Mathematics > Operator Algebras

# A class of II_1 factors with many non conjugate Cartan subalgebras

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We construct a class of II_1 factors M that admit unclassifiably many Cartan subalgebras in the sense that the equivalence relation of being conjugate by an automorphism of M is complete analytic, in particular non Borel. We also construct a II_1 factor that admits uncountably many non isomorphic group measure space decompositions, all involving the same group G. So G is a group that admits uncountably many non stably orbit equivalent actions whose crossed product II_1 factors are all isomorphic.

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| Comments: | v3: minor changes, final version, to appear in Advances in Mathematics. v2: we provide examples of II_1 factors M such that conjugacy of Cartan subalgebras of M by an automorphism, is a complete analytic equivalence relation |
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*Which authors of this paper are endorsers?*