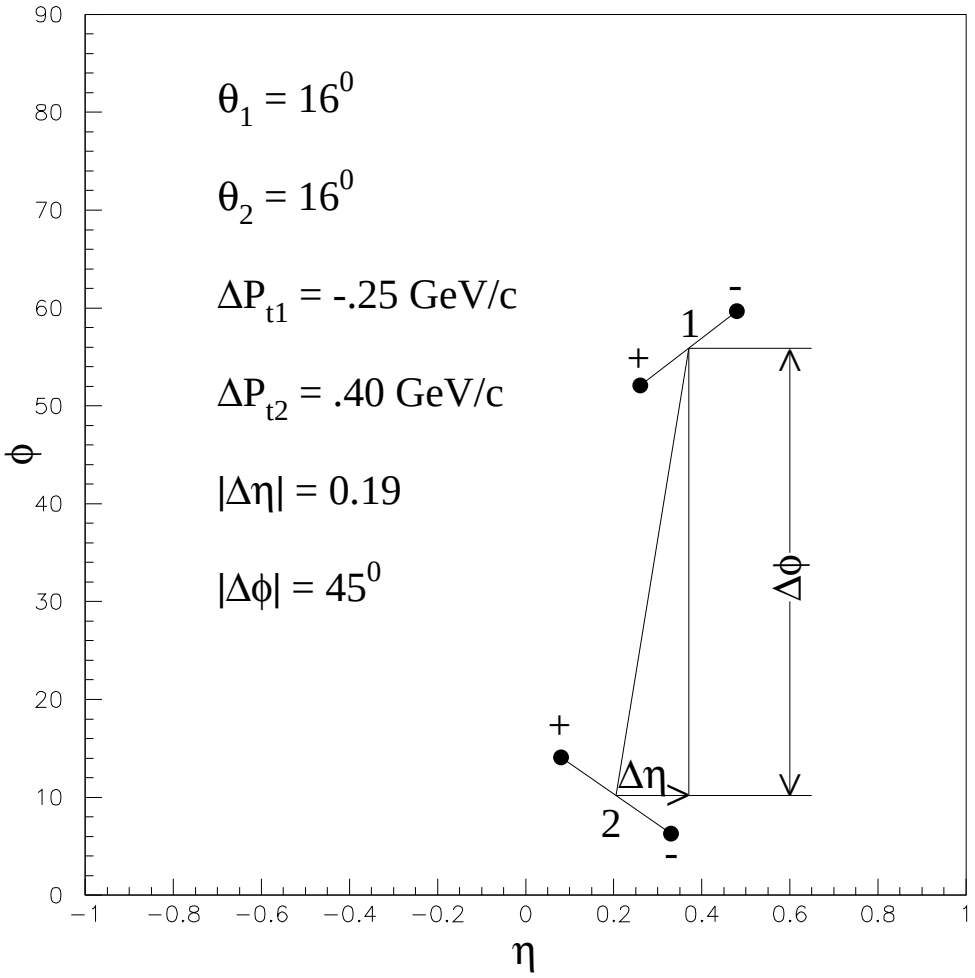


FIG. 17: Pairs of pairs selected for forming a correlation exhibiting the effect of changes in $p_t$ due to the color magnetic field. The largest opening angle $\theta$ for plus minus pairs is 16° or less. This opening angle assures that each pair has a high probability that it arises from a quark anti-quark pair. In this figure we have picked two pairs at this limit ($\theta_1 = 16°$ and $\theta_2 = 16°$). The mid-point for pair 1 and 2 represents the vector sum of pair 1 and 2 which moves toward the harder particle when the momenta differ. These mid-points are chosen to have $40° < |\Delta\phi| < 48°$ in order for the pairs to be on opposite sides of the bubble. Since we are interested in pairs directly across the bubble we make the $\Delta\eta$ separation be no more than 0.2. The difference in $p_t$ for pair 1 is $\Delta P_{t1}$ = -0.25 GeV/c, while the difference in $p_t$ for pair 2 is $\Delta P_{t2} = 0.40$ GeV/c. The minus sign for 1 follows from the fact that the plus particle has 1.14 GeV/c and the minus particle has 1.39 GeV/c. The plus sign for 2 follows from the fact that the plus particle has 1.31 GeV/c and the minus particle has 0.91 GeV/c.

pairs in different events. We determine the rescale of the mixed event denominator by considering the number of pairs of pairs for the case $|\Delta\eta|$ lying between 1.2 and 1.5 plus any value of $|\Delta\phi|$ for events and mixed events so that the overall ratio of this sample numerator to denominator is 1. By picking this $\Delta\eta$ bin for all $|\Delta\phi|$ we have around the same pair count as the signal cut with the $\Delta\phi$ correlation of the bubbles being washed out. For a simpler notation let (sign $(|\Delta P_{t1}| + |\Delta P_{t2}|)) = \Delta P_{t1} + \Delta P_{t2}$ which we plot in the range from -4 to +4 since we have an over all $p_t$ range 0.8 to 4.0 GeV/c. Thus the maximum magnitude of $\Delta P_t$'s is 3.2 GeV/c which makes $\Delta P_{t1} + \Delta P_{t2}$ have a range of ±6.4. However the larger values near these range limits occur very rarely.

In Fig. 18 we show the correlation function of opposite sign charged-particle-pairs paired and binned by the variable $\Delta P_{t1} + \Delta P_{t2}$ with a cut $|\Delta\eta|$ less than 0.2 between the vector sums of the two pairs, and with $40° < |\Delta\phi| < 48°$. The events are generated by the PBM[6] and are charged particles of $0.8 < p_t < 4.0$ GeV/c, with $|\eta| < 1$, from Au Au collisions at $\sqrt{s_{NN}} = 200$ GeV. Since we select pairs