1053-13-273 Louiza Fouli* (lfouli@math.nmsu.edu), New Mexico State University, Department of Mathematical Sciences, Dept 3MB, P. O. Box 30001, Las Cruces, NM 88003, and Craig Huneke (huneke@math.ku.edu), Department of Mathematics, University of Kansas, Lawrence, KS 66045. *Characterizations of Systems of Parameters in non Cohen-Macaulay rings.* Preliminary report.

Let R be a Noetherian local ring of dimension d. Let $\underline{x} = x_1, \ldots, x_d$ be a system of parameters, that is $\operatorname{ht}(\underline{x}) = d$. Let $\underline{y} = y_1, \ldots, y_d$ be a sequence such that $(\underline{y}) \subset (\underline{x})$ and let A be a matrix such that $\underline{y} = A\underline{x}$. Dutta and Roberts give a criterion for when (\underline{y}) is also a system of parameters in a Cohen-Macaulay local ring. More specifically they show that the sequence \underline{y} is a system of parameters if and only if the map $R/(\underline{x}) \xrightarrow{\cdot \det A} R/(\underline{y})$ induced by multiplication by det A is injective. We will discuss necessary and sufficient conditions for when the sequence \underline{y} is a system of parameters without the assumption that the ring is Cohen-Macaulay. This is joint work with Craig Huneke. (Received September 07, 2009)