1054-05-302 **Endre Szemeredi***, 110 Frelinghuysen Road, Piscataway, NJ 08854-8019, and **Jozsef Solymosi**.
*Convexity and sumsets.* Preliminary report.

Let $B = \{b_1 < b_2 < \ldots < b_n\}$ an increasing sequence of real numbers and suppose that $b_i - b_{i-1} < b_{i+1} - b_i$ for any $1 < i < n$. We call such sequences *convex*. Erdős conjectured that convex sequences have large difference (and sum) sets. Elekes, Nathanson, and Ruzsa proved that $|B - B| \geq c|B|^{3/2}$. It is not known if $|B - B| \geq c|B|^{2-\varepsilon}$ holds for convex sequences or not. In this talk we show that there is a constant $\delta > 0$ such that for any convex sequence $B$ $|B - B| \geq c|B|^{3/2+\delta}$. (Received September 15, 2009)