

## **Modelling flux variability from internal shocks in relativistic jets**

Particle acceleration at stationary and moving internal shocks is one of the principal mechanisms to explain the variable synchrotron emission, seen from the radio to the X-ray band, from relativistic jets in radio-loud active galactic nuclei. To reproduce the light curves associated with these shocks, we perform SRMHD simulations of magnetised relativistic

transverse-structured jets using the AMRVAC code.

Perturbations are injected at the base of a jet that carries stationary shocks, to study the interaction between the moving and the stationary shocks. Synchrotron emission and radiative transfer are simulated in post-treatment. The model is applied to the radio core and inner jet of the radio-galaxy M87 to study the multi-wavelength flux evolution from such perturbations and compare it against archival data.

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