

## Broadband planar antenna with low side lobes levels capabilities and high cross-polarisation rejection for DBS reception

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This contribution describes a novel microstrip array antenna for DBS reception. Specific features are low side lobes levels as well as high cross-polarisation rejection. For the former purpose, a specific arrangement of the antenna elements along the elevation axis is used, enabling a tapering of the array characteristics in the azimuth direction. Based on a virtual symmetry, appropriate broadband feeding networks are designed, eliminating phase errors. Moreover, the two feeding networks, each corresponding to a polarisation state, are separated by a ground plane, which leads to a very good decoupling between the ports.

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