

Simplicity of Partial Skew Group Rings of Abelian Groups

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Abstract. Let A be a ring with local units, E a set of local units for A , G an abelian group and α a partial action of G by ideals of A that contain local units. We show that $A \star_{\alpha} G$ is simple if and only if A is G -simple and the center of the corner $e\delta_0(A \star_{\alpha} G)e\delta_0$ is a field for all $e \in E$. We apply the result to characterize simplicity of partial skew group rings in two cases, namely for partial skew group rings arising from partial actions by clopen subsets of a compact set and partial actions on the set level.