1057-32-56   **Jiri Lebl*** (`jlebl@math.uiuc.edu`), Department of Mathematics, 1409 W. Green Street, Urbana,
IL 61801, and **Han Peters**. *Polynomials constant on a hyperplane and CR maps of*
hyperquadrics.

We prove a sharp degree bound for polynomials constant on a hyperplane with a fixed number of distinct monomials for
dimensions 2 and 3. We study the connection with monomial CR maps of hyperquadrics and prove similar bounds in
this setup with emphasis on the case of spheres. The results support generalizing a conjecture on the degree bounds to
the more general case of hyperquadrics. (Received December 26, 2009)