

## Observation of anti-ExB vortex in a plasma

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A vortex with anti-ExB rotation was observed in a cylindrical plasma. This results means that there exists an strong force acting on ions which dominates the electric field. The line spectrum measurements revealed that the anti-ExB vortex always accompnies a deep and localized depletion of the background neutrals.

A new mechanism of momentum tranport due to interaction with the neutral flow is proposed. The vorticity distribution expected from the proposed mechanism well agrees with the experimental observation.

This means that the distribution of background neutrals determines the ion flow field.

