

NCSX TRANSPORT STUDIES

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The NCSX design team has now evolved 2 configurations which simultaneously satisfy constraints of confinement, ballooning and kink stability, and the construction of whose coils appears feasible. Here, we will report on transport-related studies ongoing as part of the continuing evolution of the NCSX design toward an attractive compact QA stellarator concept. Some transport-related issues of more general interest raised by the design effort on which work is in progress are the self-consistent radial electric field and plasma flows, validation of analytic theories of the bootstrap current, and design flexibility.