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Quanta of the Third Kind: Anyons

Sunday, 6 June 2021 18:00 (1 hour)

For many years physicists divided the world of quantum particles into two kingdoms –bosons and fermions. Anyons are particles with a sort of memory, that fall outside those kingdoms. In recent decades theorists have produced an enormous literature about the possible occurrence and properties of anyons. It is only in the last few months, however, that clear experimental confirmation has appeared. I will review the theoretical background and describe the breakthrough experiments. Anyons will be central in a new and promising method of information processing: topological quantum computing.

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