

## Response of Jets to Collective Flow in Heavy-Ion Collisions

*Wednesday 8 January 2025 09:00 (30 minutes)*

The highly-successful program of jet quenching in heavy-ion collisions relies upon a separation of energy scales between the jet  $p_T$  and the medium. At leading power in this high- $p_T$  “eikonal” expansion, scattering in the medium leads to isotropic transverse momentum broadening and radiative energy loss, but the medium is approximately static in this limit. When extended to incorporate the first sub-eikonal order, however, scattering in the medium is sensitive to other degrees of freedom, including in particular the velocity field of the medium. In response to a flowing medium, jets experience both a net deflection in the direction of the flow and a velocity-dependent bias in their emitted radiation. In this talk, I will discuss the origin of these effects and their potential impact in heavy-ion phenomenology.

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