

28 The energy levels in a hydrogen atom are shown.

energy level n	energy / eV
1	-13.6
2	-3.4
3	-1.5
4	-0.9
5	-0.5

A red spectral line known as the hydrogen alpha line has been of great value to astronomers. Its wavelength is 656.28 nm.

Which level change gives rise to the hydrogen alpha line?

A 2 to 1

B 3 to 1

C 3 to 2

D 5 to 2