

Abstract Submitted
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Quasar Jet Acceleration NICHOLAS POLITO, DAVID HOUGH, Trinity University — We observed radio jets in six lobe-dominated quasars (LDQs) from 1995 to 2008 using the NRAO VLBA at 8.4 and 15 GHz. These observations have tracked jet component positions and velocities over that time period. There is a correlation between apparent jet speed and projected core distance in these LDQs at greater than 99 per cent confidence levels (Hough 2008, *Extragalactic Jets*, eds: Rector and DeYoung, ASP, p. 274). Four of our sources show this effect particularly strongly. We only tracked single jet components over relatively short distances, but the assumption of a unique velocity profile allows us to study component motion on an effective timescale of approximately 20-50 years. Results for 3C207 and 3C263 show a good fit using a constant acceleration model. The cause of such acceleration is still unknown, though “magnetic acceleration” by a gradient in magnetic field pressure is one possibility.

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