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Why are all I_{AA} distributions constant for away $p_{T_a} > 3$ GeV/c in di-hadron correlations with trigger $p_{T_t} < 20$ GeV/c in Relativistic Heavy Ion Central Collisions?¹ MICHAEL TANNENBAUM, Brookhaven National Laboratory — In Relativistic Heavy Ion Collisions at RHIC and LHC an I_{AA} distribution is the measurement in di-hadron correlations of the ratio of the A+A to p+p associated away particle transverse momentum (p_{T_a}) distributions for trigger particles with a given p_{T_t} . In all published measurements in Au+Au collisions at RHIC (c.m. energy 200 GeV) [PHENIX, PRL104, 252301 (2010)], [STAR, PLB760, 689 (2016)] and Pb+Pb collisions at LHC (c.m. energy 2.76 TeV) [ALICE, PLB763, 238 (2016)], the I_{AA} distribution decreases in the range $0 < p_{T_a} < 3$ GeV/c and then becomes constant out to the measurement limit $p_{T_a} < 20$ GeV/c. One possibility discussed is that jet fragments with $p_{T_a} > 3$ GeV/c are sufficiently inside the jet cone that they don't lose energy by the BDMPSZ method [arXiv:hep-ph/0002198v2]

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