

# PLASMA INJECTION AND HIGH-ENERGY EMISSION IN BLACK HOLE MAGNETOSPHERES

*Tuesday, 9 July 2019 10:00 (30 minutes)*

Plasma injection and magnetic field dissipation are two key issues in the theory of black hole jets. Pair production in either starved magnetospheric regions or dissipative boundary layers can supply the plasma required for black hole activation. These processes naturally produce rapidly varying VHE emission. In the first part of the talk I shall discuss pair creation in a starved BH magnetosphere and present recent GRPIC simulations of a spark gap. In the second part I will present results of recent force-free simulations of magnetic loops accretion into a Kerr black hole, and show that in such configurations rapid dissipation occurs in the current sheets of interacting loops, that can give rise to TeV emission and consequent pair creation.

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