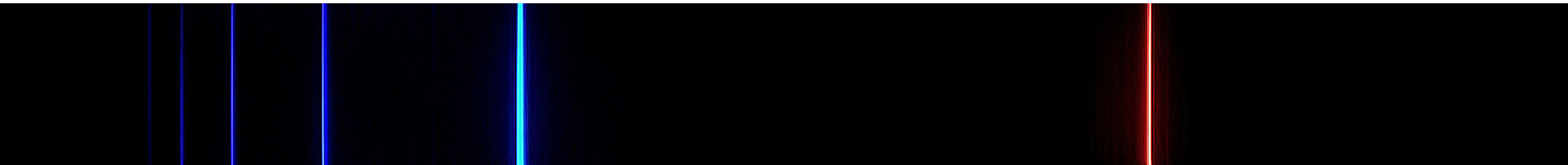


The Balmer Series



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The Balmer Series

Which quantum numbers give rise to the transitions in the Balmer series for hydrogen. The first four lines of the Balmer series are 656.5 nm, 486.3 nm, 434.2 nm and 410.3 nm.

A. Provide the quantum numbers for the Balmer emission lines

Transition at 656.5 nm _____ to _____.

Transition at 486.3 nm _____ to _____.

Transition at 434.2 nm _____ to _____.

Transition at 410.3 nm _____ to _____.

B. Predict the wavelength of the next transition in the Balmer series.

Wavelength = _____.