

**Weak L^1 inequalities for noncommutative singular
integrals**

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The classical Calderón-Zygmund decomposition is a fundamental tool that helps one study endpoint estimates near L^1 . In this talk, we shall study an extension of the decomposition to a particular operator valued setting where noncommutativity makes its appearance, allowing us to get rid of the (usually necessary) UMD property of the Banach space where functions take values. The noncommutative extension entails a number of applications. One that we shall discuss concerns weak L^1 estimates for Fourier multipliers on groups. Based on joint work with L. Cadilhac and J. Parcet.