1096-47-2488 **George R Exner*** (exner@bucknell.edu), Department of Mathematics, Bucknell University, Lewisburg, PA 17837, and **Il Bong Jung**, **Mi Ryeong Lee** and **Sun Hyun Park**. *A range for quadratic hyponormality.* Preliminary report.

Let W_α be the unilateral weighted shift operator on Hilbert space associated with weight sequence α. An operator T is quadratically hyponormal if $T + sT^2$ is hyponormal for all complex s; for weighted shifts, and using the Nested Determinant Test, this reduces to non-negativity, for all $t \geq 0$, of certain polynomials $d_n(t)$, $n = 1, 2, \ldots$. A strong way to achieve this is to insist that every coefficient arising in any d_n is non-negative: this is positive quadratic hyponormality. For the weight sequence $\alpha : 1, 1, \sqrt{x}, (\sqrt{u}, \sqrt{v}, \sqrt{w})^\wedge$ (where $(\sqrt{u}, \sqrt{v}, \sqrt{w})^\wedge$ indicates the sequence is completed by the recursive tail arising in Stampfli's completion of three increasing weights to a sequence yielding a subnormal shift), we show that the set of x for which there exist u, v, and w resulting in quadratic hyponormality is $(1, 2)$, which is also the analogous set for positive quadratic hyponormality. (Received September 17, 2013)