1135-30-354 **David Cardon**, **Tamas Forgacs*** (tforgacs@csufresno.edu), **Andrzej Piotrowski**, **Evan Sorensen** and **Jason White**. *On sector reducing operators.* Preliminary report.

Let $\{\gamma_k\}_{k=0}^{\infty}$ be a sequence of real numbers, and let $T : \mathbb{R}[x] \to \mathbb{R}[x]$ be defined by $T[\sum_{k=0}^{n} a_k x^k] = \sum_{k=0}^{n} a_k \gamma_k x^k$. If π_{S_δ} denotes the set of all real polynomials whose zeros lie in the sector $S_\delta := \{z \mid |\mathrm{Arg}(z)| < \delta\}$, and $T(\pi_{S_\delta}) \subset \pi_{S_{\delta'}}$ for some $0 < \delta' < \delta$, we say that T is a sector reducing operator. In this talk we address some properties sector reducing operators must possess. In particular, we show that in order for T to be a sector reducer, the sequence $\{\gamma_k\}_{k=0}^{\infty}$ must satisfy $\gamma_n\gamma_{n+2}/\gamma_{n+1}^2 < 1$ for all n, and $\limsup_{n\to\infty} \gamma_n\gamma_{n+2}/\gamma_{n+1}^2 < 1$. We also discuss connections to the works of de Bruijn, Pólya and the first author vis á vis complex zero strip decreasing operators. (Received August 27, 2017)