Name:_____   **Date:**_____

Partner:_____

The Bohr Model of the Atom

Your nicely formatted Excel worksheet should be placed in my inbox on \\files (\\files\Inbox \Physics\Pogo\OpticsLab; only one Excel document per group; it should be titled "Spectrum-Smith&Jones.xls"), assuming that you and your partner are named Smith and Jones, respectively. Please "save as" .xls format (NOT .xlsx format).

Part 1: Laser Diffraction			
	units	*Value*	*Uncertainty*
slope of $m\lambda$ versus $\sin\theta$	m		
grating spacing d	m		
Part 2: Hydrogen (H) Lamp			
	units	*Value*	*Uncertainty*
slope of $\left(\dfrac{m}{\sin\theta}\right)$ versus $\left(\dfrac{1}{n_{upper}^2}\right)$	m^{-1}		
intercept of $\left(\dfrac{m}{\sin\theta}\right)$ versus $\left(\dfrac{1}{n_{upper}^2}\right)$	m^{-1}		
Rydberg Constant using this slope	m^{-1}		
Rydberg Constant using this intercept	m^{-1}		
Average Rydberg constant of all lines	m^{-1}		
Accepted Rydberg Constant	m^{-1}		

In the space below, comment on your results. How does your grating spacing from part 1 agree with the manufacturer's value? How does your measured Rydberg constant agree with the accepted value? Can you think of any reasons for discrepancies?