An observation of Tomonaga-Luttinger liquid in one-dimensional interacting Bose gases¹ XIWEN GUAN, Chinese Academy of Sciences, ZHEN-SHENG YUAN’S GROUP TEAM², FENG HE COLLABORATION³ — It is a long standing challenge to observe quantum liquids in low-dimensional quantum systems. In this talk, I will present a fundamental understanding of universal low energy physics in one dimensional quantum systems, showing the origin of the Tomonaga-Luttinger liquid. Then I will further discuss an experimental observation of Tomonaga-Luttinger liquid in the Lieb-Linger model.


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