Abstract

For Banach space operators T satisfying the Tadmor-Ritt condition $\|(zI - T)^{-1}\| \leq C|z - 1|^{-1}$, $|z| > 1$, we show how to use the Riesz turndown collar theorem to estimate $\sup_{n \geq 0} \|T^n\|$. A similar estimate is shown for $\limsup_n \|T^n\|$ in terms of the Ritt constant $M = \limsup_{z \to 1} \|(1 - z)(zI - T)^{-1}\|$. We also obtain an estimate of the functional calculus for these operators proving, in particular, that $\|f(T)\| \leq C_q \|f\|_{Mult}$, where $\| \cdot \|_{Mult}$ stands for the multiplier norm of the Cauchy-Stieltjes over a Lusin type cone domain depending on C and a parameter q, $0 < q < 1$.