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Domain Decomposition of the Dirac operator in QUDA

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In this poster, we will present our implementation strategy of domain decomposition techniques for the Dirac operator within QUDA. We are developing a generic 4-dimensional domain decomposition aiming to support algorithms such as Red-Black Schwartz Alternating Procedure (SAP), time-slice domains and multilevel algorithms. We will also discuss how we plan to support preconditioned operators, BLAS routines and reductions acting on the domains, as well as, to use the techniques within multigrid solvers.

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