ON THE CLASSIFICATION OF C*-ALGEBRAS OF MINIMAL DYNAMICAL SYSTEMS OF A PRODUCT OF THE CANTOR SET AND AN ODD DIMENSIONAL SPHERE.

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Let $\beta : S^n \to S^n$ be one of the known examples of minimal dynamical systems of n dimensional spheres, $n \geq 3$ odd, constructed by [3] or [1]. For every such (β, S^n), there is a Cantor minimal system (X, α) such that the product system $(X \times S^n, \alpha \times \beta)$ is minimal and such that tracial state space of $\mathcal{C}(S^n) \rtimes_\beta \mathbb{Z}$ is preserved in $\mathcal{C}(X \times S^n) \rtimes_{\alpha\times\beta} \mathbb{Z}$.

I show that $\mathcal{C}(X \times S^n) \rtimes_{\alpha\times\beta} \mathbb{Z}$ is a tracially approximately interval (TAI) algebra and hence classifiable. Moreover, with forthcoming work of Wilhelm Winter this implies that $\mathcal{C}(Y) \rtimes_\beta \mathbb{Z}$ is TAI after tensoring with the universal UHF algebra, showing that such crossed products are classified by their tracial state spaces, as conjectured by N. Christopher Phillips [2].

References

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