1056-20-1991 **Lourdes Juan*** (lourdes.juan@ttu.edu), Department of Mathematics, Texas Tech University, Box 1042, Lubbock, TX 79409, and **Andy R. Magid**. *Differential 'Galois' extensions with new constants.*

Let F be a differential field with algebraically closed field of constants $\mathcal{C}$ and let E be a differential field extension of F. E is a differential Galois extension if it is generated over F by a full set of solutions of a linear homogeneous differential equation with coefficients in F and its field of constants coincides with $\mathcal{C}$. We study the differential field extensions E of F that satisfy the first condition but not the second. Our main result shows that nonetheless E is much like a differential Galois extension of FK, where K is the field of constants of E. In particular, we find an algebraic subgroup G of $\mathrm{GL}_n(K)$ with $E^G = FK$. (Received September 22, 2009)