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Unitary equivalence to Jordan models for weak contractions of class C_0

We study the problem of classification of Hilbert space contractions belonging to the class C_0 through the properties of some associated operator algebras. More precisely, we obtain results on the unitary equivalence of weak contractions of class C_0 to their Jordan models under an assumption on their commutants. In particular, our work addresses the case of arbitrary finite multiplicity. The main tool is the theory of boundary representations due to Arveson. Our approach also raises some interesting questions about general non-self-adjoint operator algebras and possible refinements of Paulsen's theorem on completely bounded homomorphisms.