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# The Dynamics of Colliding Radiative Jets: Experiments and Simulations

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In this talk we present new results of simulations designed to understand pulsed power experiments of colliding magnetized radiative jets. Our simulations are relevant to astrophysical colliding plasma flows when energy losses from optically thin radiative emission are significant. Examples environments include jets from young and evolved stars as well as the swept-up shells of stellar wind-blown bubbles. In the laboratory experiments, the colliding jets produced bow-shock shaped interaction regions which were observed to fragment, leading to strongly heterogeneous flows. In our studies we first focused on the nature of the instabilities which led to the fragmentation using a power law cooling curve. This allowed us to understand what modes were triggered in the shock-bounded interaction region. Our study allowed us to isolate the radiative and NLTS instabilities as the primary mechanism for instability. We further explored the generation of structure in the Shocked Lateral Outflows (SLOs) associated with the interaction region. The connection between our results and astrophysical flows will also be discussed.