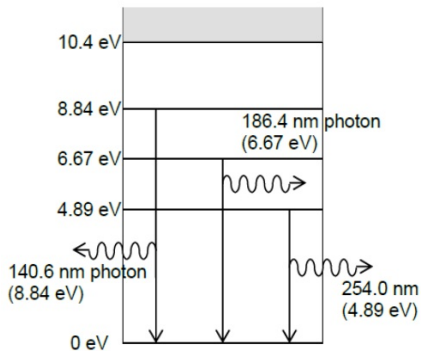


$\lambda$		
140.6 nm	8.84 eV	Note that these wavelength/energy pairs correspond to the excitation levels of mercury vapour.
186.4 nm	6.67 eV	
254.0 nm	4.89 eV	
312.3 nm	3.98 eV	
572.9 nm	2.17 eV	What about these wavelength/energy pairs?
686.8 nm	1.81 eV	

$$E = \frac{hc}{\lambda} = \frac{4.14 \times 10^{-15} \text{ eV} \cdot \text{s} (3.00 \times 10^8 \text{ m/s})}{254 \times 10^{-9} \text{ m}} = \mathbf{4.89 \text{ eV}}$$



ionization level

3<sup>rd</sup> excitation level

2<sup>nd</sup> excitation level

1<sup>st</sup> excitation level

ground state

