

*Erratum***Wolf-Rayet stars and O-star runaways with HIPPARCOS****I. Kinematics**

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Astron. Astrophys. **331**, 949–958 (1998)

Dr. Lex Kaper has kindly pointed out an error in our paper “Wolf-Rayet stars and O-star runaways with HIPPARCOS I. Kinematics”. The origin of the problem lies in Eqs. 2.30 and 2.31 of the textbook “Physics of the Galaxy and Interstellar Matter” by Scheffler & Elsässer (Springer-Verlag, 1982), page 41, which we used to convert the proper motion vectors into the Galactic coordinate system. We had already discovered errors in Eq. 2.30 (wrong signs and reversed *cos* vs *sin*), and an error in Eq. 2.31, except that we inadvertently neglected to change the second factor of the last term in the first line of Eq. 2.31 from *sin* $\delta$  to *cos* $\delta$ . Unfortunately this error leads to erroneous results that affect each and every figure (1–5) and table (1–4; Table 1 was put in the CDS) in the paper. However, the results are not serious for the fast-moving stars (the main thrust of this paper) and do not affect our essential conclusions. For the slow-moving stars, the effect is more serious, but of no great consequence, as those peculiar motions are frequently below the  $1\sigma$  accuracy limit. We have corrected the pertinent data in Table 1 and all the figures and placed them in the CDS. Below we attach the corrected Tables 2–4.

**Table 2.** Program stars with the most significant deviation ( $\geq 10\sigma$ ) in  $\mu_l$  or  $\mu_b$  from Galactic rotation.

HD	$(\mu_l)_{pec}/\sigma_{(\mu_l)_{pec}}$	$(\mu_b)_{pec}/\sigma_{(\mu_b)_{pec}}$	Comments
34078 = AE Aur	-71.5	46.1	known runaway
38666 = $\mu$ Col	52.4	-10.1	known runaway
66811 = $\zeta$ Pup	-52.1	-35.8	known runaway
5394 = $\gamma$ Cas	32.3	8.8	MXRB, nearby
210839 = $\lambda$ Cep	-29.4	-6.3	known runaway
116852	17.4	-12.3	
192163 = WR136	-11.1	5.6	
157857	-3.7	10.5	known runaway
192281	-2.7	10.2	
201345	0.3	-10.0	

*Note:* the stars are ordered in decreasing absolute deviation in  $\mu_{pec}$  in either of the galactic coordinates. “Nearby” if  $r < 0.4kpc$ . Known runaways after Gies (1987) and Blaauw (1993).

**Table 3.** Stars with  $(v_t)_{pec} km s^{-1} > 42 + \sigma_{(v_t)_{pec}}$ , in order of HIP number.

HD/DM	Sp	Other	$ f/\sigma_f  > 10?$	Known runaway?	SB?	Comments
34078	AE Aur	O9.5V	yes	yes		
41997		O7.5V(n)				
86161	WR16	WN8				strongly variable
96548	WR40	WN8		(yes)		highly variable
116852		O9III	yes			
143414	WR71	WN6		(yes)		highly variable
E328209		O9.5Ia				
CD-49 11137		O9.5Ia				
157857		O6.5III(f)	yes	yes		
160641	V 2076 Oph	O9.5Ia			SB?	
168941		O9.5II				
187282	WR128	WN4				
227018		O6.5III				
197406	WR148	WN7 + B(c?)		(yes)	SB1	variable

*Note:*  $f$  refers to  $\mu_{pec}$  in  $l$  or  $b$ . WR runaway status suspected (Moffat & Isserstedt 1980). AE Aur and HD 116852 have  $(v_t)_{pec} > 42 + 2\sigma_{(v_t)_{pec}}$  km/s.

**Table 4.** OB and WR stars moving towards recognized/potential bow shock structures.

Star	$(\mu_\alpha)_{pec}$	$\sigma_{(\mu_\alpha)_{pec}}$	$(\mu_\delta)_{pec}$	$\sigma_{(\mu_\delta)_{pec}}$
HD 50896=WR6	-2.44	0.43	1.82	0.66
HD 77581=Vela X-1	-0.88	0.58	4.25	0.66
HD 86161=WR16	-6.31	0.60	1.51	0.65
HD 96548=WR40	2.79	0.76	-4.12	0.72
HD 187282=WR128	4.39	1.27	-2.28	1.01
HD 189957	-1.23	0.48	0.94	0.50
HD 190918=WR133	-1.32	0.89	-3.23	0.93
HD 191765=WR134	-2.81	0.58	-4.29	0.63
HD 192163=WR136	-5.50	0.49	-3.05	0.53
HD 210839= $\lambda$ Cep	-8.29	0.44	-9.03	0.39