

Donovan's conjecture for abelian defect groups: a reduction to quasisimples

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Abstract

Donovan's conjecture states that for a fixed defect group, up to Morita equivalence, there are only finitely many blocks with this defect group. In this talk I will present a reduction for Donovan's conjecture for abelian defect groups to blocks of quasisimple groups. In particular, this completes the proof of Donovan's conjecture for abelian defect groups in characteristic 2. The main tool in all of this is the new concept of a strong Frobenius number which is a refinement of the Morita Frobenius number introduced by Kessar. This is all joint work with Charles Eaton.