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Paul Frank Baum* (baum@math.psu.edu), Mathematics Department, Penn State University, University Park, PA 16802. *Dirac Operator and K-theory for discrete groups.*

Let G be a (countable) discrete group. The BC (Baum-Connes) conjecture proposes an answer for the problem of calculating the K-theory of the reduced C^* algebra of G . Usually the proposed answer is formulated as the equivariant K-homology (with G -compact supports) of the universal example for proper actions of G . This talk gives an equivalent form of the conjectured answer using spin-c manifolds. The map to the K-theory of the reduced C^* algebra is then by taking the equivariant index of the evident (twisted) Dirac operator.

The talk will explain Chern character plus the connection of this point of view to the universal example and to the Atiyah-Singer index theorem.

The above is joint work with N.Higson and T.Schick. (Received September 15, 2007)