Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-47-1400 **George R. Exner*** (exner@bucknell.edu), Department of Mathematics, Bucknell University, Lewisburg, PA 17837, and **Il Bong Jung**. *Weak* 2*-hyponormality for a weighted shift with Bergman tail.* Preliminary report.

A bounded linear operator T on Hilbert space is hyponormal if $[T^*, T] = T^*T - TT^* \geq 0$; it is weakly n-hyponormal if, for every polynomial p of degree at most n, $p(T)$ is hyponormal. We show that the set of x for which the unilateral weighted shift with weight sequence $\sqrt{x}, \sqrt{x}, \sqrt{3/4}, \sqrt{4/5}, \ldots$ (Bergman tail) is weakly 2-hyponormal is a closed interval and provide estimates for the interval's endpoints. (Received October 05, 2004)