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**Eigenstate entanglement entropy in spinless fermion systems II** LUCAS HACKL, LEV VIDMAR, EUGENIO BIANCHI, MARCOS RIGOL, Pennsylvania State Univ — The entanglement entropy of ground states of spinless fermion systems has been extensively studied in recent years. Here, we focus on its properties in the entire spectrum, which have remained largely unexplored. Using recently developed analytical techniques, we study the dependence of the entanglement entropy on the subsystem size for large classes of eigenstates. We also discuss the corresponding statistical ensemble that one uses to find the average eigenstate entanglement entropy.

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