1108-51-408      **J.-F. Lafont\*** (`jlafont@math.ohio-state.edu`), Dept. of Mathematics, Ohio State University, 231 West 18th Ave., Columbus, OH 43210-1174, and **D. Constantine** (`dconstantine@wesleyan.edu`), Wesleyan University, Mathematics and Computer Science Department, 265 Church Street, Middletown, CT 06459. *Marked length spectrum rigidity for Fuchsian buildings.* Preliminary report.

We consider certain compact quotients of Fuchsian buildings. If the quotients are equipped with piecewise hyperbolic locally CAT(-1) metrics, and have no vertex links which are generalized 3-gons, we show that these spaces are marked length spectrum rigid. That is to say, if there is an isomorphism of fundamental groups that preserves the minimal length of geodesics in free homotopy classes of loops, then there is in fact an isometry realizing the isomorphism of fundamental groups. Next we show that, amongst the piecewise negatively curved locally CAT(-1) metrics, the piecewise hyperbolic ones maximize the volume. This is joint work with Dave Constantine, who will present some related results in his talk in this session. (Received January 19, 2015)