A RELATIONSHIP: SUBNORMAL, POLYNOMIALLY HYPONORMAL AND SEMI-WEAKLY HYPONORMAL WEIGHTED SHIFTS

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Abstract. Let $\alpha(x) : \sqrt{x}, (\sqrt{a}, \sqrt{b}, \sqrt{c})^\wedge$ be a one-step backward extension sequence of Stampfli's subnormal completion, where $0 < x \leq a < b < c$, and let $W_{\alpha(x)}$ be the associated weighted shift. In this talk, we prove that $W_{\alpha(x)}$ is subnormal if and only if $W_{\alpha(x)}$ is polynomially hyponormal, which also is equivalent to that $W_{\alpha(x)}$ is completely semi-weakly hyponormal.

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