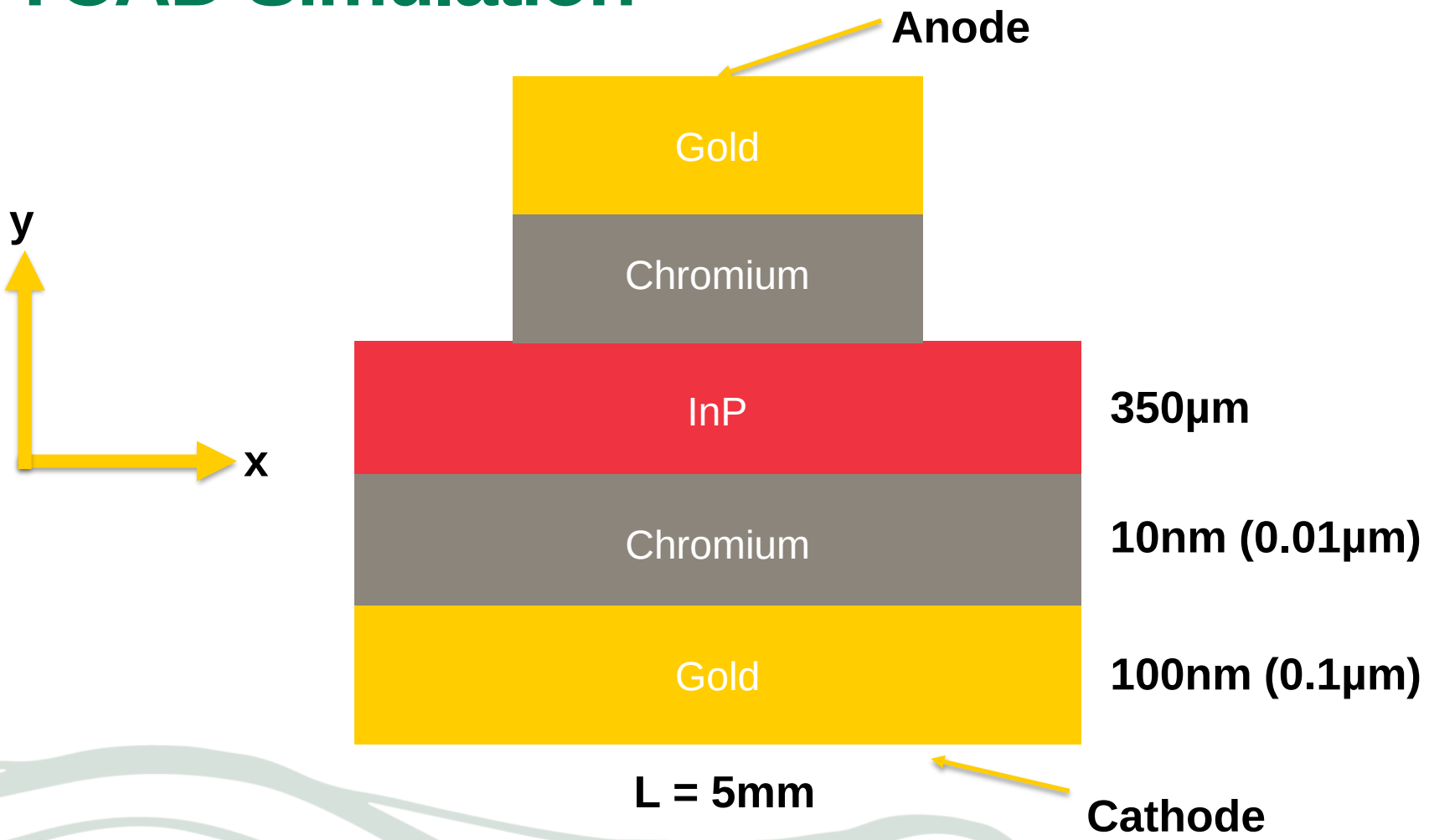




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HEP InP Thin Films Update
September 1, 2026

2D TCAD Simulation

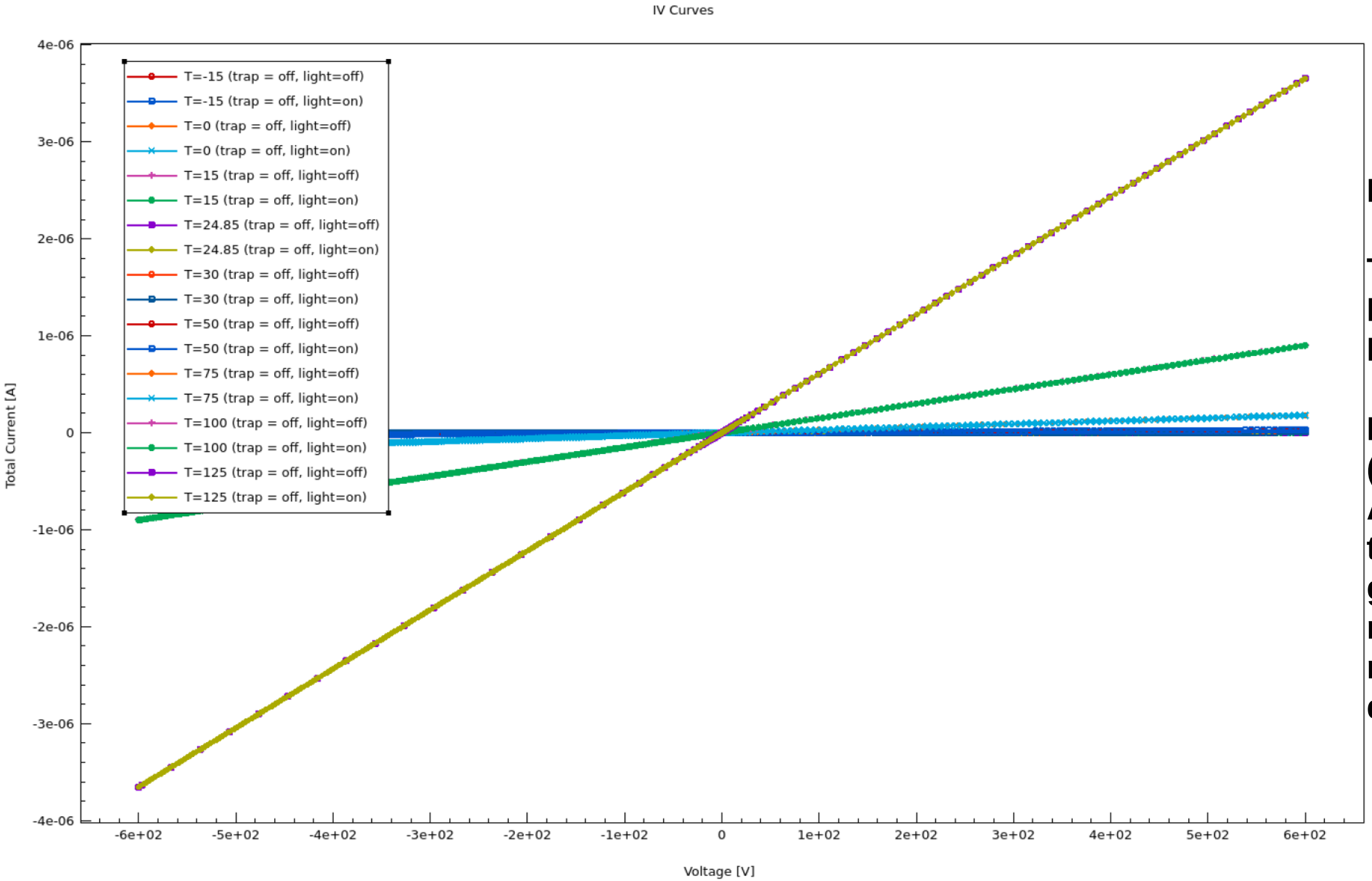


Beam Parameters

Table 5: Beam Line Properties

Facility	Beam Energy [keV]	Beam Diameter [μm]	Operational Temperature [C]	Beam Flux [ph/s]	Sample support
CLS	15	40	2.5	1.25×10^{11}	Thick PCB
DLS	15	2	-15	1.18×10^{8}	Thin PCB with enhanced thermal control

With CLS

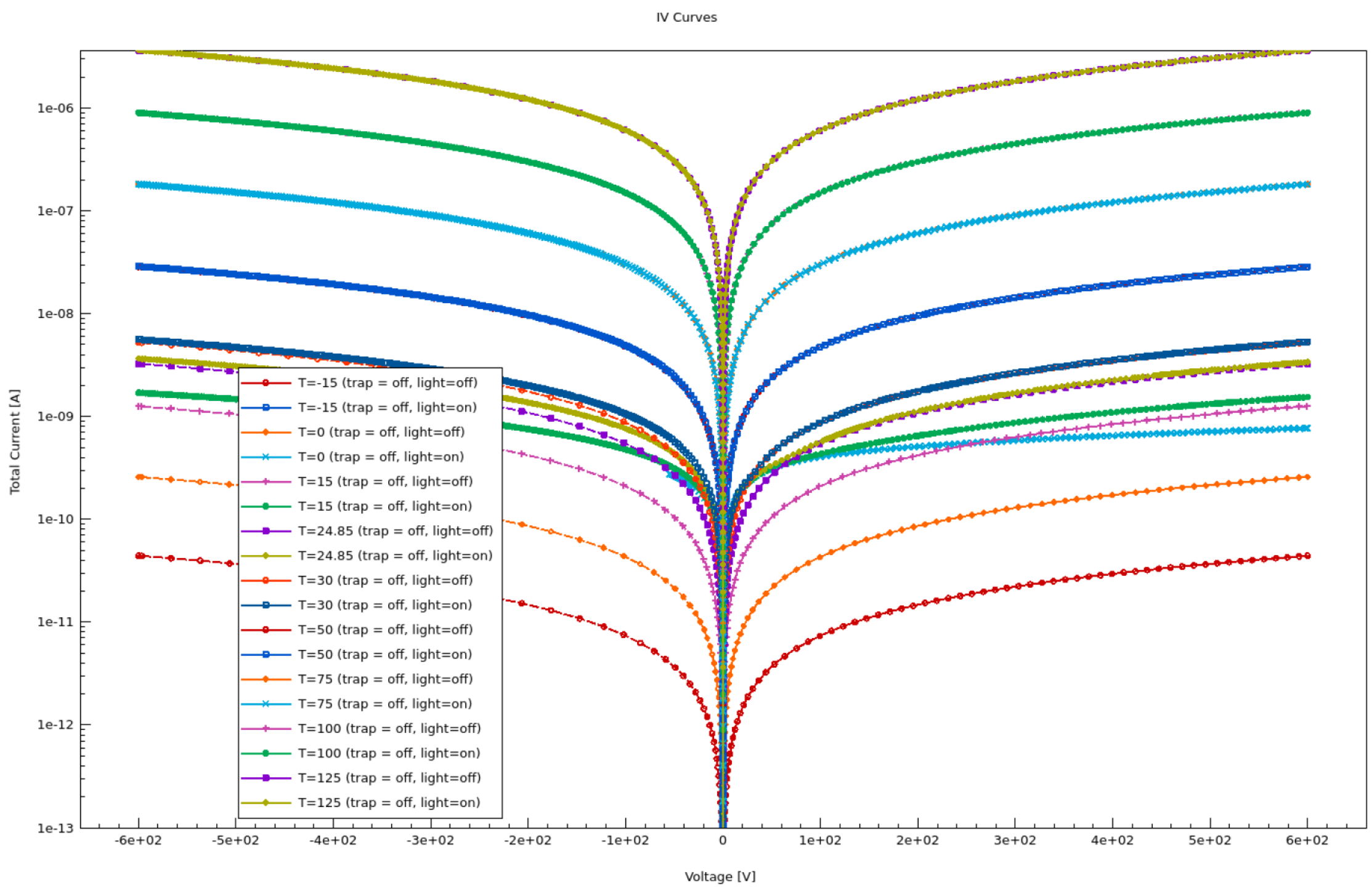


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Linear

Trap Distribution Model Off

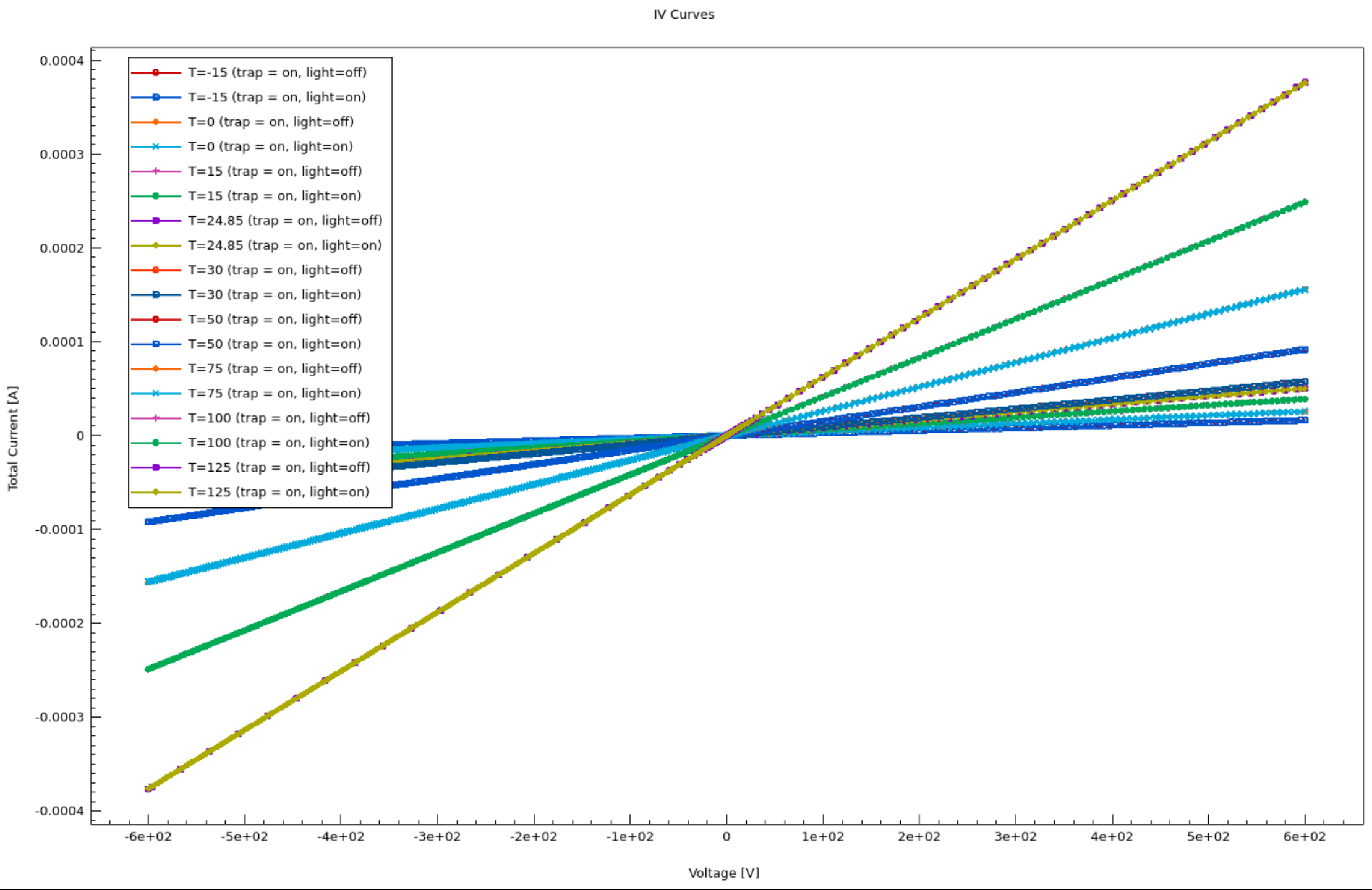
Light (On means Activated the optical generation module, off means deactivated)



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Log

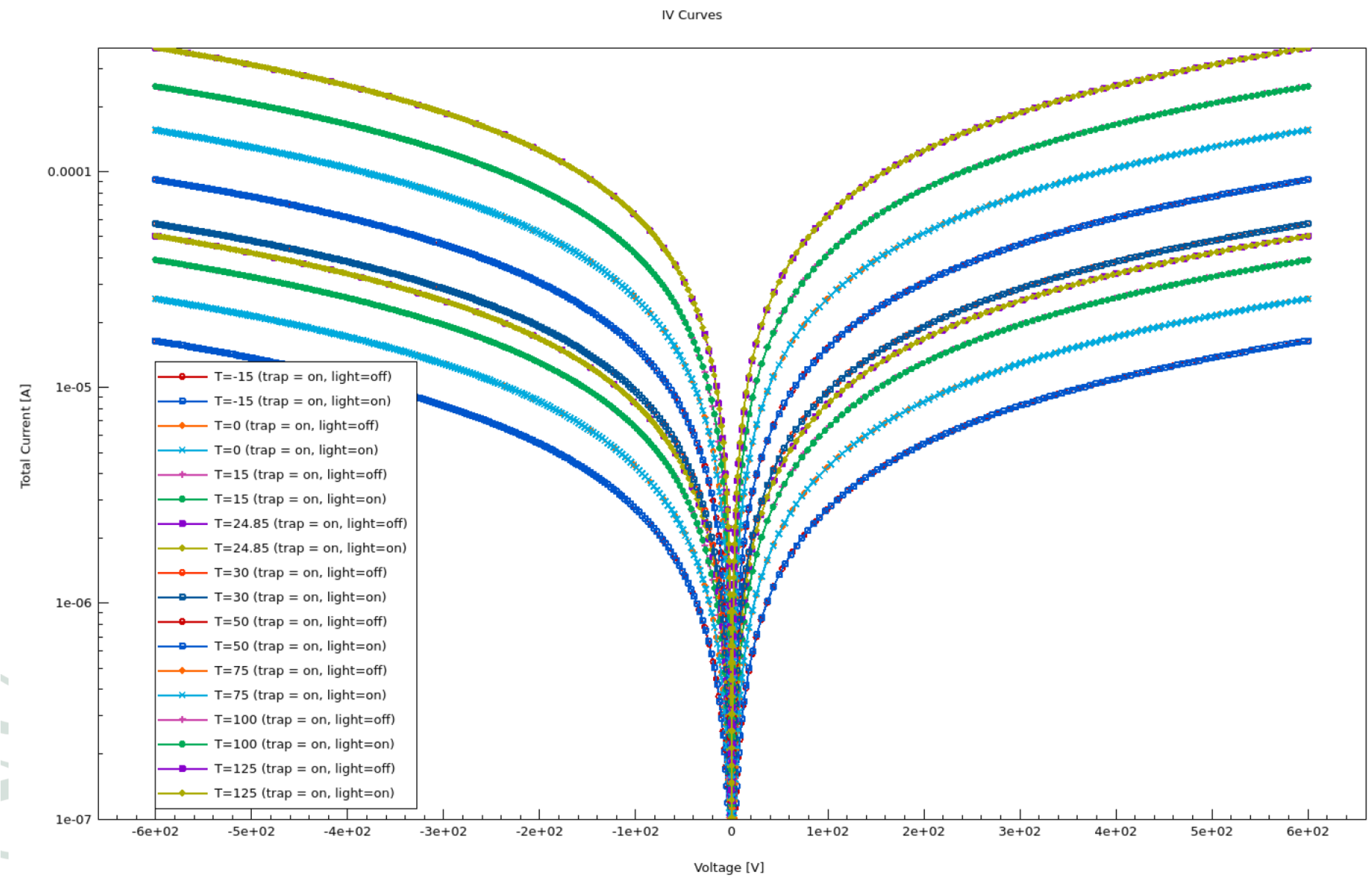
Trap Distribution Model Off



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Linear

Trap Distribution Model On

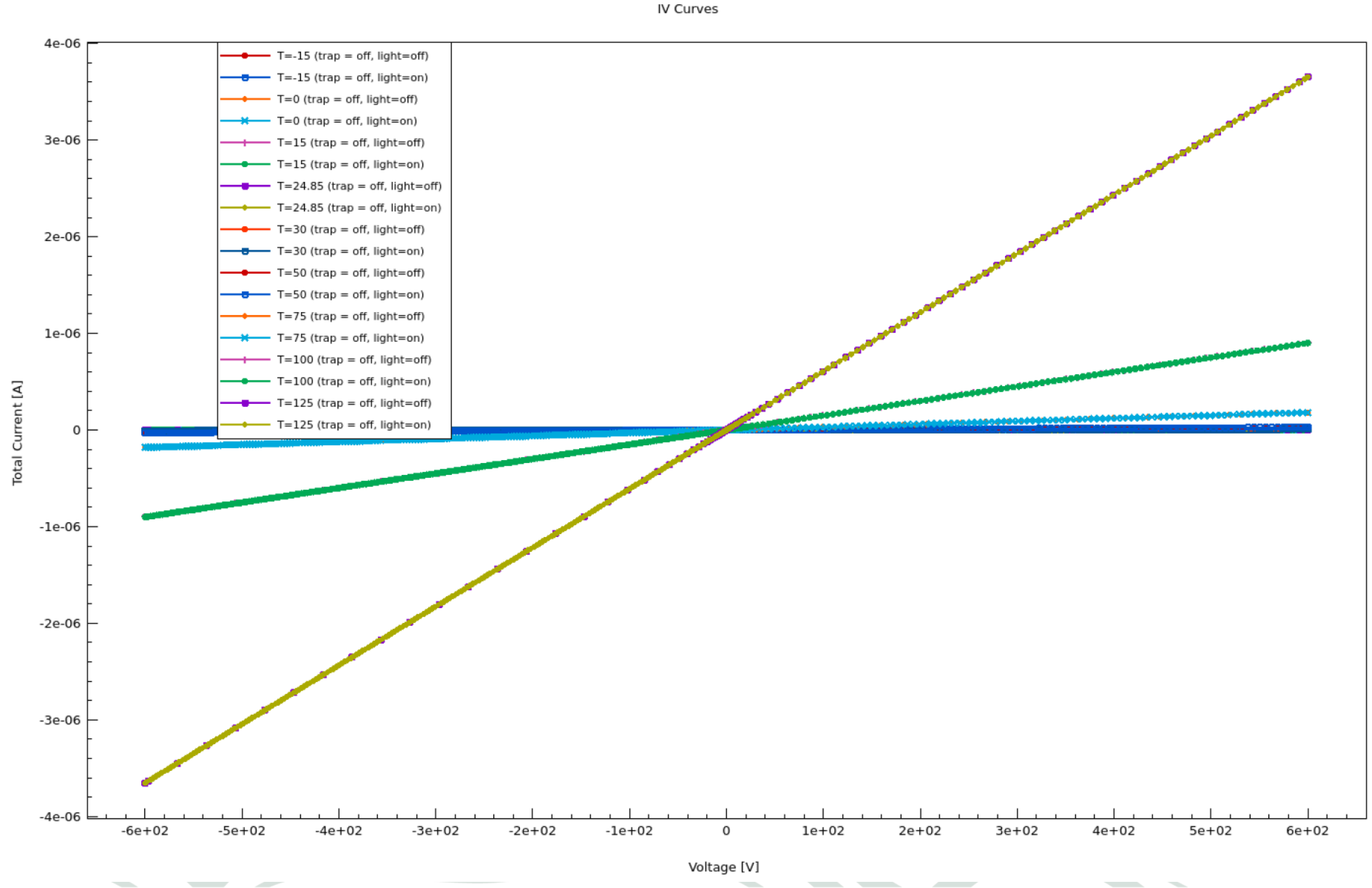


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Log

Trap Distribution Model On

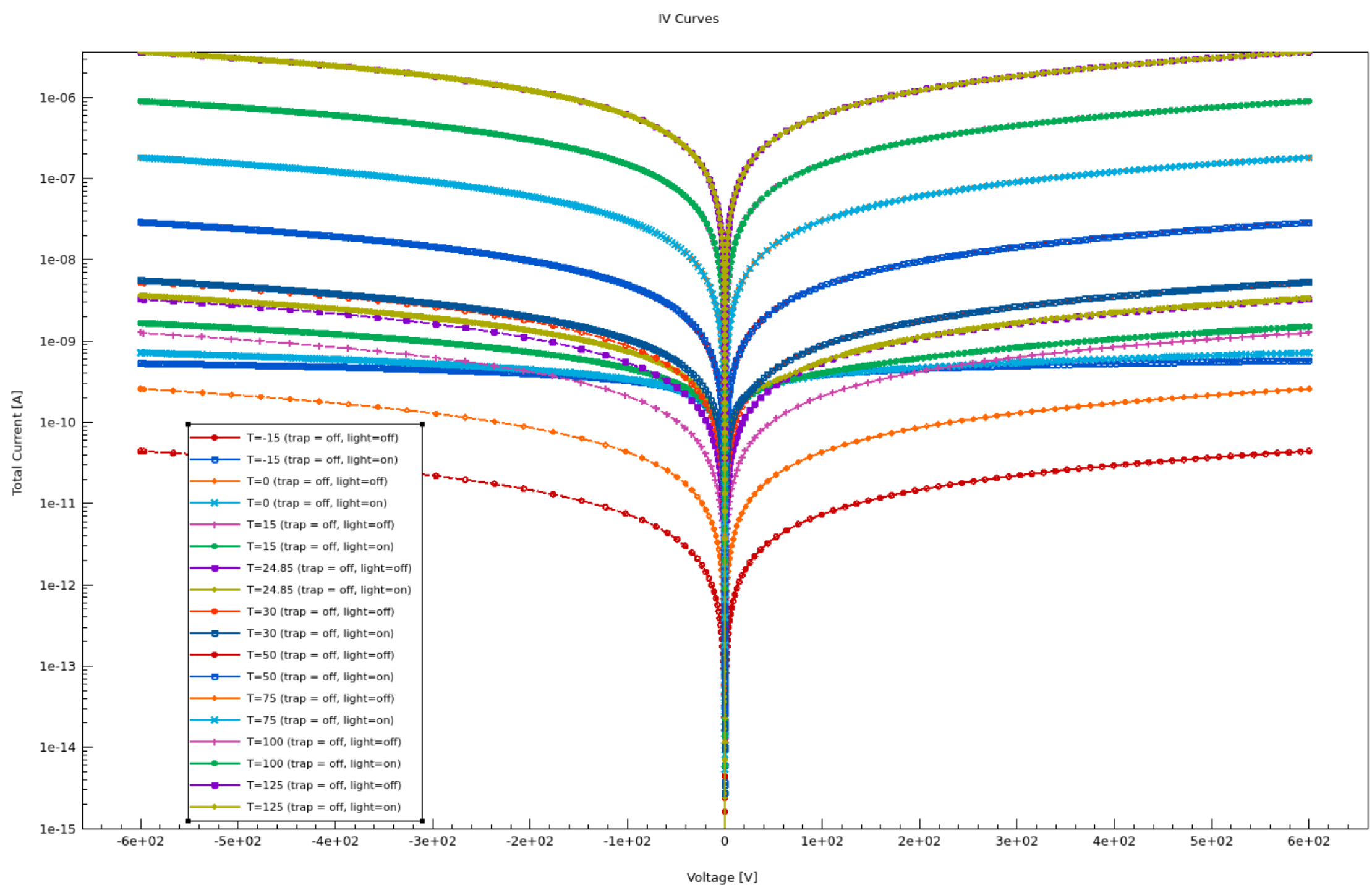
With DLS



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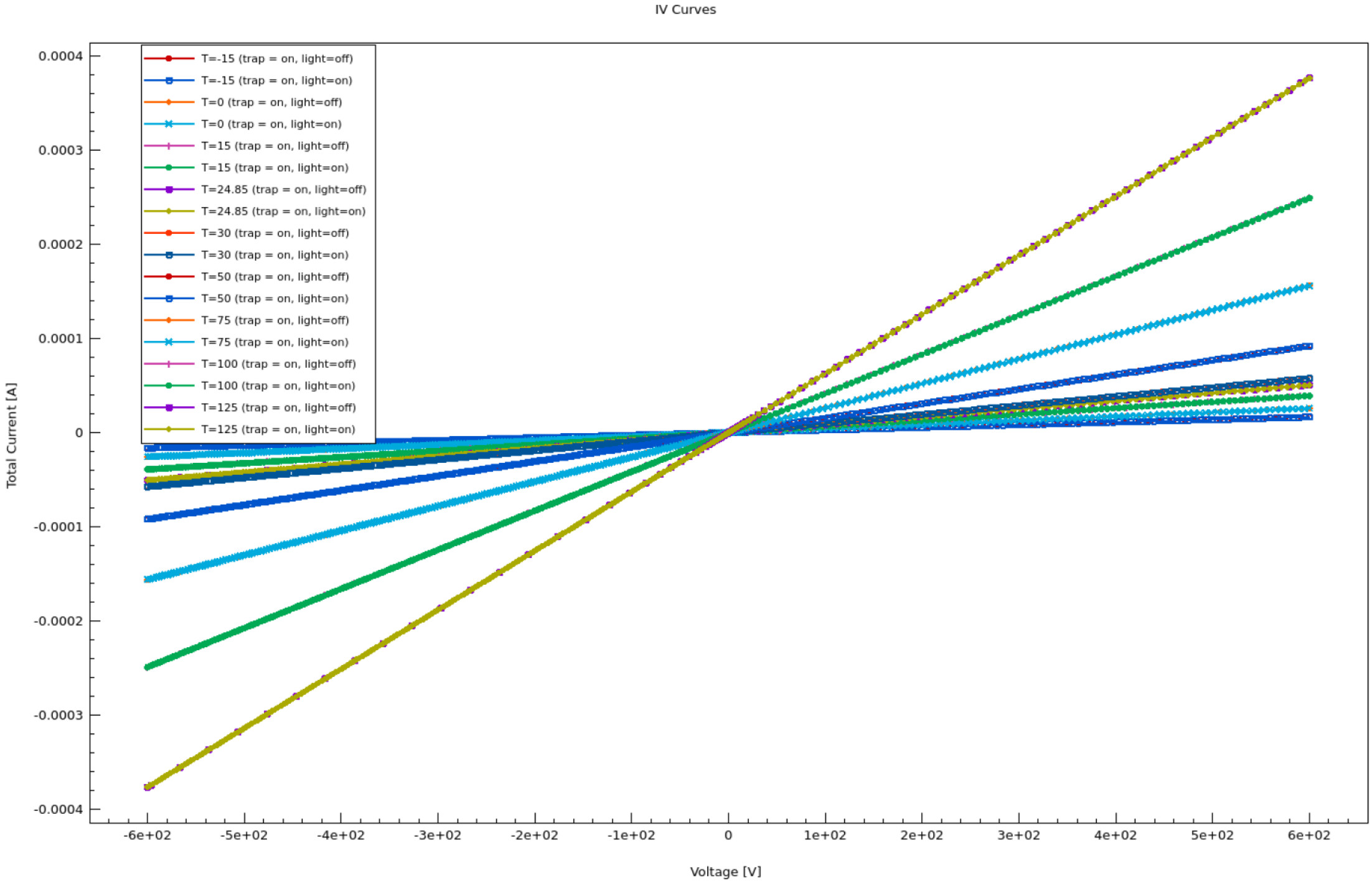
Trap Distribution Model Off



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Log

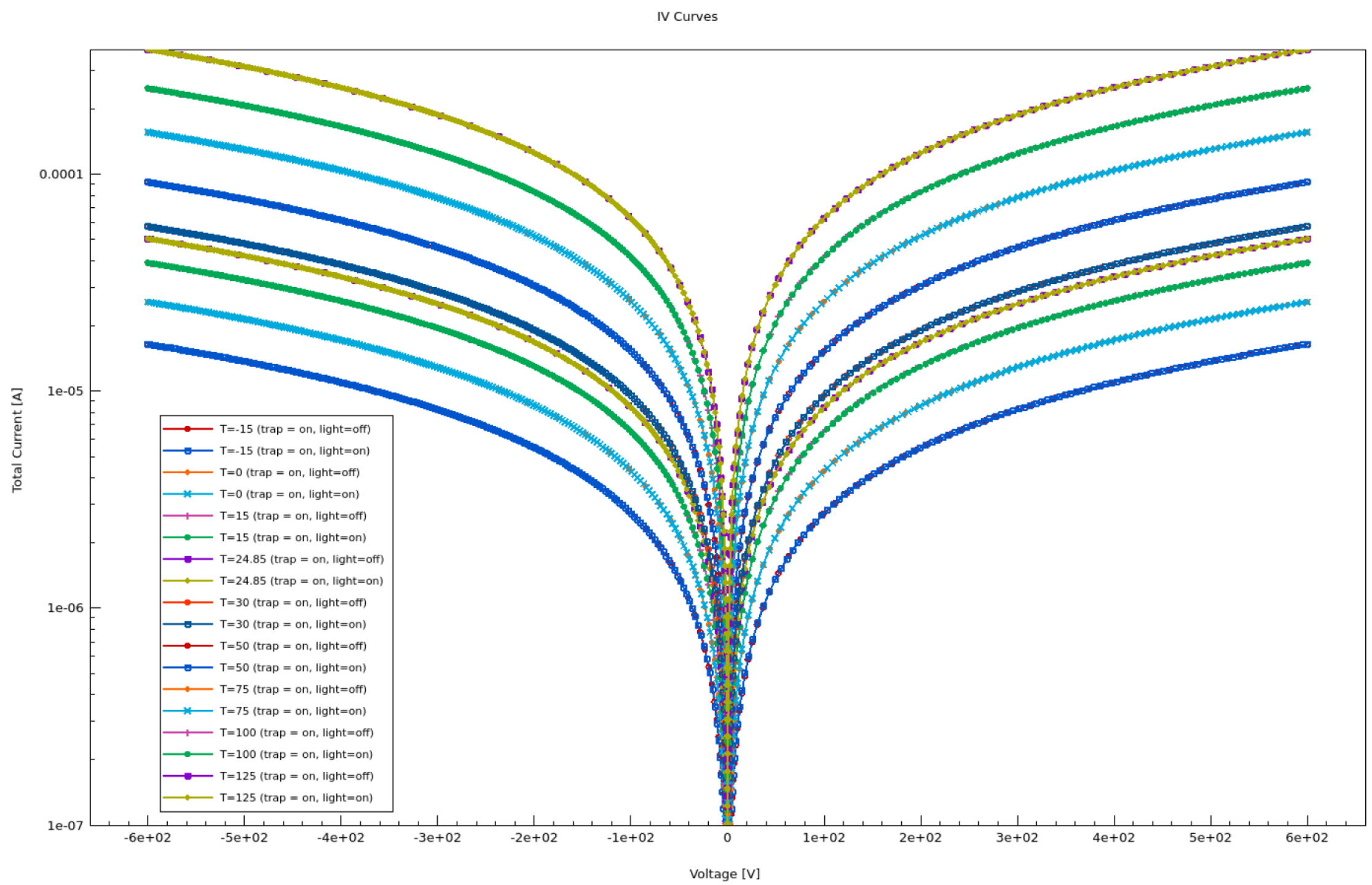
Trap Distribution Model Off



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Linear

Trap Distribution Model On



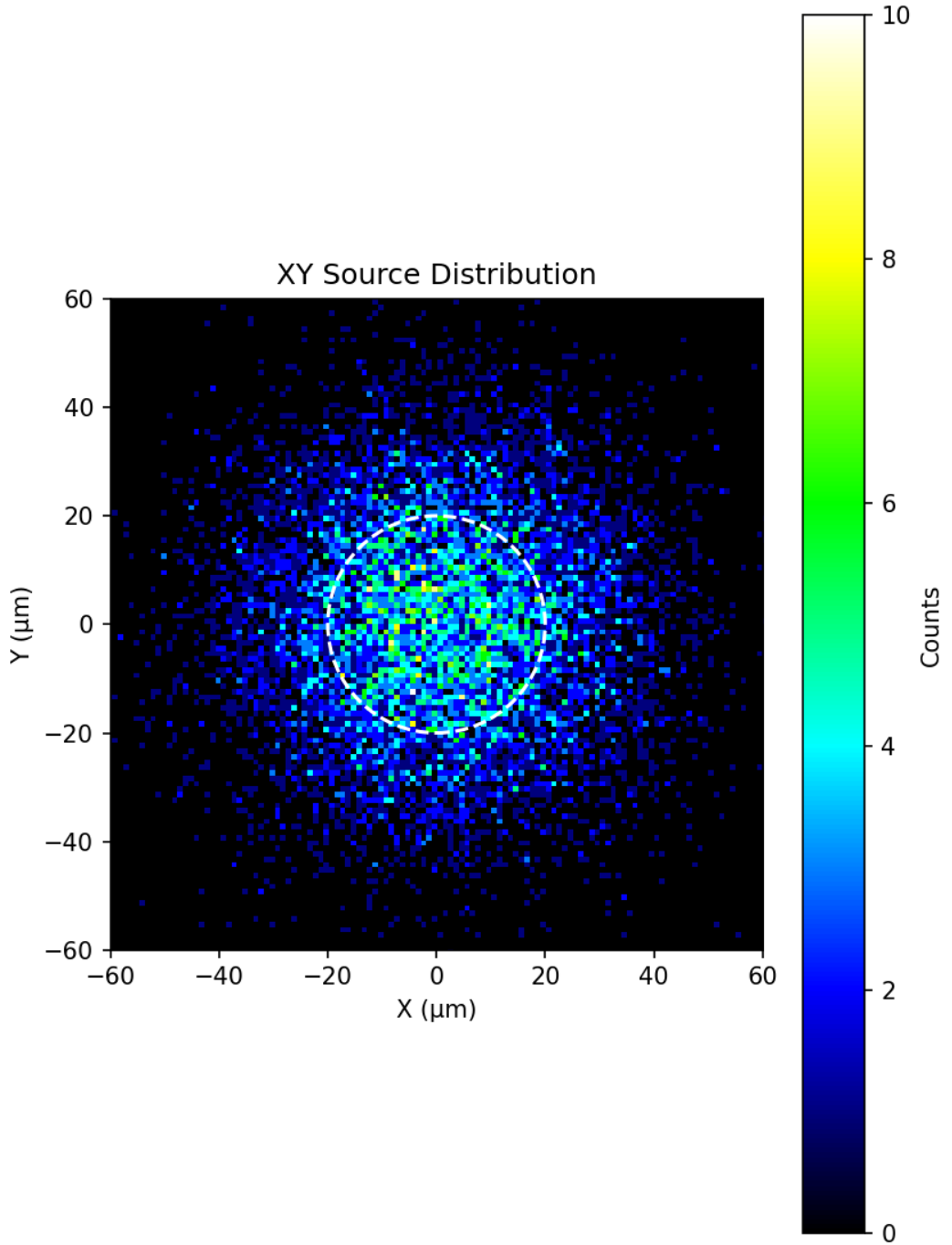
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Log

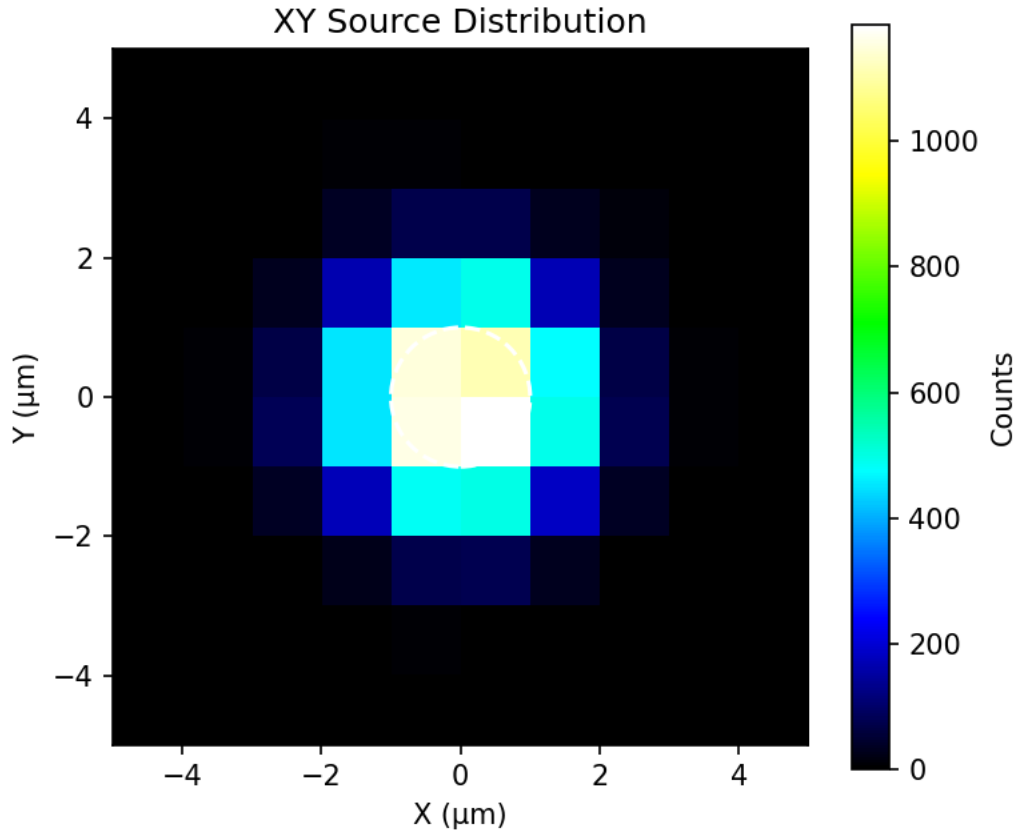
Trap Distribution Model On

Backup

CLS


XY Source Distribution
Y (µm)
X (µm)
Counts
60
40
20
0
−20
−40
−60
10
8
6
4
2
0

DLS


XY Source Distribution
Y (µm)
X (µm)
Counts
4
2
0
−2
−4
1000
800
600
400
200
0