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**Stefan Richter\*** (richter@math.utk.edu) and **Carl Sundberg**. *Remarks about cyclic vectors in the Drury Arveson space*. Preliminary report.

Let  $H_d^2$  denote the Drury Arveson space of the open unit ball  $B_d$  of  $\mathbb{C}^d$ . A function  $f \in H_d^2$  is called cyclic, if there is a sequence of polynomials  $p_n$  such that  $p_n f \rightarrow 1$ . We show that for  $d \leq 2$  a polynomial is cyclic, if and only if it has no zeros in  $B_d$ . For  $d \geq 4$  there are noncyclic polynomials with no zeros in  $B_d$ . The case  $d = 3$  is open. (Received June 29, 2011)