

## Radial correlation measurements at TEXTOR

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In the last year the reflectometer system at TEXTOR has been upgraded. A third antennae array at a different toroidal position has been installed, which is  $\Delta\phi = 112^\circ$  apart from the midplane antennae and  $\Delta\phi = 90^\circ$  apart from the top antennae array. It consists of one launcher and two receiving antennae. The whole array and the waveguide in the vessel allow the measurement of O- and X-mode polarization.

A second micro wave generator operating in the frequency range 24-40 GHz, comparable to the frequency range of the already existing one, 36-37 GHz, has been put into regular operation for all three antennae arrays. The new generator allows up to 8 different preprogrammed frequencies for a discharge. The time for the phase locking of the intermediate frequency is less than 1 ms. In the existing set-up poloidal and radial correlations can be measured. The testing of the toroidal correlation measurements has started.

The paper reports on the first observation of radial correlations at the mid-plane and at  $\theta = 90^\circ$  antennae array. The second mw-generator is connected to only one antennae in both arrays. The other generator is connected with the remaining antennae of the array, allowing the measurement of poloidal correlations simultaneously. From the measurements of the turbulence the poloidal and radial propagation is deduced. Both measurements yield a better description of the turbulent transport at TEXTOR.

The radial correlation measurements are used for the investigation of the radial wavelength of the geodesic acoustic mode as well for the radial properties of the ambient turbulence. The first results will be presented here.

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