

1 Event Plane Correlated Triangular Flow in Au+Au
2 Collisions at $\sqrt{s_{NN}} = 3$ GeV from STAR

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7 **Abstract**

8 Directed and elliptic flow have been extensively studied in heavy-ion collisions while
9 triangular flow (v_3) could be further explored. v_3 could prove very useful as a signal for
10 Quark-Gluon Plasma (QGP) formation due to its sensitivity to QGP viscosity and the
11 possibility that it is less affected by transport dynamics at very low energies [1]. This
12 talk presents the current progress of an analysis on v_3 for π , p , d , and t at the fixed
13 target energy of $\sqrt{s_{NN}} = 3.0$ GeV, which is the lowest in phase-II of the Beam Energy
14 Scan at STAR. The results show a positive correlation between v_3 and the first-order
15 event plane and a significant rapidity-odd v_3 for p . In the future, these triangular flow
16 measurements will be studied at other collision energies in STAR.

17 **References**

- 18 [1] J. Auvinen and H. Petersen. Evolution of elliptic and triangular flow as a function of
19 $\sqrt{s_{NN}}$ in a hybrid model. *Phys. Rev. C*, 88:064908, 2013.