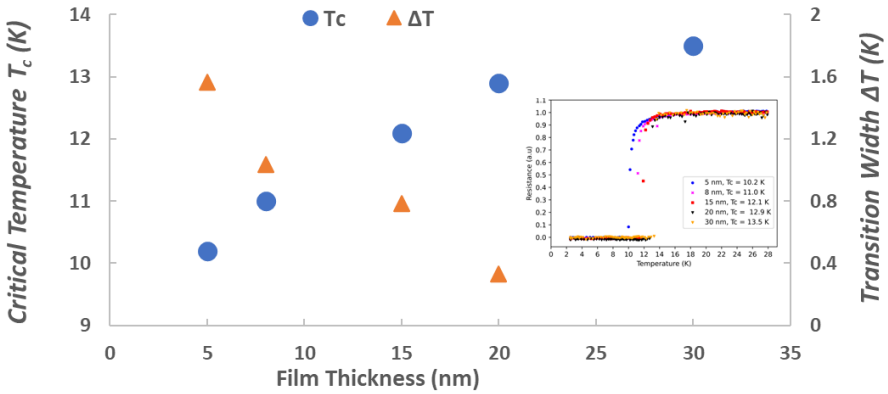

Figure 1. Superconductivity of PEALD NbN films: T_c vs thickness, and ΔT vs thickness

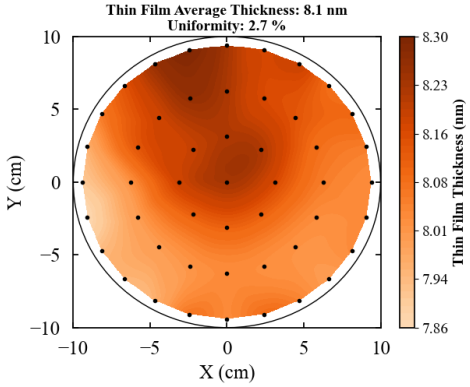

Figure 2. Excellent thickness uniformity for 8 nm NbN over200 mm achieved by PEALD

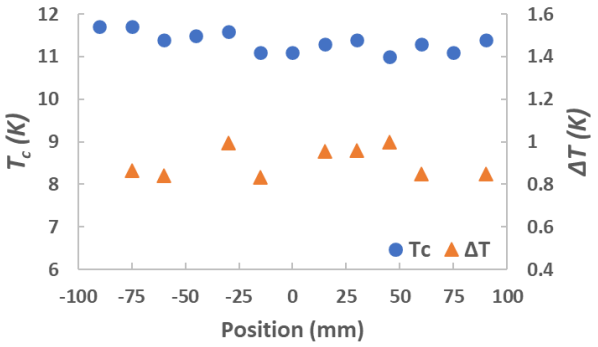

Figure 3. Excellent uniformity of T_c and ΔT for 8 nm NbN over 200 mm achieved by PEALD

*Table I. Comparison of our parameter spread with literature data**

*NbN Data in contrast literature were achieved on Oxford Instruments Plasma Technology ALD tool, OpAl:

- *Knehr E, et al. "Wafer-level uniformity of atomic-layer-deposited niobium nitride thin films for quantum devices". Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films, 2021, 39(5): 052401.*

	OpAl over 100 mm area, processed at 380 °C, 60 s plasma exposure per cycle				FlexAl over 200 mm area, processed at 250 °C, 5 s plasma exposure per cycle			
Parameter	Ave.	Max	Min	Uniformity	Ave.	Max	Min	Uniformity
Thickness (nm)	6.1	-	-	±3.6%	8.1	8.3	7.86	±2.8%
Critical temperature T_c (K)	10	10.3	9.3	± 5%	11.4	11.7	11	± 3.1%
Transition width ΔT (K)	1.5	1.75	1.38	12.3%	0.91	1	0.83	9%
RT Resistivity (μΩ cm)	300	390	260	21.7%	150	153	147	2.0%
Jc @ 4.2K (MA/cm^2)	4.7	5.7	3.1	27.7%	Under test	11.91	Under test	Under test