



FIG. A.4. AMPT ESE results. Shown are three centralities of Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV (upper panels) and at 27 GeV (lower panels) simulated by AMPT, with approximately  $5 \times 10^6$  events for each centrality at each energy. The  $\Delta\gamma$  is plotted as a function of  $v_2$  in events binned in  $\hat{q}_2^2\{2\}$  (Eqs. 5,6). POIs are from acceptance  $0.3 < |\eta| < 1$ , and the event selection variable  $\hat{q}_2^2\{2\}$  is computed from particles in  $|\eta| < 0.3$ , both with  $0.2 < p_T < 2$  GeV/c. The model's known impact parameter direction  $\psi = 0$  is taken as the EP in calculating  $\Delta\gamma$  (Eqs. 2,3) and  $\langle v_2 \rangle$  (Eq. 10).