962-20-1434 **Olga G. Kharlampovich*** (olga@triples.math.mcgill.ca), Department of Mathematics & Statistics, McGill University, 805 Sherbrooke Street West, Montreal, QC Canada H3A 2K6. *The canonical JSJ decomposition for fully residually free groups and Krull dimension of F^n.*

I consider different aspects of Diophantine geometry over a free nonabelian group F, in particular, I will show that Krull dimension of F^n is finite and can be effectively calculated. The proof uses the effectiveness of the canonical JSJ decomposition for fully residually free groups. (Received October 06, 2000)