

### Hydrogen Classical Wavelengths and Intensities

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Wavelengths:

$$\frac{1}{\lambda} = R_H \left( \frac{1}{n_1^2} - \frac{1}{n_2^2} \right) \quad ; \quad R_H = 1.09737316 \times 10^7$$

<u><math>n_2</math></u>	<u><math>n_1</math></u>	<u>Relative intensity</u>	<u>Wavelength (nm)</u>
9	2	5	383.5384
8	2	6	388.9049
7	2	8	397.0072
6	2	15	410.174
5	2	30	434.047
4	2	80	486.133
3	2	180	656.2852
7	4	5	2165.53
6	4	8	2625.15
5	4	15	4051.16
7	5	4	4652.51
6	5	6	7457.8
7	6	3	12368.5

According to Absolute Relativity:

$$\text{Intensity -- } I = \lambda V^5 \quad \Leftrightarrow \quad I = \frac{2.55 \times 10^{11} \cdot \lambda}{n_2^{3.5} \cdot n_1^{3.6}}$$