

INSTABILITY OF WRINKLED CURRENT SHEETS IN RELATIVISTIC WINDS AND JETS: THE ORIGIN OF LOW σ ?

Jonathan Arons¹ and Bjoern Schmekel¹

¹*Theoretical Astrophysics Center, University of California, Berkeley*

I discuss the empirical basis for the conclusion that relativistic winds and possibly jets have flows dominated by kinetic energy at their termination, even when they are emitted from magnetically dominated sources. I describe two new dynamical and radiative mechanisms for the dissipation of magnetic energy, based on instabilities of the wrinkled current sheet in these flows. I speculate on their significance for the provenance of low asymptotic magnetization (and high flow 4-velocity) and discuss some possible observational signatures of their activity.