1062-16-237 **Grégoire Dupont** and **Hugh Thomas*** (hthomas@unb.ca). *A geometric interpretation of the transverse quiver Grassmannian.* Preliminary report.

The well-known Laurent phenomenon in cluster algebras states that an element g of the cluster algebra A can be expressed as a Laurent polynomial in the cluster variables of any cluster of A. If g can always be written as such a Laurent polynomial with *positive* coefficients, then g is called a "positive" element of A. A $\mathbb{Z}$-basis $\mathcal{B}$ of a cluster algebra A is called "canonically positive" if the positive elements of A are exactly the non-negative linear combinations of elements of $\mathcal{B}$. (These notions go back to Sherman-Zelevinsky, 2003.)

Based on the known examples of canonically positive bases due to Sherman-Zelevinsky and Cerulli, Dupont has conjectured a construction of the canonically positive basis in arbitrary finite and affine type, in terms of Euler characteristics of "transverse quiver Grassmannians". I will report on our attempts to improve the understanding of the conjecture, by interpreting the transverse quiver Grassmannian of submodules of a regular indecomposable M as the subvariety of the usual quiver Grassmannian consisting of modules which admit deformations locally (with respect to the $\mathbb{P}^1$ structure of the collection of tubes). (Received August 10, 2010)