SVT Physics capabilities

- flavor physics with short lifetime hadrons

detection of : Λ, $\bar{\Lambda}$, K^0_s, Ξ^-, $\bar{\Xi}^-$, Ω^-, $\bar{\Omega}^-$, D−meson (?)

→ transverse mass spectra as indication for thermalization

→ ratios like $\bar{\Xi}^-/\Xi^-$, Λ/Ξ^- as indication for QGP

→ K^0_s interferometry as indication for strangeness distillation

→ D−meson abundance and spectrum as QGP signature

- chiral condensation, BE condensation

measurement of very low p_T particles (event−by−event)

→ low p_T enhancement

→ DCC as explanation for centauro events

→ pion laser effect

- multistrange composite objects with very short lifetime

detection of objects like ${}^{7}_{\Xi M}$He or bound states like $\Sigma^-\Sigma^-$

→ doorway to strangelet production

→ production yield as indication for QGP

- enhancement of STAR baseline capabilities

better vertex, position and momentum resolution

→ effect on HBT, HE observables, phase space coverage, track reconstruction efficiency, particle identification