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Multigrid Methods Applied to Multigroup Neutron Transport

ADNAN REBEI, ECE, UW-Madison and KAIN — A full multigrid algorithm based on the nodal expansion method is used to solve the multigroup neutron transport diffusion equation with discontinuous coefficients. The prolongation and restriction operators between the various meshes are constructed for the surface averaged currents. The fast convergence of the method is demonstrated in a calculation of the criticality of a reactor.

- [1] L. Mei, Appl. Math. Comp. 179, 473 (2006).
- [2] L. Yu. Zaslavsky, Appl. Math. Comp. 53, 13 (1993).

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