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Relativistic Hydrodynamic Simulations of Radio Jets

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Relativistic outflows represent a key ingredient in the evolution of galaxies, both if generated in active galactic nuclei (AGN), or in X-ray binary stars (XRBs). In the former case, they produce a global effect on the host galaxy, whereas in the latter, it is the sourrounding interstellar medium (ISM) that is affected. Therefore, it is crucial to understand their nature, evolution and impact on the ambient medium at the different scales. In my talk, I will present recent numerical simulations that have allowed us to make interesting and relevant steps in our research of these fundamental astrophysical scenario.