

33 Doubles in Taurus

Observed 1988-1996 with a C-8 (Celestron) from Columbia, Missouri (USA) and Kansas City, Missouri.

Observer: Richard Harshaw

Dates and sky conditions were not logged at this time in my observations.

STF 383 (ADS 2515; HD 21031; SAO 93414)							Rating: 4
Position: 0324+1733		Year of last measure: 1940		Assumed distance (l.y.): 640		Assumed luminosity (suns): 25	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	8.1	n/a	n/a	G5	Y	20	
B	9.5	5 -	121 +		R	5	
Observations:							
Observed at 104x.							
Notes:							
First measure 5.7" @ 120.							
The stars show similar proper motions.							
STF 403 (ADS 2584; HD 21775; SAO 93470)							Rating: 5
Position: 0331+1947		Year of last measure: 1948		Assumed distance (l.y.): 373		Assumed luminosity (suns): 9	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	8.0	n/a	n/a	F8	W	7	
B	9.6	3 =	175 -	F8	W	2	
Observations:							
Observed at 280x. It is the W-most of three 9m stars in a 35' chain.							
Notes:							
First measure 2.9" @ 182.							
The stars have different proper motions.							
STF 406 (ADS 2580; HD 21788; SAO 111233)							Rating: 3
Position: 0331+0509		Year of last measure: 1940		Assumed distance (l.y.): 471		Assumed luminosity (suns): 23	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	7.3	n/a	n/a	F0	W	21	
B	10.1	9 =	124 =		B	2	
Observations:							

Observed at 104x.

Notes:

First measure 9.3" @ 124.

The stars have different proper motions.

STF 412 (7 Tau; ADS 2616)

Rating: 3

Position: 0334+2428

Year of last measure: 1997

	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	5.95	n/a	n/a	A3 V	W	
B	5.98	0.7 +	0 -!!	A3 V	W	
C	9.92	22.5 =	55 -		bW	

Observations:

0515 of 09/22/01 UT; S6; T8; C11. Observed at 654x.

Notes:

AB 1830, no data. 1912 (Aitken) 0.2" @ 128. Orbit calculated. Period is 375 years, semi-major axis is 0.56", and the motion is retrograde.

AC 1821: 22.4" @ 63. 1995 shown, 53 measurements in the interval. C is physical to the system.

STF 414 (H III 78; ADS 2618; HD 22116)

Rating: 2

Position: 0334+1948

Year of last measure: 1976

	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	8.1	n/a	n/a	A0	W	
B	8.3	7 =	185 -		W	

Observations:

Observed at 104x.

Notes:

First measure 7.1" @ 186.

The stars have different proper motions.

STF 422 (V711 Tau; ADS 2644; HD 22468; SAO 111291)

Rating: 3

Position: 0337+0035

Year of last measure: 1975

Assumed distance (l.y.): 94

Assumed luminosity (suns): 3.24

	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	5.9	n/a	n/a	G5 IV	O	3.03
B	8.8	6 =	259 +	K1 IV	Y	0.21

Observations:

Observed at 207x. Some observers report Y and B. Webb saw them as D and B.

The dY star 10 Tau is 11' S.

Notes:

Star A is a spectroscopic binary with a 2.8378 day period and a radio flare stare (V711 Tau, an RS CVn type).

The visual binary orbital period is about 2,101 years (Hopmann, 1964).

First measure: 6.1" @ 232. In 1903, Burnham obtained a PA of 249.

STF 430 (HD 22428; SAO 39005)						Rating: 1	
Position: 0338+4448		Year of last measure: 1935		Assumed distance (l.y.): 467		Assumed luminosity (suns): 21.5	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	8.0	n/a	n/a	A0	W	10.8	
B		26.6	55				
C	8.0	37 =	301 -	A0	W	10.8	
Observations:							
Observed at 83x. This pair looks like the eyes of a spook.							
Webb saw them as Y!, ? and ?.							
Very rich field.							
Notes:							
First measure AB, 26.6" @ 55.							
First measure AC, 37.4" @ 302.							
The stars show similar proper motions.							

STF 427 (ADS 2679; HD 22766; SAO 76071)						Rating: 1	
Position: 0341+2846		Year of last measure: 1954		Assumed distance (l.y.): 500		Assumed luminosity (suns): 41	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	6.9	n/a	n/a	A0	Y	30	
B	8.1	7 =	208 -		B	11	
Observations:							
Observed at 65x. Very rich field.							
Notes:							
First measure 6.7" @ 209.							
The stars share common proper motion.							

STF 435 (ADS 2708; HD 23075; SAO 76094)						Rating: 3	
Position: 0343+2541		Year of last measure: 1934		Assumed distance (l.y.): 157		Assumed luminosity (suns): 3.4	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	7.1	n/a	n/a	F5	Y	2.8	
B	8.8	13	2		R	0.6	
Observations:							
Observed at 104x.							
Notes:							
The stars show a similar, but small, proper motion.							

STF 452 (30 Tau; ADS 2778; HD 23793; SAO 93611)						Rating: 4	
Position: 0348+1108		Year of last measure: 1933		Assumed distance (l.y.): 570		Assumed luminosity (suns): 242	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	5.1	n/a	n/a	B3 V+F5 V	B	240	

B	10.2	9 =	59 +	O?	2
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Observations:
Observed at 65x. Some observers report bW and bW or Y and B. Webb saw them as bG and ? or yW and gW.

Notes:
This star is a member of the Cas-Tau OB1 Association and appears to be an old disk population runaway star.
First measure (1830) by F. W. Struve: 8.9" @ 58.

STF 479 (H N 93; ADS 2926; HD 25201; SAO 76388)						Rating: 1
Position: 0401+2312	Year of last measure: 1954		Assumed distance (l.y.): 1,080		Assumed luminosity (suns): 376	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	6.5	n/a	n/a	B9 V	Y	200
B	6.9	7 =	127 -		O	160
C	9.4	58 =	240 -	F0	B	16

Observations:
Observed at 65x. Rich field. Webb saw them as W, W and ?.

Notes:
Hipparcos/Tycho data show different distances for these stars; they may be an optical system.
First measure AB, 7.4" @ 129.
First measure AC, 58" @ 241.

OS 72 (ADS 3006; HD 26038; SAO 93777)						Rating: e
Position: 0408+1720	Year of last measure: 1991					
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	6.2	n/a	n/a	K5 IIIb	dO!!	
B	9.1	4 -	328 +		dB	

Observations:
Observed at 280x.

Notes:
The primary is an infra-red source.
1854: 4.6" @ 327. 28 measurements were made between 1854 and 1991.

STF 495 (ADS 2999; HD 26015; SAO 93775)						Rating: 4
Position: 0408+1509	Year of last measure: 1942		Assumed distance (l.y.): 153		Assumed luminosity (suns): 7.9	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	6.0	n/a	n/a	F3 V	W	7.3
B	8.8	4 =	221 =		B	0.6

Observations:
Observed at 207x.

Notes:
The primary is probably a Delta Scuti variable and is also a spectroscopic binary.
It is a member of the Hyades group.

First measure 3.6" @ 221.
The stars show common proper motion and similar radial velocity.

STF 494 (ADS 3019; HD 26128; SAO 76476)

Rating: 1

Position: 0409+2306	Year of last measure: 1960		Assumed distance (l.y.): 800		Assumed luminosity (suns): 220	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	6.5	n/a	n/a	A3	W	130
B	6.9	5 =	187 +	A3	W	90

Observations:

Observed at 104x.

Notes:

First measure 5.1" @ 186.

The stars show a similar, but small, proper motion.

STF 515 (ADS 3065; HD 26678; SAO 111669)

Rating: 4

Position: 0413+0252	Year of last measure: 1830		Assumed distance (l.y.): 317		Assumed luminosity (suns): 6	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	8.2	n/a	n/a	F5	W	4
B	9.2	3.3 -	42 -		W	2

Observations:

Observed at 207x. It looks fainter than the listed magnitudes.

Notes:

First measure 3.5" @ 44.

STF 517 (ADS 3095; HD 26991; SAO 111705)

Rating: 3

Position: 0416+0027	Year of last measure: 1934		Assumed distance (l.y.): 530		Assumed luminosity (suns): 35	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	7.2	n/a	n/a	A0	W	30
B	9.1	3	12		O?	5

Observations:

Observed at 207x.

STF 528 (Chi Tau; 59 Tau; ADS 3161; HD 27638; SAO 76573)

Rating: 3

Position: 0423+2538	Year of last measure: 1990		Assumed distance (l.y.): 268		Assumed luminosity (suns): 44.2	
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	5.4	n/a	n/a	B9 V	B	39
B	7.6	19 =	24 -		G	5.2

Observations:

Observed at 83x. Webb saw them as W and bW.

Notes:

This star is spinning at 350 kps.
 First measure: 19.3" @ 25.
 The stars show similar proper motions.

STF 534 (62 Tau; ADS 3179; HD 27778; SAO 76591)

Rating: 3

Position: 0424+2418 Year of last measure: 1991 Assumed distance (l.y.): 730 Assumed luminosity (suns): 156

	Mag	Sep	PA	Spectra	Colors Seen	Luminosity
A	6.2	n/a	n/a	B3 V	Y	140
B	8.6	30 +	290 =	A0	B	15
E, etc.	b: 12.0	Bb: 111	Bb: 330		?	1

Observations:

Observed at 83x. Webb saw them as W and ?, and wrote, "fine field."

Notes:

First measure 28.9" @ 290.

Delta 3 Tau (68 Tau; Kuiper 17; AC = H VI 101; V776 Tau; ADS 3206; HD 27962; SAO 93923)

Rating: 5

Position: 0425+1755 Year of last measure: 1958 Assumed distance (l.y.): 148 Assumed luminosity (suns): 38.3

	Mag	Sep	PA	Spectra	Colors Seen	Luminosity
A	4.2	n/a	n/a	A2 IV	W	36
B	7.5	1.4	333 +		?	1.7
C	8.7	77	233		?	0.6

Observations:

Observed at 104x.

Notes:

The primary is 2.1 times as large as the Sun and is a "blue straggler".

Hind's Variable Nebula (NGC 1555) lies nearby (1422+1932), but is very elusive. Hind discovered it in 1852 with a 7" telescope, and, like Hubble's Nebula, its brightness varies due to the variable star (T Tauri) that illuminates it.

T Tauri is a member of the Hyades cluster (star #56) and is a spectroscopic binary with a 57.25 day period.

STF 546 (ADS 3224; HD 28139; SAO 93939)

Rating: 3

Position: 0427+1907 Year of last measure: 1954 Assumed distance (l.y.): 214 Assumed luminosity (suns): 3.5

	Mag	Sep	PA	Spectra	Colors Seen	Luminosity
A	7.7	n/a	n/a	F5 V	Y	3
B	9.7	7	184 -	G0	O	0.5

Observations:

Observed at 104x.

Notes:

The stars share a large common proper motion.

SI 10 (Theta 2 Tau; 78 Tau; HD 28319; SAO 93957)							Rating: 5
Position: 0429+1552	Year of last measure: 1921			Assumed distance (l.y.): 149	Assumed luminosity (suns): 130.2		
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	3.4	n/a	n/a	A7 III	W	77	
B	3.8	337	346	K0 II	Y	53.2	
Observations:							
Observed at 104x.							
Notes:							
Star A is a spectroscopic binary (140.728 day period) and occultation binary; it is 50 times the size of the sun. It is also a probable Delta Scuti star and member of the Hyades cluster.							
The stars share common proper motion.							
STF 559 (ADS 3297; HD 28867; SAO 94002)							Rating: 1
Position: 0433+1801	Year of last measure: 1991			Assumed distance (l.y.): 423	Assumed luminosity (suns): 69		
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	6.2	n/a	n/a	B9 IVn	W	47	
B	7.0	3 =	278 -		W	22	
Observations:							
Observed at 207x.							
Notes:							
First measure (1830) by F. W. Struve: 3" @ 279.							
The stars show similar proper motions.							
STF 572 (ADS 3353; HD 29364; SAO 76682)							Rating: 4
Position: 0438+2656	Year of last measure: 1991			Assumed distance (l.y.): 228	Assumed luminosity (suns): 14.3		
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	6.6	n/a	n/a	F2 V	W	9.4	
B	7.3	4 +	191 -	F3 V	W	4.9	
Observations:							
Observed at 207x. Some observers note Y and B. Webb: Y.							
Notes:							
Star A is a spectroscopic binary.							
First measure (1830) by F. W. Struve: 3.2" @ 210.							
South 455 (Tau Tau; 94 Tau; OSS 54; Hough 642; HD 29763; SAO 76721)							Rating: 4
Position: 0442+2257	Year of last measure: 1926			Assumed distance (l.y.): 401	Assumed luminosity (suns): 262		
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>	
A	4.3	n/a	n/a	B3 V	W	244	
C	7.1	63	212		B	18	
Observations:							

Observed at 83x. Webb saw them as W and B.

Notes:

The primary rotates at 187 km/sec and is a spectroscopic binary with a 2.9565 day period. The AB period is something like around 28 years (?). The system belongs to the Cas-Tau OB1 Association.

Hipparcos/Tycho data show different distances for these stars; they may be an optical system.

STF 623 (ADS 3587; HD 31806; SAO 76880)

Rating: 3

Position: 0500+2719	Year of last measure: 1934	Assumed distance (l.y.): 451	Assumed luminosity (suns): 29			
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	7.0	n/a	n/a	B7 V	W	25
B	9.1	21 +	206 +	A0 V	B	4

Observations:

Observed at 83x.

Franks: W, B.

Notes:

First measure: 20.4" @ 205.

The stars share common proper motion.

STF 670 (ADS 3854; HD 34251; SAO 94431)

Rating: 3

Position: 0517+1826	Year of last measure: 1994	Assumed distance (l.y.): 1,100	Assumed luminosity (suns): 150			
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	7.2	n/a	n/a	B3	W	100
B	8.2	2.8 +	164 -		W	50

Observations:

Observed at 280x. Some observers report both as B. Webb saw them as W and bW.

Notes:

First measure 2.3" @ 171. 1908 (Bowyer), 2.3" @ 167.

STF 686 (ADS 3922; SAO 77122)

Rating: 2

Position: 0521+2402	Year of last measure: 1963	Assumed distance (l.y.): 174	Assumed luminosity (suns): 2.5			
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	7.7	n/a	n/a	F2	pO	2
B	9.1	9 =	223 +		pB	0.5

Observations:

Observed at 104x.

Notes:

First measure 9.2" @ 220.

The stars share common proper motion.

STF 716 (118 Tau; STF 719?; ADS 4068; HD 35943; SAO 77201)

Rating: 2

Position: 0529+2508	Year of last measure: 1985	Assumed distance (l.y.): 434	Assumed luminosity (suns): 106.34
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	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	5.8	n/a	n/a	B9 V	Y	72
B	6.6	5 =	208 +	A0 V	B?	34
C	11.6	141	99		?	0.34

Observations:
Observed at 83x. Some observers note W and R. Webb saw them as W and bW.

Notes:
This star rotates at 133 kps.
First measure (1829) by F. W. Struve: 4.9" @ 197. 1914 (Phillips), PA 201.

STF 730 (ADS 4131; HD 36408; SAO 94630)						Rating: 2
Position: 0532+1703		Year of last measure: 1993		Assumed distance (l.y.): 1,120		Assumed luminosity (suns): 650
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	6.0	n/a	n/a	A2 IIIe	W	400
B	6.5	10 =	141 -	B7 III	W	250

Observations:
Observed at 83x. Striking! Webb saw them as yW and bW.
Moderate field.

Notes:
Star A is a spectroscopic binary.
First measure 9.8" @ 142.
The stars show a similar, but small, proper motion.

STF 749 (Worley; ADS 4208; HD 37098; SAO 77322)						Rating: 3
Position: 0537+2655		Year of last measure: 1966		Assumed distance (l.y.): 478		Assumed luminosity (suns): 132
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	5.8	n/a	n/a	B8 IV	W	87
B	6.5	1 +	333 -	B8 IV	W	45

Observations:
Observed at 697x. Very even. This is a good test of your optics, your skill, and the sky.

Notes:
First measure 0.7" @ 23. 1914 (Phillips), 0.9" @ 347.

STF 777 (ADS 4295; HD 37980)						Rating: 4
Position: 0543+2213		Year of last measure: 1830		Assumed distance (l.y.): 109		Assumed luminosity (suns): 0.3
	<u>Mag</u>	<u>Sep</u>	<u>PA</u>	<u>Spectra</u>	<u>Colors Seen</u>	<u>Luminosity</u>
A	9.3	n/a	n/a	A0	W	0.2
B	9.7	5 =	85 =		B	0.1

Observations:
0430, 1-1-00 UT S8; T8; Observed at 104x; an 8m star is 12' NNW.

Notes: