SAND2017-12366R

Digital electronics at the atomic limit (DEAL) executive summary for year 1 (UUR):

The digital electronics at the atomic limit (DEAL) project seeks to leverage Sandia's atomic-precision fabrication capability to realize the theorized orders-of-magnitude improvement in operating voltage for tunnel field effect transistors (TFETs) compared to CMOS. Not only are low-power digital circuits a critical element of many national security systems (e.g. satellites), TFETs can perform circuit functions inaccessible to CMOS (e.g. polymorphism).

Project metrics (internal use only):

Publications & presentations: none

Professional awards & recognition: none

External Collaborations: none

Further non-LDRD work: From ARO. Project 205353. Do proof-of-principle work that leads to cryogenic JFET for qubit readout. Analog application based on the same fabrication pathways DEAL develops.