



ALICE-ANA-2014-xxx
June 16, 2018

small systems

Observable or effect	PbPb	pPb (high mult.)	pp (high mult.)	Refs.
Low p_T spectra (“radial flow”)	yes	yes	yes	[1–10]
Intermed. p_T (“recombination”)	yes	yes	yes	[5, 6, 10–15]
Particle ratios	GC level	GC level except Ω	GC level except Ω	[8, 9, 16, 17]
Statistical model	$\gamma_s^{\text{GC}} = 1, 10\text{--}30\%$	$\gamma_s^{\text{GC}} \approx 1, 20\text{--}40\%$	$\gamma_s^{\text{C}} < 1, 20\text{--}40\%$	[9, 18, 19]
HBT radii ($R(k_T), R(\sqrt[3]{N_{\text{ch}}})$)	$R_{\text{out}}/R_{\text{side}} \approx 1$	$R_{\text{out}}/R_{\text{side}} \lesssim 1$	$R_{\text{out}}/R_{\text{side}} \lesssim 1$	[20–28]
Azimuthal anisotropy (v_n) (from two part. correlations)	$v_1 - v_7$	$v_1 - v_5$	v_2, v_3	[29–31] [32–39, 39–43]
Characteristic mass dependence	$v_2 - v_5$	v_2, v_3	v_2	[39, 42–48]
Directed flow (from spectators)	yes	no	no	[49]
Charge dependent flow (CME, CMW)	yes	yes	not observed	[50–54]
Higher order cumulants (mainly $v_2\{n\}, n \geq 4$)	“ $4 \approx 6 \approx 8 \approx \text{LYZ}$ ” +higher harmonics	“ $4 \approx 6 \approx 8 \approx \text{LYZ}$ ” +higher harmonics	“ $4 \approx 6 \approx 8 \approx \text{LYZ}$ ”	[39, 55–64, 64–69]
Weak η dependence	yes	yes	not measured	[41, 65, 67, 70–76]
Factorization breaking	yes ($n = 2, 3$)	yes ($n = 2, 3$)	not measured	[40, 77, 78]
Event-by-event v_n distributions	$n = 2 - 4$	not measured	not measured	[79, 80]
Event plane and v_n correlations	yes	yes	yes	[81–84]
Direct photons at low p_T	yes	not measured	yes	[85, 86]
Jet quenching	yes	not observed	not observed	[87–107]
Heavy flavor anisotropy	yes	yes [108]	not measured	[108–118]
Quarkonia	$J/\psi \uparrow, \Upsilon \downarrow$	suppressed	not measured	[108, 118–125, 125–138]

Table 1: Summary of bulk observables or effects (classified as known from AA data) in PbPb collisions, as well as in high multiplicity pPb and pp collisions at the LHC. References to key measurements for the various observables and systems are given. See text for details.

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