

Abstract Submitted  
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**Band structure in bulk entanglement spectrum of quantum Hall state**<sup>1</sup> CHI-KEN LU, D.-W. CHIOU, F.-L. LIN, National Taiwan Normal University — We study the bulk entanglement spectrum of integer quantum Hall state with a symmetric checkerboard partition of space. By reformulating the correlation matrix in a guiding center representation, we show that the problem is mapped to a two-dimensional lattice with unit vector determined by the field and partition grid. The bulk entanglement spectrum shows the particle-hole symmetry and the band touching, which are related to the dual symmetry of partition and the Chern number, respectively. Ref. 1 T. Hsieh and L. Fu, PRL 113, 106801 (2014). Ref. 2 Q. Zhu, X. Wan, and G.-M. Zhang, PRB 90 235134 (2014). Ref. 3 C.-K. Lu, D. Chiou, and F. Lin PRB 92 075130 (2015).

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Chi-Ken Lu  
National Taiwan Normal University

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