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Louis H. Kauffman* (kauffman@uic.edu), 5530 South Shore Drive, Apt 7C, Chicago, IL 60637-1946. *Unitary Braiding and Majorana Fermions*. Preliminary report.

A Majorana Fermion is an elementary particle that is its own anti-particle. It was conjectured by Majorana that the neutrino has this property. It has been more recently conjectured that single electrons are composed of two Majorana Fermions, and there is some experimental evidence for this statement. Majorana Fermions change phase when encircling one another, and it is possible to construct unitary representations of the Artin braid group, based on Majorana Fermions. These representations can do partial topological quantum computing. This talk will explain the author's point of view on this arena. (Received September 11, 2014)