• hydrodynamics:

hydrodynamical equations:

$$\partial_\mu T^{\mu\nu}(x) = 0; \quad \partial_\mu j^\mu_{\rm B}(x) = 0$$

energy-momentum tensor:

$$T^{\mu\nu}(x) = [\epsilon(x) + p(x)]u^\mu(x)u^\nu(x) - p(x)g^{\mu\nu}$$

baryon current:

$$j^\mu_{\rm B}(x) = \rho_{\rm B}(x)u^\mu(x)$$

- EoS from hadron gas and partonic gas
- initial conditions from parametrizations of $\rho^i_B, \epsilon^i, u^{\mu i}$
- freeze out condition

rate:

$$\frac{d^2N}{dMd\eta} = \int^{\sigma_f} d^4x \int d^3q \frac{M}{q_0} \frac{dN_{l^+l^-}}{d^4xd^4q}(x) A(M, |\vec{q}|)$$