1144-20-226 **N. Bhaskhar*** (nbhaskh@g.ucla.edu), **A. Merkurjev** and **V. Chernousov**. *The norm principle for type D_n groups over complete discretely valued fields.*

Norm principles examine the behaviour of the images of group morphisms (from a linear algebraic group to a commutative one) over field extensions, with respect to the norm map. These have been previously studied by Merkurjev-Gille in conjunction with the rationality of the algebraic group in question. However a result of Merkurjev and Barquero shows that norm principle holds in general for all reductive groups of classical type without D_n components. In this talk, we investigate the D_n case over an arbitrary complete discretely valued field K with residue field k (of characteristic not 2).

We show that if the norm principle holds for such groups (arising from quadratic forms) over all finite extensions of the residue field k, then it holds for such groups defined over K. This yields new examples of fields over which the norm principle holds for the groups under consideration. As a further application, we also relate the possible failure of the norm principle to the non-triviality of certain Tate-Shafarevich sets. (Received August 26, 2018)