

S12c **Positional Coincidence of H₂O Maser and a Plasma Obscuring Torus in Radio Galaxy NGC 1052**

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We report multi-frequency simultaneous VLBA observations at 15, 22 and 43 GHz towards the nucleus of the nearby radio galaxy NGC 1052. These three continuum images reveal a double-sided jet structure, whose relative intensity ratios imply that the jet axis is oriented close to the sky plane. The steeply rising spectra at 15–43 GHz at the inner edge of the jets strongly suggest that synchrotron emission is absorbed by foreground thermal plasma. We detected H₂O maser emission in the velocity range of 1550–1850 km/s, which is redshifted by 50–350 km/s with respect to the systemic velocity of NGC 1052. The redshifted maser gas appears projected against both sides of the jet, in the same manner as the HI seen in absorption. The H₂O maser gas are located where the free-free absorption opacity is large. This probably imply that the maser gas in NGC 1052 is associated with a circumnuclear torus or disk as in the nucleus of NGC 4258. Such circumnuclear structure can be the sence of accreting onto the central engine.