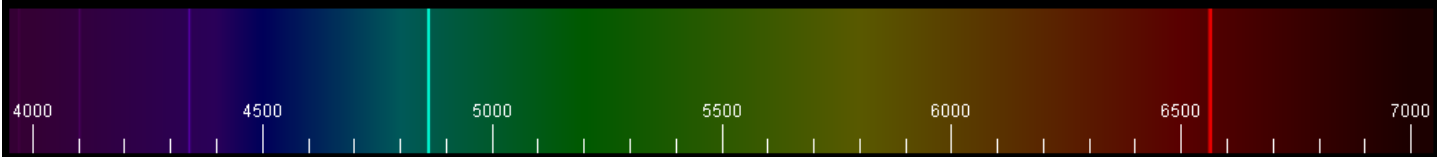


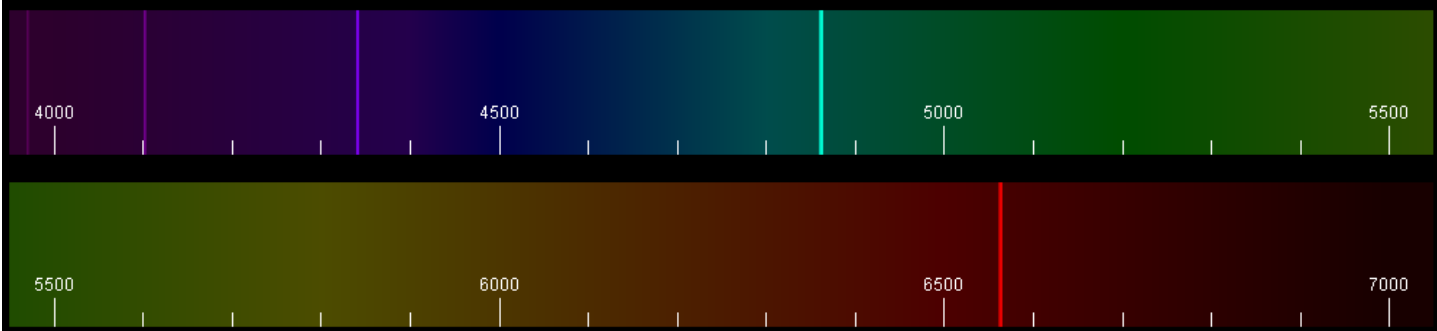
Spectrum of Hydrogen Gas Discharge

This is a colour representation of the emission line spectrum of Hydrogen excited in a electrical discharge.

Note that a faint continuum was added only to give a better impression of the location of the colours in the spectrum.



The spectrum in two parts:



<http://astro.u-strasbg.fr/~koppen/discharge/hydrogen.htm>

Intensity	Wavelength (Å)
5	3835.38
6	3889.05
8	3970.07
15	4101.74
30	4340.46
30	4861.28
10	4861.29
60	4861.36
90	6562.71
30	6562.72
180	6562.85

http://physics.nist.gov/PhysRefData/Handbook/Tables/hydrogentable2_a.htm

Equations and Unit Conversions

Frequency (denoted f) * Wavelength (denoted λ) = speed of light (denoted c) (299,792,458 meters/second)
Energy (denoted E) = Frequency (denoted f) * Planck's constant (denoted h) ($6.62606896 \times 10^{-34}$ Joule·Second)
1 eV = 1.602×10^{-19} Joules
1 angstrom (symbol Å) = 0.1 nm and $10 \text{ Å} = 1 \text{ nm}$
1 nanometer = 1×10^{-9} meter

Wavelength Nanometers	Wavelength Angstrom Å	Frequency (f) Hertz	Energy E Joules	Energy E eV	Hydrogen Balmer Line
400	4000	7.49E+14	4.97E-19	3.10	
410.2	4102	7.31E+14	4.84E-19	3.02	Hδ
434.0	4340	6.91E+14	4.58E-19	2.86	Hγ
450	4500	6.66E+14	4.41E-19	2.76	
486.1	4861	6.17E+14	4.09E-19	2.55	Hβ
500	5000	6.00E+14	3.97E-19	2.48	
550	5500	5.45E+14	3.61E-19	2.25	
600	6000	5.00E+14	3.31E-19	2.07	
650	6500	4.61E+14	3.06E-19	1.91	
656.3	6563	4.57E+14	3.03E-19	1.89	Hα
700	7000	4.28E+14	2.84E-19	1.77	
750	7500	4.00E+14	2.65E-19	1.65	

Hydrogen Atom

