A&A 623, C2 (2019)
https://doi.org/10.1051/0004-6361/201834020e

Astronomy & Astrophysics

Open cluster kinematics with *Gaia* DR2⋆ *(Corrigendum)*

C. Soubiran[1], T. Cantat-Gaudin[2], M. Romero-Gómez[2], L. Casamiquela[1], C. Jordi[2], A. Vallenari[3], T. Antoja[2], L. Balaguer-Núñez[2], D. Bossini[3], A. Bragaglia[4], R. Carrera[3], A. Castro-Ginard[2], F. Figueras[2], U. Heiter[6], D. Katz[7], A. Krone-Martins[5], J.-F. Le Campion[1], A. Moitinho[5], and R. Sordo[3]

[1] Laboratoire d'Astrophysique de Bordeaux, Univ. Bordeaux, CNRS, B18N, allée Geoffroy Saint-Hilaire, 33615 Pessac, France
e-mail: caroline.soubiran@u-bordeaux.fr
[2] Institut de Ciències del Cosmos, Universitat de Barcelona (IEEC-UB), Martí i Franquès 1, 08028 Barcelona, Spain
[3] INAF-Osservatorio Astronomico di Padova, vicolo Osservatorio 5, 35122 Padova, Italy
[4] INAF-Osservatorio di Astrofisica e Scienza dello Spazio, via Gobetti 93/3, 40129 Bologna, Italy
[5] CENTRA, Faculdade de Ciências, Universidade de Lisboa, Ed. C8, Campo Grande, 1749-016 Lisboa, Portugal
[6] Department of Physics and Astronomy, Uppsala University, Box 516, 75120 Uppsala, Sweden
[7] GEPI, Observatoire de Paris, Université PSL, CNRS, 5 Place Jules Janssen, 92190 Meudon, France

A&A, 619, A155 (2018), https://doi.org/10.1051/0004-6361/201834020

Key words. stars: kinematics and dynamics – Galaxy: kinematics and dynamics – open clusters and associations: general – errata, addenda

Due to an unfortunate error in the computation of distance between clusters, Tables 4 and 5, and Fig. 12 in Sect. 3.3 of the original paper contain incorrect values. Here we present the updated tables and figure.

Table 4 gives the list of cluster pairs that differ by less than 100 pc in distance and 5 km s^{-1} in velocity in our high-quality sample. The closest pair includes ASCC 16 and ASCC 21, which are separated by ∼13 pc, with a velocity difference of 4.5 km s^{-1}. RSG 7 and RSG 8, as well as ASCC 16 and ASCC 19, are also close pairs separated by ∼24 pc, with velocity differences of 2.3 km s^{-1} and 3.6 km s^{-1} respectively, thus good candidates to be physically related. Several possibly larger complexes may be found in that table, formed by clusters that appear more than one time. Table 5 gives a list of candidates binaries from the literature. The most famous binary cluster formed by h and χ Persei (NGC 869 and NGC 884, Messow & Schorr 1913) appears to have a separation of 19.5 pc. An excellent candidate binary is the pair Collinder 394 and NGC 6716, which lie at a distance of ∼11 pc from each other. IC 2602 and Platais 8 are also close from each other (∼35 pc) and they are possibly physically related, owing to their common age in DAML and similar velocity (also reported in Table 4). The other pairs in Table 5 have much larger separation and they are more likely to result from a chance alignment than that they are a physical binary system.

Table 4. Pairs of OCs differing by less than 100 pc in their Galactic position and 5 km s^{-1} in velocity in the high-quality sample.

Cluster 1	Cluster 2	Δpos (pc)	ΔV (km s^{-1})
ASCC 105	Roslund 5	85.1	3.7
ASCC 127	RSG 7	61.8	3.3
ASCC 127	RSG 8	81.9	2.8
ASCC 16	ASCC 19	24.6	3.6
ASCC 16	ASCC 21	13.2	4.5
ASCC 19	NGC 2232	96.0	3.9
ASCC 58	Alessi 5	99.4	3.9
ASCC 58	BH 99	54.8	3.3
ASCC 97	IC 4725	84.0	3.8
Alessi 20	Stock 12	59.3	2.2
Alessi 5	BH 99	50.5	3.6
Collinder 135	Collinder 140	84.6	3.6
Collinder 135	NGC 2451B	69.2	2.4
Collinder 140	NGC 2451B	50.8	1.8
Collinder 69	Gulliver 6	83.4	3.5
Gulliver 20	IC 4665	96.3	2.7
IC 2391	Platais 9	43.9	1.6
IC 2602	Platais 8	35.9	4.3
NGC 2451B	NGC 2547	82.7	3.4
RSG 7	RSG 8	24.3	2.3
Stock 23	Trumpler 3	70.1	2.7

⋆ The table with clusters velocities is only available at the CDS via anonymous ftp to cdsarc.u-strasbg.fr (130.79.128.5) or via http://cdsarc.u-strasbg.fr/viz-bin/qcat?J/A+A/623/C2

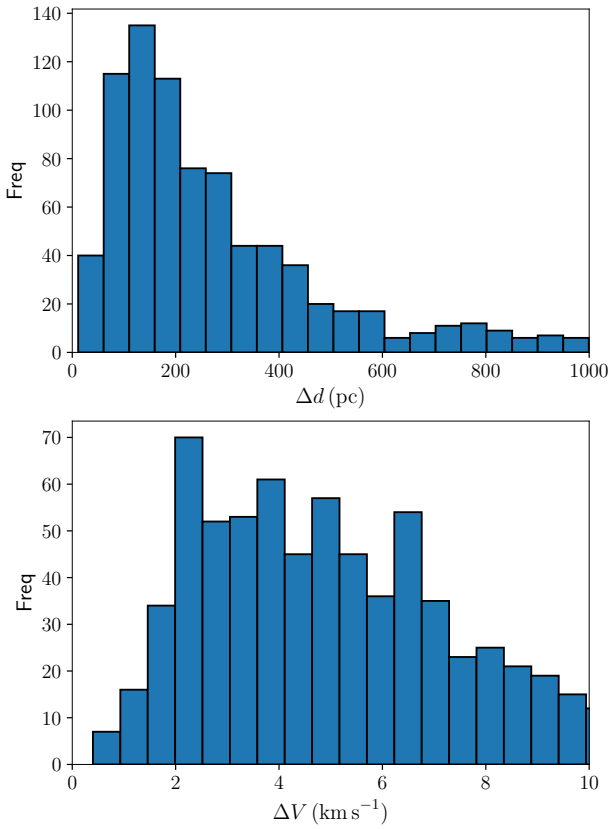

Fig. 12. Histogram of the distance between nearest neighbours in the high-quality sample (*upper panel*) and the same in velocity (*lower panel*).

Table 5. Separation in space and velocity of binary candidates from the literature, computed from our mean parameters for 861 OCs.

Cluster 1	Cluster 2	ref	Δpos (pc)	ΔV (km s^{-1})
Alessi 13	Mamajek 1	1	92.5	5.1
Alessi 21	NGC 2422	1	120.8	9.3
Platais 8	IC 2602	1	35.9	4.3
Turner 9	ASCC 110	1	275.6	9.0
Collinder 394	NGC 6716	1	11.4	13.8
IC 1396	NGC 7160	1	87.6	13.9
NGC 869	NGC 884	2	19.5	19.9
NGC 5617	Trumpler 22	3	79.8	10.4
IC 4756	NGC 6633	4	82.9	8.0

References. (1) Conrad et al. (2017), (2) Messow & Schorr (1913), (3) De Silva et al. (2015), (4) Casamiquela et al. (2016).

References

Casamiquela, L., Carrera, R., Jordi, C., et al. 2016, MNRAS, 458, 3150
Conrad, C., Scholz, R.-D., Kharchenko, N. V., et al. 2017, A&A, 600, A106
De Silva, G. M., Carraro, G., D'Orazi, V., et al. 2015, MNRAS, 453, 106
Messow, B., & Schorr, R. R. E. 1913, Astronomische Abhandlungen der Hamburger Sternwarte, 2, 1