

# Bragg Vortex Splitting in Bose-Hubbard Rings

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Angular momentum states are robust, topologically protected quantum states. Using dynamically controllable optical lattice potentials from DMD arrays, traveling Bragg-vortex splitter potentials can be implemented. Short Bragg pulses are used to prepare many-body vortex states. Tunnel-coupling between two adjacent Bose-Hubbard rings exhibit from coherent Josephson-oscillations to sharp many-body resonances.

## References

- [1] M R Sturm, M Schlosser, R Walser and G Birkl, Phys. Rev. A **95**, 063625 (2017)