1123-14-131 **Steven Sperber***, sperber@math.umn.edu, and **Alan Adolphson**, alan.adolphson@okstate.edu.
Distinguished Root Formulas for Generalized Calabi-Yau Projective Hypersurfaces. Preliminary report.

Let X be a non-singular projective hypersurface of degree d and dimension n. When n+2 is a multiple of d, say $n+2=(r+1)d$, the first non-vanishing hodge number in dimension n is $h^{r,n-r}=1$. If we work over the finite field of q elements, and write $Z(X,T)$ for the zeta function of X, it is known that $(Z(X,T)\prod_{i=0}^{n}(1-q^iT))^{(-1)^{n+1}}$ is a polynomial for general X with a (distinguished) unique reciprocal root u_X satisfying $\mathrm{ord}_q(u_X)=r$. In this work, we describe a formula for this unique reciprocal zero in terms of a distinguished p-adic solution to a particular A-hypergeometric system. (Received August 22, 2016)