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Xia Chen (xchen@math.utk.edu), Department of Mathematics, University of Tennessee Knoxville, 813 Swanston Street, Knoxville, TN 37996, **Aurelien Deya** (aurelien.deya@univ-lorraine.fr), Institut Elie Cartan, University of Lorraine, Nancy, France, **Cheng Ouyang*** (couyang@math.uic.edu), Department of Math, Statistics and Compute Sci, University of Illinois at Chicago, 851 S Morgan St, Chicago, IL 60607, and **Samy Tindel** (stindel@purdue.edu), Department of Mathematics, Purdue University, 150 N. University Street, West Lafayette, IN 47907. *Moment estimates for some renormalized parabolic Anderson models.*

We consider some parabolic Anderson models with Gaussian noise whose space time covariance function is singular. We shall give some information about the moments of the solution when the stochastic heat equation is interpreted in the Skorohod sense. Of special interest is the critical case, in which one observes a phase transition (in time) for the existence of moments. The talk is based on a joint work with Xia Chen, Aurelien Deya and Samy Tindel. (Received July 14, 2020)