Marta Casanellas and Robin Hartshorne* (robin@math.berkeley.edu), Department of Mathematics, University of California, Berkeley, CA 94720-3840. *Ulrich bundles on cubic surfaces*. Let X be a nonsingular cubic surface in P³. We prove the existence, for every rank r at least 2, of stable Ulrich bundles of rank r on X. An Ulrich bundle is a vector bundle with no intermediate cohomology, whose associated graded module has the largest possible number, 3r, of generators. These bundles form an open subset of dimension r² + 1 of the moduli space of stable vector bundles on X. (Received February 10, 2008)