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A canonical form for the Pimsner–Voiculescu embedding

The well-known embedding by Pimsner and Voiculescu of the irrational rotation C^* -algebra in an AF algebra is very concrete, but is not quite canonical, as the construction requires making infinitely many choices. In particular, it is not clear whether any automorphisms other than inner ones extend to the AF algebra.

Zhuang Niu and I have found a construction which seems much more natural—it is at least much simpler than the original one—, and for which some automorphisms can be seen to extend. The only difficulty is that we have not yet succeeded in showing that the larger algebra is AF.