

William and Mary Cell Production

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July 9, 2007

W&M Cell Inventory

Name	Type	Density (amg)	Lifetime (hrs)	Max Polarization
Aaron	3.5" 42 deg	7.57	12	33%-Rb
Dominic	3" 42 deg	7.56	9.5	58%-Rb 53%-K
Archie	3" 90 deg	7.73	36	41%-Rb 44%-K
Hamlet	3" 42 deg	Fill Friday	XXX	XXXX

UVa Cell Inventory

Name	Type	Density (amg)	Lifetime (hrs)	Max Polarization
Antoinette	3.5" 90 deg	~7.5		
Samantha	3" 42 deg	~7.5	26	53%, masing
Stephanie	3" 90 deg	~7.5		
Boris	3" 42 deg	~7.5		

Target Lab Research

- W&M working to measure κ_0 for potassium at our operating temperatures.
- W&M has new oven to accommodate these new cells.
- UVa will finish new oven in a couple of weeks.

Summary

- Total number of 42 deg, 3" cells=4
- Total number of 90 deg, 3" cells=2
- 1 each, 42 deg and 90 deg cells that are 3.5".
- Production in each lab is about one cell per month.
- Estimated end of year inventory=16 (+2) cells.
- Efficiency of production of high polarization cells is quite high now.
- All cells use 90 Torr of N₂ and 5:1 K:Rb alkali ratio.
- All cells tested with approx. 40-50 Watts of light on cell!