1079-57-330 **Tim D Cochran*** (cochran@rice.edu). *On the injectivity of satellite operations in knot concordance.* Preliminary report.

Satellite operations with a fixed pattern may be viewed as functions from the set of knot types to the set of knot types. Using standard tools of 3-manifolds one can see that these functions are usually injective. These functions descend to give operators (not homomorphisms) on the set of smooth concordance classes of knots. It is conjectured that many of these are also injective. The Whitehead Double operator is the most famous example. Despite growing evidence, to date no non-trivial operator has been shown to be injective. We will prove that for a very large class of operators, P, modulo the smooth 4-d poincare conjecture, P(K)=P(Unknot) implies K=Unknot. For topological concordance the hypothesis about the Poincare conjecture is not needed. (Received January 17, 2012)