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Andrew Lawrie, Jonas Luhrmann* (luehrmann@math.jhu.edu), Sung-Jin Oh and Sohrab Shahshahani. Local smoothing estimates for Schrodinger equations on hyperbolic space and applications.

We establish frequency-localized local smoothing estimates for Schrodinger equations on hyperbolic space. The proof is based on the positive commutator method and a heat flow based Littlewood-Paley theory. Our results and techniques are motivated by applications to the problem of stability of solitary waves to nonlinear Schrodinger-type equations on hyperbolic space. (Received September 09, 2018)