

Continuum Polarization Observations of NGC 253

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We have conducted 3cm and 6cm radio continuum observations of the nearby starburst galaxy NGC 253 with the Effelsberg 100m telescope. The polarized emission reveals a prominent radio halo with the magnetic field mainly aligned parallel to the galactic disk. In the south-east of NGC 253 a huge spur dominates, where the magnetic field lines are along the spur. As this spur can be interpreted as a starburst-driven outflow, magnetic fields trace (or even control) the occurrence of collimated galactic outflows (chimneys). Thus NGC 253 serves as an ideal case to study the connection between galactic winds and the large-scale magnetic field structure. With recently obtained VLA-D observations at 6 cm, to be combined with the Effelsberg data, we will be able to examine this connection in more detail.

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