Interplay between collective expansion and Mach cone
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Content:
We develop a hybrid model in which space-time evolution of the bulk matter, jet propagation and their interactions are described within one framework. When an energetic jet traverses the bulk matter, it loses its energy into the matter and forms a Mach-cone like structure. On the other hand, the bulk matter expands radially due to pressure gradient. As a result, there happens an interplay between radial expansion and the Mach cone. We discuss possible phenomena and observables related with this in asymmetric gamma-jet events. We also discuss phenomena in which many jets with relatively smaller energies (mini-jets) propagate the bulk matter at once in an event.

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