

## **MAGNETIC RECONNECTION IN EXTRAGALACTIC JETS**

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The extended nonthermal emission of extragalactic jets can only be explained by in situ particle acceleration. The only energy source in the entire jet region is the magnetic field. Magnetic reconnection can convert the free energy stored in the helical configuration to particle kinetic energy. In the collisionless magnetized jet plasma it is inertia driven reconnection operating in a highly filamentary magnetic flux rope that results in a continuous acceleration of high-energy particles.