1003-06-219 **Jason D Holland\*** (`hollandj@acu.edu`), ACU Box 28012, Abilene, TX 79699. *On Stone's Representation Theorem For Boolean Algebras.* Preliminary report.

In this paper, we use certain large subsets of a Boolean algebra known as whales to provide a constructive proof of Stone's Representation Theorem, namely that every Boolean algebra is isomorphic to an algebra of sets. A classical proof of Stone's Theorem uses the Boolean prime ideal theorem which is equivalent to the axiom of choice. Our proof avoids the Boolean prime ideal theorem and is therefore valid in Zermelo-Fraenkel set theory. (Received August 30, 2004)