

We focus on preconditioning techniques for a mixed finite element discretization of an incompressible magnetohydrodynamics (MHD) problem. Upon discretization and linearization, a  $4 \times 4$  non-symmetric block-structured linear system needs to be (repetitively) solved. One of the principle challenges is the presence of a skew-symmetric term that couples the fluid velocity with the electric field. Our proposed technique is motivated by the block-structure of the underlying linear systems in conjunction with effective preconditioners for the mixed Maxwell and Navier-Stokes subproblems. The preconditioner is based on dual and primal Schur complement approximations to yield a scalable solution method. Large scale numerical results demonstrate the effectiveness of our approach.