1161-05-194 **Paul Balister*** (paul.balister@maths.ox.ac.uk), Mathematical Institute, Radcliffe Observatory Quarter, Woodstock Road, Oxford, OX2 6GG, United Kingdom, and **Bela Bollobas**, **Robert Morris**, **Julian Sahasrabudhe** and **Marius Tiba**. *Flat Littlewood polynomials exist.*

A Littlewood polynomial is a polynomial with all coefficients equal to $+1$ or -1. Erdős (1957) and Littlewood (1966) asked if one could find $\delta, \Delta > 0$ such that for all large n there exist Littlewood polynomials $P(z)$ of degree n such that $\delta\sqrt{n} \leq |P(z)| \leq \Delta\sqrt{n}$ for all complex z with $|z| = 1$. In this talk I will describe our proof of this conjecture, which uses recent results in discrepancy theory. (Received August 17, 2020)