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Disks of Fire and Water: On the Coexistence of Hydroxyl and Water Megamasers BRANDON WIGGINS, VICTOR MIGENES, Brigham Young University — Hydroxyl and water megamasers are employed in the study of the internal kinematics of distant galaxies. OH masers are radiatively pumped through FIR photons, while water masers have been found to be pumped collisionally at higher densities and temperatures. The pumping mechanisms appear to be mutually exclusive which is supported observationally by the fact that specimens exhibiting masing in both varieties are nearly non-existent. In this presentation, we report the results of a study of NGC 3079, an object which exhibits masing activity from both water and OH maser species and seek to shed additional light on the possibly unique physical processes taking place within this object. Interferometric data from the European Very Long Baseline Interferometry Network (EVN) were reduced using the AIPS software suite. We detect the molecular disk in NGC 3079 and superimpose the OH maser reported in Baan et al. (1995). Archival data of radio continuum emission on the kiloparsec scale suggests an outflow with a position angle differing significantly from the outflows on subparsec scales, perhaps indicating the presence of a precessing jet to power outflows. A warped/precessing disk model is proposed to explain the wide angle outflow and chaotic structure of the molecule disk. Brief discussion is provided on the OH maser discussed in Baan et al. (1995).

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