Pumped UVa Transversity Cells

Vert 90-deg cells in red and Long 42-deg cells in blue

Cell	Max Pol	Masing Thresh	Lasers & Power	Density (ρ)	Pressure (265^{o}C)
Samantha	70%	56%	3C/60W	7.8amg	12.8atm
	53%*	25%*	3F/40W		
Boris	39%*	none*	3F/40W	8.0amg	12.9atm
Brady	72%	43%*	3C/60W	7.9amg	12.9atm
Astralweeks	70%	32%*	2C1F/60W	8.1amg	12.9atm

NOTE: all cells have approximately a 30hr lifetime

*with gradient coil OFF, all other measurements with gradient ON

Lasers: F=FAP C=Comet

Final Alkali Ratio of the Cells

- Amount of Rubidium - one always gets more or equal amount of Rb compared to starting K/Rb ratio
- Chase Method - the more alkali one chases into the cell the closer one gets to the initial ratio
- Dependence on Starting Ratio - the higher the ratio the more the variance in final amount
- Range of Final Alkali Ratio - at the 5:1 K/Rb level, the final ratios range from 2.5:1 to 5:1
- Optimal Alkali Ratio for Max Polarization - between 3:1 and 7:1 (not that sensitive)
- Samantha, Brady & Astralweeks are all within the optimal range, similar to GEN's Edna

Transversity Cell Characterizations

Vert 90-deg cells in red and Long 42-deg cells in blue

Cell	PB	PC	WIN	WALL
Samantha	X	X	X	X
Boris	X	X	X	X
Brady	X	X	X	X
Astralweeks	X	X		
Stephanie	X	X	1	
Alex	X			

NOTE#1: the balance of cells Antoinette 3.5-inch, Tigger and Moss have no measurements done on them to date

NOTE#2: Melissa was pumped to 55% at W&M