1147-13-329 **Patricia Klein*** (pklein@uky.edu), **Linquan Ma**, **Pham Hung Quy**, **Ilya Smirnov** and **Yongwei Yao**. *Lech's inequality and the Stuckrad-Vogel conjecture.*

Let (R, m) be a Noetherian local ring, and let M be a finitely generated R-module of dimension d. Let $e(I, M)$ denote the Hilbert-Samuel multiplicity of M on the ideal I. Lech's inequality states that the set $\{\ell(R/I)/e(I, R)\}$, as I runs through all m-primary ideals, is bounded below by $1/d!e(m, R)$. Stuckrad and Vogel showed that this set is not in general bounded above. However, they conjectured that whenever the completion of M is equidimensional that $\{\ell(M/IM)/e(I, M)\}$ will indeed be bounded above. We prove this conjecture. This talk is based on joint work with Linquan Ma, Pham Hung Quy, Ilya Smirnov, and Yongwei Yao. (Received January 19, 2019)