

τ 93 VIRGINIS(1900, $\alpha = 13^h 56^m.6$, $\delta = +2^\circ 02'$, mag. 4.34, type A2)

The spectrum of this star consists of broad hydrogen lines and calcium *K*, while hazy ill-defined $\lambda 4481$ and $\lambda 4549$ are also seen. Occasionally traces of other metallic lines appear, but the measures are confined to the ones above mentioned. While the range of 46 km. obtained from the measures might suggest a real variation in the radial velocity, the writer is inclined to ascribe the greatest portion of it at least to errors of measurement. Treating it as of constant velocity, we get a value -2 km. per sec. Campbell in *L. O. B.*, 211, uses the value -10 ; in his statistical treatment of the velocities of A-type stars.

Plate	Date, G.M.T.	Velocity	Lines
1312	1908, Feb. 21.88	-9	5
1382	Mar. 4.86	$+18$	3
1389	" 9.81	$+10$	3
1399	" 16.83	-3	3
1510	April 22.82	-12	3
1535	May 18.64	-26	3
1570	June 3.65	-15	3
2417	1909, Mar. 22.82	-1	4
2453	" 31.80	-1	2
2502	April 19.81	$+21$	2
2512	" 23.77	$+2$	3
2532	" 28.80	-20	2

MEASURES OF τ VIRGINIS

λ	1312		1382		1389		1399		1510		1535		1570	
	Vel.	Wt.	Vel.	Wt.	Vel.	Wt.	Vel.	Wt.	Vel.	Wt.	Vel.	Wt.	Vel.	Wt.
1861.527													-13.4	$\frac{1}{4}$
4549.766									-10.4	$\frac{1}{4}$				
4481.400	-49.8	$\frac{1}{4}$	$+17.3$	$\frac{1}{4}$	$+18.1$	$\frac{1}{4}$			-22.3	$\frac{1}{4}$				
1340.634	10.4	$\frac{1}{2}$	-12.1	$\frac{1}{2}$	-6.8	$\frac{1}{4}$	-28.6	$\frac{1}{4}$	$+4.5$	$\frac{1}{4}$	-16.0	$\frac{1}{2}$	$+5.4$	$\frac{1}{2}$
1104.890	28.8	$\frac{1}{2}$	$+0.9$	$\frac{1}{4}$	-31.7	$\frac{1}{4}$	11.6	$\frac{1}{2}$			13.4	$\frac{1}{4}$		
3970.177	13.6	$\frac{1}{2}$												
3933.825	-43.4	$\frac{1}{4}$					-20.2	$\frac{1}{4}$			-25.5	$\frac{1}{2}$	$+27.0$	$\frac{1}{4}$
Weighted mean	-32.34		-1.51		-8.74		-18.00		-9.40		-19.28		$+6.10$	
V_a	$+23.96$		$+19.89$		$+17.97$		$+15.02$		-1.90		-6.73		-20.61	
V_d	$-.01$		$-.04$		$+.01$		$-.01$		$-.20$		$+.04$		$-.12$	
Curv.	$-.28$		$-.28$		$-.28$		$-.28$		$-.28$		$-.28$		$-.28$	
Radial Velocity	-8.7		$+18.1$		$+10.0$		-3.3		-11.8		-26.2		-14.9	