1056-14-1723 **Damiano Testa** (adomani@gmail.com), Mathematical Institute, 24-29 St Giles', Oxford, TX OX1 3LB, **Anthony Varilly-Alvarado*** (varilly@rice.edu), Mathematics Depatrment, MS136, Houston, TX 77005, and **Mauricio Velasco** (velasco@math.berkeley.edu), Department of Mathematics, Evans Hall, Berkeley, CA 94720. *Cox rings of big rational surfaces.*

The Cox ring, or total coordinate ring, of an algebraic variety is the object of much recent work in both algebraic geometry and number theory. For example, the Cox rings of del Pezzo surfaces, have been used to count points of bounded height on these surfaces and thus verify instances of a deep conjecture of Batyrev and Manin. Determining which varieties have a finitely generated Cox ring is a notoriously difficult problem, even in the case of surfaces. We will show that the class of smooth projective rational surfaces with big anticanonical class has a finitely generated Cox ring. We will also present some systematic collections of examples of these surfaces. (Received September 22, 2009)