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## Jet quenching in small systems (20+5)

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We discuss recent results on possible jet quenching in collisions of small systems: in  $pp$ ,  $pA$  and oxygen-oxygen collisions. Calculations of the radiative and collisional parton energy loss are performed for the temperature dependent running QCD coupling. We use parametrization of  $\alpha_s(Q, T)$  which has a plateau around  $Q \sim \kappa T$  (it is motivated by the lattice calculation of the effective QCD coupling in the QGP). The parameter  $\kappa$  has been fitted to the LHC data on the nuclear modification factor  $R_{AA}$  in heavy ion collisions. Using the optimal  $\kappa$  we perform calculations of  $R_{pp}$ ,  $R_{pPb}$ , and  $R_{AA}$  and  $v_2$  for O+O collisions. We find that predictions for  $R_{OO}$  may differ substantially for scenarios with and without mini-QGP formation in  $pp$  collisions.

We show that the available data on  $R_{pPb}$  may be consistent with the QGP formation in  $pp$  and  $pPb$  collisions. However, a scenario with the QGP formation only in  $pPb$  collisions is excluded.

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