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A Class of Banach Algebras Whose Duals Have the Schur Property

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Abstract: Call a commutative Banach algebra A a γ-algebra if it contains a bounded group Γ such that $\overline{aco(\Gamma)}$ contains a multiple of the unit ball of A. In this paper, first by exhibiting several concrete examples, we show that the class of γ-algebras is quite rich. Then, for a γ-algebra A, we prove that $A^{\star}$ has the Schur property iff the Gelfand spectrum $\sum$ of A is scattered iff $A^{\star}=ap(A)$ iff $A^{\star}=\overline{Span(\sum)}$.

Key Words: Schur property, Segal algebras, almost periodic functionals.