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**Development of a Grid-Based Gyrokinetic Simulation Code**

STEPHAN BRUNNER, TRACH-MINH TRAN, XAVIER LAPILLONNE, MAURA BRUNETTI, CRPP — A new grid-based code is being developed for solving the gyrokinetic equation in tokamak geometry. This development builds on the experience gained with the CYGNE project [M. Brunetti *et. al*, Comp. Phys. Comm. **163**, 1 (2004)], which solved the electrostatic drift-kinetic equations in a cylindrical system using a semi-Lagrangian approach. This new code makes use of efficient and flexible software modules optimized for parallel platforms. Preliminary results in reduced geometry, in particular slab and cylindrical, will be presented.

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