1025-51-52 **Bart De Bruyn*** (bdb@cage.ugent.be), Ghent University, Department of Pure Mathematics, Krijgslaan 281 (S22), 9000 Gent, Belgium. *Generalized quadrangles of order s with a hyperbolic line consisting of regular points.*

If A is a set of points of a generalized quadrangle Q of order (s,t), then $A^\perp$ denotes the set of points of Q collinear with all points of A. We also define $A^{\perp\perp} := (A^\perp)^\perp$. If (x,y) is a pair of noncollinear points of Q, then $\{x,y\}^{\perp\perp}$ – the so-called hyperbolic line through the points x and y – contains at most $t+1$ points. If $|\{x,y\}^{\perp\perp}| = t+1$, then the pair (x,y) is called regular. A point x of Q is called regular if (x,y) is regular for every point noncollinear with x.

It has been shown about 40 years ago that a generalized quadrangle of order s containing only regular points is isomorphic to the symplectic generalized quadrangle $W(s)$ (so, s is a prime power). In the talk, we will sketch a proof of the following result.

Theorem *A generalized quadrangle of order s is isomorphic to $W(s)$ if it has a hyperbolic line $\{x,y\}^{\perp\perp}$ every point of which is regular.*

This is a characterization of the symplectic generalized quadrangle $W(s)$ which only needs $s+1$ regular points (in a nice position). (Received January 11, 2007)