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## Shocks in Quark-Gluon Plasma

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Large energy deposition from LHC quenching jets restarted interest to shock formation. Shocks also have theoretical significance as the simplest out-of-equilibrium setting without time dependence. While weak shocks have small gradients and can be treated hydrodynamically in the Navier-Stokes (NS) approximation, the ones without a small parameter (strong shocks) needs other methods. Two of those will be applied: (i) the “resummed hydrodynamics” proposed earlier by Lublinsky and myself; and (ii) AdS/CFT correspondence, which uses the modified Einstein equations. In the latter case we apply novel variational approach and find approximate solution good to within fraction of a percent. The conclusion from both treatments is that the strong shocks deviate from NS only be few percent, in the direction of thinner shocks. We also discuss how shock formation should modify the predictions for jet-hadron and hard hadron-hadron correlators.

**Primary author:** SHURYAK, Edward (stony brook university)

**Presenter:** SHURYAK, Edward (stony brook university)

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