

Abstract Submitted
for the OSF07 Meeting of
The American Physical Society

The Dynamics of Extragalactic Jets¹ NICHOLAS GEITNER,
DANIEL HOMAN, Denison University — We present a preliminary analysis of the motion of extragalactic jets, taken from the 2 cm/MOJAVE survey with NRAO's Very Long Baseline Array, to find and analyze jet accelerations. Most of the reliable jets we examined exhibited superluminal motion with at most small accelerations. We then examined statistical limits on these accelerations. To do so, several accelerations models were examined, including a mass loading model. It was found that mass loading has the greatest effect on fast jets directed close to our line of sight. We concluded that the levels of mass loading for all of the reliable sources were roughly 1% mass increase or less per year. We also examined data from an expanded data set with observations up through 2006; a few jets were found with interesting and significant bends in their trajectories. One such case shows possible evidence of collimation.

¹We acknowledge the contributions of the 2cm/MOJAVE team. This work was supported by grants from Research Corporation, NSF Grant AST-0707693, and the Anderson Fund at Denison University

Daniel Homan
Denison University

Date submitted: 01 Oct 2007

Electronic form version 1.4