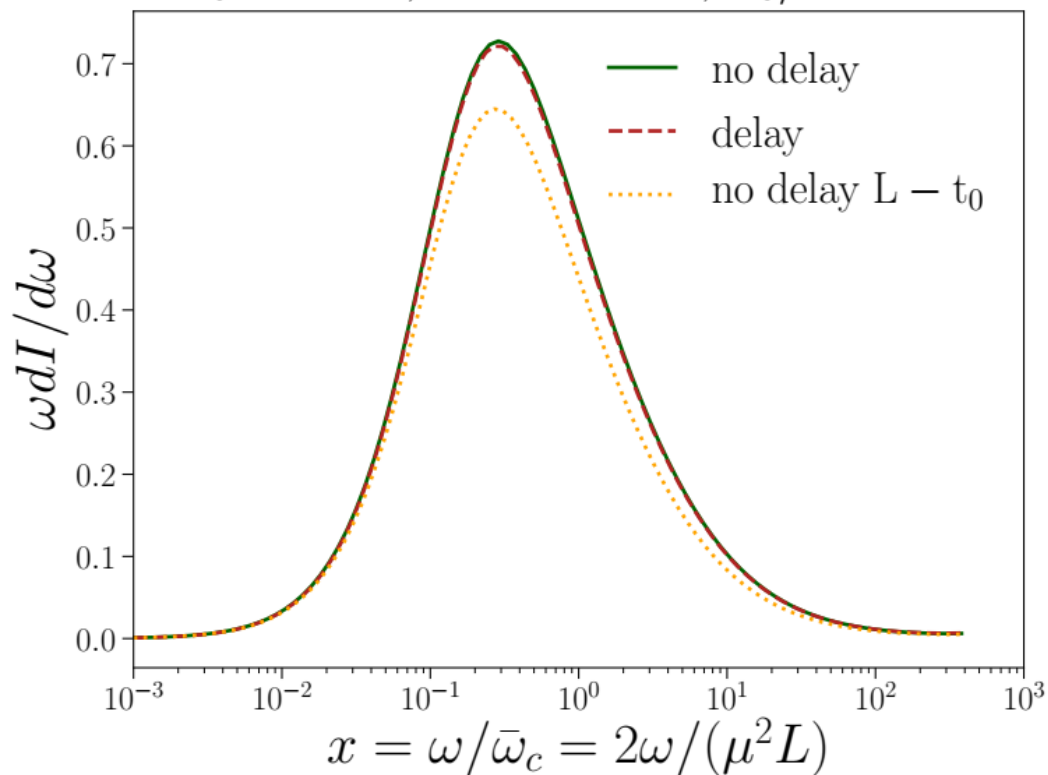


Full

$$\omega \frac{dI}{d\omega} = \int_0^\omega \omega \frac{dI}{d\omega d^2k}$$

Results 2: full spectrum

$n_0 L = 5.0$, $\bar{R} = 1000.0$, $t_0/L = 0.1$



$n_0 L = 5.0$, $\bar{R} = 1000.0$, $t_0/L = 0.5$

