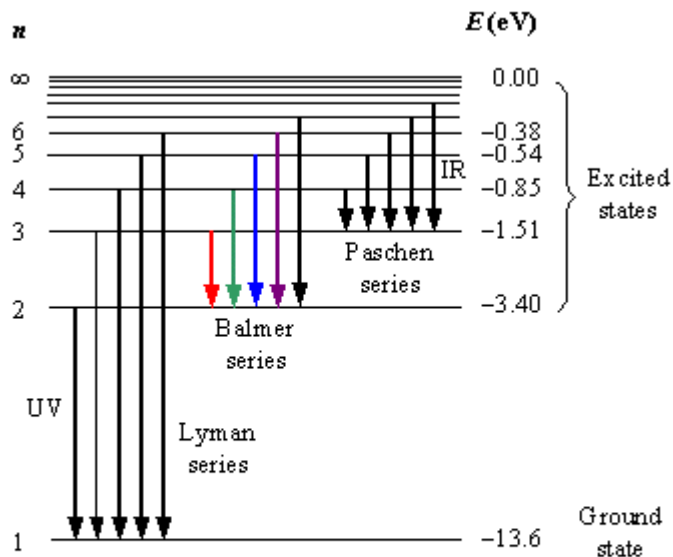
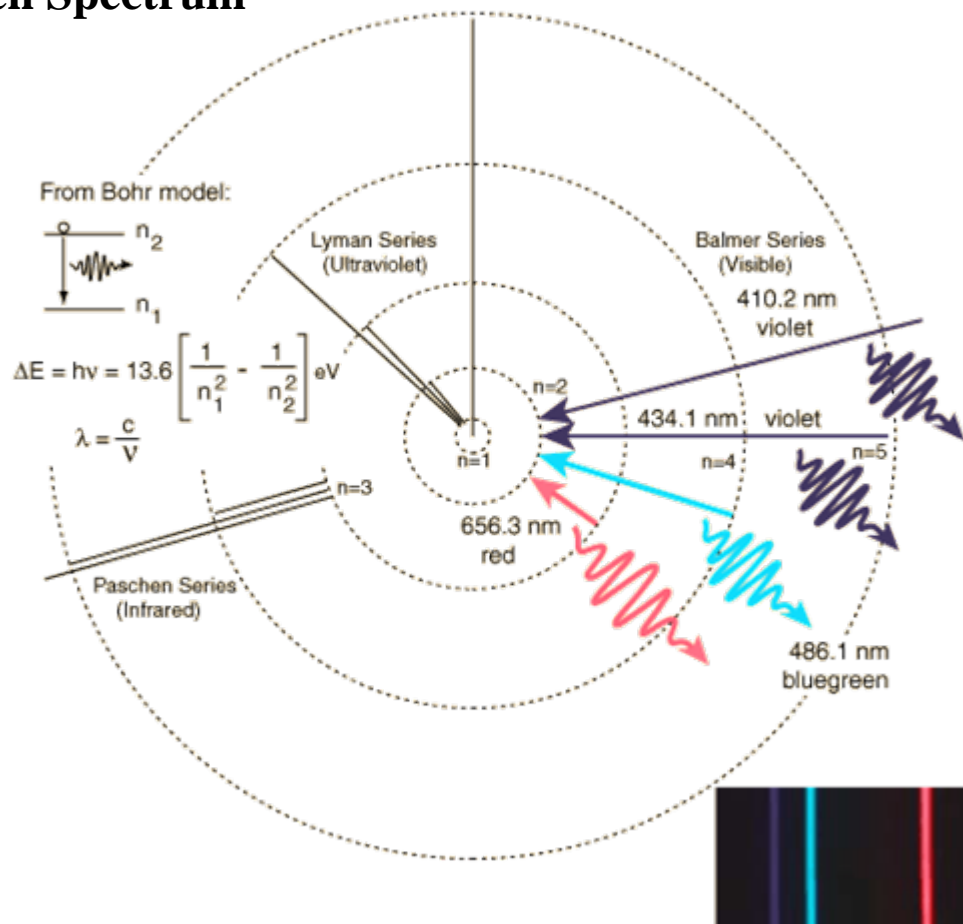


$$p\lambda = d(\sin \theta_p + \sin \theta_i), \quad p = \pm 1, \pm 2, \pm 3, \dots$$

Hydrogen Spectrum

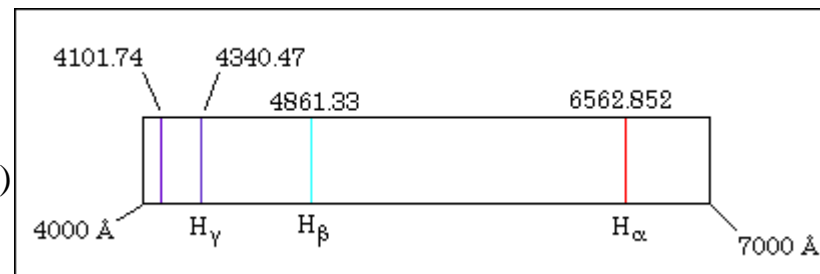


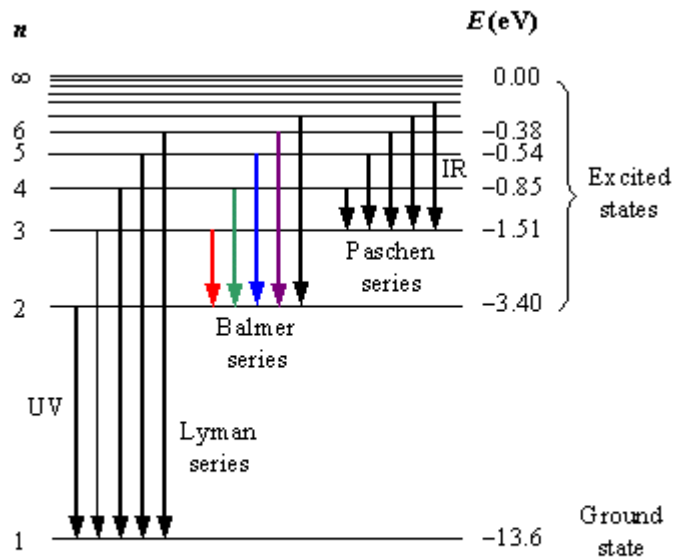
Energy levels of the hydrogen atom with some of the transitions between them that give rise to the spectral lines indicated.



The measured lines of the [Balmer series](#) of hydrogen in the nominal [visible region](#) are:

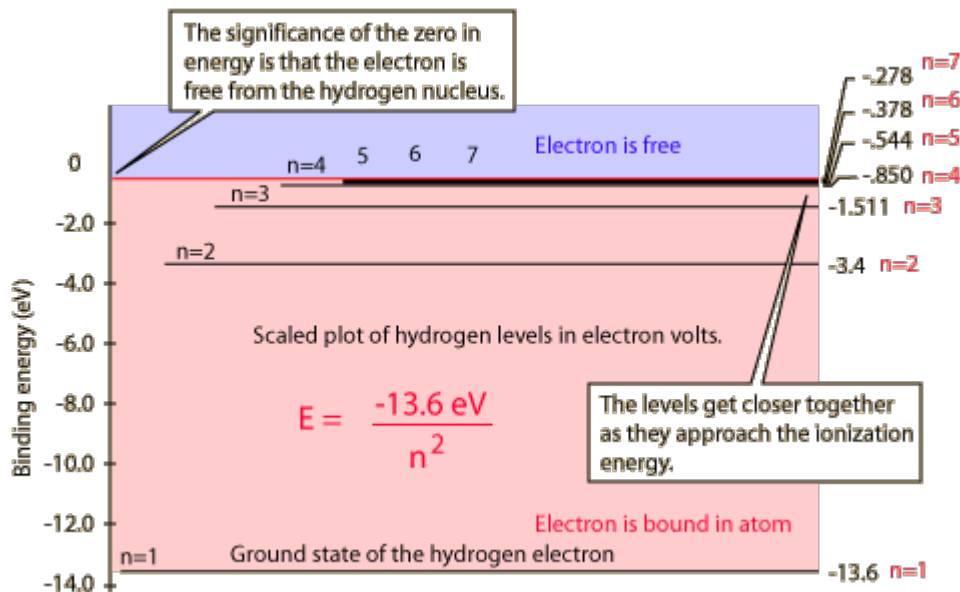
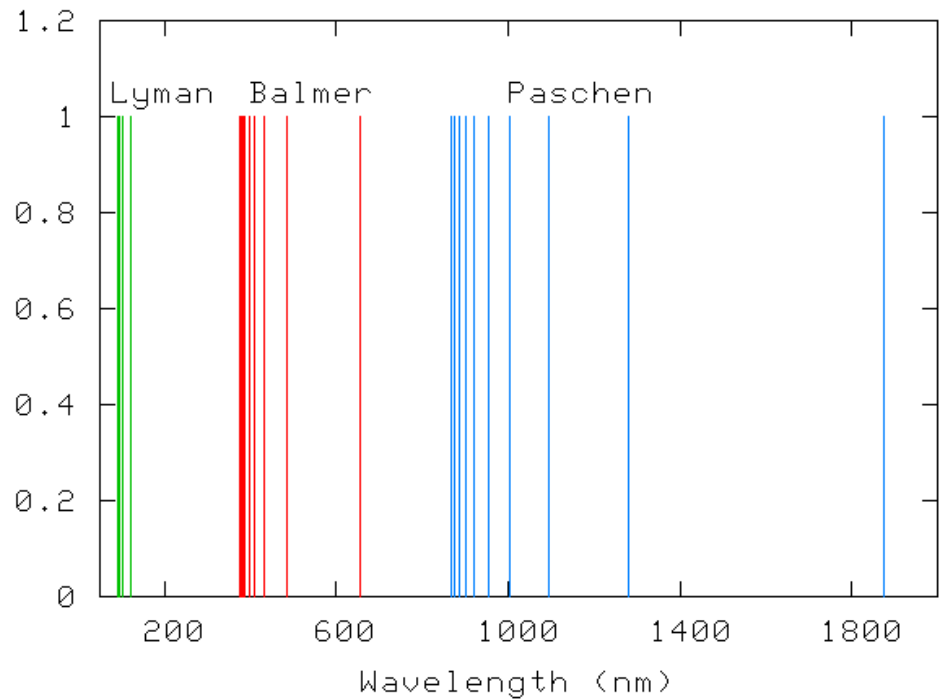
Wavelength (nm)	Relative Intensity	Transition	Color
383.5384	5	9 → 2	Violet
388.9049	6	8 → 2	Violet
397.0072	8	7 → 2	Violet
410.174	15	6 → 2	Violet
434.047	30	5 → 2	Violet
486.133	80	4 → 2	Bluegreen (cyan)
656.272	120	3 → 2	Red
656.2852	180	3 → 2	Red



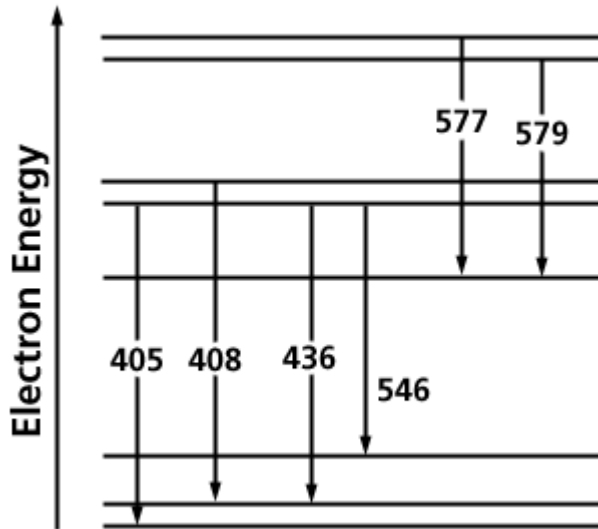


Energy levels of the hydrogen atom with some of the transitions between them that give rise to the spectral lines indicated.

Spectrum of hydrogen



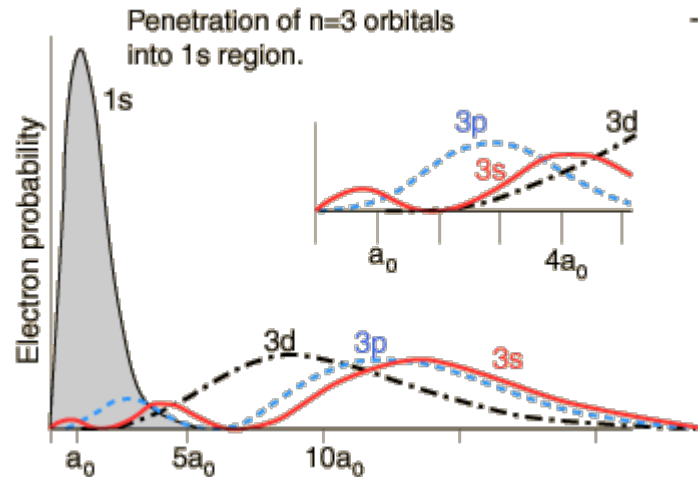
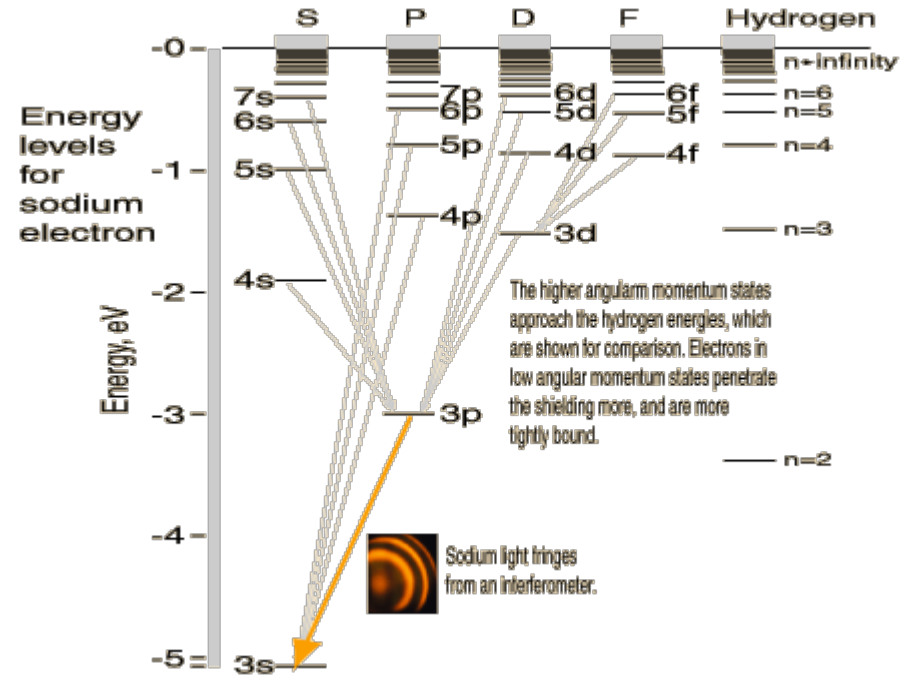
Mercury



The measured lines of Mercury in the nominal [visible region](#) are:

Wavelength (nm)	Relative Intensity	Color
614.95	weak	Red
579.07	strong	Yellow
576.96	strong	Yellow
546.07	strong	Green
435.84	very strong	Blue
434.75	strong	Blue
433.92	medium	Blue
407.78	strong	Violet
404.66	very strong	Violet

Sodium



Sodium Doublet

