



Inverted Vs. Non-Inverted Devices With Superconducting Aluminum Films Coupled To Tungsten Transition Edge Sensors

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We have fabricated and characterized test-devices of a new geometry for Cryogenic Dark Matter Search (CDMS) superconducting W/Al thin film sensors. The modified design uses the same photolithography masks used to fabricate earlier-generation W/Al test devices, but with the Al and W metal films deposited in reverse order. This inverted film geometry (Al over W instead of our conventional W over Al) offers a simplified and robust way to dramatically increase the thickness of Al energy collecting "fins" coupled to thin W-TEs in a CDMS sensor geometry.

Data are presented from experiments with several "inverted" geometry test devices exposed to a collimated beam of x-rays from a NaCl fluorescence source. The results are compared to data obtained with similar devices fabricated in the standard, "non-inverted" geometry.