1046-47-914   **Nathan S. Feldman*** (`feldmanN@wlu.edu`), Mathematics Department, Washington & Lee University, Lexington, VA 24450. *Hypercyclic Operators with a Prescribed Spectrum.* Preliminary report.

A bounded linear operator on a Hilbert space is hypercyclic if it has a point with dense orbit. Herrero proved that if an operator is hypercyclic, then every component of its spectrum must intersect the unit circle. We will prove the converse. We will show that given any compact set K in the complex plane such that every component of K intersects the unit circle, there is a hypercyclic operator whose spectrum is equal to K. Thus Herrero's necessary condition is also sufficient in describing the spectra of hypercyclic operators. (Received September 12, 2008)