JETSET FP6, "Jet Simulations, Experiments, Theory" 10 years later, what is next?



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Internal chocs in stratified relativistic jets

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We investigate the plasmoid knot formation in stratified relativistic jet by means of relativistic magneto-hydrodynamics simulations. Indeed, astrophysical jets in active galactic nuclei seem to be transversely stratified, with a fast inner jet and a slower outer jet. As it is likely that the launching mechanism for each component is different. In the other hand, the steady and moving knots properties are observed along these jets. With the proposed model, we were able to link the different types of observed knot in various radio loud AGN with specific stratified jet characteristics. We showed that the increase energy flux at the outer edge of the jet induces a steady knot near the core and a moving knots at larger distance.

Contribution

Talk

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