

## “A quick hop around the Hyades”

I have just started observing multiple-star systems from my garden in Ramsgate. I do not possess a micrometer or astrometric eyepiece so I have been estimating stellar separations as fractions of the field of view of my eyepieces. This imprecise method has allowed me to develop some of the skills needed to locate and observe these objects. Light pollution restricts my observations to a southerly direction where Taurus has recently been an attractive target. Using *Burnham's Celestial Handbook* as a guide I have concentrated on the Hyades. The following table summarises my observations (using a 6" reflector) of 5 objects noted by Burnham in that region :

Object (1950 epoch)	Type	Components per Burnham	Comments
$\theta$ Tauri 04h 25m RA 15° 46' Dec	Binary	Magnitudes : 3.5 - 4 Separation : 337" Position angle : 346°	Very easy pair to observe. No special colouration noted. Separation estimated at 440" - increase from Burnham's value ?
80 Tauri (Struve 554) 04h 27m RA 15° 32' Dec	Binary	Magnitudes : 5.5 - 8 Separation : 1.6" Position angle : 18°	Could not resolve this pair.
68 Tauri (H101) 04h 23m RA 17° 48' Dec	Triple star system	Magnitudes : 4.5 - 7.5 (A) : 4.5 - 9 (B) Separation : 1.4" (A) 77.1" (B) Position angle : 329° (A) 333° (B)	'A' component could not be resolved. 'B' component not reliably identified.
Struve 546 04h 24m RA 19° 01' Dec	Binary	Magnitudes : 8 - 9.5 Separation : 6.8" Position angle : 184°	No appreciable colouration to the components. Averted vision at 300x magnification needed to see the fainter star.
Struve 545 04h 24m RA 18° 06' Dec	Binary	Magnitudes : 7.5 - 9 Separation : 18.8" Position angle : 57°	No appreciable colouration to the components. Split at 166x magnification. Components as per Burnham.

The faintest star noted during these observations was mag 10.5 1265-876 in the Tycho-1 catalogue (collected by the star mapper of the ESA Hipparcos satellite), found in the field of 68 Tauri. With a visual limiting magnitude of 4.3 from my garden it was a hard object to see.

I would welcome any comments on  $\theta$  Tauri, whose components seem to have moved appreciably from Burnham's values. I would also welcome any comparison observations of the B-component of 68 Tauri. Since I observed the mag 9.6 star TY1 1269-829 (4h 23m RA, 17° 54' Dec) on 18/12/03 at a separation of about 400", I find it odd that I could not confidently note the presence of the mag 9 B-component at a separation of 77" (Burnham's value).

Even though it is not part of the Hyades, no visit to Taurus would be complete without taking a look at M1, the Crab Nebula (5h 32m RA, 21° 59' Dec). This object is largely accepted to be the remnant of a supernova which occurred in 1054 A.D. (although this is not completely proven). Burnham describes it as "the most conspicuous known supernova remnant ... a fairly easy object, detectable in 3 and 4 inch apertures, appearing irregularly oval in a 6-inch glass". I found it to be a very hard object to see, even with averted vision. I could not discern any boundary, shape or structure in it, "it just appeared as a fuzzy blob". I noted it as "not worth the effort to track down"; perhaps other SEKAS observers with larger apertures have achieved better results ?

Lee Russell BSc(Hons)(Open), DipPhys(Open)  
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mailto : L\_RUSSELL1@HOTMAIL.COM