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Hadronic observables in small collisions systems from classical Yang-Mills dynamics + Lund string fragmentation

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We present calculations of hadron production from gluon dominated non-equilibrium matter in various small collision systems using the IP-Glasma model combined with a state-of-the-art fragmentation prescription based on the Lund model. We study bulk observables such as particle spectra, nuclear modification factors (R_{pA}), proton-to-pion ratios and multi-particle azimuthal angular correlations. We demonstrate that characteristic features of hadronic observables such as the baryon to meson ratio, mass ordering of $v_2(pT)$ and $\langle pT \rangle$, are naturally reproduced within the initial state framework [1]. We also present first results on a systematic comparison of such observables across different systems, including p+p and p+Pb collisions at the LHC as well as p/d/He3+Au at RHIC.

[1] B. Schenke, S. Schlichting, P. Tribedy, R. Venugopalan, Phys.Rev.Lett. 117 (2016) no.16, 162301

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