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Mingchu Gao* (mcgao@uiuc.edu), Department of Mathematics, University of Illinois, Urbana, IL 61801, and **Marius Junge**. *Examples of prime von Neumann algebras.*

We show that the reduced free product von Neumann algebra of a sequence of injective von Neumann algebras on separable Hilbert spaces with a faithful normal state on each algebra is prime, if the free product algebra is not injective. Moreover, a non-injective von Neumann subalgebra of the free product algebra is prime, too, if there is a normal conditional expectation from the free product algebra onto the subalgebra. This result provides many examples of prime von Neumann algebras. These examples include prime finite factors given by Ge and prime type-three factors given by Shlyakhtenko. In our proof we combine Ozawa's new techniques for solid von Neumann algebras with Shlyakhtenko's "matrix model" techniques for the free Araki-Woods factors. (Received August 25, 2006)