

THE DIXMIER PROPERTY

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The Dixmier property is a property for C^* -algebras, originating in '49 in Dixmier's proof of unique trace for II_1 factors, and also featuring prominently in C^* -simplicity arguments beginning with Powers in '75. For a unital C^* -algebra A , it says that for every element a , one can approximate a central element by averages of unitary conjugates of a .

This property puts some well-known and straightforward restrictions on the tracial and ideal structure of the C^* -algebra. For example, a simple C^* -algebra with the Dixmier property has at most one tracial state. The converse is a result of Haagerup and Zsidó. I will discuss a new generalization, characterizing the Dixmier property in terms of ideal space and tracial restrictions. I will also talk about a uniform version of the Dixmier property. This is joint work with R. Archbold, and L. Robert.