

1035-46-1197

Stephen J Dilworth* (dilworth@math.sc.edu), Department of Mathematics, University of South Carolina, Columbia, SC 29208, and **E Odell**, **Thomas Schlumprecht** and **Andras Zsak**.
Partial Unconditionality.

A basis in a Banach space is said to be unconditional if the family of projections onto all finite subsets of the basis is equicontinuous. There is an example due to Maurey and Rosenthal of a normalized weakly null basis without any unconditional subsequence. Elton considered the family of nonlinear thresholding projections which send a vector onto any subset of those of its coefficients which are bigger than a fixed δ in absolute value. He proved that every normalized weakly null sequence has a subsequence such that the family of projections corresponding to this subsequence is bounded in norm by a constant $C(\delta)$. It is not known whether $C(\delta)$ becomes unbounded as $\delta \rightarrow 0$. We discuss this problem, present some extensions of Elton's theorem, and explain a connection with certain greedy algorithms that are used in nonlinear approximation. (Received September 19, 2007)