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Josephson current in carbon nanotube quantum dots RAMON AGUADO, CSIC, JONG SOO LIM, ROSA LOPEZ, Universitat de les Illes Balears, Spain, MAHN-SOO CHOI, Korea University — We study theoretically the Josephson current through a carbon nanotube quantum dot coupled to superconducting leads. Due to the interplay between the curvature-induced spin-orbit effect and external magnetic fields, we find a rich $0-\pi$ phase diagram in various transport regimes ranging from noninteracting to Coulomb Blockade, cotunneling and the Kondo limit.

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