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Elliptic flow of Λ , Ξ and Ω in 2.76 A TeV Pb+Pb collisions

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The elliptic flow of common hadrons (pions, kaons, and protons) are developed in both the QGP and the hadronic phase and are sensitive to the viscosity of the evolving fireball. For a precise extraction of the QGP viscosity from these flow data, Hybrid model calculations that combine hydrodynamic simulations of the expanding QGP fluid with microscopic descriptions of the re-scattering hadronic gas are required. Multi-strange hadrons (ϕ , Ω , etc) with smaller hadronic cross sections are expected to decouple from the system earlier and might directly probe the QGP viscosity. In this talk, we will systematically study the elliptic flow of different multi-strange hadrons to test the QGP viscosity extracted from the elliptic flow of common hadrons. We will also extract effective early decoupling temperatures for different multi-strange hadrons through comparing the full hybrid model simulations and the pure hydrodynamic simulation with early decoupling.

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