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Ontario K1S 5B6, Canada. *A comparison of some Arens irregularities.*

Let  $A$  be a Banach algebra. The dual  $A$ -module actions extend the product on  $A$  to two Banach algebra multiplications on the second dual of  $A$ , called the left and the right Arens products. When these two products coincide,  $A$  is said to be Arens regular. Every operator algebra, in particular, every  $C^*$ -algebra, is Arens regular. However, Banach algebras studied in abstract harmonic analysis are typically far from being Arens regular. In this talk, we will discuss and compare some Arens irregularities. (Received March 02, 2009)