



Albireo is a bright star in the constellation Cygnus. Even at low magnification it easily resolves into one of the most beautiful colour-contrast binaries in the sky. But only spectroscopy can reveal a hidden story behind each of the stars that make up this beautiful pair.

The brighter, orange star Albireo A is a red giant whose relatively cool surface allows the expression of a host of elemental absorption lines. In my image I have gone on a treasure hunt and have identified some of the chemical elements in the spectrum. But look more closely and you see that the hydrogen Balmer absorption series is quite distinct as well, something which should not be so visible in such a cool star. Albireo A is in fact itself a binary star, very narrowly paired with a much hotter star which betrays itself only in the spectrum.

The fainter, blue star Albireo B is a hot B-type main sequence star. The hydrogen Balmer absorption series is very obvious in its spectrum. Again, look more closely and you notice that the Balmer hydrogen alpha line at 6563Å is in fact an emission line not an absorption line. What is going on here? Albireo B has a rapidly rotating disk of ejected gas around its equator which fluoresces as it is bathed in intense UV light from the hot star.

Come along to my workshop on the 15th August to learn how easy it is to add this dimension to the wonderful hobby of amateur astronomy smile emoticon  
<http://astrophotographycourses.co.uk/courselist.html>

— at Near Wells, Somerset UK.