Giant shot noise from Majorana zero modes in topological trijunctions

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The clear-cut experimental identification of Majorana bound states in transport measurements still poses experimental challenges. I will show that the zero-energy Majorana state formed at a junction of three topological superconductor wires is directly responsible for giant shot noise amplitudes, in particular at low voltages and for small contact transparency. The only intrinsic noise limitation comes from the current-induced dephasing rate due to multiple Andreev reflection processes.