

S31c High-resolution imaging of H₂O maser towards the type 2 Seyfert NGC 1068

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Using MERLIN (Multi-Element Radio-Linked Interferometer Network), high-resolution imaging observations of 22 GHz H₂O maser in the type 2 Seyfert galaxy, NGC 1068 were made at about 20 milliarcsecond angular resolution, which were aimed for imaging off-nuclear jet maser known in the galaxy in order to probe a region where jet-interstellar medium interaction occurs. No off-nuclear masers have been detected in our observations, perhaps due to the variability of the strength of the masers. The masers located nearby the nucleus of the galaxy lying at blue-shifted and the galactic systemic velocity were detected in our observations. The positions of these nuclear masers were pin-downed, resulting the fact that the detected nuclear maser positions coincide with the continuum nucleus obtained by the MERLIN continuum observations at lower frequencies within uncertainties. The masers arise near from the central engine of the galaxy, which is consistent with the results of earlier VLBI measurements.