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VLBI Imaging of Active Galactic Nuclei[1] CASSIDY SMITH, Texas Christian University, CHRISTIAN AARS, Angelo State University, ANGELO STATE UNIVERSITY COLLABORATION, TRINITY UNIVERSITY COLLABORATION — We employ high-resolution, high-sensitivity, very-long baseline interferometry (VLBI) radio imaging of parsec-scale jets in radio sources to confirm a partial unification theory of active galactic nuclei (AGNs). Various types of AGN contain supermassive black-holes viewed with different orientation angles to the observer's line-of-sight. In the radio, most AGN can be divided into a very bright central core component and a fainter, elongated jet component. We have used a program called DIFMAP to construct high- resolution images of the quasar 3C207, and then modeled the structure of the core and inner jet components. Images of 3C207 were obtained over six epochs in 2005, to observe temporal changes in the core/jet structure. We find multiple components within the core, oriented in a manner that is consistent with their jet components. Some evidence of bending is seen as well. Bending can be interpreted both as evidence of jet interactions with the interstellar medium or as possible precession of the black hole's rotation axis.

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