

# FUSION SYSTEMS, GROUPS, PARTIAL GROUPS AND SIMPLICIAL SETS

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ABSTRACT. Motivated by the theory of fusion systems, Chermak introduces the concept of partial group and locality. We take the point of view of the nerve of a partial group and explore the insight of the homotopy theory of simplicial sets. As an application we generalize a calculation by J. Lannes of the homotopy fixed points for the action of a finite  $p$ -group on the  $p$ -completed classifying space of a finite group in the context of fusion systems.

*This is joint work with Alex Gonzalez.*