1064-03-239 **Barbara F. Csima*** (csima@math.uwaterloo.ca), Department of Pure Mathematics, University of Waterloo, Waterloo, Ontario N2L 3G1, Canada, and **Bernard A. Anderson**. *A bounded jump for the bounded Turing degrees.*

We define the *bounded jump*, a jump operator on the bounded Turing (bT) degrees (also known as the weak truth-table degrees). We let A^{nb} denote the n-th bounded jump of a set A. We demonstrate several properties of the bounded jump, including that it is strictly increasing and order preserving on the bounded Turing (bT) degrees. We show that the bounded jump is related to the Ershov hierarchy. Indeed, for $n \geq 2$ we have $X \leq_{bT} \emptyset^{nb} \iff X$ is ω^n-c.e. $\iff X \leq_1 \emptyset^{nb}$, extending the classical result that $X \leq_{bT} \emptyset' \iff X$ is ω-c.e.. Finally, we prove that the analogue of Shoenfield inversion holds for the bounded jump on the bounded Turing degrees. That is, for every X such that $\emptyset^b \leq_{bT} X \leq_{bT} \emptyset^{2b}$, there is a $Y \leq_{bT} \emptyset^b$ such that $Y^b \equiv_{bT} X$. (Received September 10, 2010)