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Pierre Fima* (pfima@illinois.edu), Department of Mathematics, University of Illinois at Urbana-Champaign, 1409 W. Green Street, Urbana, IL 61801-2975. *Property T for Discrete Quantum Groups.*

In this talk, we will introduce the notion of property T for discrete quantum groups. From this definition we can prove the basic expected properties: discrete quantum groups with property T are unimodular and finitely generated. Moreover the non-commutative version of the Connes-Jones' Theorem is true: an I.C.C. discrete quantum group has T if and only if its dual von Neumann algebra is a II_1 factor and has property T . We will also discuss property T (and the behavior of Kazhdan's constants) in almost all known examples of discrete quantum groups: the classical ones, the free ones, the q -deformations, the twisting and bicrossed product construction. Finally, if the time permits, we will discuss the notion of residually finite discrete quantum groups. (Received February 02, 2009)