1043-14-210   **Gene Freudenburg*** (`gene.freudenburg@wmich.edu`), Department of Mathematics, Western Michigan University, Kalamazoo, MI 49008. $\mathbb{A}^2$-*Fibrations over the Affine Plane.* Preliminary report.

It is an open question whether every $\mathbb{A}^2$-fibration $X \to \mathbb{A}^2$ over the affine plane is trivial. This talk will discuss recent examples of such fibrations, due to the speaker, constructed as the kernel of a locally nilpotent derivation with a slice; it is not known whether these examples are trivial. In particular, let B denote the polynomial ring in 5 variables over a field of characteristic zero. We exhibit $s \in B$ and a locally nilpotent derivation D of B with $Ds = 1$; this implies that B/sB is an $\mathbb{A}^2$-fibration over $\mathbb{A}^2$. Morevover, we give a method for finding $f \in B$ of degree smaller than s such that B/fB and B/sB are isomorphic as fibrations. However, it is not known whether f is a slice for any locally nilpotent derivation of B. (Received August 27, 2008)

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