High order PDE-convergence of AMF-W methods for parabolic problems

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The PDE-orders of convergence in the Euclidean norm of s-stage AMF-W-methods for two dimensional parabolic problems on rectangular domains are considered. We explain the algebraic conditions to reach order three in the case of homogeneous Dirichlet boundary conditions and give some interesting methods having that order. We also provide some evidence that seems to indicate that PDE-convergence of order four cannot be achieved with that kind of method.