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Progress Report on Closing the Quantum Metrological Triangle MIKKO PAALANEN, Aalto Univ, Low Temp Lab, Espoo, Finland, O. HAHTELA, A. KEMPPINEN, V. MAISI, A. MANNINEN, A. SATRAPINSKI, MIKES, Espoo, Finland, J. HASSEL, P. HELISTO, H. SEPPA, VTT Informat Technol, Espoo, Finland, P. HAKONEN, S. KAFANOV, M. MOTTONEN, J. PEKOLA, Aalto Univ, Low Temp Lab, Espoo, Finland, D. AVERIN, SUNY Stony Brook, New York, USA, Y. PASHKIN, J. TSAI, NEC, Tsukuba, Japan — Quantum Metrological Triangle is made out of three components: Josephson voltage standard, Quantum Hall resistance standard and an accurate current pump. Closing the Triangle consists of applying Ohm's law with great accuracy on the three devices, which are based on fundamental physical phenomena and quantities, such as Planck's constant and electron charge. The first two devices are already accepted international metrological standards. We will report on our recent progress in developing an accurate current pump, based on a hybrid single electron transistor, and compare it with other current pumps. We will also report on new ideas in developing the low noise current amplifier, needed for testing the Ohm's law, and describe our overall plans for closing the Triangle along with the expected uncertainties.

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