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*Forcing axioms and rigidity of corona algebras.*

It has become clear over the last two decades or so that forcing axioms like PFA often have strong consequences in the rigidity of structures of size continuum. One such line of results, going back to the 80's, describes explicitly all possible isomorphisms between certain quotient Boolean algebras in the presence of PFA (or more accurately a couple of its combinatorial consequences). The techniques involved were used more recently by Farah to solve a long-outstanding problem on the automorphisms of the Calkin algebra. We will describe a strong generalization of all of these results, which takes place in the setting of  $C^*$ -algebras. No prior knowledge of  $C^*$ -algebras will be assumed. This talk represents joint work with Alessandro Vignati. (Received August 20, 2018)