

## References

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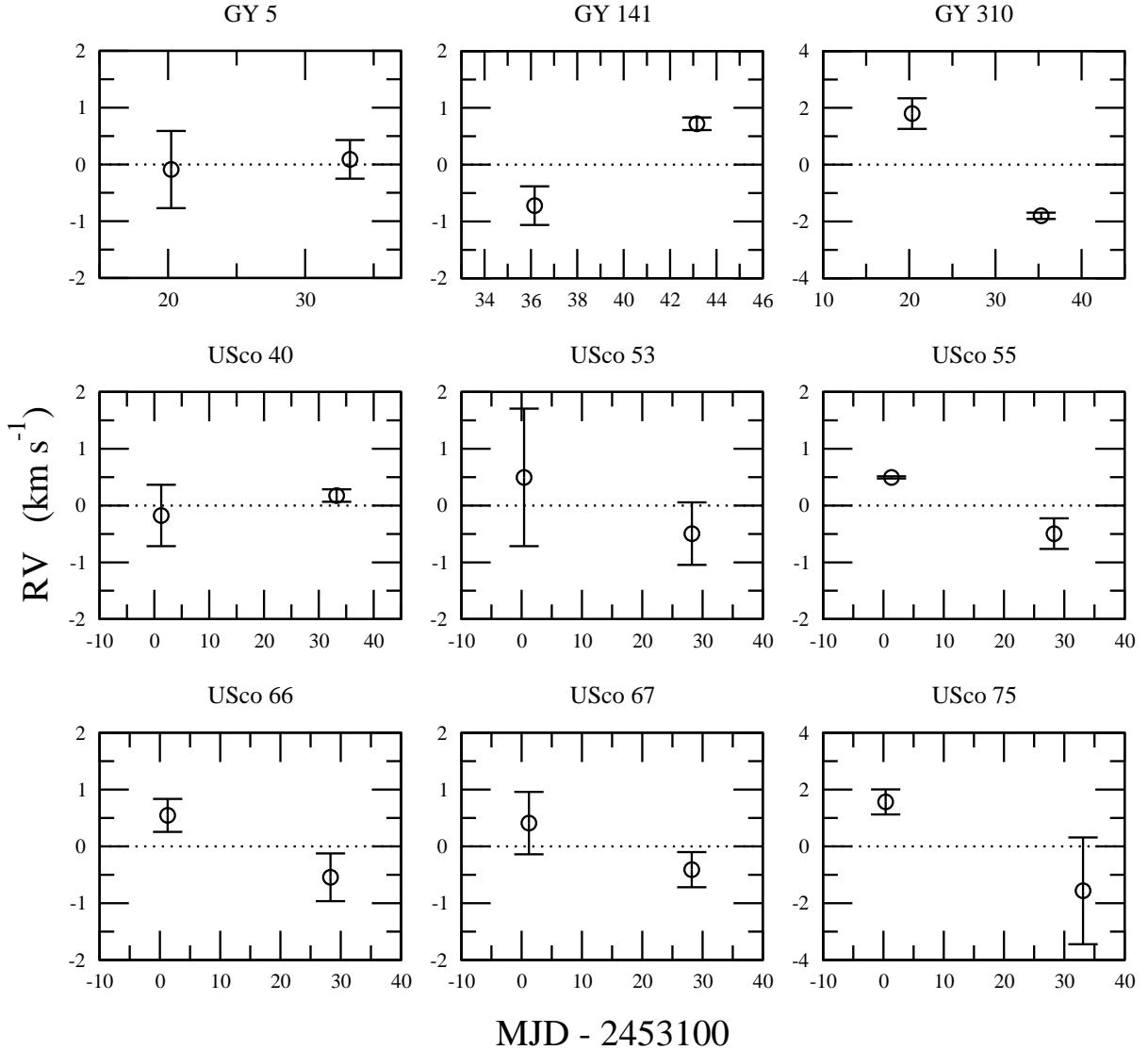
**Table 1.** Summary of known properties of the targets from literatures: a. ?) (original list for Oph), b. ?) (original list for Upper Sco objects), c. ?), d. ?), and e. ?).

Object	Sp.	<i>I</i>	mass [ $M_{\odot}$ ]	RV [ $\text{km s}^{-1}$ ]	$v \sin i$ [ $\text{km s}^{-1}$ ]	Known multiple?
GY 5	M7 <sup>c</sup>	~ 16	0.07 <sup>d</sup>	$-6.3 \pm 1.9^d$	$16.8 \pm 2.7^d$	no
GY 141	M8.5 <sup>a</sup>	~ 16	0.02 <sup>d</sup>	...	...	no
GY 310	M8.5 <sup>c</sup>	~ 16	0.08 <sup>a,d</sup>	...	...	no
USco 40	M5 <sup>b</sup>	14.3	0.1 <sup>b</sup>	...	...	no
USco 53	M5 <sup>b</sup>	14.5	0.1 <sup>b</sup>	...	...	no
USco 55	M5.5 <sup>b</sup>	14.6	0.10 + 0.07 <sup>e</sup>	...	...	yes <sup>e</sup>
USco 66	M6 <sup>b</sup>	14.9	0.07 + 0.07 <sup>e</sup>	$-4.4 \pm 0.6^d$	...	yes <sup>e</sup>
USco 67	M5.5 <sup>b</sup>	14.9	0.10 <sup>e</sup>	...	...	no
USco 75	M6 <sup>b</sup>	15.1	0.07 <sup>e</sup>	$-5.6 \pm 1.1^d$	...	no
USco 100	M7 <sup>b</sup>	15.6	0.05 <sup>e</sup>	$-8.9 \pm 0.6^d$	...	no
USco 101	M5 <sup>b</sup>	15.6	0.05 <sup>b</sup>	...	...	no
USco 104	M5 <sup>b</sup>	15.7	0.05 <sup>b</sup>	...	...	no
USco 109	M6 <sup>b</sup>	16.1	0.07 + 0.04 <sup>e</sup>	$-3.8 \pm 0.7^d$	...	yes <sup>e</sup>
USco 112	M5.5 <sup>b</sup>	16.1	0.1 <sup>e</sup>	...	...	no
USco 121	M6 <sup>b</sup>	16.5	0.02 <sup>b</sup>	$-38.9 \pm 1.0^d$	...	no
USco 128	M7 <sup>b</sup>	17.1	0.05 <sup>e</sup>	$-3.0 \pm 1.6^d$	...	no
USco 130	M7.5 <sup>e</sup>	17.5	0.04 <sup>e</sup>	...	...	no
USco 132	M7 <sup>b</sup>	17.6	0.05 <sup>e</sup>	$-8.2 \pm 1.1^d$	...	no

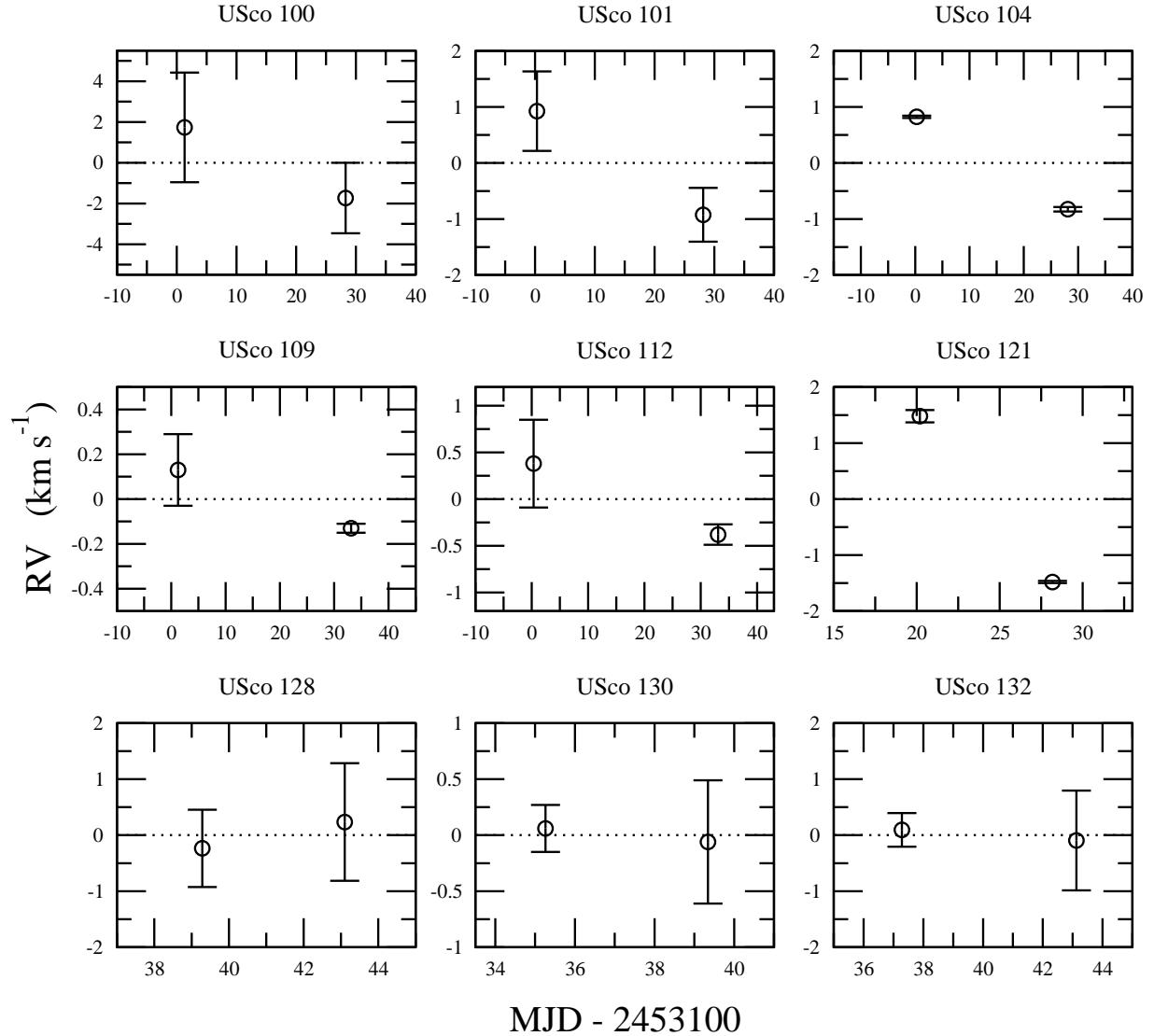
**Table 2.** Summary of the observation, the heliocentric radial velocities (RV) from two-epoch and the average rotational velocities ( $v \sin i$ ). The uncertainties of relative radial velocities ( $\sigma_{\text{RRV}}$ ) with respect to the template star LHS 049 and the average radial velocities ( $\overline{\text{RV}}$ ) are also given. The last column indicates whether a target is a candidate for multiplicity i.e. the measured radial velocity changes from two different epoch is larger than  $1\sigma_{\text{RRV}}$  of each others (c.f. Fig. 1). Rank indicates the likeliness of the candidacy base of the RV separation and the peak strength of the cross-correlation curves.

Object	Date	MDJ-2453100	RV [km s $^{-1}$ ]	$\sigma_{\text{RRV}}$ [km s $^{-1}$ ]	$\overline{\text{RV}}$ [km s $^{-1}$ ]	$v \sin i$ [km s $^{-1}$ ]	candidate?	rank	known
GY 5	2004-Apr-25	20.22051	$-6.14 \pm 0.84$	0.68	$-6.05 \pm 1.03$	$16.5 \pm 0.6$	no		
	2004-May-08	33.27776	$-5.96 \pm 0.60$	0.34					
GY 141	2004-May-11	36.16016	$-4.39 \pm 0.60$	0.34	$-3.67 \pm 0.79$	$4.4 \pm 1.4$	yes	2	
	2004-May-18	43.15707	$-2.95 \pm 0.51$	0.11					
GY 310	2004-Apr-25	20.32700	$-4.83 \pm 0.74$	0.54	$-6.63 \pm 0.90$	$11.1 \pm 6.0$	yes	2	
	2004-May-10	35.31139	$-8.43 \pm 0.51$	0.11					
USco 40	2004-Apr-06	01.25900	$-7.15 \pm 0.74$	0.54	$-6.98 \pm 0.90$	$34.2 \pm 0.5$	no		
	2004-May-08	33.25324	$-6.80 \pm 0.51$	0.11					
USco 53	2004-Apr-05	00.39651	$-7.27 \pm 0.93$	1.21	$-6.35 \pm 1.19$	$40.0 \pm 0.6$	no		
	2004-May-03	28.23079	$-5.43 \pm 0.74$	0.55					
USco 55	2004-Apr-06	01.33509	$-5.39 \pm 0.50$	0.02	$-6.38 \pm 0.73$	$22.9 \pm 0.8$	yes	1	X
	2004-May-03	28.30546	$-6.38 \pm 0.53$	0.27					
USco 66	2004-Apr-06	01.29007	$-5.32 \pm 0.57$	0.29	$-5.87 \pm 0.86$	$25.9 \pm 1.2$	no	2	X
	2004-May-03	28.28683	$-6.41 \pm 0.65$	0.42					
USco 67	2004-Apr-06	01.21481	$-6.01 \pm 0.74$	0.55	$-6.42 \pm 0.90$	$18.4 \pm 0.4$	no		
	2004-May-03	28.21759	$-6.83 \pm 0.59$	0.31					
USco 75	2004-Apr-05	00.37453	$-6.75 \pm 0.67$	0.44	$-8.32 \pm 2.05$	$55.6 \pm 3.0$	yes	3	
	2004-May-08	33.09532	$-9.88 \pm 1.94$	1.88					
USco 100	2004-Apr-06	01.30836	$-6.76 \pm 2.74$	2.69	$-8.47 \pm 3.28$	$43.7 \pm 3.2$	no		
	2004-May-03	28.26425	$-10.23 \pm 1.80$	1.73					
USco 101	2004-Apr-05	00.30191	$-4.22 \pm 0.87$	0.71	$-5.15 \pm 1.11$	$19.1 \pm 0.3$	yes	2	
	2004-May-03	28.14804	$-6.07 \pm 0.69$	0.48					
USco 104	2004-Apr-05	00.27545	$-5.83 \pm 0.50$	0.02	$-6.66 \pm 0.06$	$16.7 \pm 0.4$	yes	1	
	2004-May-03	28.12391	$-7.48 \pm 0.50$	0.06					
USco 109	2004-Apr-06	01.23587	$-4.15 \pm 0.52$	0.16	$-5.12 \pm 0.72$	$8.6 \pm 1.2$	possibly	3	X
	2004-May-08	33.11929	$-4.41 \pm 0.50$	0.03					
USco 112	2004-Apr-05	00.34486	$-2.70 \pm 0.69$	0.47	$-3.08 \pm 0.86$	$5.8 \pm 1.2$	possibly	3	
	2004-May-08	33.07139	$-3.46 \pm 0.51$	0.11					
USco 121	2004-Apr-25	20.19466	$-39.47 \pm 0.51$	0.11	$-40.95 \pm 0.71$	$17.6 \pm 1.3$	yes	1	
	2004-May-03	28.18537	$-42.43 \pm 0.50$	0.02					
USco 128	2004-May-14	39.28595	$-7.41 \pm 0.85$	0.69	$-7.18 \pm 1.44$	$3.6 \pm 1.1$	no		
	2004-May-18	43.09885	$-6.94 \pm 1.16$	1.05					
USco 130	2004-May-10	35.26060	$-4.83 \pm 0.54$	0.21	$-4.89 \pm 0.92$	$15.2 \pm 1.1$	no		
	2004-May-14	39.34201	$-4.95 \pm 0.74$	0.55					
USco 132	2004-May-12	37.28394	$-7.18 \pm 0.58$	0.30	$-7.28 \pm 1.17$	$9.1 \pm 0.7$	no		
	2004-Jun-18	43.12719	$-7.37 \pm 1.02$	0.89					

USCO-121==> Only 7 days apart!  
1USco-128 and USco-130 ==>only 4 days apart!



**Figure 1.** Relative radial velocities (RVs) of objects measured in two different epochs. The vertical axes indicate the amount of deviation from the average radial velocity ( $\bar{RV}$ ) in Table 1, and the horizontal axes indicate the time of the observation in modified Julian date (MJD). The objects are considered to have a non-constant radial velocity when the error bars of two data points do not overlap each other.



**Figure 1.** continued