

Table 1. Properties of Milky Way dwarf galaxies

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
LMC	Nubecula Major Large Magellanic Cloud	05:23:34.6	-69:45:22.0	MW			Dwarf Galaxy
SMC	Nubecula Minor NGC 292 Small Magellanic Cloud	00:52:37.9	-72:48:01.1	LMC			Dwarf Galaxy
Fornax	ESO 356-G04 PGC 10074 PGC 10093	02:39:50.0	-34:29:58.9	MW	Shapley (1938a)		Dwarf Galaxy
Sculptor	ESO 351-G30	01:00:04.4	-33:43:07.0	MW	Shapley (1938b)		Dwarf Galaxy
Leo I	UGC 5470 DDO 74 Regulus Dwarf	10:08:27.5	+12:18:21.2	MW	Harrington & Wilson (1950)		Dwarf Galaxy
Leo II	Leo B UGC 6253 DDO 93	11:13:27.0	+22:09:10.4	MW	Harrington & Wilson (1950)		Dwarf Galaxy
Draco	UGC 10822 DDO 208	17:20:16.4	+57:55:06.6	MW	Wilson (1955)		Dwarf Galaxy
Ursa Minor	UGC 9749 DDO 199 PGC 54074	15:08:58.1	+67:13:19.6	MW	Wilson (1955)		Dwarf Galaxy
Carina	ESO 206-G220	06:41:37.6	-50:57:33.5	MW	Cannon et al. (1977)		Dwarf Galaxy
Sextans		10:13:03.1	-01:36:47.9	MW	Irwin et al. (1990)		Dwarf Galaxy
Sagittarius		18:55:19.5	-30:32:43.4	MW	Ibata et al. (1994)		Dwarf Galaxy
Willman 1	SDSS J1049+5103	10:49:22.5	+51:03:00.4	MW	Willman et al. (2005a)		Dwarf Galaxy
Ursa Major I		10:35:04.9	+51:56:52.4	MW	Willman et al. (2005b)		Dwarf Galaxy
Bootes I		14:00:04.8	+14:30:48.6	MW	Belokurov et al. (2006)		Dwarf Galaxy
Canes Venatici I		13:28:02.2	+33:33:07.6	MW	Zucker et al. (2006a)		Dwarf Galaxy

Table 1 continued on next page

Table 1 (continued)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
Canes Venatici II	SDSS J1257+3419	12:57:10.2	+34:19:21.4	MW	Belokurov et al. (2007) Sakamoto & Hasegawa (2006)		Dwarf Galaxy
Coma Berenices		12:26:58.9	+23:54:24.8	MW	Belokurov et al. (2007)		Dwarf Galaxy
Hercules		16:31:05.3	+12:47:06.7	MW	Belokurov et al. (2007)		Dwarf Galaxy
Leo IV		11:32:57.7	-00:32:43.1	MW	Belokurov et al. (2007)		Dwarf Galaxy
Segue 1		10:07:00.1	+16:04:32.2	MW	Belokurov et al. (2007)		Dwarf Galaxy
Ursa Major II		08:51:29.4	+63:08:00.6	MW	Zucker et al. (2006b)		Dwarf Galaxy
Bootes II		13:58:03.4	+12:51:19.1	MW	Walsh et al. (2007)		Dwarf Galaxy
Bootes III		13:57:12.0	+26:48:00.0	MW	Grillmair (2009)		Dwarf Galaxy
Leo V		11:31:08.6	+02:13:09.8	MW	Belokurov et al. (2008)		Dwarf Galaxy
Segue 2		02:19:17.4	+20:09:44.6	MW	Belokurov et al. (2009)		Dwarf Galaxy
Pisces II		22:58:32.7	+05:57:20.0	MW	Belokurov et al. (2010)		Dwarf Galaxy
Cetus II	DES J0117-1725	01:17:52.8	-17:25:12.0	MW	Drlica-Wagner et al. (2015)		
Columba I	DES J0531-2801	05:31:25.7	-28:02:33.1	MW	Drlica-Wagner et al. (2015)		Dwarf Galaxy
Eridanus II	DES J0344.3-4331	03:44:22.2	-43:31:58.4	MW	Bechtol et al. (2015) Koposov et al. (2015a)		Dwarf Galaxy
Grus I		22:56:39.8	-50:10:04.8	MW	Koposov et al. (2015a)		Dwarf Galaxy
Grus II	DES J2204-4626	22:04:06.0	-46:26:31.2	MW	Drlica-Wagner et al. (2015)		Dwarf Galaxy
Horologium I	DES J0255.4-5406	02:55:31.5	-54:06:57.6	LMC	Bechtol et al. (2015) Koposov et al. (2015a)		Dwarf Galaxy
Horologium II		03:16:25.8	-50:02:55.0	MW	Kim & Jerjen (2015a)	Cand.	
Hydra II		12:21:42.0	-31:59:09.6	MW	Martin et al. (2015)		Dwarf Galaxy
Pegasus III		22:24:25.8	+05:24:54.2	MW	Kim et al. (2015a)		Dwarf Galaxy
Phoenix II	DES J2339.9-5424	23:39:59.0	-54:24:41.4	LMC	Bechtol et al. (2015) Koposov et al. (2015a)		Dwarf Galaxy
Pictor I	DES J0443.8-5017 Pictoris I	04:43:47.4	-50:16:59.0	MW	Bechtol et al. (2015) Koposov et al. (2015a)		
Reticulum II	DES J0335.6-5403	03:35:40.9	-54:03:04.7	LMC	Bechtol et al. (2015) Koposov et al. (2015a)		Dwarf Galaxy
Reticulum III	DES J0345-6026	03:45:26.4	-60:27:00.0	MW	Drlica-Wagner et al. (2015)		Dwarf Galaxy

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Table 1 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
Triangulum II	Laevens 2	02:13:18.0	+36:10:12.7	MW	Laevens et al. (2015a)		Dwarf Galaxy
Tucana II	DES J2251.2-5836	22:51:55.1	-58:34:08.0	MW	Bechtol et al. (2015) Koposov et al. (2015a)		Dwarf Galaxy
Tucana III	DES J2356-5935	23:56:25.8	-59:35:00.0	MW	Drlica-Wagner et al. (2015)		
Tucana IV	DES J0002-6051	00:02:52.1	-60:49:48.0	MW	Drlica-Wagner et al. (2015)		Dwarf Galaxy
Tucana V	DES J2337-6316	23:37:23.3	-63:15:57.6	MW	Drlica-Wagner et al. (2015)		
Aquarius II		22:33:55.5	-09:19:38.6	MW	Torrealba et al. (2016b)		Dwarf Galaxy
Crater II		11:49:14.4	-18:24:46.8	MW	Torrealba et al. (2016a)		Dwarf Galaxy
Pictor II		06:44:43.2	-59:53:49.2	MW	Drlica-Wagner et al. (2016)		
Virgo I	HSC J1200-0040	12:00:09.1	-00:40:51.6	MW	Homma et al. (2016)		
Carina II		07:36:25.6	-57:59:56.8	LMC	Torrealba et al. (2018)		Dwarf Galaxy
Carina III		07:38:31.2	-57:53:58.9	LMC	Torrealba et al. (2018)		Dwarf Galaxy
Cetus III	HSC J0209-0416	02:05:19.4	-04:16:12.0	MW	Homma et al. (2018)	Cand.	
Hydrus I		02:29:33.4	-79:18:32.0	LMC	Koposov et al. (2018)		Dwarf Galaxy
Antlia II		09:35:13.9	-36:41:56.8	MW	Torrealba et al. (2019b)		Dwarf Galaxy
Bootes IV	HSC J1534+4343	15:34:45.4	+43:43:33.6	MW	Homma et al. (2019)		
Centaurus I		12:38:20.4	-40:54:07.2	MW	Mau et al. (2020)		Dwarf Galaxy
Eridanus IV		05:05:45.1	-09:30:54.0	MW	Cerny et al. (2021a)		Dwarf Galaxy
Bootes V	DELVE J1415+3254	14:15:38.2	+32:54:50.4	MW	Smith et al. (2023a) Cerny et al. (2023a)		
Leo Minor I	DELVE J1057+2852	10:57:02.6	+28:52:30.0	MW	Cerny et al. (2023a)		
Pegasus IV		21:54:09.4	+26:37:12.0	MW	Cerny et al. (2023b)		Dwarf Galaxy
Virgo II	DELVE J1500+0554	15:00:14.2	+05:54:32.4	MW	Cerny et al. (2023a)	Cand.	
Sextans II	KiDS-UFD-1	10:25:44.9	-00:37:51.6	MW	Homma et al. (2023) Gatto et al. (2023)		
Ursa Major III	UNIONS 1	11:38:49.8	+31:04:42.0	MW	Smith et al. (2023b)		
Virgo III		12:25:23.5	+04:26:27.6	MW	Homma et al. (2023)	Cand.	

NOTE—Satellites are ordered by discovery year. Column description: **RA** and **Dec**—IRCS, J2000; **Candidate?**—Satellites labeled candidate do not have deeper photometry, spectroscopic follow-up, or a *Gaia* proper motion signal and may be false-positives; **Classification**—whether the system is a confirmed dwarf galaxy based on the [Willman & Strader \(2012\)](#) definition. This includes a resolved velocity dispersion, metallicity dispersion, or size clearly larger than a star cluster.

Table 2. Properties of Milky Way dwarf galaxies

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
Antlia II	143.8079	-36.6991	104.60 ± 8.60	0.60 ± 0.04	156.0 ± 2.4	$2367.4^{+280.0}_{-258.5}$	20.47 ± 0.09	$124.2^{+5.3}_{-5.0}$	10.7	-9.7 ± 0.1	a,b
Aquarius II	338.4813	-9.3274	5.10 ± 0.80	0.39 ± 0.09	121.0 ± 9.0	$124.2^{+21.3}_{-22.0}$	20.16 ± 0.07	$107.6^{+3.5}_{-3.4}$	15.8	-4.4 ± 0.1	c
Bootes I	210.0200	14.5135	9.97 ± 0.27	0.30 ± 0.03	6.0 ± 3.0	$160.4^{+8.7}_{-7.7}$	19.11 ± 0.08	$66.4^{+2.5}_{-2.4}$	13.1	-6.0 ± 0.2	d,e
Bootes II	209.5141	12.8553	3.17 ± 0.42	0.25 ± 0.11	-68.0 ± 27.0	$33.2^{+5.1}_{-5.4}$	18.10 ± 0.06	$41.7^{+1.2}_{-1.1}$	15.2	-2.9 ± 0.2	e,f
Bootes III	209.3000	26.8000	$40.60^{+4.20}_{-3.80}$	$0.33^{+0.08}_{-0.09}$	$279.0^{+7.0}_{-9.0}$	$452.7^{+52.5}_{-54.4}$	18.34 ± 0.02	46.6 ± 0.4	12.6	-5.7 ± 0.5	g,h,i
Bootes IV	233.6890	43.7260	7.60 ± 0.80	0.64 ± 0.05	3.0 ± 4.0	$275.8^{+43.5}_{-40.6}$	21.60 ± 0.20	$208.9^{+20.2}_{-18.4}$	16.3	$-5.3^{+0.3}_{-0.2}$	j,k
Bootes V	213.9090	32.9140	$0.76^{+0.08}_{-0.07}$	0.20 ± 0.10	$18.0^{+15.0}_{-13.0}$	$19.8^{+2.9}_{-2.5}$	20.04 ± 0.15	$101.9^{+7.3}_{-6.8}$	16.8	-3.2 ± 0.3	l
Canes Venatici I	202.0091	33.5521	7.12 ± 0.21	0.44 ± 0.03	80.0 ± 2.0	$325.8^{+17.0}_{-13.6}$	21.62 ± 0.06	$210.9^{+5.9}_{-5.7}$	12.9	-8.7 ± 0.1	m,e
Canes Venatici II	194.2927	34.3226	1.52 ± 0.24	0.40 ± 0.13	9.0 ± 15.0	$54.3^{+10.2}_{-9.6}$	21.02 ± 0.06	$160.0^{+4.5}_{-4.4}$	15.8	-5.2 ± 0.3	n,e
Carina	100.4065	-50.9593	10.10 ± 0.10	0.36 ± 0.01	60.0 ± 1.0	$248.2^{+12.9}_{-12.1}$	20.12 ± 0.11	$105.6^{+5.5}_{-5.3}$	10.7	-9.4 ± 0.1	o,e
Carina II	114.1066	-57.9991	8.69 ± 0.75	0.34 ± 0.07	170.0 ± 9.0	$76.6^{+8.4}_{-7.0}$	17.86 ± 0.02	37.4 ± 0.4	13.3	-4.6 ± 0.1	p
Carina III	114.6298	-57.8997	3.75 ± 1.00	0.55 ± 0.18	150.0 ± 14.0	$19.6^{+8.0}_{-6.6}$	17.22 ± 0.10	27.8 ± 1.3	14.8	-2.4 ± 0.2	p
Centaurus I	189.5850	-40.9020	$2.90^{+0.50}_{-0.40}$	0.40 ± 0.10	20.0 ± 11.0	$75.8^{+13.0}_{-14.3}$	$20.33^{+0.03}_{-0.01}$	$116.4^{+1.6}_{-0.5}$	14.8	-5.5 ± 0.1	q
Cetus II	19.4700	-17.4200	$1.90^{+1.00}_{-0.50}$	< 0.40		$15.9^{+7.2}_{-6.2}$	17.38 ± 0.19	$29.9^{+2.7}_{-2.5}$	17.4	0.0 ± 0.7	r
Cetus III	31.3310	-4.2700	$1.23^{+0.42}_{-0.19}$	$0.76^{+0.06}_{-0.08}$	$101.0^{+5.0}_{-6.0}$	$42.5^{+14.0}_{-12.9}$	22.00 ± 0.20	$251.2^{+24.2}_{-22.1}$	18.6	$-3.4^{+0.5}_{-0.4}$	s,k
Columba I	82.8570	-28.0425	2.20 ± 0.20	0.30 ± 0.10	24.0 ± 9.0	$96.5^{+13.5}_{-11.2}$	21.31 ± 0.11	$182.8^{+9.5}_{-9.0}$	17.1	-4.2 ± 0.2	t
Coma Berenices	186.7454	23.9069	5.64 ± 0.30	0.37 ± 0.05	-57.0 ± 4.0	$55.0^{+3.8}_{-4.1}$	18.13 ± 0.08	$42.3^{+1.6}_{-1.5}$	13.8	-4.3 ± 0.2	e,u
Crater II	177.3100	-18.4130	31.20 ± 2.50	< 0.10		$1065.0^{+78.7}_{-86.1}$	20.35 ± 0.02	117.5 ± 1.1	12.2	-8.2 ± 0.1	v
Draco	260.0684	57.9185	9.67 ± 0.09	0.29 ± 0.01	87.0 ± 1.0	$190.8^{+6.7}_{-5.9}$	19.53 ± 0.07	80.5 ± 2.6	10.7	-8.8 ± 0.1	e,w
Eridanus II	56.0925	-43.5329	2.31 ± 0.12	0.48 ± 0.04	72.6 ± 3.3	$178.4^{+13.2}_{-10.9}$	22.84 ± 0.05	$369.8^{+8.6}_{-8.4}$	15.7	-7.1 ± 0.3	x,y
Eridanus IV	76.4380	-9.5150	$4.90^{+1.10}_{-0.80}$	$0.54^{+0.10}_{-0.14}$	$65.0^{+9.0}_{-8.0}$	$72.9^{+17.7}_{-17.9}$	$19.42^{+0.01}_{-0.08}$	$76.6^{+0.4}_{-2.8}$	14.7	-4.7 ± 0.2	z
Fornax	39.9583	-34.4997	19.90 ± 0.06	0.29 ± 0.00	42.7 ± 0.3	$695.2^{+15.8}_{-14.9}$	20.77 ± 0.05	$142.6^{+3.2}_{-3.1}$	7.4	-13.4 ± 0.2	e,aa,ab
Grus I	344.1660	-50.1680	$4.16^{+0.54}_{-0.74}$	$0.44^{+0.08}_{-0.10}$	$153.0^{+8.0}_{-7.0}$	$114.1^{+20.4}_{-19.7}$	20.51 ± 0.10	$126.5^{+6.0}_{-5.7}$	16.4	-4.1 ± 0.3	ac,ad
Grus II	331.0250	-46.4420	5.90 ± 0.50	< 0.21		$94.8^{+9.6}_{-8.8}$	18.71 ± 0.10	$55.2^{+2.6}_{-2.5}$	15.2	-3.5 ± 0.3	ad,ae
Hercules	247.7722	12.7852	5.63 ± 0.46	0.69 ± 0.03	-73.0 ± 2.0	$118.9^{+12.7}_{-11.9}$	20.58 ± 0.10	$130.6^{+6.2}_{-5.9}$	14.8	-5.8 ± 0.2	e,af
Horologium I	43.8813	-54.1160	1.70 ± 0.10	$0.16^{+0.06}_{-0.05}$	$67.0^{+13.0}_{-14.0}$	$35.8^{+2.9}_{-2.8}$	19.50 ± 0.10	$79.4^{+3.7}_{-3.6}$	16.1	-3.4 ± 0.1	ag,i
Horologium II	49.1077	-50.0486	$2.09^{+0.44}_{-0.41}$	$0.52^{+0.13}_{-0.17}$	127.0 ± 11.0	$32.3^{+8.7}_{-8.2}$	19.46 ± 0.20	$78.0^{+7.5}_{-6.9}$	16.9	$-2.6^{+0.2}_{-0.3}$	ah

Table 2 continued on next page

Table 2 (continued)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
Hydra II	185.4251	-31.9860	$1.70^{+0.30}_{-0.20}$	$0.01^{+0.19}_{-0.01}$	$28.0^{+40.0}_{-35.0}$	$71.0^{+11.1}_{-10.0}$	20.90 ± 0.11	$151.4^{+7.9}_{-7.5}$	15.8	-5.1 ± 0.3	ai,aj
Hydrus I	37.3890	-79.3089	$7.42^{+0.62}_{-0.54}$	$0.21^{+0.15}_{-0.07}$	97.0 ± 14.0	$52.4^{+5.3}_{-5.4}$	17.20 ± 0.04	27.5 ± 0.5	12.5	-4.7 ± 0.1	ak
Leo I	152.1146	12.3059	3.65 ± 0.03	0.30 ± 0.10	78.0 ± 1.0	$229.7^{+17.5}_{-18.3}$	22.06 ± 0.08	$258.2^{+9.7}_{-9.3}$	10.2	-11.8 ± 0.3	e,al
Leo II	168.3627	22.1529	2.52 ± 0.03	0.07 ± 0.01	38.0 ± 8.0	$165.3^{+9.8}_{-9.4}$	21.84 ± 0.13	$233.3^{+14.4}_{-13.6}$	12.1	-9.7 ± 0.0	am,e
Leo IV	173.2405	-0.5453	2.54 ± 0.27	0.17 ± 0.09	-28.0 ± 38.0	$100.8^{+13.5}_{-12.3}$	20.90 ± 0.06	$151.4^{+4.2}_{-4.1}$	15.9	-4.9 ± 0.3	an,e
Leo Minor I	164.2610	28.8750	$1.09^{+0.37}_{-0.35}$	< 0.40		$25.7^{+9.4}_{-9.1}$	$19.56^{+0.11}_{-0.19}$	$81.7^{+4.2}_{-6.8}$	17.2	$-2.4^{+0.5}_{-0.4}$	l
Leo V	172.7857	2.2194	1.00 ± 0.32	0.43 ± 0.22	-71.0 ± 26.0	$35.7^{+14.5}_{-13.1}$	21.14 ± 0.06	$169.0^{+4.7}_{-4.6}$	16.7	-4.4 ± 0.4	an,e
Pegasus III	336.1074	5.4150	$1.67^{+0.26}_{-0.21}$	$0.37^{+0.08}_{-0.09}$	$83.0^{+8.0}_{-7.0}$	$82.1^{+14.9}_{-12.5}$	21.66 ± 0.12	$214.8^{+12.2}_{-11.5}$	17.5	-4.2 ± 0.2	ao,ap
Pegasus IV	328.5390	26.6200	$1.60^{+0.29}_{-0.25}$	< 0.41	$115.0^{+27.0}_{-41.0}$	$41.8^{+6.6}_{-7.2}$	19.77 ± 0.03	$89.9^{+1.3}_{-1.2}$	15.5	-4.2 ± 0.2	aq
Phoenix II	354.9960	-54.4115	1.50 ± 0.30	0.40 ± 0.10	156.0 ± 13.0	$27.8^{+7.0}_{-6.2}$	19.60 ± 0.20	$83.2^{+8.0}_{-7.3}$	16.9	-2.7 ± 0.4	ar
Pictor I	70.9475	-50.2831	1.29 ± 0.15	$0.44^{+0.07}_{-0.09}$	55.0 ± 6.0	$31.8^{+5.2}_{-4.4}$	20.30 ± 0.10	$114.8^{+5.4}_{-5.2}$	17.2	-3.1 ± 0.3	ag,i
Pictor II	101.1800	-59.8970	$3.80^{+1.50}_{-1.00}$	$0.13^{+0.22}_{-0.13}$	$14.0^{+60.0}_{-66.0}$	$43.6^{+17.1}_{-14.6}$	$18.30^{+0.12}_{-0.15}$	$45.7^{+2.6}_{-3.1}$	15.1	$-3.2^{+0.4}_{-0.5}$	as
Pisces II	344.6365	5.9555	$1.34^{+0.08}_{-0.07}$	$0.37^{+0.04}_{-0.03}$	98.0 ± 3.0	$56.4^{+6.0}_{-5.3}$	21.31 ± 0.17	$182.8^{+14.9}_{-13.8}$	17.0	-4.3 ± 0.2	ap,at
Reticulum II	53.9203	-54.0513	6.30 ± 0.40	0.60 ± 0.10	68.0 ± 2.0	$36.3^{+5.2}_{-5.4}$	17.50 ± 0.10	$31.6^{+1.5}_{-1.4}$	14.4	-3.1 ± 0.1	ar
Reticulum III	56.3600	-60.4500	$2.40^{+0.90}_{-0.80}$	< 0.40		$63.3^{+25.5}_{-23.4}$	19.81 ± 0.31	$91.6^{+14.1}_{-12.2}$	16.5	-3.3 ± 0.3	r
Sagittarius	283.8313	-30.5454	342.00 ± 12.00	0.64 ± 0.02	102.0 ± 2.0	$1566.4^{+137.7}_{-128.8}$	17.10 ± 0.15	$26.3^{+1.9}_{-1.8}$	3.6	-13.5 ± 0.3	au
Sculptor	15.0183	-33.7186	11.17 ± 0.05	0.33 ± 0.01	92.0 ± 1.0	$223.0^{+4.8}_{-4.3}$	19.62 ± 0.04	$83.9^{+1.6}_{-1.5}$	8.8	-10.8 ± 0.1	av,e
Segue 1	151.7504	16.0756	3.62 ± 0.42	0.33 ± 0.10	77.0 ± 15.0	$19.4^{+3.4}_{-3.0}$	16.80 ± 0.20	$22.9^{+2.2}_{-2.0}$	15.5	-1.3 ± 0.7	aw,e
Segue 2	34.8226	20.1624	3.76 ± 0.28	0.22 ± 0.07	164.0 ± 14.0	$35.2^{+3.8}_{-4.0}$	$17.81^{+0.14}_{-0.15}$	36.5 ± 2.4	15.9	-1.9 ± 0.9	ax,e
Sextans	153.2628	-1.6133	16.50 ± 0.10	0.30 ± 0.01	57.0 ± 1.0	$345.1^{+15.2}_{-16.4}$	19.67 ± 0.10	$85.9^{+4.0}_{-3.9}$	10.9	-8.7 ± 0.1	ay,e
Sextans II	156.4370	-0.6310	4.20 ± 0.50	$0.43^{+0.07}_{-0.08}$	-17.0 ± 9.0	$115.8^{+19.5}_{-19.9}$	20.50 ± 0.20	$125.9^{+12.1}_{-11.1}$	16.6	-3.9 ± 0.4	k
Triangulum II	33.3252	36.1702	2.50 ± 0.30	0.30 ± 0.10	73.0 ± 17.0	$17.1^{+2.7}_{-2.5}$	17.27 ± 0.11	$28.4^{+1.5}_{-1.4}$	16.1	-1.2 ± 0.4	t
Tucana II	342.9796	-58.5689	$12.89^{+1.71}_{-1.98}$	$0.39^{+0.10}_{-0.20}$	107.0 ± 18.0	$162.1^{+36.5}_{-34.0}$	18.75 ± 0.20	$56.2^{+5.4}_{-4.9}$	15.0	-3.8 ± 0.1	ag,az
Tucana III	359.1075	-59.5833	5.10 ± 1.20	0.20 ± 0.10	25.0 ± 38.0	$30.4^{+8.0}_{-6.9}$	16.80 ± 0.10	$22.9^{+1.1}_{-1.0}$	15.5	-1.3 ± 0.2	ar
Tucana IV	0.7170	-60.8300	$9.30^{+1.40}_{-0.90}$	$0.39^{+0.07}_{-0.10}$	$27.0^{+9.0}_{-8.0}$	$97.0^{+16.8}_{-15.8}$	18.36 ± 0.18	$47.0^{+4.1}_{-3.7}$	15.4	$-3.0^{+0.3}_{-0.4}$	ae
Tucana V	354.3470	-63.2660	$2.10^{+0.60}_{-0.40}$	$0.51^{+0.09}_{-0.18}$	29.0 ± 11.0	$22.6^{+7.0}_{-6.5}$	18.70 ± 0.21	$55.0^{+5.6}_{-5.1}$	17.6	$-1.1^{+0.5}_{-0.6}$	ae
Ursa Major I	158.7706	51.9479	8.31 ± 0.35	0.59 ± 0.03	67.0 ± 2.0	$150.6^{+11.8}_{-12.7}$	19.94 ± 0.13	$97.3^{+6.0}_{-5.7}$	14.8	-5.1 ± 0.4	ba,e
Ursa Major II	132.8726	63.1335	13.80 ± 0.50	0.56 ± 0.03	-76.0 ± 2.0	$92.0^{+7.9}_{-7.3}$	17.70 ± 0.13	$34.7^{+2.1}_{-2.0}$	13.3	-4.4 ± 0.3	bb,e
Ursa Major III	174.7075	31.0783	$0.90^{+0.40}_{-0.30}$	$0.50^{+0.20}_{-0.30}$	$169.0^{+18.0}_{-12.0}$	$1.7^{+0.9}_{-0.8}$	15.00 ± 0.20	$10.0^{+1.0}_{-0.9}$	17.2	$2.2^{+0.4}_{-0.3}$	bc
Ursa Minor	227.2420	67.2221	18.30 ± 0.11	0.55 ± 0.01	50.0 ± 1.0	$235.8^{+2.9}_{-2.8}$	19.10	66.1	10.4	-8.7 ± 0.1	e,bd

Table 2 continued on next page

Table 2 (*continued*)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
Virgo I	180.0380	-0.6810	$1.76^{+0.49}_{-0.40}$	$0.59^{+0.12}_{-0.14}$	$62.0^{+8.0}_{-13.0}$	$28.5^{+10.0}_{-8.6}$	19.80 ± 0.20	$91.2^{+8.8}_{-8.0}$	18.9	-0.9 ± 0.7	s,k
Virgo II	225.0590	5.9090	$0.74^{+0.13}_{-0.11}$	< 0.30		15.4 ± 2.9	19.30 ± 0.22	$72.4^{+7.7}_{-7.0}$	17.7	$-1.6^{+0.4}_{-0.6}$	l
Virgo III	186.3480	4.4410	1.00 ± 0.20	$0.29^{+0.15}_{-0.19}$	$-24.0^{+21.0}_{-26.0}$	$35.7^{+9.4}_{-7.9}$	20.90 ± 0.20	$151.4^{+14.6}_{-13.3}$	18.2	$-2.7^{+0.5}_{-0.6}$	k
Willman 1	162.3436	51.0501	2.51 ± 0.22	0.47 ± 0.06	73.0 ± 4.0	$19.9^{+4.2}_{-4.1}$	17.90 ± 0.40	$38.0^{+7.7}_{-6.4}$	15.4	-2.5 ± 0.7	e,be

NOTE—Column descriptions: **RA** and **Dec**—IRCS, J2000; r_h —Major axis of 2D projected half-light radius; ϵ —ellipticity ($1 - b/a$); θ —position angle defined north to east; $r_{1/2}$ —spherically averaged half-light radius ($r_{1/2} = R_h \sqrt{1 - \epsilon}$); $(m - M)_0$ —distance modulus; d —distance to satellite; V —V-band magnitude; M_V —absolute V-band magnitude, the distance errors are not included. Citations: (a) Ji et al. (2021) (b) Vivas et al. (2022) (c) Torrealba et al. (2016b) (d) Dall’Ora et al. (2006) (e) Muñoz et al. (2018) (f) Walsh et al. (2008) (g) Carlin & Sand (2018) (h) Correnti et al. (2009) (i) Moskowicz & Walker (2020) (j) Homma et al. (2019) (k) Homma et al. (2023) (l) Cerny et al. (2023a) (m) Kuehn et al. (2008) (n) Greco et al. (2008) (o) Karczmarek et al. (2015) (p) Torrealba et al. (2018) (q) Mau et al. (2020) (r) Drlica-Wagner et al. (2015) (s) Homma et al. (2018) (t) Carlin et al. (2017) (u) Musella et al. (2009) (v) Torrealba et al. (2016a) (w) Muraveva et al. (2020) (x) Crnojević et al. (2016) (y) Martínez-Vázquez et al. (2021) (z) Cerny et al. (2021a) (aa) Oakes et al. (2022) (ab) Wang et al. (2019a) (ac) Cantu et al. (2021) (ad) Martínez-Vázquez et al. (2019) (ae) Simon et al. (2020) (af) Mutlu-Pakdil et al. (2020) (ag) Koposov et al. (2015a) (ah) Kim & Jerjen (2015a) (ai) Martin et al. (2015) (aj) Vivas et al. (2016) (ak) Koposov et al. (2018) (al) Stetson et al. (2014) (am) Bellazzini et al. (2005) (an) Medina et al. (2018) (ao) Kim et al. (2016b) (ap) Richstein et al. (2022) (aq) Cerny et al. (2023b) (ar) Mutlu-Pakdil et al. (2018) (as) Drlica-Wagner et al. (2016) (at) Sand et al. (2012) (au) McConnachie (2012) (av) Martínez-Vázquez et al. (2015) (aw) Belokurov et al. (2007) (ax) Boettcher et al. (2013) (ay) Lee et al. (2009) (az) Vivas et al. (2020) (ba) Garofalo et al. (2013) (bb) Dall’Ora et al. (2012) (bc) Smith et al. (2023b) (bd) Nemec et al. (1988) (be) Willman et al. (2006)

Table 3. Properties of Milky Way dwarf galaxies

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{\text{[Fe/H]}}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
Antlia II	264.8009	11.2543	288.8 ± 0.4	$5.98^{+0.37}_{-0.36}$	-1.90 ± 0.04	0.34 ± 0.03	-0.093 ± 0.008	0.100 ± 0.009	a,b
Aquarius II	55.1082	-53.0085	-65.3 ± 1.8	$4.70^{+1.80}_{-1.20}$	-2.57 ± 0.17	$0.36^{+0.20}_{-0.14}$	$-0.179^{+0.119}_{-0.113}$	$-0.466^{+0.096}_{-0.095}$	c,b
Bootes I	358.1019	69.6366	101.8 ± 0.7	$4.60^{+0.80}_{-0.60}$	$-2.35^{+0.09}_{-0.08}$	$0.44^{+0.07}_{-0.06}$	-0.385 ± 0.017	-1.068 ± 0.013	d,b
Bootes II	353.7314	68.8649	$-130.4^{+1.4}_{-1.1}$	$2.90^{+1.60}_{-1.20}$	$-2.71^{+0.11}_{-0.10}$		$-2.426^{+0.080}_{-0.077}$	-0.414 ± 0.061	c,b
Bootes III	35.4052	75.3535	197.5 ± 3.8	14.00 ± 3.20	-2.10 ± 0.20	0.60	-1.176 ± 0.019	-0.890 ± 0.015	e,b
Bootes IV	70.6823	53.3050					$0.469^{+0.180}_{-0.244}$	$0.489^{+0.256}_{-0.255}$	b
Bootes V	55.6680	70.9177	5.1 ± 13.4		-2.85 ± 0.10		-0.220 ± 0.050	-0.280 ± 0.070	f,g
Canes Venatici I	74.3043	79.8288	30.9 ± 0.6	7.60 ± 0.40	-1.91 ± 0.04	$0.39^{+0.03}_{-0.02}$	$-0.096^{+0.030}_{-0.031}$	-0.116 ± 0.020	b,h
Canes Venatici II	113.5744	82.7012	-128.9 ± 1.2	4.60 ± 0.80	$-2.35^{+0.16}_{-0.19}$	$0.57^{+0.15}_{-0.12}$	$-0.124^{+0.117}_{-0.115}$	$-0.254^{+0.082}_{-0.080}$	b,h
Carina	260.1060	-22.2194	222.9 ± 0.1	6.60 ± 1.20	-1.80 ± 0.02	0.24	$0.532^{+0.007}_{-0.006}$	0.127 ± 0.006	b,i
Carina II	269.9816	-17.1398	477.2 ± 1.2	$3.40^{+1.20}_{-0.80}$	-2.44 ± 0.09	$0.22^{+0.10}_{-0.07}$	$1.885^{+0.018}_{-0.019}$	0.133 ± 0.019	j,b
Carina III	270.0060	-16.8458	$284.6^{+3.4}_{-3.1}$	$5.60^{+4.30}_{-2.10}$			$3.095^{+0.040}_{-0.041}$	1.395 ± 0.045	j,b
Centaurus I	300.2649	21.9019	44.8 ± 0.8	$4.20^{+0.60}_{-0.50}$	-2.57 ± 0.08	$0.38^{+0.07}_{-0.05}$	-0.140 ± 0.050	-0.190 ± 0.040	k
Cetus II	156.4655	-78.5313					$2.844^{+0.061}_{-0.059}$	$0.474^{+0.064}_{-0.063}$	b
Cetus III	163.8102	-61.1333							
Columba I	231.6333	-28.8855	153.7 ± 4.9	< 6.70	$-2.37^{+0.35}_{-0.34}$	$0.71^{+0.49}_{-0.24}$	$0.169^{+0.071}_{-0.073}$	-0.400 ± 0.079	l,b
Coma Berenices	241.8639	83.6123	98.1 ± 0.9	4.60 ± 0.80	-2.43 ± 0.11	$0.46^{+0.09}_{-0.08}$	$0.423^{+0.026}_{-0.027}$	-1.721 ± 0.024	b,h
Crater II	282.9084	42.0276	89.3 ± 0.3	$2.34^{+0.42}_{-0.30}$	-2.16 ± 0.04	0.24 ± 0.05	-0.072 ± 0.020	-0.112 ± 0.013	a,b
Draco	86.3711	34.7126	-290.7 ± 0.8	9.10 ± 1.20	-2.00 ± 0.02	0.34 ± 0.02	$0.044^{+0.005}_{-0.006}$	-0.188 ± 0.006	b,m
Eridanus II	249.7802	-51.6431	75.6 ± 1.3	$6.90^{+1.20}_{-0.90}$	-2.38 ± 0.13	$0.47^{+0.12}_{-0.90}$	$0.125^{+0.101}_{-0.100}$	$0.013^{+0.123}_{-0.127}$	n,b
Eridanus IV	209.4987	-27.7715	$-31.5^{+1.3}_{-1.2}$	$6.10^{+1.20}_{-0.90}$	$-2.87^{+0.08}_{-0.07}$	0.20 ± 0.09	0.250 ± 0.060	-0.100 ± 0.050	o,k
Fornax	237.2382	-65.6741	55.2 ± 0.1	12.10 ± 0.20	$-1.07^{+0.02}_{-0.01}$	0.27 ± 0.01	0.381 ± 0.001	-0.359 ± 0.002	b,i
Grus I	338.6794	-58.2366	-143.5 ± 1.2	$2.50^{+1.30}_{-0.80}$	-2.62 ± 0.11		$0.069^{+0.051}_{-0.050}$	$-0.248^{+0.071}_{-0.072}$	p,b
Grus II	351.1386	-51.9414	-110.0 ± 0.5	< 2.00	-2.51 ± 0.11		0.384 ± 0.033	$-1.484^{+0.039}_{-0.040}$	b,q
Hercules	28.7277	36.8563	45.0 ± 1.1	5.10 ± 0.90	$-2.47^{+0.13}_{-0.12}$	$0.47^{+0.11}_{-0.08}$	-0.035 ± 0.042	$-0.339^{+0.035}_{-0.036}$	b,h
Horologium I	271.3842	-54.7350	$112.8^{+2.5}_{-2.6}$	$4.90^{+2.80}_{-0.90}$	-2.76 ± 0.10	$0.17^{+0.20}_{-0.03}$	$0.847^{+0.034}_{-0.035}$	-0.607 ± 0.035	r,b
Horologium II	262.5313	-54.1391					$0.967^{+0.173}_{-0.171}$	$-0.771^{+0.220}_{-0.230}$	b

Table 3 continued on next page

Table 3 (*continued*)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha\star}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
Hydra II	295.6170	30.4630	303.1 ± 1.4	< 4.50	-2.02 ± 0.08	$0.40^{+0.48}_{-0.26}$	-0.394 ± 0.140	$0.000^{+0.103}_{-0.104}$	s,b
Hydrus I	297.4163	-36.7463	80.4 ± 0.6	$2.70^{+0.51}_{-0.43}$	-2.52 ± 0.09	0.41 ± 0.08	3.781 ± 0.016	-1.496 ± 0.015	t,b
Leo I	225.9847	49.1100	282.9 ± 0.5	9.20 ± 0.40	$-1.48^{+0.02}_{-0.01}$	0.26 ± 0.01	-0.050 ± 0.014	-0.120 ± 0.010	u,b
Leo II	220.1608	67.2252	78.5 ± 0.6	7.40 ± 0.40	$-1.68^{+0.02}_{-0.03}$	0.34 ± 0.02	-0.109 ± 0.028	-0.150 ± 0.026	b,v
Leo IV	265.4577	56.5060	$131.6^{+1.0}_{-1.2}$	$3.40^{+1.30}_{-0.90}$	$-2.48^{+0.16}_{-0.13}$	$0.42^{+0.12}_{-0.10}$	-0.009 ± 0.152	$-0.279^{+0.115}_{-0.112}$	w,b
Leo Minor I	202.2324	64.7496					$-0.010^{+0.390}_{-0.400}$	$-1.290^{+0.370}_{-0.400}$	f
Leo V	261.8564	58.5344	$173.1^{+1.0}_{-0.8}$	< 4.70	$-2.29^{+0.14}_{-0.17}$	$0.30^{+0.14}_{-0.09}$	0.113 ± 0.219	$-0.391^{+0.155}_{-0.153}$	w,b
Pegasus III	69.8599	-41.8262	-222.9 ± 2.6	$5.40^{+3.00}_{-2.50}$	-2.55 ± 0.15		-0.030 ± 0.210	$-0.580^{+0.213}_{-0.208}$	x,b
Pegasus IV	80.7972	-21.4031	$-273.6^{+1.6}_{-1.5}$	$3.30^{+1.70}_{-1.10}$	$-2.67^{+0.25}_{-0.29}$	$0.46^{+0.29}_{-0.17}$	0.330 ± 0.070	-0.210 ± 0.080	y
Phoenix II	323.6820	-59.7439	32.4 ± 3.8	< 21.20	$-2.51^{+0.19}_{-0.17}$	$0.33^{+0.29}_{-0.16}$	$0.507^{+0.047}_{-0.048}$	$-1.199^{+0.058}_{-0.057}$	l,b
Pictor I	257.2990	-40.6450					$0.153^{+0.086}_{-0.088}$	$0.096^{+0.118}_{-0.114}$	b
Pictor II	269.6330	-24.0520					1.150 ± 0.060	$1.140^{+0.060}_{-0.050}$	z
Pisces II	79.2175	-47.1079	-226.5 ± 2.7	$5.40^{+3.60}_{-2.40}$	-2.45 ± 0.07	$0.48^{+0.70}_{-0.29}$	$0.681^{+0.309}_{-0.307}$	$-0.645^{+0.215}_{-0.209}$	s,b
Reticulum II	266.3007	-49.7376	64.3 ± 1.2	$3.60^{+1.00}_{-0.70}$	-2.65 ± 0.07	0.28 ± 0.09	$2.377^{+0.023}_{-0.024}$	$-1.379^{+0.026}_{-0.025}$	b,aa
Reticulum III	273.8782	-45.6478	274.2 ± 7.5	< 8.30	-2.81 ± 0.29	$0.35^{+0.21}_{-0.09}$	$0.260^{+0.140}_{-0.144}$	$-0.502^{+0.222}_{-0.226}$	l,b
Sagittarius	5.5688	-14.1665	140.0 ± 2.0	11.40 ± 0.70	$-0.53^{+0.03}_{-0.02}$	0.17 ± 0.02	-2.692 ± 0.001	-1.359 ± 0.001	ab,ac
Sculptor	287.6961	-83.1524	111.4 ± 0.1	9.20 ± 1.10	$-1.73^{+0.03}_{-0.02}$	0.44 ± 0.02	0.100 ± 0.002	-0.158 ± 0.002	b,i
Segue 1	220.4776	50.4090	208.5 ± 0.9	$3.70^{+1.40}_{-1.10}$	-2.50		-2.102 ± 0.051	$-3.375^{+0.044}_{-0.046}$	b,ad
Segue 2	149.4462	-38.1445	-40.2 ± 0.9	< 2.60	-2.22 ± 0.13	0.43	1.446 ± 0.059	$-0.322^{+0.049}_{-0.050}$	ae,b
Sextans	243.4973	42.2736	224.3 ± 0.1	7.90 ± 1.30	-1.97 ± 0.04	0.38 ± 0.03	$-0.409^{+0.009}_{-0.008}$	0.037 ± 0.009	b,i
Sextans II	245.3263	45.3223							
Triangulum II	140.9044	-23.8282	-381.7 ± 1.1	< 4.20	-2.24 ± 0.05	$0.53^{+0.38}_{-0.12}$	0.575 ± 0.060	$0.112^{+0.069}_{-0.067}$	af,b
Tucana II	328.0863	-52.3248	-124.7 ± 1.0	$3.80^{+1.10}_{-0.70}$	-2.77		$0.911^{+0.024}_{-0.026}$	-1.280 ± 0.029	ag,b
Tucana III	315.4236	-56.1909	-102.3 ± 0.4	< 1.50	$-2.42^{+0.07}_{-0.08}$		$-0.048^{+0.035}_{-0.036}$	-1.638 ± 0.039	b,ah
Tucana IV	313.3093	-55.3089	$15.9^{+1.8}_{-1.7}$	$4.30^{+1.70}_{-1.00}$	$-2.49^{+0.15}_{-0.16}$		$0.534^{+0.050}_{-0.053}$	$-1.707^{+0.054}_{-0.055}$	b,q
Tucana V	316.3148	-51.8953	$-36.2^{+2.5}_{-2.2}$	< 7.40	-2.17 ± 0.23		$-0.140^{+0.040}_{-0.050}$	$-1.180^{+0.050}_{-0.060}$	z,q
Ursa Major I	159.3624	54.4268	-55.3 ± 1.4	7.00 ± 1.00	$-2.16^{+0.11}_{-0.13}$	$0.62^{+0.10}_{-0.08}$	-0.401 ± 0.036	$-0.613^{+0.040}_{-0.042}$	b,h
Ursa Major II	152.4603	37.4410	-116.5 ± 1.9	6.70 ± 1.40	$-2.23^{+0.21}_{-0.24}$	$0.67^{+0.20}_{-0.15}$	1.731 ± 0.021	$-1.906^{+0.024}_{-0.025}$	b,h
Ursa Major III	194.6164	73.6766	88.6 ± 1.3	$3.70^{+1.40}_{-1.00}$			-0.750 ± 0.090	1.150 ± 0.140	ai
Ursa Minor	104.9817	44.8126	-247.0 ± 0.4	8.60 ± 0.30	-2.13 ± 0.02	0.35 ± 0.01	-0.120 ± 0.005	0.071 ± 0.005	b,aj

Table 3 *continued on next page*

Table 3 (*continued*)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha\star}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
Virgo I	276.9419	59.5777							
Virgo II	4.0665	52.7543							
Virgo III	286.4759	66.4770							
Willman 1	158.5729	56.7833	-14.1 ± 1.0	4.00 ± 0.80	-2.19 ± 0.08		$0.255^{+0.077}_{-0.087}$	$-1.110^{+0.095}_{-0.091}$	b,ak

NOTE—Column descriptions: **l**—Galactic longitude; **b**—Galactic latitude; v_{los} —systemic heliocentric line-of-sight velocity (generally stellar); σ_{los} —stellar velocity dispersion; [Fe/H]—mean metallicity of the system, spectroscopic metallicity is preferred; $\sigma_{[\text{Fe}/\text{H}]}$ —metallicity dispersion; $\mu_{\alpha\star}$ —systemic proper motion in $\alpha \cos \delta$ direction, ; μ_{δ} —systemic proper motion in δ direction. Citations: (a) Ji et al. (2021) (b) Pace et al. (2022) (c) Bruce et al. (2023) (d) Koposov et al. (2011) (e) Carlin et al. (2009) (f) Cerny et al. (2023a) (g) Smith et al. (2023a) (h) Simon & Geha (2007) (i) Walker et al. (2009) (j) Li et al. (2018) (k) Heiger et al. (2023) (l) Fritz et al. (2019) (m) Walker et al. (2015b) (n) Li et al. (2017) (o) Cerny et al. (2021a) (p) Chiti et al. (2022) (q) Simon et al. (2020) (r) Koposov et al. (2015b) (s) Kirby et al. (2015) (t) Koposov et al. (2018) (u) Mateo et al. (2008) (v) Spencer et al. (2017) (w) Jenkins et al. (2021) (x) Kim et al. (2016b) (y) Cerny et al. (2023b) (z) Battaglia et al. (2022) (aa) Walker et al. (2015a) (ab) Gaia Collaboration et al. (2018) (ac) McConnachie (2012) (ad) Simon et al. (2011) (ae) Kirby et al. (2013) (af) Kirby et al. (2017a) (ag) Chiti et al. (2023) (ah) Simon et al. (2017) (ai) Smith et al. (2023b) (aj) Spencer et al. (2018) (ak) Willman et al. (2011)

Table 4. Properties of Milky Way dwarf galaxies

Name	M_\star M_\odot	$M_{\text{dyn}}(r_{1/2})$ M_\odot	$\Upsilon_{1/2}$	M_{HI} M_\odot	M_{HI}/M_\star	Ref
Antlia II	1.3×10^6	7.9×10^7	119.2	$< 9.8 \times 10^1$	< 0.00007	a,b
Aquarius II	9.5×10^3	2.6×10^6	540.3	$< 1.8 \times 10^3$	< 0.2	c,b,d
Bootes I	4.4×10^4	3.2×10^6	144.9	$< 2.6 \times 10^2$	< 0.006	e,f,g
Bootes II	2.6×10^3	2.6×10^5	203.0	$< 3.7 \times 10^1$	< 0.01	c,f,g
Bootes III	3.4×10^4	8.2×10^7	4853.2	$< 1.1 \times 10^2$	< 0.003	h,i,j,b
Bootes IV	2.3×10^4					k,l
Bootes V	3.3×10^3					m,n
Canes Venatici I	5.3×10^5	1.8×10^7	66.1	$< 1.1 \times 10^3$	< 0.002	f,o,g
Canes Venatici II	2.0×10^4	1.1×10^6	107.8	$< 2.4 \times 10^3$	< 0.1	f,b,o
Carina	1.0×10^6	1.0×10^7	19.9	$< 1.1 \times 10^3$	< 0.001	f,b,p
Carina II	1.2×10^4	8.3×10^5	142.9	$< 2.4 \times 10^2$	< 0.02	q,b,r
Carina III	1.6×10^3	5.9×10^5	760.7	$< 1.0 \times 10^2$	< 0.06	q,b,r
Centaurus I	2.8×10^4	1.2×10^6	87.9			s,t
Cetus II	1.7×10^2			$< 1.3 \times 10^2$	< 0.7	u,b
Cetus III	4.1×10^3			$< 8.5 \times 10^3$	< 2	v,l,b
Columba I	8.2×10^3	$< 4.1 \times 10^6$	< 304.9	$< 5.2 \times 10^3$	< 0.6	w,x,b
Coma Berenices	8.9×10^3	1.1×10^6	243.6	$< 5.9 \times 10^1$	< 0.007	f,o,g
Crater II	3.3×10^5	5.4×10^6	33.3	$< 3.0 \times 10^3$	< 0.009	a,b,y
Draco	5.9×10^5	1.5×10^7	50.0	$< 1.5 \times 10^2$	< 0.0003	f,g,z
Eridanus II	1.2×10^5	7.9×10^6	131.7	$< 2.9 \times 10^3$	< 0.02	aa,ab
Eridanus IV	1.3×10^4	2.6×10^6	394.9			ac,s
Fornax	3.9×10^7	9.5×10^7	4.9	$< 3.6 \times 10^3$	< 0.00009	f,b,p,ad
Grus I	7.7×10^3	6.7×10^5	173.5	$< 2.4 \times 10^3$	< 0.3	ae,af,b
Grus II	4.3×10^3	$< 3.5 \times 10^5$	< 309.9	$< 4.3 \times 10^2$	< 0.1	b,ag
Hercules	3.6×10^4	2.9×10^6	160.2	$< 1.5 \times 10^3$	< 0.04	f,b,o
Horologium I	3.9×10^3	8.0×10^5	410.4	$< 7.6 \times 10^2$	< 0.2	ah,ai,j,b
Horologium II	1.9×10^3			$< 7.7 \times 10^2$	< 0.4	aj,b

Table 4 continued on next page

Table 4 (*continued*)

Name	M_{\star}	$M_{\text{dyn}}(r_{1/2})$	$\Upsilon_{1/2}$	M_{HI}	M_{HI}/M_{\star}	Ref
	M_{\odot}	M_{\odot}		M_{\odot}		
Hydra II	1.9×10^4	$< 1.4 \times 10^6$	< 85.7	$< 3.2 \times 10^3$	< 0.2	ak,al,b
Hydrus I	1.3×10^4	3.6×10^5	54.7	$< 1.2 \times 10^2$	< 0.009	am,b
Leo I	9.1×10^6	1.8×10^7	4.0	$< 3.6 \times 10^3$	< 0.0004	an,f,g
Leo II	1.3×10^6	8.4×10^6	12.7	$< 1.9 \times 10^3$	< 0.001	f,g,ao
Leo IV	1.6×10^4	1.1×10^6	134.1	$< 2.3 \times 10^3$	< 0.1	ap,f,b
Leo Minor I	1.6×10^3					m
Leo V	9.8×10^3	$< 7.6 \times 10^5$	< 222.6	$< 3.6 \times 10^2$	< 0.04	ap,f,g
Pegasus III	8.0×10^3	2.2×10^6	564.1	$< 3.4 \times 10^3$	< 0.4	aq,b,ar
Pegasus IV	8.6×10^3	4.2×10^5	98.9			as
Phoenix II	2.1×10^3	$< 1.2 \times 10^7$	< 412.4	$< 8.3 \times 10^2$	< 0.4	x,at,b
Pictor I	3.0×10^3			$< 1.9 \times 10^3$	< 0.6	ah,j,b
Pictor II	3.3×10^3			$< 2.9 \times 10^2$	< 0.09	au,b
Pisces II	8.8×10^3	1.5×10^6	348.2	$< 1.6 \times 10^3$	< 0.2	ak,b,ar
Reticulum II	3.0×10^3	4.4×10^5	297.3	$< 1.4 \times 10^2$	< 0.05	at,b,av
Reticulum III	3.6×10^3	$< 4.1 \times 10^6$	< 247.3	$< 9.9 \times 10^2$	< 0.3	u,x,b
Sagittarius	4.3×10^7	1.9×10^8	8.8	$< 1.2 \times 10^2$	< 0.000003	aw,b
Sculptor	3.5×10^6	1.8×10^7	10.1	$< 3.1 \times 10^3$	< 0.0009	f,b,p
Segue 1	5.7×10^2	2.5×10^5	887.9	$< 1.1 \times 10^1$	< 0.02	f,ax,g
Segue 2	1.0×10^3	$< 2.2 \times 10^5$	< 487.9	$< 3.0 \times 10^2$	< 0.3	ay,f,b
Sextans	5.3×10^5	2.0×10^7	76.1	$< 4.0 \times 10^2$	< 0.0008	f,b,p
Sextans II	6.3×10^3					l
Triangulum II	5.2×10^2	$< 2.8 \times 10^5$	< 77534.7	$< 1.1 \times 10^2$	< 0.2	w,az,b
Tucana II	5.4×10^3	2.2×10^6	817.9	$< 2.0 \times 10^2$	< 0.04	ba,ah,b
Tucana III	5.7×10^2	$< 6.4 \times 10^4$	< 7810.8	$< 7.5 \times 10^1$	< 0.1	at,b,bb
Tucana IV	2.7×10^3	1.7×10^6	1259.8	$< 2.3 \times 10^2$	< 0.08	b,ag
Tucana V	4.7×10^2	$< 1.2 \times 10^6$	< 7249.3	$< 3.6 \times 10^2$	< 0.8	b,ag
Ursa Major I	1.9×10^4	6.9×10^6	705.3	$< 6.9 \times 10^3$	< 0.4	f,b,o
Ursa Major II	1.0×10^4	3.9×10^6	769.1	$< 8.8 \times 10^1$	< 0.009	f,o,g
Ursa Major III	2.3×10^1	2.4×10^4	2090.9			bc
Ursa Minor	5.3×10^5	1.6×10^7	61.1	$< 4.7 \times 10^1$	< 0.00009	f,g,bd

Table 4 *continued on next page*

Table 4 (*continued*)

Name	M_{\star}	$M_{\text{dyn}}(r_{1/2})$	$\Upsilon_{1/2}$	M_{HI}	M_{HI}/M_{\star}	Ref
	M_{\odot}	M_{\odot}		M_{\odot}		
Virgo I	3.9×10^2			$< 8.8 \times 10^2$	< 2	v,l,b
Virgo II	7.5×10^2					m
Virgo III	2.0×10^3					l
Willman 1	1.8×10^3	3.0×10^5	342.1	$< 3.7 \times 10^3$	< 2	f,b,be

NOTE—Column descriptions: M_{\star} —Stellar mass from M_V assuming mass-to-light ratio of 2; $M_{\text{dyn}}(r_{1/2})$ —Dynamical mass within the spherically average half-light radius using the [Wolf et al. \(2010\)](#) estimator; $\Upsilon_{1/2}$ —Dynamical mass-to-light ratio at the half-light radius; M_{HI} —HI mass, in constrast to other columns the upper limits are a mix of 2,3,5 sigma measurements; M_{HI}/M_{\star} —Ratio of gas-to-stellar mass. Citations: (a) [Ji et al. \(2021\)](#) (b) [Putman et al. \(2021\)](#) (c) [Bruce et al. \(2023\)](#) (d) [Torrealba et al. \(2016b\)](#) (e) [Koposov et al. \(2011\)](#) (f) [Muñoz et al. \(2018\)](#) (g) [Spekkens et al. \(2014\)](#) (h) [Carlin et al. \(2009\)](#) (i) [Correnti et al. \(2009\)](#) (j) [Moskowitz & Walker \(2020\)](#) (k) [Homma et al. \(2019\)](#) (l) [Homma et al. \(2023\)](#) (m) [Cerny et al. \(2023a\)](#) (n) [Smith et al. \(2023a\)](#) (o) [Simon & Geha \(2007\)](#) (p) [Walker et al. \(2009\)](#) (q) [Li et al. \(2018\)](#) (r) [Torrealba et al. \(2018\)](#) (s) [Heiger et al. \(2023\)](#) (t) [Mau et al. \(2020\)](#) (u) [Drlica-Wagner et al. \(2015\)](#) (v) [Homma et al. \(2018\)](#) (w) [Carlin et al. \(2017\)](#) (x) [Fritz et al. \(2019\)](#) (y) [Torrealba et al. \(2016a\)](#) (z) [Walker et al. \(2015b\)](#) (aa) [Crnojević et al. \(2016\)](#) (ab) [Li et al. \(2017\)](#) (ac) [Cerny et al. \(2021a\)](#) (ad) [Wang et al. \(2019a\)](#) (ae) [Cantu et al. \(2021\)](#) (af) [Chiti et al. \(2022\)](#) (ag) [Simon et al. \(2020\)](#) (ah) [Koposov et al. \(2015a\)](#) (ai) [Koposov et al. \(2015b\)](#) (aj) [Kim & Jerjen \(2015a\)](#) (ak) [Kirby et al. \(2015\)](#) (al) [Martin et al. \(2015\)](#) (am) [Koposov et al. \(2018\)](#) (an) [Mateo et al. \(2008\)](#) (ao) [Spencer et al. \(2017\)](#) (ap) [Jenkins et al. \(2021\)](#) (aq) [Kim et al. \(2016b\)](#) (ar) [Richstein et al. \(2022\)](#) (as) [Cerny et al. \(2023b\)](#) (at) [Mutlu-Pakdil et al. \(2018\)](#) (au) [Drlica-Wagner et al. \(2016\)](#) (av) [Walker et al. \(2015a\)](#) (aw) [McConnachie \(2012\)](#) (ax) [Simon et al. \(2011\)](#) (ay) [Kirby et al. \(2013\)](#) (az) [Kirby et al. \(2017a\)](#) (ba) [Chiti et al. \(2023\)](#) (bb) [Simon et al. \(2017\)](#) (bc) [Smith et al. \(2023b\)](#) (bd) [Spencer et al. \(2018\)](#) (be) [Willman et al. \(2011\)](#)

Table 5. Properties of ultra-faint star clusters/hyper-faint galaxy candidates

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
Koposov 1		11:59:18.1	+12:15:41.4	MW	Koposov et al. (2007)		
Koposov 2		07:58:17.2	+26:15:26.6	MW	Koposov et al. (2007)		
Segue 3		21:21:31.0	+19:07:03.7	MW	Belokurov et al. (2010)		Star Cluster
Munoz 1		15:01:47.8	+66:58:05.5	MW	Muñoz et al. (2012)		
Balbinot 1		22:10:43.0	+14:56:25.1	MW	Balbinot et al. (2013)		
Kim 1		22:11:41.1	+07:01:37.6	MW	Kim & Jerjen (2015b)	Cand.	
Laevens 1	Crater I PSO J174.0675-10.8774 Crater 1	11:36:16.0	-10:52:37.9	MW	Belokurov et al. (2014) Laevens et al. (2014)		Star Cluster
DES 1		00:33:59.8	-49:02:19.0	MW	Luque et al. (2016)		
Draco II	Laevens 5	15:52:47.6	+64:33:55.0	MW	Laevens et al. (2015b)		
Eridanus III	DES J0222.7-5217	02:22:46.8	-52:17:01.7	MW	Bechtol et al. (2015) Koposov et al. (2015a)		
Kim 2	Indus I Indus 1 DES J2108.8-5109	21:08:48.5	-51:10:01.6	MW	Kim et al. (2015b) Bechtol et al. (2015) Koposov et al. (2015a)		Star Cluster
Laevens 3		21:06:55.1	+14:59:03.8	MW	Laevens et al. (2015b)		Star Cluster
Sagittarius II	Laevens 4	19:52:40.5	-22:04:05.0	MW	Laevens et al. (2015b)		Star Cluster
Kim 3		13:22:45.1	-30:36:00.0	MW	Kim et al. (2016a)	Cand.	
SMASH 1		06:21:00.0	-80:23:47.8	MW	Martin et al. (2016a)	Cand.	
DES 3		21:40:13.2	-52:32:30.5	MW	Luque et al. (2018)	Cand.	
DES 4		05:28:22.8	-61:43:25.3	MW	Torrealba et al. (2019a)	Cand.	
DES 5		05:10:00.8	-62:34:49.7	MW	Torrealba et al. (2019a)	Cand.	
Gaia 3		06:20:14.1	-73:24:52.0	MW	Torrealba et al. (2019a)	Cand.	
PS1 1	Prestgard 64	19:16:41.1	-27:49:38.0	MW	Torrealba et al. (2019a)	Cand.	
To 1		03:44:19.8	-69:25:21.2	MW	Torrealba et al. (2019a)	Cand.	
BLISS 1	BLISS J0321+0438	11:50:02.4	-41:46:19.2	MW	Mau et al. (2019)		

Table 5 continued on next page

Table 5 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
HSC 1	HSC J2217+0328	22:17:14.2	+03:28:48.0	MW	Homma et al. (2019)	Cand.	
DELVE 1		16:30:54.0	-00:58:19.2	MW	Mau et al. (2020) Drlica-Wagner et al. (2020)		
DELVE 2	DELVE J0155-6815	01:55:05.3	-68:15:10.8	MW	Cerny et al. (2021b)		
YMCA-1		07:23:21.1	-64:49:54.8	MW	Gatto et al. (2021)		
DELVE 3	DELVE J1921-6047	19:21:35.0	-60:47:02.4	MW	Cerny et al. (2023a)		
DELVE 4	DELVE J1523+2723	15:23:06.0	+27:23:42.0	MW	Cerny et al. (2023a)		
DELVE 5	DELVE J1448+1728	14:48:25.0	+17:28:04.8	MW	Cerny et al. (2023a)		
DELVE 6		02:12:16.8	-66:03:21.6	MW	Cerny et al. (2023c)		

NOTE— Column description: **Classification**—Star cluster/Globular cluster versus dwarf galaxy.

Table 6. Properties of ultra-faint star clusters/hyper-faint galaxy candidates

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
BLISS 1	177.5100	-41.7720	$0.60^{+0.19}_{-0.14}$	0.06	$101.0^{+74.0}_{-56.0}$	$4.1^{+1.2}_{-1.1}$	$16.87^{+0.20}_{-0.13}$	$23.7^{+2.3}_{-1.4}$	16.9	$0.0^{+1.7}_{-0.7}$	a
Balbinot 1	332.6791	14.9403	$0.60^{+0.16}_{-0.11}$			$5.5^{+1.3}_{-1.4}$	$17.52^{+0.07}_{-0.11}$	$31.9^{+1.0}_{-1.6}$	16.3	-1.2 ± 0.7	b
DELVE 1	247.7250	-0.9720	$0.97^{+0.27}_{-0.19}$	$0.20^{+0.10}_{-0.20}$	$21.0^{+26.0}_{-30.0}$	$4.7^{+1.4}_{-1.2}$	16.39 ± 0.12	$19.0^{+1.1}_{-1.0}$	16.2	$-0.2^{+0.8}_{-0.6}$	c
DELVE 2	28.7720	-68.2530	$1.04^{+0.19}_{-0.15}$	$0.03^{+0.15}_{-0.03}$	$74.0^{+84.0}_{-40.0}$	$20.8^{+3.5}_{-3.2}$	19.26 ± 0.10	$71.1^{+3.4}_{-3.2}$	17.2	$-2.1^{+0.4}_{-0.5}$	d
DELVE 3	290.3960	-60.7840	$0.40^{+0.12}_{-0.08}$	< 0.40	$87.0^{+30.0}_{-35.0}$	$6.5^{+1.6}_{-1.7}$	$18.73^{+0.09}_{-0.23}$	$55.7^{+2.4}_{-5.6}$	17.4	$-1.3^{+0.4}_{-0.6}$	e
DELVE 4	230.7750	27.3950	$0.49^{+0.16}_{-0.12}$	0.40 ± 0.20	$152.0^{+14.0}_{-17.0}$	$4.7^{+1.8}_{-1.6}$	18.28 ± 0.19	$45.3^{+4.1}_{-3.8}$	18.1	$-0.2^{+0.5}_{-0.8}$	e
DELVE 5	222.1040	17.4680	$0.68^{+0.24}_{-0.17}$	$0.60^{+0.10}_{-0.20}$	$77.0^{+10.0}_{-11.0}$	$4.7^{+2.0}_{-1.6}$	17.97 ± 0.17	$39.3^{+3.2}_{-3.0}$	18.4	$0.4^{+0.4}_{-0.9}$	e
DELVE 6	33.0700	-66.0560	$0.43^{+0.18}_{-0.12}$	< 0.56	$14.0^{+40.0}_{-63.0}$	$9.9^{+3.8}_{-3.5}$	$19.51^{+0.11}_{-0.16}$	$79.8^{+4.1}_{-5.7}$	18.0	$-1.5^{+0.4}_{-0.6}$	f
DES 1	8.4992	-49.0386	$0.24^{+0.04}_{-0.03}$	$0.41^{+0.03}_{-0.06}$	112.0 ± 3.0	4.1 ± 0.6	19.40 ± 0.12	$75.9^{+4.3}_{-4.1}$	18.0	-1.4 ± 0.5	g
DES 3	325.0552	-52.5418	$0.30^{+0.05}_{-0.04}$	$0.18^{+0.14}_{-0.12}$	$-11.6^{+30.8}_{-32.2}$	$5.8^{+1.0}_{-1.1}$	$19.41^{+0.08}_{-0.11}$	$76.2^{+2.9}_{-3.8}$	17.8	$-1.6^{+0.5}_{-0.3}$	h
DES 4	82.0950	-61.7237	0.83			7.6	17.50	31.6	16.4	-1.1	i
DES 5	77.5035	-62.5805	0.18			1.3	17.00	25.1	17.3	0.3	i
Draco II	238.1983	64.5653	$3.00^{+0.70}_{-0.50}$	0.23 ± 0.15	$76.0^{+22.0}_{-32.0}$	$16.5^{+3.7}_{-3.6}$	16.67 ± 0.05	21.6 ± 0.5	15.9	$-0.8^{+0.4}_{-1.0}$	j
Eridanus III	35.6952	-52.2838	$0.32^{+0.04}_{-0.03}$	$0.44^{+0.02}_{-0.03}$	109.0 ± 5.0	$6.2^{+0.7}_{-0.6}$	19.80 ± 0.04	91.2 ± 1.7	17.7	-2.1 ± 0.5	g
Gaia 3	95.0586	-73.4145	0.53			7.4	18.40	47.9	15.1	-3.3	i
HSC 1	334.3090	3.4800	$0.44^{+0.07}_{-0.06}$	$0.46^{+0.08}_{-0.10}$	-12.0 ± 11.0	$4.2^{+0.9}_{-0.7}$	18.30 ± 0.20	$45.7^{+4.4}_{-4.0}$	18.1	$-0.2^{+0.6}_{-0.8}$	k
Kim 1	332.9214	7.0271	1.20 ± 0.10	0.42 ± 0.10	-59.0 ± 6.0	5.2 ± 0.7	$16.48^{+0.20}_{-0.10}$	$19.8^{+1.9}_{-0.9}$	16.8	0.3 ± 0.5	l
Kim 2	317.2020	-51.1671	0.42 ± 0.02	0.12 ± 0.10	35.0 ± 5.0	$11.8^{+1.0}_{-0.9}$	20.10 ± 0.10	$104.7^{+4.9}_{-4.7}$	18.6	-1.5 ± 0.5	m
Kim 3	200.6880	-30.6000	$0.52^{+0.24}_{-0.11}$	$0.17^{+0.26}_{-0.17}$	4.0 ± 24.0	$2.0^{+0.8}_{-0.7}$	$15.90^{+0.11}_{-0.04}$	$15.1^{+0.8}_{-0.3}$	16.6	0.7 ± 0.3	n
Koposov 1	179.8253	12.2615	0.62 ± 0.18	0.45 ± 0.15	7.0 ± 21.0	$6.3^{+2.2}_{-2.0}$	18.42	48.3	17.4	-1.0 ± 0.7	o
Koposov 2	119.5715	26.2574	0.44 ± 0.07	0.43 ± 0.14	-35.0 ± 18.0	3.4 ± 0.7	17.70	34.7	16.8	-0.9 ± 0.8	o
Laevens 1	174.0668	-10.8772	0.46 ± 0.01			19.5 ± 0.6	20.82 ± 0.04	145.9 ± 3.0	15.5	-5.3 ± 0.1	p
Laevens 3	316.7294	14.9844	0.64 ± 0.05	$0.11^{+0.09}_{-0.11}$	$72.0^{+24.0}_{-17.0}$	$10.6^{+1.0}_{-0.9}$	$18.94^{+0.05}_{-0.02}$	$61.4^{+1.4}_{-0.6}$	16.1	$-2.8^{+0.2}_{-0.3}$	q
Munoz 1	225.4490	66.9682	0.49 ± 0.15	0.34 ± 0.17	139.0 ± 46.0	$5.0^{+1.9}_{-1.7}$	$18.27^{+0.23}_{-0.26}$	$45.1^{+5.0}_{-5.1}$	17.9	-0.4 ± 1.0	r,o
PS1 1	289.1712	-27.8272	0.55			4.8	17.40	30.2	15.5	-1.9	i
SMASH 1	95.2496	-80.3966	$0.57^{+0.32}_{-0.18}$	$0.62^{+0.17}_{-0.21}$	-24.0 ± 16.0	$5.5^{+3.0}_{-2.7}$	18.80	57.5	17.8	-1.0 ± 0.9	s
Sagittarius II	298.1687	-22.0681	1.60 ± 0.10	< 0.10		$32.0^{+3.7}_{-3.4}$	19.20 ± 0.20	$69.2^{+6.7}_{-6.1}$	14.0	-5.2 ± 0.1	t

Table 6 continued on next page

Table 6 (*continued*)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
Segue 3	320.3793	19.1177	0.43 ± 0.08	0.23 ± 0.11	33.0 ± 36.0	1.8 ± 0.4	16.14 ± 0.09	16.9 ± 0.7	16.1	$-0.1^{+0.1}_{-0.8}$	u
To 1	56.0825	-69.4226	0.27			3.4	18.20	43.7	16.6	-1.6	i
YMCA-1	110.8378	-64.8319	0.22 ± 0.03			$3.5^{+0.6}_{-0.5}$	$18.72^{+0.15}_{-0.17}$	$55.5^{+4.0}_{-4.2}$	18.2	-0.5 ± 0.6	v

NOTE— Citations: (a) [Mau et al. \(2019\)](#) (b) [Balbinot et al. \(2013\)](#) (c) [Mau et al. \(2020\)](#) (d) [Cerny et al. \(2021b\)](#) (e) [Cerny et al. \(2023a\)](#) (f) [Cerny et al. \(2023c\)](#) (g) [Conn et al. \(2018\)](#) (h) [Luque et al. \(2018\)](#) (i) [Torrealba et al. \(2019a\)](#) (j) [Longeard et al. \(2018\)](#) (k) [Homma et al. \(2019\)](#) (l) [Kim & Jerjen \(2015b\)](#) (m) [Kim et al. \(2015b\)](#) (n) [Kim et al. \(2016a\)](#) (o) [Muñoz et al. \(2018\)](#) (p) [Weisz et al. \(2016\)](#) (q) [Longeard et al. \(2019\)](#) (r) [Muñoz et al. \(2012\)](#) (s) [Martin et al. \(2016a\)](#) (t) [Mutlu-Pakdil et al. \(2018\)](#) (u) [Fadely et al. \(2011\)](#) (v) [Gatto et al. \(2022\)](#)

Table 7. Properties of ultra-faint star clusters/hyper-faint galaxy candidates

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha\star}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
BLISS 1	290.8313	19.6526					-2.340 ± 0.042	0.138 ± 0.038	a
Balbinot 1	75.1723	-32.6443							
DELVE 1	14.1876	30.2900					0.040 ± 0.070	-1.540 ± 0.050	b
DELVE 2	294.2362	-47.7863					$0.920^{+0.120}_{-0.110}$	$-0.970^{+0.090}_{-0.080}$	b
DELVE 3	335.8458	-27.0619					$-0.330^{+0.310}_{-0.340}$	$-0.800^{+0.350}_{-0.320}$	c
DELVE 4	42.3105	56.4285					$0.420^{+0.080}_{-0.090}$	-0.750 ± 0.110	c
DELVE 5	19.3752	61.3561					$-1.820^{+0.130}_{-0.120}$	-0.930 ± 0.120	c
DELVE 6	290.5702	-49.0866					0.930 ± 0.390	-1.280 ± 0.380	d
DES 1	310.5222	-67.8318							
DES 3	343.8295	-46.5116							
DES 4	270.8713	-33.4387							
DES 5	272.2040	-35.4695							
Draco II	98.2942	42.8800	$-342.5^{+1.1}_{-1.2}$	< 5.90	-2.70 ± 0.10		$1.027^{+0.067}_{-0.065}$	0.887 ± 0.072	e,f
Eridanus III	274.9547	-59.5966					1.390 ± 0.130	-0.640 ± 0.140	b
Gaia 3	284.2274	-28.1313							
HSC 1	66.3192	-41.8407							
Kim 1	68.5158	-38.4241							
Kim 2	347.1549	-42.0693							
Kim 3	310.8601	31.7892					-0.849 ± 0.178	3.396 ± 0.140	a
Koposov 1	260.9699	70.7551					-1.513 ± 0.135	-0.814 ± 0.105	a
Koposov 2	195.1097	25.5468					-0.601 ± 0.189	-0.025 ± 0.189	a
Laevens 1	274.8070	47.8474	148.2 ± 1.1	$2.04^{+2.19}_{-1.06}$	-1.68	< 0.53	-0.040 ± 0.120	0.120 ± 0.100	b,g
Laevens 3	63.5981	-21.1761	-70.2 ± 0.5		-1.80 ± 0.10		0.172 ± 0.101	-0.666 ± 0.080	h,a
Munoz 1	105.4414	45.4806	-137.0 ± 4.0	< 4.70	-1.46 ± 0.32		-0.100 ± 0.203	-0.020 ± 0.207	i,a
PS1 1	10.0421	-17.4207							
SMASH 1	292.1393	-27.9860							
Sagittarius II	18.9355	-22.8975	$-177.2^{+0.5}_{-0.6}$	1.70 ± 0.50	-2.23 ± 0.07		-0.769 ± 0.035	$-0.903^{+0.022}_{-0.023}$	j,f

Table 7 continued on next page

Table 7 (*continued*)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha\star}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
Segue 3	69.3997	-21.2723	-167.0	1.20 ± 2.60			-0.981 ± 0.121	-1.667 ± 0.081	k,a
To 1	284.3606	-40.9069							
YMCA-1	276.0948	-21.1101					1.044 ± 0.402	1.107 ± 0.209	l

NOTE— Citations: (a) [Vasiliev & Baumgardt \(2021\)](#) (b) [Battaglia et al. \(2022\)](#) (c) [Cerny et al. \(2023a\)](#) (d) [Cerny et al. \(2023c\)](#) (e) [Longeard et al. \(2018\)](#) (f) [Pace et al. \(2022\)](#) (g) [Voggel et al. \(2016\)](#) (h) [Longeard et al. \(2019\)](#) (i) [Muñoz et al. \(2012\)](#) (j) [Longeard et al. \(2021\)](#) (k) [Fadely et al. \(2011\)](#) (l) [Piatti & Lucchini \(2022\)](#)

Table 8. Properties of M31 dwarf galaxies

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
M32	UGC 452 NGC 221 PGC002555	00:42:41.8	+40:51:54.4	M 31			Dwarf Galaxy
NGC 185	UGC 396	00:38:58.0	+48:20:10.0	M 31	Herschel (1789)		Dwarf Galaxy
NGC 205	M110 UGC 426	00:40:22.5	+41:41:11.0	M 31			Dwarf Galaxy
NGC 147	UGC 326 DDO 3 PGC 2004 LEDA 2004 Caldwell 17	00:33:11.6	+48:30:28.0	M 31	Herschel (1833)		Dwarf Galaxy
IC 10	UGC 192 2MASX J00201733+5918136 MCG +10-01-001 PGC001305	00:20:24.5	+59:17:30.0	M 31	Swift (1888)		Dwarf Galaxy
Andromeda I		00:45:39.7	+38:02:15.0	M 31	van den Bergh (1972)		Dwarf Galaxy
Andromeda II		01:16:26.8	+33:26:07.0	M 31	van den Bergh (1972)		Dwarf Galaxy
Andromeda III		00:35:30.9	+36:29:56.0	M 31	van den Bergh (1972)		Dwarf Galaxy
LGS 3	Local Group Suspect 3 Pisces Pisces I	01:03:55.0	+21:53:06.0	M 31	Karachentseva (1976) Kowal et al. (1978)		Dwarf Galaxy
Andromeda V		01:10:17.5	+47:37:42.0	M 31	Armandroff et al. (1998)		Dwarf Galaxy
Andromeda VI	Pegasus dSph	23:51:46.9	+24:34:57.0	M 31	Karachentsev & Karachentseva (1999)		Dwarf Galaxy
Andromeda VII	Casseopia dSph Cassiopeia	23:26:33.5	+50:40:48.0	M 31	Karachentsev & Karachentseva (1999)		Dwarf Galaxy
Andromeda IX		00:52:53.4	+43:11:57.0	M 31	Zucker et al. (2004)		Dwarf Galaxy
Andromeda X		01:06:35.4	+44:48:27.0	M 31	Zucker et al. (2007)		Dwarf Galaxy

Table 8 continued on next page

Table 8 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
Andromeda XI		00:46:19.7	+33:48:10.0	M 31	Martin et al. (2006)		Dwarf Galaxy
Andromeda XII		00:47:28.3	+34:22:38.0	M 31	Martin et al. (2006)		Dwarf Galaxy
Andromeda XIII	Pisces III	00:51:51.0	+33:00:16.0	M 31	Martin et al. (2006)		Dwarf Galaxy
Andromeda XIV		00:51:35.0	+29:41:23.0	M 31	Majewski et al. (2007)		Dwarf Galaxy
Andromeda XV		01:14:18.3	+38:07:11.0	M 31	Ibata et al. (2007)		Dwarf Galaxy
Andromeda XVI	Pisces V	00:59:30.3	+32:22:34.0	M 31	Ibata et al. (2007)		Dwarf Galaxy
Andromeda XIX		00:19:34.5	+35:02:41.0	M 31	McConnachie et al. (2008)		Dwarf Galaxy
Andromeda XVII		00:37:06.3	+44:19:23.0	M 31	Irwin et al. (2008)		Dwarf Galaxy
Andromeda XVIII		00:02:14.5	+45:05:15.8	M 31	McConnachie et al. (2008)		Dwarf Galaxy
Andromeda XX		00:07:30.6	+35:07:37.0	M 31	McConnachie et al. (2008)		Dwarf Galaxy
Andromeda XXI		23:54:47.9	+42:28:14.0	M 31	Martin et al. (2009)		Dwarf Galaxy
Andromeda XXII	Triangulum I	01:27:40.4	+28:05:25.0	M 31	Martin et al. (2009)		Dwarf Galaxy
Andromeda XXIII		01:29:21.0	+38:43:26.0	M 31	Richardson et al. (2011)		Dwarf Galaxy
Andromeda XXIV		01:18:32.7	+46:22:13.0	M 31	Richardson et al. (2011)		Dwarf Galaxy
Andromeda XXIX		23:58:55.6	+30:45:20.2	M 31	Bell et al. (2011)		Dwarf Galaxy
Andromeda XXV		00:30:09.9	+46:51:41.0	M 31	Richardson et al. (2011)		Dwarf Galaxy
Andromeda XXVI		00:23:46.3	+47:54:43.0	M 31	Richardson et al. (2011)		Dwarf Galaxy
Andromeda XXVII		00:37:27.1	+45:23:13.0	M 31	Richardson et al. (2011)		Dwarf Galaxy
Andromeda XXVIII		22:32:41.2	+31:12:53.8	M 31	Slater et al. (2011)		Dwarf Galaxy
Cassiopeia II	Andromeda XXX	00:36:34.6	+49:38:49.0	M 31			Dwarf Galaxy
Cassiopeia III	Andromeda XXXII	00:35:57.4	+51:33:36.2	M 31	Martin et al. (2013a)		Dwarf Galaxy
Lacerta I	Andromeda XXXI	22:58:12.2	+41:18:22.3	M 31	Martin et al. (2013a)		Dwarf Galaxy
Perseus I	Andromeda XXXIII	03:01:23.4	+40:59:05.4	M 31	Martin et al. (2013b)		Dwarf Galaxy
Pegasus V	Andromeda XXXIV	23:18:27.8	+33:21:32.0	M 31	Collins et al. (2022)		Dwarf Galaxy
Pisces VII	Triangulum III	01:21:40.6	+26:23:27.6	M 33	Martínez-Delgado et al. (2022)		Dwarf Galaxy

NOTE—

Table 9. Properties of M31 dwarf galaxies

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
Andromeda I	11.4154	38.0375	3.90 ± 0.10	0.28 ± 0.03	30.0 ± 4.0	$746.1^{+31.2}_{-28.5}$	24.45 ± 0.05	$776.2^{+18.1}_{-17.7}$	13.1	-11.3 ± 0.2	a,b
Andromeda II	19.1117	33.4353	5.30 ± 0.10	0.16 ± 0.02	31.0 ± 5.0	942.1 ± 30.3	24.12 ± 0.05	$666.8^{+15.5}_{-15.2}$	12.4	-11.7 ± 0.2	a,b
Andromeda III	8.8788	36.4989	2.00 ± 0.20	0.59 ± 0.04	140.0 ± 3.0	$267.9^{+31.7}_{-30.6}$	24.29 ± 0.05	$721.1^{+16.8}_{-16.4}$	14.8	$-9.5^{+0.3}_{-0.2}$	a,b
Andromeda IX	13.2225	43.1992	$2.00^{+0.30}_{-0.20}$	$0.00^{+0.16}_{-0.00}$	41.0 ± 65.0	$398.2^{+46.7}_{-49.6}$	24.23 ± 0.06	$701.5^{+19.7}_{-19.1}$	15.6	-8.6 ± 0.3	a,b
Andromeda V	17.5729	47.6283	$1.60^{+0.20}_{-0.10}$	$0.26^{+0.09}_{-0.07}$	54.0 ± 10.0	$300.0^{+34.0}_{-32.2}$	24.40 ± 0.06	$758.6^{+21.3}_{-20.7}$	15.1	-9.3 ± 0.2	a,b
Andromeda VI	357.9454	24.5825	2.15 ± 0.08	0.41 ± 0.03	163.0 ± 3.0	$400.1^{+21.4}_{-21.5}$	24.60 ± 0.06	$831.8^{+23.3}_{-22.7}$	13.3	-11.3 ± 0.2	c,b
Andromeda VII	351.6396	50.6800	3.47 ± 0.07	0.13 ± 0.04	94.0 ± 8.0	$776.6^{+31.8}_{-32.2}$	24.58 ± 0.06	$824.1^{+23.1}_{-22.5}$	11.8	-12.8 ± 0.3	c,b
Andromeda X	16.6475	44.8075	$1.10^{+0.40}_{-0.20}$	$0.10^{+0.34}_{-0.10}$	$30.0^{+20.0}_{-12.0}$	$171.2^{+52.3}_{-47.8}$	24.00 ± 0.06	$631.0^{+17.7}_{-17.2}$	16.7	-7.3 ± 0.3	a,b
Andromeda XI	11.5821	33.8028	0.60 ± 0.20	$0.19^{+0.28}_{-0.19}$	54.0 ± 30.0	$110.8^{+42.0}_{-42.4}$	24.38 ± 0.07	$751.6^{+24.6}_{-23.8}$	18.0	-6.4 ± 0.4	a,b
Andromeda XII	11.8679	34.3772	$1.80^{+1.20}_{-0.70}$	$0.61^{+0.16}_{-0.48}$	$16.0^{+12.0}_{-36.0}$	$214.6^{+162.6}_{-125.5}$	$24.28^{+0.08}_{-0.07}$	$717.8^{+26.9}_{-22.8}$	17.7	-6.6 ± 0.5	a,b
Andromeda XIII	12.9625	33.0044	$0.80^{+0.40}_{-0.30}$	$0.61^{+0.14}_{-0.20}$	$-20.0^{+9.0}_{-12.0}$	$118.4^{+62.3}_{-53.0}$	24.57 ± 0.07	$820.4^{+26.9}_{-26.0}$	17.8	-6.8 ± 0.4	a,b
Andromeda XIV	12.8958	29.6897	1.50 ± 0.20	$0.17^{+0.16}_{-0.17}$	-4.0 ± 14.0	$294.8^{+52.0}_{-45.8}$	24.44 ± 0.06	$772.7^{+21.6}_{-21.1}$	15.8	-8.6 ± 0.3	a,b
Andromeda XIX	4.8937	35.0447	$14.20^{+3.40}_{-1.90}$	$0.58^{+0.05}_{-0.10}$	34.0 ± 5.0	$2168.7^{+442.7}_{-448.9}$	$24.55^{+0.09}_{-0.08}$	$812.8^{+34.4}_{-29.4}$	14.5	-10.1 ± 0.3	a,b
Andromeda XV	18.5763	38.1197	1.30 ± 0.10	0.24 ± 0.10	38.0 ± 15.0	$246.8^{+24.8}_{-26.1}$	24.37 ± 0.05	$748.2^{+17.4}_{-17.0}$	16.0	-8.4 ± 0.3	a,b
Andromeda XVI	14.8763	32.3761	1.00 ± 0.10	0.29 ± 0.08	98.0 ± 9.0	126.7 ± 15.4	23.57 ± 0.08	$517.6^{+19.4}_{-18.7}$	16.1	-7.5 ± 0.3	a,d
Andromeda XVII	9.2762	44.3231	1.40 ± 0.30	0.50 ± 0.10	110.0 ± 9.0	$216.8^{+53.0}_{-51.7}$	24.40 ± 0.07	$758.6^{+24.9}_{-24.1}$	16.6	-7.8 ± 0.3	a,b
Andromeda XVIII	0.5603	45.0877	0.92 ± 0.05	0.44 ± 0.12	75.1 ± 4.5	$237.5^{+28.1}_{-31.4}$	25.36 ± 0.08	$1180.3^{+44.3}_{-42.7}$	16.2	-9.2 ± 0.4	e,a
Andromeda XX	1.8775	35.1269	$0.40^{+0.20}_{-0.10}$	$0.11^{+0.41}_{-0.11}$	$90.0^{+20.0}_{-44.0}$	$71.2^{+32.3}_{-26.5}$	24.35 ± 0.08	$741.3^{+27.8}_{-26.8}$	18.0	-6.4 ± 0.4	a,b
Andromeda XXI	358.6996	42.4706	$4.10^{+0.80}_{-0.40}$	$0.36^{+0.10}_{-0.13}$	139.0 ± 13.0	$717.0^{+145.5}_{-113.0}$	$24.44^{+0.06}_{-0.07}$	$772.7^{+21.6}_{-24.5}$	15.5	-8.9 ± 0.3	a,b
Andromeda XXII	21.9183	28.0903	$0.90^{+0.30}_{-0.20}$	$0.61^{+0.10}_{-0.14}$	114.0 ± 10.0	$120.6^{+42.6}_{-37.8}$	24.39 ± 0.07	$755.1^{+24.7}_{-24.0}$	18.0	-6.4 ± 0.4	a,b
Andromeda XXIII	22.3375	38.7239	5.40 ± 0.40	$0.41^{+0.05}_{-0.06}$	138.0 ± 5.0	$898.4^{+78.9}_{-83.2}$	24.36 ± 0.07	$744.7^{+24.4}_{-23.6}$	14.6	-9.8 ± 0.2	a,b
Andromeda XXIV	19.6363	46.3703	$2.60^{+1.00}_{-0.50}$	$0.10^{+0.31}_{-0.10}$	90.0 ± 34.0	$406.6^{+127.8}_{-124.7}$	23.92 ± 0.07	$608.1^{+19.9}_{-19.3}$	16.3	-7.6 ± 0.3	a,b
Andromeda XXIX	359.7317	30.7556	1.39 ± 0.08	0.29 ± 0.04	55.0 ± 4.0	$242.7^{+17.3}_{-16.4}$	24.26 ± 0.06	$711.2^{+19.9}_{-19.4}$	16.1	-8.2 ± 0.3	b,f
Andromeda XXV	7.5412	46.8614	$2.70^{+0.40}_{-0.20}$	$0.03^{+0.16}_{-0.03}$	-16.0 ± 30.0	$566.3^{+61.8}_{-62.1}$	$24.38^{+0.07}_{-0.06}$	$751.6^{+24.6}_{-20.5}$	15.3	$-9.1^{+0.3}_{-0.2}$	a,b
Andromeda XXVI	5.9429	47.9119	$1.00^{+0.60}_{-0.50}$	$0.35^{+0.33}_{-0.35}$	50.0 ± 90.0	$159.5^{+115.2}_{-100.8}$	$24.48^{+0.06}_{-0.07}$	$787.0^{+22.1}_{-25.0}$	18.5	$-6.0^{+0.7}_{-0.5}$	a,b
Andromeda XXVII	9.3629	45.3869	1.80 ± 0.30	0.40 ± 0.20	150.0 ± 10.0	$326.4^{+79.7}_{-79.8}$	24.59 ± 0.12	$827.9^{+47.0}_{-44.5}$	16.7	-7.9 ± 0.5	g
Andromeda XXVIII	338.1717	31.2149	1.38 ± 0.06	0.42 ± 0.06	35.0 ± 1.0	$227.9^{+16.1}_{-16.2}$	24.36 ± 0.05	$744.7^{+17.3}_{-17.0}$	15.8	-8.5 ± 0.4	e,b,f

Table 9 continued on next page

Table 9 (continued)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
Cassiopeia II	9.1442	49.6469	1.50 ± 0.20	$0.43^{+0.10}_{-0.12}$	110.0 ± 9.0	$181.3^{+31.7}_{-30.1}$	23.74 ± 0.06	$559.8^{+15.7}_{-15.3}$	16.0	$-7.7^{+0.3}_{-0.2}$	a,b
Cassiopeia III	8.9893	51.5601	4.73 ± 0.09	0.30 ± 0.01	91.0 ± 2.0	$921.8^{+32.3}_{-30.0}$	24.52 ± 0.06	$801.7^{+22.5}_{-21.8}$	12.1	-12.4 ± 0.2	h,b
IC 10	5.1021	59.2917	2.65	0.19 ± 0.02		533.6	24.43 ± 0.03	$769.1^{+10.7}_{-10.6}$	9.5	-14.9 ± 0.2	i,j
LGS 3	15.9792	21.8850	2.10 ± 0.20	0.20	0.0	$367.6^{+36.4}_{-35.0}$	23.91 ± 0.05	$605.3^{+14.1}_{-13.8}$	14.3	-9.6 ± 0.1	i,b
Lacerta I	344.5509	41.3062	3.13 ± 0.05	0.41 ± 0.01	-64.0 ± 1.0	$520.9^{+14.5}_{-14.2}$	24.36 ± 0.05	$744.7^{+17.3}_{-17.0}$	13.2	-11.2 ± 0.3	h,b
M32	10.6741	40.8651	0.47 ± 0.05	0.25 ± 0.02	159.0 ± 2.0	$91.7^{+9.4}_{-10.6}$	24.44 ± 0.06	$772.7^{+21.6}_{-21.1}$	8.1	-16.3 ± 0.1	i,b
NGC 147	8.2983	48.5078	3.17	0.41 ± 0.02	25.0 ± 3.0	520.2	24.33 ± 0.06	$734.5^{+20.6}_{-20.0}$	9.5	-14.8 ± 0.1	i,b
NGC 185	9.7417	48.3361	2.55	0.15 ± 0.10	35.0 ± 3.0	443.6	24.06 ± 0.06	$648.6^{+18.2}_{-17.7}$	9.2	-14.9 ± 0.1	i,b
NGC 205	10.0938	41.6864	2.46 ± 0.10	0.43 ± 0.10	28.0 ± 5.0	$449.8^{+45.4}_{-45.2}$	24.61 ± 0.06	$835.6^{+23.4}_{-22.8}$	8.1	-16.5 ± 0.1	i,b
Pegasus V	349.6158	33.3589	$0.40^{+0.20}_{-0.10}$	0.01 ± 0.01	$96.0^{+47.0}_{-57.0}$	$79.5^{+30.0}_{-31.6}$	24.20 ± 0.10	$691.8^{+30.9}_{-31.1}$	17.9	-6.3 ± 0.2	k
Perseus I	45.3477	40.9848	$1.40^{+0.07}_{-0.06}$	0.09 ± 0.06	$-58.0^{+25.0}_{-21.0}$	$271.4^{+17.2}_{-16.0}$	24.24 ± 0.06	$704.7^{+19.7}_{-19.2}$	15.4	-8.9 ± 0.3	h,b
Pisces VII	20.4190	26.3910	$0.67^{+0.20}_{-0.10}$	< 0.10	$96.0^{+32.0}_{-36.0}$	$186.6^{+45.4}_{-47.8}$	24.90 ± 0.20	$955.0^{+92.1}_{-84.0}$	19.2	-5.7 ± 0.3	l

NOTE— Citations: (a) [Martin et al. \(2016b\)](#) (b) [Savino et al. \(2022\)](#) (c) [McConnachie & Irwin \(2006\)](#) (d) [Martínez-Vázquez et al. \(2017\)](#) (e) [Higgs et al. \(2021\)](#) (f) [Slater et al. \(2015\)](#) (g) [Richardson et al. \(2011\)](#) (h) [Rhode et al. \(2023\)](#) (i) [McConnachie \(2012\)](#) (j) [McQuinn et al. \(2017\)](#) (k) [Collins et al. \(2022\)](#) (l) [Collins et al. \(2023\)](#)

Table 10. Properties of M31 dwarf galaxies

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
Andromeda I	121.6789	-24.8202	-376.3 ± 2.2	10.20 ± 1.90	-1.51 ± 0.02	0.34			a
Andromeda II	128.9048	-29.1463	-192.4 ± 0.5	7.80 ± 1.10	-1.47 ± 0.01				b
Andromeda III	119.3642	-26.2625	-344.3 ± 1.7	9.30 ± 1.40	-1.75 ± 0.03	0.43			a
Andromeda IX	123.2130	-19.6718	-209.4 ± 2.5	10.90 ± 2.00	-2.03 ± 0.00				a
Andromeda V	126.2205	-15.1230	-397.3 ± 1.5	10.50 ± 1.10	-1.84 ± 0.01	0.41			a
Andromeda VI	106.0443	-36.3252	-339.8 ± 1.9	$12.40^{+1.50}_{-1.30}$					c
Andromeda VII	109.4665	-9.9593	-307.2 ± 1.3	13.00 ± 1.00	-1.37 ± 0.01	0.36	0.060 ± 0.037	-0.004 ± 0.034	a,d
Andromeda X	125.7565	-17.9811	-164.1 ± 1.7	6.40 ± 1.40	-2.27 ± 0.03	0.47			a
Andromeda XI	121.7176	-29.0569	$-427.5^{+3.4}_{-3.5}$	$7.60^{+4.00}_{-2.80}$					c
Andromeda XII	122.0008	-28.4874	-557.1 ± 1.7	< 4.00					c
Andromeda XIII	123.0316	-29.8672	-185.4 ± 2.4	5.80 ± 2.00					a
Andromeda XIV	122.9697	-33.1820	-480.6 ± 1.2	5.30 ± 1.00	-2.23 ± 0.01				a
Andromeda XIX	115.5917	-27.3725	-109.0 ± 1.6	$7.80^{+1.70}_{-1.50}$	-2.07 ± 0.02				e
Andromeda XV	127.8737	-24.5325	-323.0 ± 1.4	4.00 ± 1.40	-1.43 ± 0.42				a
Andromeda XVI	124.9080	-30.4647	-367.3 ± 2.8	3.80 ± 2.90					a
Andromeda XVII	120.2299	-18.4735	$-251.6^{+1.8}_{-2.0}$	$2.90^{+2.20}_{-1.90}$					c
Andromeda XVIII	113.8876	-16.9183	-332.1 ± 2.7	9.70 ± 2.30	-1.33 ± 0.02				a
Andromeda XX	112.8715	-26.8852	$-456.2^{+3.1}_{-3.6}$	$7.10^{+3.90}_{-2.50}$					c
Andromeda XXI	111.9175	-19.1866	-363.4 ± 1.0	$6.10^{+1.00}_{-0.90}$	-1.70 ± 0.10				f
Andromeda XXII	132.5888	-34.1011	-129.8 ± 2.0	$2.80^{+1.90}_{-1.40}$					c
Andromeda XXIII	130.9882	-23.5541	-237.7 ± 1.2	7.10 ± 1.00					c
Andromeda XXIV	127.7968	-16.2453	-128.2 ± 5.2	< 7.30					c
Andromeda XXIX	109.8016	-30.7738	-194.4 ± 1.5	5.70 ± 1.20	-1.90 ± 0.12	0.57 ± 0.11			g
Andromeda XXV	119.1544	-15.8543	-107.7 ± 1.0	$3.70^{+1.20}_{-1.10}$	-1.90 ± 0.10				h
Andromeda XXVI	118.1451	-14.7025	$-261.6^{+3.0}_{-2.8}$	$8.60^{+2.80}_{-2.20}$					c
Andromeda XXVII	120.3590	-17.4149	$-539.6^{+4.7}_{-4.5}$	$14.80^{+4.30}_{-3.10}$					c
Andromeda XXVIII	91.0305	-22.9264	-331.1 ± 1.8	4.90 ± 1.60	-1.84 ± 0.15	0.65 ± 0.15			g

Table 10 continued on next page

Table 10 (*continued*)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
Cassiopeia II	120.4624	-13.1535	-139.8 ^{+36.0} _{-6.6}	11.80 ^{+7.70} _{-4.70}					c
Cassiopeia III	120.4800	-11.2380	-371.6 ± 0.7	8.40 ± 0.60	-1.70 ± 0.10				i
IC 10	118.9727	-3.3413	-348.0 ± 1.0				0.039 ± 0.009	0.031 ± 0.008	j,k
LGS 3	126.7625	-40.8939	-286.5 ± 0.3	7.90 ^{+5.30} _{-2.90}					k
Lacerta I	101.0962	-16.7150	-198.4 ± 1.1	10.30 ± 0.90	-2.00 ± 0.10				i
M32	121.1499	-21.9764	-199.0 ± 6.0	92.00 ± 5.00					k
NGC 147	119.8159	-14.2536	-193.1 ± 0.8	16.00 ± 1.00			0.023 ± 0.014	0.038 ± 0.015	k,l
NGC 185	120.7919	-14.4838	-203.8 ± 1.1	24.00 ± 1.00			0.024 ± 0.014	0.006 ± 0.015	k,l
NGC 205	120.7178	-21.1378	-246.0 ± 1.0	35.00 ± 5.00					k
Pegasus V	101.4911	-25.6126							
Perseus I	147.8182	-15.5236	-326.0 ± 3.0	4.20 ^{+3.60} _{-4.20}	-2.00 ± 0.20				i
Pisces VII	131.3065	-35.9886							

NOTE— Citations: (a) Tollerud et al. (2012) (b) Ho et al. (2012) (c) Collins et al. (2013) (d) Warfield et al. (2023) (e) Collins et al. (2020) (f) Collins et al. (2021) (g) Tollerud et al. (2013) (h) Charles et al. (2023) (i) Martin et al. (2014) (j) Brunthaler et al. (2007) (k) McConnachie (2012) (l) Sohn et al. (2020)

Table 11. Properties of M31 dwarf galaxies

Name	M_\star	$M_{\text{dyn}}(r_{1/2})$	$\Upsilon_{1/2}$	M_{HI}	M_{HI}/M_\star	Ref
	M_\odot	M_\odot		M_\odot		
Andromeda I	5.9×10^6	7.2×10^7	24.4	$< 8.1 \times 10^4$	< 0.01	a,b,c
Andromeda II	8.3×10^6	5.3×10^7	12.8	$< 4.6 \times 10^4$	< 0.006	d,a,b
Andromeda III	1.1×10^6	2.2×10^7	40.4	$< 5.8 \times 10^4$	< 0.05	a,b,c
Andromeda IX	4.8×10^5	4.5×10^7	186.2	$< 4.6 \times 10^4$	< 0.10	a,b,c
Andromeda V	9.0×10^5	3.1×10^7	69.4	$< 7.7 \times 10^4$	< 0.09	a,b,c
Andromeda VI	5.7×10^6	5.7×10^7	20.2	$< 2.8 \times 10^4$	< 0.005	e,f,b
Andromeda VII	2.2×10^7	1.2×10^8	11.0	$< 7.7 \times 10^4$	< 0.003	f,b,c
Andromeda X	1.4×10^5	7.3×10^6	102.6	$< 3.0 \times 10^4$	< 0.2	a,b,c
Andromeda XI	6.1×10^4	6.3×10^6	208.1	$< 4.8 \times 10^4$	< 0.8	e,a,b
Andromeda XII	7.3×10^4	$< 3.5 \times 10^6$	< 173.1	$< 4.7 \times 10^4$	< 0.6	e,a,b
Andromeda XIII	8.7×10^4	3.7×10^6	85.4	$< 6.7 \times 10^4$	< 0.8	a,b,c
Andromeda XIV	4.9×10^5	8.0×10^6	32.8	$< 2.3 \times 10^4$	< 0.05	a,b,c
Andromeda XIX	1.8×10^6	1.2×10^8	137.5	$< 1.3 \times 10^5$	< 0.07	g,a,b
Andromeda XV	3.8×10^5	3.7×10^6	19.3	$< 5.9 \times 10^4$	< 0.2	a,b,c
Andromeda XVI	1.7×10^5	1.7×10^6	20.5	$< 2.3 \times 10^4$	< 0.1	a,b,c
Andromeda XVII	2.3×10^5	1.7×10^6	15.2	$< 4.6 \times 10^4$	< 0.2	e,a,b
Andromeda XVIII	7.9×10^5	2.1×10^7	52.4	$< 2.1 \times 10^5$	< 0.3	h,a,b,c
Andromeda XX	5.9×10^4	3.8×10^6	128.7	$< 5.4 \times 10^4$	< 0.9	e,a,b
Andromeda XXI	6.4×10^5	2.6×10^7	79.2	$< 6.0 \times 10^4$	< 0.09	i,a,b
Andromeda XXII	6.2×10^4	9.0×10^5	29.3	$< 2.7 \times 10^4$	< 0.4	e,a,b
Andromeda XXIII	1.4×10^6	4.2×10^7	61.5	$< 7.7 \times 10^4$	< 0.06	e,a,b
Andromeda XXIV	1.9×10^5	$< 2.2 \times 10^7$	< 441.1	$< 4.1 \times 10^4$	< 0.2	e,a,b
Andromeda XXIX	3.2×10^5	7.3×10^6	46.2	$< 2.4 \times 10^4$	< 0.08	b,j,k
Andromeda XXV	7.3×10^5	7.4×10^6	20.2	$< 2.5 \times 10^5$	< 0.3	l,a,b
Andromeda XXVI	4.2×10^4	1.3×10^7	602.1	$< 5.4 \times 10^4$	< 1	e,a,b
Andromeda XXVII	2.5×10^5	6.8×10^7	553.5	$< 9.0 \times 10^4$	< 0.4	e,b,m
Andromeda XXVIII	4.3×10^5	5.1×10^6	23.5	$< 2.2 \times 10^4$	< 0.05	h,b,j,k

Table 11 continued on next page

Table 11 (*continued*)

Name	M_\star	$M_{\text{dyn}}(r_{1/2})$	$\Upsilon_{1/2}$	M_{HI}	M_{HI}/M_\star	Ref
	M_\odot	M_\odot		M_\odot		
Cassiopeia II	2.1×10^5	2.4×10^7	223.9	$< 2.7 \times 10^4$	< 0.1	e,a,b
Cassiopeia III	1.6×10^7	6.1×10^7	7.8	$< 8.2 \times 10^4$	< 0.005	n,b,o
IC 10	1.6×10^8			4.7×10^7	0.3	p,b
LGS 3	1.2×10^6	1.9×10^7	32.2	2.4×10^5	0.2	p,b
Lacerta I	5.2×10^6	5.1×10^7	19.7	$< 9.3 \times 10^4$	< 0.02	n,b,o
M32	5.9×10^8	7.2×10^8	2.5	$< 1.7 \times 10^5$	< 0.0003	p,b
NGC 147	1.5×10^8	1.2×10^8	1.7	$< 7.9 \times 10^4$	< 0.0005	p,b
NGC 185	1.5×10^8	2.4×10^8	3.2	1.2×10^5	0.0	p,b
NGC 205	6.9×10^8	5.1×10^8	1.5	4.1×10^5	0.0	p,b
Pegasus V	5.7×10^4					q
Perseus I	6.0×10^5	4.5×10^6	14.9	$< 6.6 \times 10^4$	< 0.1	n,b,o
Pisces VII	3.3×10^4					r

NOTE—Citations: (a) [Martin et al. \(2016b\)](#) (b) [Putman et al. \(2021\)](#) (c) [Tollerud et al. \(2012\)](#) (d) [Ho et al. \(2012\)](#) (e) [Collins et al. \(2013\)](#) (f) [McConnachie & Irwin \(2006\)](#) (g) [Collins et al. \(2020\)](#) (h) [Higgs et al. \(2021\)](#) (i) [Collins et al. \(2021\)](#) (j) [Slater et al. \(2015\)](#) (k) [Tollerud et al. \(2013\)](#) (l) [Charles et al. \(2023\)](#) (m) [Richardson et al. \(2011\)](#) (n) [Martin et al. \(2014\)](#) (o) [Rhode et al. \(2023\)](#) (p) [McConnachie \(2012\)](#) (q) [Collins et al. \(2022\)](#) (r) [Collins et al. \(2023\)](#)

Table 12. Properties of Local Group dwarf galaxies

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
AGC749235	PGC5059199	12:24:09.9	+26:13:52.0	LF			Dwarf Galaxy
DDO 147	UGC07949	12:46:59.8	+36:28:35.0	NGC 4214			Dwarf Galaxy
	PGC043129						
	KDG200						
	MCG +06-28-030						
DDO 44		07:34:11.5	+66:52:47.0	NGC 2403			Dwarf Galaxy
ESO 274-001	PGC054392	15:14:13.5	-46:48:45.0	NGC 5128			Dwarf Galaxy
	RFGC2937						
	HIPASS J1514-46						
KK 258	ESO468-020	22:40:43.9	-30:47:59.0	LF			Dwarf Galaxy
	[KK98]258						
	PGC069468						
KKS53	PGC2815820	13:11:14.2	-38:54:22.0	NGC 5128			Dwarf Galaxy
	[KK2000] 53						
	Cen7						
NGC 4190	PGC039023	12:13:44.6	+36:38:00.0	NGC 4214			Dwarf Galaxy
	UGC07232						
	CGCG 187-024						
NGC 4214	NGC4228	12:15:39.2	+36:19:38.6	NGC 4214			Dwarf Galaxy
	PGC039225						
	UGC07278						
	CGCG 187-032						
	MCG +06-27-042						
NGC 4163	UGC 7199	12:12:09.1	+36:10:09.0	LF	Herschel (1789)		Dwarf Galaxy
	NGC 4167						
NGC 300		00:54:53.5	-37:41:04.0	LF	Dunlop (1828)		Dwarf Galaxy
NGC 55		00:14:53.6	-39:11:48.0	LF	Dunlop (1828)		Dwarf Galaxy

Table 12 *continued on next page*

Table 12 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
NGC 3109	DDO 236 UGCA 194	10:03:06.9	-26:09:35.0	LF	Herschel (1847)		Dwarf Galaxy
NGC 6822	IC 4895 DDO 209 Barnard's Galaxy	19:44:56.6	-14:47:21.0	LF	Barnard (1884)		Dwarf Galaxy
IC 5152		22:02:41.5	-51:17:47.0	LF	Pickering & Stewart (1899)		Dwarf Galaxy
IC 4662	ESO 102-G014	17:47:08.8	-64:38:30.0	LF	Lunt (1902)		Dwarf Galaxy
IC 1613	DDO 8 UGC 668	01:04:47.8	+02:07:04.0	LF	Wolf (1906)		Dwarf Galaxy
IC 3104	ESO 020-G004 UKS 1215-794	12:18:46.0	-79:43:34.0	LF	Pickering (1908)		Dwarf Galaxy
WLM	Wolf-Lundmark-Melotte UGCA 444 DDO 221 LEDA 143	00:01:58.2	-15:27:39.0	LF	Wolf (1909) Melotte (1926)		Dwarf Galaxy
Leo A	Leo III UGC 5364 DDO 69 PGC 28868	09:59:26.5	+30:44:47.0	LF	Zwicky (1942)		Dwarf Galaxy
Sextans A	UGCA 205 DDO 75	10:11:00.8	-04:41:34.0	LF	Zwicky (1942)		Dwarf Galaxy
GR 8	UGC 8091 VV 558 DDO 155	12:58:40.4	+14:13:03.0	LF	Reaves (1956)		Dwarf Galaxy
Pegasus dIrr	UGC 12613 DDO 216	23:28:36.3	+14:44:35.0	LF	Holmberg (1958)		Dwarf Galaxy
Sextans B	UGC 5373 DDO 70	10:00:00.1	+05:19:56.0	LF	Holmberg (1958)		Dwarf Galaxy
Aquarius	DDO 210	20:46:51.8	-12:50:53.0	LF	van den Bergh (1959)		Dwarf Galaxy
DDO 113	UGCA 276	12:14:57.9	+36:13:08.0	LF	van den Bergh (1959)		Dwarf Galaxy

Table 12 *continued on next page*

Table 12 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
	KDG 90						
DDO 125	UGC 7577	12:27:40.9	+43:29:44.0	LF	van den Bergh (1959)		Dwarf Galaxy
DDO 190	UGC 9240	14:24:43.4	+44:31:33.0	LF	van den Bergh (1959)		Dwarf Galaxy
DDO 99	UGC 6817	11:50:53.0	+38:52:49.0	NGC 4124	van den Bergh (1959)		Dwarf Galaxy
UGC 4879	VV 124	09:16:02.2	+52:50:24.0	LF	Kopylov et al. (2008) Vorontsov-Velyaminov (1959)		Dwarf Galaxy
UGC 9128	DDO 187 CGCG 133-019 MCG +04-34-009 PGC050961	14:15:56.5	+23:03:19.0	LF	van den Bergh (1959)		Dwarf Galaxy
UGC 8508		13:30:44.4	+54:54:36.0	LF	Vorontsov-Vel'Yaminov & Krasnogorskaya (1962)		Dwarf Galaxy
UGCA 86	VIIZw009	03:59:48.3	+67:08:19.0	LF	Nilson (1974)		Dwarf Galaxy
Phoenix		01:51:06.0	-44:26:42.0	LF	Schuster & West (1976) Canterna & Flower (1977)		Dwarf Galaxy
Sagittarius dIrr	UKS 1927-177	19:29:59.0	-17:40:51.0	LF	Cesarsky et al. (1977) Longmore et al. (1978)		Dwarf Galaxy
UKS 2323-326	UGCA 438 ESO407-018 MCG -05-55-012 PGC071431	23:26:27.5	-32:23:20.0	LF	Longmore et al. (1978)		Dwarf Galaxy
ESO 006-001		08:19:23.3	-85:08:44.0	LF	Lauberts (1982)		Dwarf Galaxy
ESO 294-G010		00:26:33.4	-41:51:19.0	NGC 0253	Lauberts (1982)		Dwarf Galaxy
ESO 410-G005	UKS 0013-324	00:15:31.6	-32:10:48.0	NGC 0253	Lauberts (1982)		Dwarf Galaxy
KKS 3	KKs3 [KK2000] 03 PGC009140	02:24:44.4	-73:30:51.0	LF	Corwin et al. (1985) Karachentseva & Karachentsev (2000) Whiting et al. (2002)		Dwarf Galaxy
Tucana		22:41:49.6	-64:25:10.0	LF	Lavery & Mighell (1992) Lavery (1990) Corwin et al. (1985)		Dwarf Galaxy
Antlia		10:04:04.1	-27:19:52.0	LF	Whiting et al. (1997)		Dwarf Galaxy

Table 12 *continued on next page*

Table 12 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
KKR 25		16:13:48.0	+54:22:16.0	LF	Karachentseva & Karachentsev (1998) Karachentseva et al. (1999) Karachentsev et al. (2001b)		Dwarf Galaxy
KKR 3	KK 230 [KK98]230 PGC166185	14:07:10.5	+35:03:37.0	LF	Karachentseva & Karachentsev (1998) Karachentseva et al. (1999)		Dwarf Galaxy
Cetus		00:26:11.0	-11:02:40.0	LF	Whiting et al. (1999)		Dwarf Galaxy
HIZSS 3A		07:00:29.3	-04:12:30.0	LF	Henning et al. (2000) Begum et al. (2005)	Cand.	
HIZSS 3B		07:00:29.3	-04:12:30.0	LF	Henning et al. (2000) Begum et al. (2005)	Cand.	
KKH 86		13:54:33.5	+04:14:35.0	LF	Karachentsev et al. (2001a)		Dwarf Galaxy
KKH 98		23:45:34.0	+38:43:04.0	LF	Karachentsev et al. (2001a)		Dwarf Galaxy
Leo T		09:34:53.4	+17:03:05.0	LF	Irwin et al. (2007)		Dwarf Galaxy
Leo P		10:21:45.1	+18:05:17.0	LF	Giovanelli et al. (2013)		Dwarf Galaxy
Antlia B		09:48:56.1	-25:59:24.0	NGC 3109	Sand et al. (2015)		Dwarf Galaxy
Tucana B		22:47:00.5	-58:24:27.0	LF	Sand et al. (2022)		Dwarf Galaxy
Leo K		09:24:06.1	+16:30:38.1	LF	McQuinn et al. (2023b)		Dwarf Galaxy
Leo M		11:05:21.2	+25:20:42.8	LF	McQuinn et al. (2023b)		Dwarf Galaxy
NGC 55-dw1	DES J0015-3825	00:15:29.8	-38:25:08.4	NGC 55	McNanna et al. (2023)	Cand.	
Pavo		19:55:00.0	-61:04:20.5	LF	Jones et al. (2023)		Dwarf Galaxy
Pegasus W		23:53:15.0	+22:06:07.1	LF	McQuinn et al. (2023a)		Dwarf Galaxy

NOTE—

Table 13. Properties of Local Field dwarf galaxies

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
AGC749235	186.0412	26.2311	0.12	0.78		44.3	27.16	2704.0	19.5	-7.7	a
Antlia	151.0171	-27.3311	1.20 ± 0.12	0.40 ± 0.04	135.0 ± 5.0	$361.8^{+45.0}_{-43.3}$	25.65 ± 0.10	$1349.0^{+63.6}_{-60.7}$	15.2	-10.4 ± 0.2	b
Antlia B	147.2337	-25.9900	0.72 ± 0.07	0.30 ± 0.05	4.0 ± 12.0	$234.7^{+28.9}_{-26.4}$	25.65 ± 0.10	$1349.0^{+63.6}_{-60.7}$	15.9	-9.8 ± 0.6	c,d
Aquarius	311.7158	-12.8481	1.63 ± 0.08	0.53 ± 0.05	96.6 ± 1.4	$319.1^{+28.7}_{-27.3}$	24.97 ± 0.09	$986.3^{+41.7}_{-40.0}$	14.5	-10.5 ± 0.1	e,b
Cetus	6.5458	-11.0444	3.20 ± 0.10	0.33 ± 0.06	63.0 ± 3.0	$574.4^{+39.2}_{-35.7}$	24.39 ± 0.07	$755.1^{+24.7}_{-24.0}$	13.2	-11.2 ± 0.2	b
DDO 113	183.7413	36.2189	0.70 ± 0.07	$0.00^{+0.09}_{-0.00}$		$594.4^{+58.0}_{-59.8}$	27.35 ± 0.06	$2951.2^{+82.7}_{-80.4}$	16.4	-11.0 ± 0.3	b
DDO 125	186.9204	43.4956	1.04 ± 0.10	0.41 ± 0.01	-68.0 ± 4.0	$598.8^{+59.6}_{-57.5}$	27.06 ± 0.05	$2582.3^{+60.1}_{-58.8}$	12.7	-14.4 ± 0.3	b
DDO 147	191.7492	36.4764	1.45	0.21		1101.3	27.34 ± 0.08	$2937.6^{+110.2}_{-106.3}$	14.6	-12.8	f,a
DDO 190	216.1808	44.5258	0.64 ± 0.06	0.10 ± 0.02	82.0 ± 5.0	$496.9^{+46.5}_{-48.2}$	27.23 ± 0.03	$2792.5^{+38.8}_{-38.3}$	12.8	-14.4 ± 0.1	b
DDO 44	113.5479	66.8797	0.74 ± 0.02	0.60		$638.2^{+26.9}_{-24.8}$	27.36 ± 0.07	$2964.8^{+97.1}_{-94.1}$	14.5	-12.9	g
DDO 99	177.7208	38.8803	0.90 ± 0.09	0.29 ± 0.01	70.0 ± 4.0	$573.5^{+67.3}_{-67.2}$	27.07 ± 0.14	$2594.2^{+172.8}_{-162.0}$	13.9	-13.2 ± 0.1	b
ESO 006-001	124.8471	-85.1456	0.28 ± 0.03	0.11		$222.9^{+21.8}_{-20.2}$	27.16 ± 0.09	$2704.0^{+114.4}_{-109.8}$	14.8	-12.4	h
ESO 274-001	228.5563	-46.8125		0.90			27.18 ± 0.08	$2729.0^{+102.4}_{-98.7}$	9.0	-18.2	f,a
ESO 294-G010	6.6392	-41.8553	0.42 ± 0.04	0.37	57.0	$247.8^{+24.5}_{-25.1}$	26.54 ± 0.04	$2032.4^{+37.8}_{-37.1}$	15.3	-11.2 ± 0.3	b
ESO 410-G005	3.8817	-32.1800	0.50 ± 0.05	0.37	57.0	$278.9^{+29.1}_{-28.8}$	26.42 ± 0.04	$1923.1^{+35.8}_{-35.1}$	14.9	-11.5 ± 0.3	b
GR 8	194.6683	14.2175	0.32 ± 0.04	0.20 ± 0.05	61.0 ± 2.0	$181.0^{+24.5}_{-24.2}$	26.69 ± 0.12	$2177.7^{+123.7}_{-117.1}$	14.2	-12.5 ± 0.2	b
HIZSS 3A	105.1221	-4.2083					26.12 ± 0.14	$1674.9^{+111.5}_{-104.6}$			b
HIZSS 3B	105.1221	-4.2083					26.12 ± 0.14	$1674.9^{+111.5}_{-104.6}$			b
IC 1613	16.1992	2.1178	7.57 ± 0.05	0.20 ± 0.05	90.5 ± 1.0	$1437.7^{+59.8}_{-55.2}$	24.32 ± 0.05	$731.1^{+17.0}_{-16.6}$	9.2	-15.1 ± 0.1	e,b,i
IC 3104	184.6917	-79.7261	2.01	0.52 ± 0.02	45.0 ± 2.0	919.5	26.78 ± 0.18	$2269.9^{+196.2}_{-180.6}$	12.5	-14.3	b
IC 4662	266.7867	-64.6417	0.48 ± 0.05	0.27 ± 0.01	-69.0 ± 4.0	$289.2^{+41.3}_{-35.6}$	26.94 ± 0.17	$2443.4^{+199.0}_{-184.0}$	11.1	-15.8 ± 0.3	b
IC 5152	330.6729	-51.2964	0.97	0.38 ± 0.02	100.0 ± 2.0	433.2	26.45 ± 0.05	$1949.8^{+45.4}_{-44.4}$	10.6	-15.9	b
KK 258	340.1829	-30.7997	1.60	0.50		771.5	26.85 ± 0.07	$2344.2^{+76.8}_{-74.4}$	16.2	-10.6	j,k
KKH 86	208.6396	4.2431	0.28 ± 0.03	0.39 ± 0.01	-3.0 ± 1.0	$164.5^{+23.2}_{-20.9}$	27.06 ± 0.16	$2582.3^{+197.5}_{-183.4}$	17.1	-10.0 ± 0.3	b
KKH 98	356.3917	38.7178	0.64 ± 0.06	0.41 ± 0.01	-5.0 ± 1.0	$360.3^{+38.5}_{-35.8}$	27.01 ± 0.09	$2523.5^{+106.8}_{-102.5}$	15.2	-11.8 ± 0.3	b
KKR 25	243.4500	54.3711	0.40 ± 0.06	0.41 ± 0.02		$171.1^{+26.8}_{-23.6}$	26.42 ± 0.07	$1923.1^{+63.0}_{-61.0}$	15.9	-10.5 ± 0.2	b
KKR 3	211.7937	35.0603	0.36 ± 0.04	0.05 ± 0.01	0.0 ± 1.0	$222.0^{+27.3}_{-25.6}$	26.70 ± 0.12	$2187.8^{+124.3}_{-117.6}$	17.2	-9.5 ± 0.3	b

Table 13 continued on next page

Table 13 (continued)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
KKS 3	36.1850	-73.5142	2.45	0.60		954.8	26.63 ± 0.07	$2118.4^{+69.4}_{-67.2}$	15.3	-11.3	l,a
KKS53	197.8091	-38.9061	0.79	0.13		612.5	27.28 ± 0.07	$2857.6^{+93.6}_{-90.6}$	16.6	-10.7	f,a
Leo A	149.8604	30.7464	2.30 ± 0.09	0.42 ± 0.05	116.4 ± 6.1	$365.9^{+22.1}_{-23.5}$	24.28 ± 0.05	$717.8^{+16.7}_{-16.3}$	12.4	-11.9 ± 0.2	e,b
Leo K	141.0254	16.5106	0.40 ± 0.05	$0.26^{+0.08}_{-0.09}$	101.0 ± 3.0	$42.3^{+8.9}_{-7.2}$	$23.16^{+0.14}_{-0.55}$	$428.5^{+28.5}_{-95.9}$	18.5	$-4.7^{+0.7}_{-0.4}$	m
Leo M	166.3382	25.3452	$0.52^{+0.10}_{-0.08}$	$0.17^{+0.12}_{-0.11}$	112.0 ± 4.0	$60.3^{+14.0}_{-13.6}$	$23.30^{+0.41}_{-0.09}$	$457.1^{+95.0}_{-18.6}$	18.0	$-5.3^{+0.3}_{-0.4}$	m
Leo P	155.4379	18.0881	1.20	0.52	335.0	392.2	26.05 ± 0.20	$1621.8^{+156.5}_{-142.7}$	16.8	-9.3 ± 0.2	n
Leo T	143.7225	17.0514	1.39 ± 0.20	0.12 ± 0.08	121.1 ± 34.7	$155.1^{+23.9}_{-24.5}$	23.08 ± 0.08	$413.0^{+15.5}_{-14.9}$	15.1	-8.0 ± 0.5	e,b
NGC 300	13.7229	-37.6844	5.00	0.83 ± 0.01	108.0 ± 2.0	1247.2	26.59 ± 0.06	$2079.7^{+58.3}_{-56.7}$	8.1	-18.5 ± 0.1	b
NGC 3109	150.7788	-26.1597	4.30 ± 0.10	0.82 ± 0.01	92.0 ± 1.0	$688.8^{+36.3}_{-36.0}$	25.57 ± 0.08	$1300.2^{+48.8}_{-47.0}$	10.7	-14.9 ± 0.1	b
NGC 4163	183.0379	36.1692	0.45 ± 0.05	0.30 ± 0.05	11.0 ± 2.0	$314.5^{+33.6}_{-38.4}$	27.28 ± 0.03	$2857.6^{+39.8}_{-39.2}$	13.2	-14.1 ± 0.3	b
NGC 4190	183.4358	36.6333	1.70	0.12		1283.6	27.21 ± 0.06	$2766.9^{+77.5}_{-75.4}$	13.4	-13.9	j,o
NGC 4214	183.9132	36.3274		0.22			27.25 ± 0.07	$2818.4^{+92.3}_{-89.4}$	9.6	-17.6	f,a
NGC 55	3.7233	-39.1967	$5.16^{+0.02}_{-0.20}$	0.83 ± 0.01	108.0 ± 2.0	$1196.3^{+78.3}_{-76.3}$	26.43 ± 0.12	$1932.0^{+109.8}_{-103.9}$	7.9	-18.5 ± 0.1	b
NGC 55-dw1	3.8740	-38.4190	$5.20^{+1.20}_{-0.80}$	$0.56^{+0.10}_{-0.12}$	$156.0^{+7.0}_{-8.0}$	$2145.6^{+551.6}_{-504.0}$	$26.71^{+0.12}_{-0.05}$	$2197.9^{+124.9}_{-50.0}$	18.7	$-8.0^{+0.5}_{-0.3}$	p
NGC 6822	296.2358	-14.7892	11.95 ± 0.07	0.28 ± 0.15	66.9 ± 14.9	$1668.6^{+158.5}_{-175.0}$	23.78 ± 0.05	$570.2^{+13.3}_{-13.0}$	8.1	-15.7 ± 0.2	e,b
Pavo	298.7499	-61.0724	1.25 ± 0.10	0.51 ± 0.08	131.0 ± 21.0	$502.8^{+79.7}_{-71.2}$	26.49 ± 0.23	$1986.1^{+221.9}_{-199.6}$	16.5	-10.0 ± 0.1	q
Pegasus W	358.3125	22.1020	0.38 ± 0.03	$0.17^{+0.07}_{-0.08}$	92.0 ± 3.0	$92.6^{+12.1}_{-11.4}$	$24.81^{+0.14}_{-0.22}$	$916.2^{+61.0}_{-88.3}$	17.6	-7.2 ± 0.2	r
Pegasus dIrr	352.1513	14.7431	3.81 ± 0.05	0.56 ± 0.05	126.3 ± 0.3	$651.7^{+38.8}_{-41.2}$	24.74 ± 0.05	$887.2^{+20.7}_{-20.2}$	12.6	-12.1 ± 0.2	e,b,i
Phoenix	27.7750	-44.4450	2.43 ± 0.02	0.30 ± 0.03	8.0 ± 4.0	$242.0^{+20.1}_{-18.0}$	$23.06^{+0.21}_{-0.12}$	$409.3^{+41.6}_{-22.0}$	13.2	-9.9 ± 0.4	s,t
Sagittarius dIrr	292.4958	-17.6808	1.13 ± 0.10	0.56 ± 0.18	86.9 ± 3.4	$260.9^{+57.9}_{-66.1}$	25.39 ± 0.08	$1196.7^{+44.9}_{-43.3}$	13.6	-11.8 ± 0.2	e,b
Sextans A	152.7533	-4.6928	2.47	0.17 ± 0.02	0.0 ± 1.0	905.7	25.70 ± 0.08	$1383.6^{+51.3}_{-49.4}$	11.5	-14.2 ± 0.1	u,b
Sextans B	150.0004	5.3322	1.06 ± 0.10	0.31 ± 0.03	110.0 ± 2.0	$355.6^{+35.9}_{-33.3}$	25.72	1393.2	11.3	-14.4 ± 0.2	u,b
Tucana	340.4567	-64.4194	1.10 ± 0.20	0.48 ± 0.03	97.0 ± 2.0	$203.5^{+41.6}_{-38.6}$	24.74 ± 0.12	$887.2^{+50.4}_{-47.7}$	15.2	-9.5 ± 0.2	b
Tucana B	341.7521	-58.4075	0.20 ± 0.08	< 0.35		$78.8^{+41.1}_{-37.5}$	$25.75^{+0.55}_{-0.45}$	$1412.5^{+407.2}_{-264.4}$	18.9	$-6.9^{+0.5}_{-0.6}$	v
UGC 4879	139.0092	52.8400	1.13 ± 0.10	0.43 ± 0.06	81.2 ± 6.5	$299.6^{+34.3}_{-30.3}$	25.43 ± 0.06	$1219.0^{+34.2}_{-33.2}$	13.2	-12.2 ± 0.2	e,b
UGC 8508	202.6850	54.9100	0.42 ± 0.04	0.45 ± 0.05	-60.0 ± 2.0	$233.7^{+25.7}_{-23.7}$	27.06 ± 0.03	$2582.3^{+35.9}_{-35.4}$	13.7	-13.4 ± 0.1	b
UGC 9128	213.9854	23.0553	0.64 ± 0.07	0.40 ± 0.05	46.0 ± 2.0	$329.8^{+39.7}_{-38.4}$	26.80 ± 0.04	$2290.9^{+42.6}_{-41.8}$	14.4	-12.4 ± 0.3	b
UGCA 86	59.9513	67.1386	0.94	0.32 ± 0.03	25.0 ± 1.0	668.5	27.36 ± 0.17	$2964.8^{+241.4}_{-223.3}$	14.2	-13.2	b
UKS 2323-326	351.6146	-32.3889	0.90 ± 0.10	0.10 ± 0.01	-60.0 ± 4.0	$548.7^{+63.9}_{-66.7}$	26.72 ± 0.09	$2208.0^{+93.4}_{-89.6}$	13.5	-13.2 ± 0.2	b

Table 13 continued on next page

Table 13 (*continued*)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
WLM	0.4925	-15.4608	4.10 ± 0.13	0.54 ± 0.06	177.0 ± 0.5	$755.6^{+56.3}_{-61.4}$	24.85 ± 0.05	$933.3^{+21.7}_{-21.2}$	10.6	-14.3 ± 0.1	e,b

NOTE— Citations: (a) [Karachentsev et al. \(2013a\)](#) (b) [McConnachie \(2012\)](#) (c) [Hargis et al. \(2020\)](#) (d) [Sand et al. \(2015\)](#) (e) [Higgs et al. \(2021\)](#) (f) [Tully et al. \(2009a\)](#) (g) [Carlin et al. \(2019\)](#) (h) [Makarova et al. \(2023\)](#) (i) [Savino et al. \(2022\)](#) (j) [Karachentsev et al. \(2004\)](#) (k) [Karachentsev et al. \(2014\)](#) (l) [Karachentsev et al. \(2015b\)](#) (m) [McQuinn et al. \(2023b\)](#) (n) [McQuinn et al. \(2015\)](#) (o) [Tully et al. \(2009b\)](#) (p) [McNanna et al. \(2023\)](#) (q) [Jones et al. \(2023\)](#) (r) [McQuinn et al. \(2023a\)](#) (s) [Battaglia et al. \(2012\)](#) (t) [van de Rydt et al. \(1991\)](#) (u) [Dalcanton et al. \(2009\)](#) (v) [Sand et al. \(2022\)](#)

Table 14. Properties of Local Field dwarf galaxies

Name	l deg	b deg	v_{los} km s ⁻¹	σ_{los} km s ⁻¹	[Fe/H]	$\sigma_{\text{[Fe/H]}}$	$\mu_{\alpha*}$ mas yr ⁻¹	μ_{δ} mas yr ⁻¹	Ref
AGC749235	219.7670	83.8428	288.0						a
Antlia	263.0971	22.3123	362.0 ± 2.0						b
Antlia B	259.4146	21.0783	375.5 ± 1.5	8.00 ^{+1.60} _{-1.40}					c
Aquarius	34.0491	-31.3432	-141.8 ^{+1.8} _{-2.0}	7.80 ^{+1.80} _{-1.10}	-1.50 ± 0.06				d
Cetus	101.4548	-72.8546	-83.9 ± 1.2	8.30 ± 1.00	-1.74 ± 0.06	0.42 ± 0.04			e
DDO 113	161.1016	78.0605	284.0 ± 6.0						f
DDO 125	137.7580	72.9422	194.9 ± 0.2						f
DDO 147	128.4088	80.6046	331.0						g
DDO 190	82.0085	64.4771	150.0 ± 4.0						f
DDO 44	149.0987	28.9584							
DDO 99	166.1976	72.7452	251.0 ± 4.0						f
ESO 006-001	297.9558	-25.2235	319.0 ± 57.0		-1.50 ± 0.20				h
ESO 274-001	326.8040	9.3341	522.0						g
ESO 294-G010	320.4157	-74.4176	106.9 ± 0.8						i
ESO 410-G005	357.8445	-80.7112	158.9 ± 1.9						i
GR 8	310.7375	76.9795	213.9 ± 2.5						j
HIZSS 3A	217.7081	0.0905	288.0 ± 2.5						f
HIZSS 3B	217.7081	0.0905	322.6 ± 1.4						f
IC 1613	129.7378	-60.5773	-231.6 ± 1.2	10.80 ^{+1.00} _{-0.90}	-1.19 ± 0.01	0.37	0.040 ± 0.020	0.010 ± 0.010	k,e
IC 3104	301.4140	-16.9508	429.0 ± 4.0						f
IC 4662	328.5486	-17.8497	302.0 ± 3.0						f
IC 5152	343.9191	-50.1919	122.0 ± 2.0						f
KK 258	17.7289	-61.2774	92.0 ± 5.0						l
KKH 86	339.0437	62.6026	287.2 ± 0.7						f
KKH 98	109.0931	-22.3774	-136.9 ± 1.0						f
KKR 25	83.8789	44.4084	-139.5 ± 1.0						f
KKR 3	63.7099	71.9922	63.3 ± 1.8						f

Table 14 continued on next page

Table 14 (*continued*)

Name	l deg	b deg	v_{los} km s ⁻¹	σ_{los} km s ⁻¹	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha*}$ mas yr ⁻¹	μ_{δ} mas yr ⁻¹	Ref
KKS 3	294.2352	-42.0020	316.0 ± 7.0		-1.90				m
KKS53	307.1403	23.8038							
Leo A	196.9036	52.4226	26.2 ^{+1.0} _{-0.9}	9.00 ^{+0.80} _{-0.60}	-1.67 ^{+0.09} _{-0.08}		-0.060 ± 0.090	-0.060 ^{+0.090} _{-0.080}	k,d
Leo K	214.2409	41.0616							
Leo M	211.1932	66.1881							
Leo P	219.6378	54.4352	260.8 ± 2.5						n
Leo T	214.8524	43.6609	38.1 ± 2.0	7.50 ± 1.60	-1.74 ± 0.04	0.54	0.230 ^{+0.260} _{-0.370}	-0.120 ± 0.220	k,o
NGC 300	299.2083	-79.4188	146.0 ± 2.0						f
NGC 3109	262.1018	23.0701	403.0 ± 2.0				-0.040 ± 0.030	-0.010 ± 0.030	k,f
NGC 4163	163.2045	77.7002	165.0 ± 5.0						f
NGC 4190	160.6200	77.5895	235.0						p
NGC 4214	160.2527	78.0742	293.0						g
NGC 55	332.8820	-75.7309	129.0 ± 2.0						f
NGC 55-dw1	334.3700	-76.4312							
NGC 6822	25.3513	-18.3892	-54.5 ± 1.7	23.20 ± 1.20	-1.05 ± 0.01	0.49	-0.060 ± 0.010	-0.070 ± 0.010	k,e
Pavo	335.8525	-31.1285							
Pegasus W	105.5582	-38.7987			-1.90 ± 0.10				
Pegasus dIrr	94.7769	-43.5541	-179.5 ± 1.5	12.30 ^{+1.20} _{-1.10}	-1.39 ± 0.01	0.56	0.150 ^{+0.130} _{-0.140}	0.070 ^{+0.120} _{-0.110}	k,e
Phoenix	272.1615	-68.9497	-21.2 ± 1.0	9.30 ± 0.70	-1.49 ± 0.04	0.51 ± 0.04	0.070 ± 0.030	-0.060 ± 0.040	k,q
Sagittarius dIrr	21.0534	-16.2859	-78.4 ± 1.6	9.40 ^{+1.50} _{-1.10}	-1.88 ^{+0.13} _{-0.09}		0.110 ^{+0.190} _{-0.180}	-0.370 ± 0.170	k,d
Sextans A	246.1482	39.8755	324.0 ± 2.0				-0.150 ^{+0.050} _{-0.040}	-0.030 ^{+0.040} _{-0.050}	k,r
Sextans B	233.2001	43.7838	304.0 ± 1.0				-0.290 ± 0.160	-0.280 ± 0.170	k,s
Tucana	322.9083	-47.3694	180.0 ± 1.3	6.20 ^{+1.60} _{-1.30}	-1.58	0.39			t
Tucana B	328.9877	-51.9619							
UGC 4879	164.6652	42.8843	-29.2 ± 1.6	9.60 ^{+1.30} _{-1.20}	-1.43 ± 0.02	0.52	0.000 ± 0.110	-0.040 ± 0.090	k,e
UGC 8508	111.1411	61.3094	56.0 ± 5.0						f
UGC 9128	25.5732	70.4648	152.0 ± 1.0						f
UGCA 86	139.7625	10.6472	67.0 ± 4.0						f
UKS 2323-326	11.8670	-70.8589	62.0 ± 5.0						f

Table 14 *continued on next page*

Table 14 (*continued*)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{\text{[Fe/H]}}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
WLM	75.8637	-73.6244	-130.0 ± 1.0	17.50 ± 2.00			0.090 ± 0.030	-0.070 ± 0.020	k,u

NOTE— Citations: (a) [Karachentsev et al. \(2013a\)](#) (b) [Barnes & de Blok \(2001\)](#) (c) [Zoutendijk et al. \(2021\)](#) (d) [Kirby et al. \(2017b\)](#) (e) [Kirby et al. \(2014\)](#) (f) [McConnachie \(2012\)](#) (g) [Tully et al. \(2009a\)](#) (h) [Makarova et al. \(2023\)](#) (i) [Bouchard et al. \(2005\)](#) (j) [Young et al. \(2003\)](#) (k) [Battaglia et al. \(2022\)](#) (l) [Karachentsev et al. \(2014\)](#) (m) [Karachentsev et al. \(2015a\)](#) (n) [Bernstein-Cooper et al. \(2014\)](#) (o) [Simon & Geha \(2007\)](#) (p) [Tully et al. \(2009b\)](#) (q) [Kacharov et al. \(2017\)](#) (r) [Koribalski et al. \(2004\)](#) (s) [Hoffman et al. \(1996\)](#) (t) [Taibi et al. \(2020\)](#) (u) [Leaman et al. \(2013\)](#)

Table 15. Properties of Milky Way dwarf galaxies

Name	M_\star M_\odot	$M_{\text{dyn}}(r_{1/2})$ M_\odot	$\Upsilon_{1/2}$	M_{HI} M_\odot	M_{HI}/M_\star	Ref
AGC749235	2.0×10^5			1.2×10^6	5.8	a
Antlia	2.6×10^6			7.3×10^5	0.3	b,c,d
Antlia B	1.4×10^6	1.4×10^7	20.0	3.1×10^5	0.2	e,f
Aquarius	2.6×10^6	1.8×10^7	13.8	3.5×10^6	1.3	g,h,c,d
Cetus	5.1×10^6	3.7×10^7	14.4	$< 9.5 \times 10^4$	< 0.02	i,c,d
DDO 113	4.1×10^6					c
DDO 125	9.5×10^7					c
DDO 147	2.2×10^7			2.9×10^7	1.3	j,a
DDO 190	1.0×10^8					c
DDO 44	2.5×10^7					k
DDO 99	3.2×10^7					c
ESO 006-001	1.6×10^7			1.3×10^6	0.1	l
ESO 274-001	3.3×10^9			2.0×10^8	0.1	j,a
ESO 294-G010	5.4×10^6			3.3×10^5	0.1	m,c
ESO 410-G005	6.9×10^6			7.3×10^5	0.1	m,c,d
GR 8	1.7×10^7			1.1×10^7	0.6	c,n
HIZSS 3A				1.4×10^7	0.8	c,d
HIZSS 3B				2.6×10^6	0.2	c,d
IC 1613	1.9×10^8	1.6×10^8	1.6	6.1×10^7	0.3	g,i,c,d
IC 3104	8.9×10^7					c
IC 4662	3.7×10^8					c
IC 5152	3.8×10^8			8.7×10^7	0.2	c,d
KK 258	3.0×10^6					o,p
KKH 86	1.6×10^6					c
KKH 98	9.1×10^6					c
KKR 25	2.8×10^6			$< 6.1 \times 10^5$	< 0.2	c,d
KKR 3	1.1×10^6					c

Table 15 continued on next page

Table 15 (*continued*)

Name	M_{\star}	$M_{\text{dyn}}(r_{1/2})$	$\Upsilon_{1/2}$	M_{HI}	M_{HI}/M_{\star}	Ref
	M_{\odot}	M_{\odot}		M_{\odot}		
KKS 3	5.7×10^6			$< 5.0 \times 10^5$	< 0.09	q,r,a
KKS53	3.2×10^6			$< 1.3 \times 10^6$	< 0.4	j,a
Leo A	9.7×10^6	2.8×10^7	5.7	8.9×10^6	0.9	g,h,c,d
Leo K	1.3×10^4					s
Leo M	2.3×10^4					s
Leo P	8.7×10^5			9.4×10^5	1.1	t,u,d
Leo T	2.7×10^5	8.2×10^6	61.6	4.0×10^5	1.5	v,g,c,w
NGC 300	4.3×10^9			1.8×10^9	0.4	c,x
NGC 3109	1.5×10^8			4.5×10^8	3.0	c,d
NGC 4163	7.3×10^7					c
NGC 4190	5.9×10^7			2.9×10^7	0.5	o,y
NGC 4214	2.0×10^9			2.8×10^8	0.1	j,a
NGC 55	4.4×10^9			1.3×10^9	0.3	c,z
NGC 55-dw1	2.7×10^5					aa
NGC 6822	3.2×10^8	8.4×10^8	5.3	2.0×10^8	0.6	g,i,c,d
Pavo	1.7×10^6			$< 9.9 \times 10^5$	< 0.6	ab
Pegasus W	1.3×10^5					ac
Pegasus dIrr	1.2×10^7	9.2×10^7	15.0	5.5×10^6	0.4	g,i,c,d
Phoenix	1.5×10^6	1.9×10^7	25.7	1.2×10^5	0.1	ad,ae,af,ag
Sagittarius dIrr	8.9×10^6	2.1×10^7	4.8	1.1×10^7	1.2	g,h,c,d
Sextans A	8.2×10^7			7.2×10^7	0.9	ah,c,d
Sextans B	1.0×10^8			4.9×10^7	0.5	ai,c,d
Tucana	1.1×10^6	7.3×10^6	13.1	$< 8.5 \times 10^4$	< 0.08	c,d,aj
Tucana B	9.8×10^4			$< 4.0 \times 10^5$	< 4	ak
UGC 4879	1.3×10^7	2.6×10^7	3.9	7.6×10^5	0.1	g,i,c,d
UGC 8508	3.8×10^7					c
UGC 9128	1.6×10^7					c
UGCA 86	3.1×10^7					c
UKS 2323-326	3.3×10^7					c

Table 15 *continued on next page*

Table 15 (*continued*)

Name	M_{\star}	$M_{\text{dyn}}(r_{1/2})$	$\Upsilon_{1/2}$	M_{HI}	M_{HI}/M_{\star}	Ref
	M_{\odot}	M_{\odot}		M_{\odot}		
WLM	8.6×10^7	2.2×10^8	5.0	6.1×10^7	0.7	g,al,c,d

NOTE—Citations: (a) Karachentsev et al. (2013a) (b) Barnes & de Blok (2001) (c) McConnachie (2012) (d) Putman et al. (2021) (e) Sand et al. (2015) (f) Zoutendijk et al. (2021) (g) Higgs et al. (2021) (h) Kirby et al. (2017b) (i) Kirby et al. (2014) (j) Tully et al. (2009a) (k) Carlin et al. (2019) (l) Makarova et al. (2023) (m) Bouchard et al. (2005) (n) Young et al. (2003) (o) Karachentsev et al. (2004) (p) Karachentsev et al. (2014) (q) Karachentsev et al. (2015a) (r) Karachentsev et al. (2015b) (s) McQuinn et al. (2023b) (t) Bernstein-Cooper et al. (2014) (u) McQuinn et al. (2015) (v) Adams & Oosterloo (2018) (w) Simon & Geha (2007) (x) Westmeier et al. (2011) (y) Tully et al. (2009b) (z) Puche et al. (1991) (aa) McNanna et al. (2023) (ab) Jones et al. (2023) (ac) McQuinn et al. (2023a) (ad) Battaglia et al. (2012) (ae) Kacharov et al. (2017) (af) Young et al. (2007) (ag) van de Rydt et al. (1991) (ah) Koribalski et al. (2004) (ai) Hoffman et al. (1996) (aj) Taibi et al. (2020) (ak) Sand et al. (2022) (al) Leaman et al. (2013)

Table 16. Properties of globular clusters hosted in dwarf galaxies

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
NGC 121	ESO 050-SC 012	00:26:48.9	-71:32:09.4	SMC			Star Cluster
Fornax GC2		02:38:44.1	-34:48:30.0	Fornax	Shapley (1938b)		Star Cluster
Fornax GC3	NGC 1049	02:39:48.1	-34:15:30.0	Fornax	Shapley (1938b)		Star Cluster
	Hodge 3						
Fornax GC4		02:40:07.6	-34:32:10.0	Fornax	Shapley (1938b)		Star Cluster
Fornax GC6		02:40:06.9	-34:25:19.2	Fornax	Shapley (1938b) Wang et al. (2019b)		Star Cluster
WLM GC1	WLM 1	00:01:49.5	-15:27:30.7	WLM	Humason et al. (1956)		Star Cluster
Fornax GC1		02:37:01.9	-34:11:01.0	Fornax	Hodge (1961)		Star Cluster
Fornax GC5		02:42:21.1	-34:06:07.0	Fornax	Hodge (1961)		Star Cluster
Reticulum	GLC 0435-59	04:36:11.0	-58:51:45.5	LMC	Sérsic (1974)		Star Cluster
	ESO 118-31						
DDO 216-A1		23:28:26.3	+14:44:25.2	Pegasus dIrr	Hoessel & Mould (1982) Cole et al. (2017)		Star Cluster
And I-GC1		00:45:42.9	+38:01:53.8	Andromeda I	Grebel et al. (2000) Caldwell et al. (2017)		Star Cluster
Sextans A-GC1		10:10:43.8	-04:43:28.8	Sextans A	Pedreros & Gallart (2002) Beasley et al. (2019)		Star Cluster
Ursa Major II GC		08:51:29.3	+63:08:03.8	Ursa Major II	Zucker et al. (2006b) Eadie et al. (2022)	Cand.	
ESO 269-066-GC3		13:13:08.8	-44:53:22.6	ESO 269-066	Georgiev et al. (2009)		Star Cluster
IKN-GC1	IKN-1	10:08:07.1	+68:23:36.7	IKN	Georgiev et al. (2009)		Star Cluster
IKN-GC2	IKN-2	10:08:10.8	+68:24:05.6	IKN	Georgiev et al. (2009)		Star Cluster
IKN-GC3	IKN-3	10:08:05.3	+68:24:33.8	IKN	Georgiev et al. (2009)		Star Cluster
IKN-GC4	IKN-4	10:08:04.8	+68:24:53.7	IKN	Georgiev et al. (2009)		Star Cluster
IKN-GC5	IKN-5	10:08:05.5	+68:24:58.0	IKN	Georgiev et al. (2009)		Star Cluster
KK 197-GC1	KK 197-01	13:21:59.8	-42:32:06.5	KK 197	Georgiev et al. (2009)		Star Cluster

Table 16 continued on next page

Table 16 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
KK 197-GC2	KK 197-02	13:22:02.0	-42:32:08.1	KK 197	Georgiev et al. (2009)		Star Cluster
	KK 197-NSC						
KK 197-GC3	KK 197-03	13:22:02.5	-42:32:13.8	KK 197	Georgiev et al. (2009)		Star Cluster
Scl-dE1 GC1		00:23:52.7	-24:41:58.0	scl-dE1	Da Costa et al. (2009)		Star Cluster
Eri II GC		03:44:22.4	-43:32:00.1	Eridanus II	Koposov et al. (2015a) Crnojević et al. (2016)		Star Cluster
KKs 3-GC1		02:24:44.4	-73:30:51.0	KKS 3	Karachentsev et al. (2015b)		Star Cluster
Gep I	And XXV-GC1	00:30:10.6	+46:51:05.6	Andromeda XXV	Cusano et al. (2016)	Cand.	
NGC 247-SC1		00:46:50.8	-20:39:05.1	NGC 247	Romanowsky et al. (2023)		Star Cluster
ESO 006-001 GC		08:19:25.0	-85:08:29.2	ESO 006-001	Makarova et al. (2023)		Star Cluster

NOTE—

Table 17. Properties of globular clusters hosted in dwarf galaxies

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
And I-GC1	11.4288	38.0316	0.02 ± 0.00			4.3 ± 0.5	24.45 ± 0.05	$776.2^{+18.1}_{-17.7}$	20.1	-4.3 ± 0.1	a,b
DDO 216-A1	352.1096	14.7403	0.05			13.5	24.77 ± 0.08	$899.5^{+33.8}_{-32.5}$	17.6	-7.1 ± 0.2	c
ESO 006-001 GC	124.8542	-85.1414	0.00			2.0	27.16 ± 0.09	$2704.0^{+114.4}_{-109.8}$	19.8	-7.4 ± 0.1	d
ESO 269-066-GC3	198.2868	-44.8896	0.00 ± 0.00	0.13		2.5 ± 0.1	27.91	3819.4	17.9	-10.0 ± 0.1	e,f
Eri II GC	56.0933	-43.5334	0.16 ± 0.01	$0.31^{+0.05}_{-0.06}$	75.0 ± 6.0	$13.9^{+1.2}_{-1.0}$	22.84 ± 0.05	$369.8^{+8.6}_{-8.4}$	19.9	-2.9 ± 0.3	g,h
Fornax GC1	39.2579	-34.1836	0.30 ± 0.00			$12.7^{+0.4}_{-0.3}$	20.84 ± 0.06	$147.2^{+4.1}_{-4.0}$	15.3	-5.5 ± 0.3	i,j
Fornax GC2	39.6838	-34.8083	0.23 ± 0.00			9.7 ± 0.3	20.78 ± 0.05	143.2 ± 3.3	13.6	-7.2 ± 0.3	i,j
Fornax GC3	39.9504	-34.2583	0.12 ± 0.00			4.9 ± 0.2	20.76 ± 0.06	$141.9^{+4.0}_{-3.9}$	12.9	-7.9 ± 0.3	i,j
Fornax GC4	40.0317	-34.5361	0.12 ± 0.01			4.7 ± 0.3	20.74 ± 0.05	$140.6^{+3.3}_{-3.2}$	13.8	-7.0 ± 0.6	k,i
Fornax GC5	40.5879	-34.1019	0.11 ± 0.00			4.6 ± 0.2	20.80 ± 0.05	$144.5^{+3.4}_{-3.3}$	13.6	-7.2 ± 0.5	i,j
Fornax GC6	40.0288	-34.4220	0.28 ± 0.03	0.41 ± 0.10	$13.1^{+10.4}_{-7.3}$	$8.8^{+1.4}_{-1.2}$	20.77 ± 0.05	$142.6^{+3.2}_{-3.1}$	16.0	-4.7 ± 0.4	l
Gep I	7.5441	46.8516	0.10			21.9	$24.38^{+0.07}_{-0.06}$	$751.6^{+24.6}_{-20.5}$	20.0	-4.4	m,b
IKN-GC1	152.0298	68.3935	0.01 ± 0.00	0.13		6.6 ± 0.3	27.87	3749.7	21.2	-6.7 ± 0.1	e,n
IKN-GC2	152.0450	68.4016	0.00 ± 0.00	0.14		3.5 ± 0.1	27.87	3749.7	20.7	-7.2 ± 0.1	e,n
IKN-GC3	152.0219	68.4094	0.01 ± 0.00	0.13		$14.8^{+0.9}_{-0.8}$	27.87	3749.7	21.1	-6.8 ± 0.1	e,n
IKN-GC4	152.0200	68.4149	0.00 ± 0.00	0.18		2.0 ± 0.2	27.87	3749.7	20.5	-7.4 ± 0.1	e,n
IKN-GC5	152.0230	68.4161	0.00 ± 0.00	0.12		2.9 ± 0.1	27.87	3749.7	19.4	-8.5 ± 0.1	e,n
KK 197-GC1	200.4992	-42.5351	0.00 ± 0.00	0.01		1.9 ± 0.2	27.92 ± 0.02	$3837.1^{+35.5}_{-35.2}$	22.2	-5.7 ± 0.1	e,o
KK 197-GC2	200.5083	-42.5356	0.00 ± 0.00	0.11		2.9 ± 0.1	27.92 ± 0.02	$3837.1^{+35.5}_{-35.2}$	18.1	-9.8 ± 0.1	e,o
KK 197-GC3	200.5104	-42.5372	0.00 ± 0.00	0.07		$2.5^{+0.2}_{-0.1}$	27.92 ± 0.02	$3837.1^{+35.5}_{-35.2}$	20.7	-7.2 ± 0.1	e,o
KKs 3-GC1	36.1850	-73.5142	0.01 ± 0.00			$4.8^{+0.3}_{-0.2}$	$26.63^{+0.06}_{-0.07}$	$2118.4^{+59.3}_{-67.2}$	18.3	-8.3 ± 0.0	p
NGC 121	6.7039	-71.5359	0.33			6.2	19.06	64.9	10.6	-8.4	q,r,s
NGC 247-SC1	11.7115	-20.6514	0.01 ± 0.00	0.21 ± 0.02	54.0	10.4 ± 0.5	27.73 ± 0.06	$3515.6^{+98.5}_{-95.8}$	18.4	-9.3 ± 0.0	t
Reticulum	69.0458	-58.8626	1.60			22.3	18.40	47.9	12.2	-6.1	q,r,u
Scl-dE1 GC1	5.9695	-24.6994	0.02 ± 0.00			21.8 ± 1.6	28.17 ± 0.12	$4305.3^{+244.6}_{-231.5}$	21.5	-6.7 ± 0.1	v
Sextans A-GC1	152.6825	-4.7247	0.02 ± 0.00	0.12 ± 0.01		6.9 ± 0.3	25.70 ± 0.08	$1383.6^{+51.3}_{-49.4}$	18.0	-7.7	w,x
Ursa Major II GC	132.8719	63.1344	0.17			1.7	17.70 ± 0.13	$34.7^{+2.1}_{-2.0}$	18.9	1.2	y,z

Table 17 continued on next page

Table 17 (*continued*)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
WLM GC1	0.4562	-15.4585	0.05 ± 0.00	0.17 ± 0.04		$11.9^{+1.0}_{-0.9}$	24.73 ± 0.07	$883.1^{+28.9}_{-28.0}$	16.0	-8.7	aa,ab

NOTE— Citations: (a) Caldwell et al. (2017) (b) Savino et al. (2022) (c) Cole et al. (2017) (d) Makarova et al. (2023) (e) Georgiev et al. (2009) (f) Karachentsev et al. (2013b) (g) Martínez-Vázquez et al. (2021) (h) Simon et al. (2021) (i) Mackey & Gilmore (2003a) (j) Mackey & Gilmore (2003b) (k) Greco et al. (2007) (l) Wang et al. (2019b) (m) Cusano et al. (2016) (n) Karachentsev et al. (2006) (o) Tully et al. (2009b) (p) Karachentsev et al. (2015b) (q) Baumgardt & Hilker (2018) (r) Baumgardt et al. (2020) (s) Baumgardt & Vasiliev (2021) (t) Romanowsky et al. (2023) (u) Milone et al. (2023) (v) Da Costa et al. (2009) (w) Beasley et al. (2019) (x) Dalcanton et al. (2009) (y) Dall’Ora et al. (2012) (z) Eadie et al. (2022) (aa) Hodge et al. (1999) (ab) Stephens et al. (2006)

Table 18. Properties of globular clusters hosted in dwarf galaxies

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
And I-GC1	121.6903	-24.8263							
DDO 216-A1	94.7252	-43.5391	-176.5 ± 9.5		-1.79 ± 0.04				a
ESO 006-001 GC	297.9520	-25.2212							
ESO 269-066-GC3	306.9679	17.8119	774.0 ± 6.0		-1.50 ± 0.20				b
Eri II GC	249.7807	-51.6425	$79.7^{+3.1}_{-3.8}$	$2.30^{+5.30}_{-2.30}$	-2.00				c
Fornax GC1	236.7245	-66.2991	59.0 ± 1.0		-2.50 ± 0.10				d
Fornax GC2	238.0786	-65.8389	64.0 ± 1.0		-2.10 ± 0.10				d
Fornax GC3	236.6632	-65.7222	60.4 ± 0.2	6.50 ± 0.20	-2.40 ± 0.10				e
Fornax GC4	237.2991	-65.6081	47.2 ± 0.1	4.10 ± 0.10	-1.40 ± 0.10				e
Fornax GC5	236.0873	-65.2267	60.6 ± 0.2	4.60 ± 0.20	-2.10 ± 0.10				e
Fornax GC6	237.0280	-65.6305	50.5 ± 1.7	$5.60^{+2.00}_{-1.80}$	-0.70 ± 0.05	< 0.17	0.392 ± 0.026	-0.448 ± 0.042	f
Gep I	119.1555	-15.8642							
IKN-GC1	141.9015	42.2151							
IKN-GC2	141.8883	42.2145							
IKN-GC3	141.8871	42.2030							
IKN-GC4	141.8818	42.1990							
IKN-GC5	141.8797	42.1991			-2.11 ± 0.19				
KK 197-GC1	308.9150	19.9813	636.4 ± 16.0						g
KK 197-GC2	308.9221	19.9800	635.4 ± 1.5		-1.84 ± 0.05				g
KK 197-GC3	308.9235	19.9783	642.6 ± 3.8		-1.80 ± 0.10				g
KKs 3-GC1	294.2352	-42.0020	316.0 ± 7.0		-1.55 ± 0.20				b
NGC 121	305.7071	-45.4594	146.9 ± 0.9				0.270 ± 0.020	-1.130 ± 0.020	h,i
NGC 247-SC1	113.4891	-83.4388	112.0 ± 5.0						j
Reticulum	268.6635	-40.2701	247.5 ± 1.5		-1.57 ± 0.03		1.950 ± 0.050	-0.270 ± 0.020	k,l
Scl-dE1 GC1	52.8010	-83.3453							
Sextans A-GC1	246.1181	39.8016	305.0 ± 15.0		-2.38 ± 0.29				m
Ursa Major II GC	152.4593	37.4405							

Table 18 continued on next page

Table 18 (*continued*)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha\star}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
WLM GC1	75.7778	-73.5990	-105.8 ± 0.4		-1.96 ± 0.08				n

NOTE— Citations: (a) [Leaman et al. \(2020\)](#) (b) [Sharina et al. \(2017\)](#) (c) [Zoutendijk et al. \(2020\)](#) (d) [Letarte et al. \(2006\)](#) (e) [Larsen et al. \(2012\)](#) (f) [Pace et al. \(2021\)](#) (g) [Fahrion et al. \(2020\)](#) (h) [Baumgardt & Hilker \(2018\)](#) (i) [Vasiliev & Baumgardt \(2021\)](#) (j) [Romanowsky et al. \(2023\)](#) (k) [Grocholski et al. \(2006\)](#) (l) [Milone et al. \(2023\)](#) (m) [Beasley et al. \(2019\)](#) (n) [Stephens et al. \(2006\)](#)

Table 19. Properties of Milky Way new disk/bulge star clusters

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
BH 140		12:53:53.5	-67:10:37.2	MW	Cantat-Gaudin et al. (2018)		Star Cluster
ESO 456-29	MWSC2761 Gran 1	17:58:36.2	-32:01:12.0	MW	Gran et al. (2019)		Star Cluster
Ferrero 54		08:33:48.3	-44:26:49.0	MW			Star Cluster
Patchick 122		09:42:30.7	-52:25:41.0	MW			Star Cluster
Patchick 126		17:05:38.6	-47:20:32.0	MW			Star Cluster
Patchick 99		18:15:47.0	-29:48:46.0	MW	Bica et al. (2019)	Cand.	
ESO 93-SC08	ESO 93-SC08	11:19:42.0	-65:13:12.0	MW	Holmberg et al. (1977)	Cand.	
Pfleiderer 2	PWM2	17:58:40.0	-05:04:30.0	MW	Pfleiderer et al. (1977) Ortolani et al. (2009)	Cand.	
Mercer 5	[MCM2005b]	18:23:19.0	-13:40:02.0	MW	Mercer et al. (2005) Longmore et al. (2011)	Cand.	
FSR 1716	VVV-GC05	16:10:30.0	-53:44:56.0	MW	Froeblich et al. (2007)		Star Cluster
FSR 1758		17:31:12.0	-39:48:30.0	MW	Froeblich et al. (2007) Cantat-Gaudin et al. (2018)		Star Cluster
FSR 1776	Minni 83	17:54:14.3	-36:09:08.6	MW	Froeblich et al. (2007)		Star Cluster
FSR 19		17:35:38.4	-21:04:12.0	MW	Froeblich et al. (2007)	Cand.	
FSR 25		17:41:43.2	-19:34:15.6	MW	Froeblich et al. (2007)	Cand.	
VVV CL0001	VVV GC001	17:54:42.5	-24:00:53.0	MW	Minniti et al. (2011)		Star Cluster
VVV CL0002	VVV GC002	17:06:06.3	-28:50:42.3	MW	Moni Bidin et al. (2011)	Cand.	
VVV CL160	RCR-01	18:06:57.1	-20:00:54.0	MW	Borissova et al. (2014) Minniti et al. (2021a)		Star Cluster
Gaia 1		06:45:52.8	-16:45:00.0	MW	Koposov et al. (2017)		Star Cluster
Gaia 2		01:52:29.8	+53:02:24.0	MW	Koposov et al. (2017)	Cand.	
Minni 48		17:33:18.0	-28:00:02.0	MW	Minniti et al. (2017b) Minniti et al. (2021b)	Cand.	
Ryu 059	RLGC 1	16:17:08.4	-44:35:38.6	MW	Ryu & Lee (2018a)	Cand.	

Table 19 continued on next page

Table 19 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
Ryu 879	RLGC 2	18:45:28.2	-05:11:33.3	MW	Ryu & Lee (2018b) Ryu & Lee (2018a) Ryu & Lee (2018b)	Cand.	
Garro 1	Garro 01 VVVX-GC-140900-653712	14:09:00.0	-65:37:12.0	MW	Garro et al. (2020)		Star Cluster
Gran 2		17:11:33.6	-24:50:56.4	MW	Gran et al. (2022)		Star Cluster
Gran 3	Patchick 125	17:05:01.4	-35:29:45.6	MW	Gran et al. (2022)		Star Cluster
Gran 4		18:32:27.1	-23:06:50.4	MW	Gran et al. (2022)		Star Cluster
Gran 5		17:48:54.7	-24:10:12.0	MW	Gran et al. (2022)		Star Cluster
Garro 2		18:05:54.0	-17:42:00.0	MW	Garro et al. (2022a)	Cand.	

NOTE—Column description: **Candidate**—spectroscopy required to confirm at low Galactic latitudes;**Classification**—Globular cluster versus open cluster.

Table 20. Properties of Milky Way new disk/bulge star clusters

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
BH 140	193.4730	-67.1770	4.45	0.18 $^{+0.20}_{-0.12}$		6.2	13.41	4.8	7.3	-6.1 \pm 0.1	a,b,c
ESO 456-29	269.6510	-32.0200	0.86 \pm 0.04			2.0 \pm 0.1	14.50	7.9	9.1	-5.4	d
ESO 93-SC08	169.9250	-65.2200									
FSR 1716	242.6250	-53.7489	1.71			3.7	14.36	7.4	9.6	-4.8 \pm 0.1	a,b,c
FSR 1758	262.8000	-39.8083	6.33 $^{+0.87}_{-1.00}$			20.2 $^{+3.1}_{-3.0}$	15.22	11.1	6.8	-8.4 \pm 0.1	e,b,c
FSR 1776	268.5595	-36.1524					14.30	7.2			f,g
FSR 19	263.9100	-21.0700	0.90 \pm 0.07			1.9 \pm 0.2	14.29 \pm 0.08	7.2 \pm 0.3	9.7	-4.6	h
FSR 25	265.4300	-19.5710	0.87 $^{+0.19}_{-0.17}$			1.8 $^{+0.3}_{-0.4}$	14.23 \pm 0.06	7.0 \pm 0.2	10.0	-4.2	h
Ferrero 54	128.4512	-44.4469					14.27 \pm 0.03	7.1 \pm 0.1			i
Gaia 1	101.4700	-16.7500	6.50 \pm 0.40			8.5 $^{+0.6}_{-0.5}$	13.25	4.5	8.3	-4.9 \pm 0.1	j,k
Gaia 2	28.1240	53.0400	1.90 $^{+0.40}_{-0.34}$			2.6 \pm 0.5	13.60 \pm 0.10	5.2 \pm 0.2	11.6	-2.0 \pm 0.1	j
Garro 1	212.2500	-65.6200	2.40 $^{+0.60}_{-0.40}$			10.7 $^{+2.4}_{-2.2}$	15.93 \pm 0.03	15.3 \pm 0.2	10.7	-5.3 \pm 1.0	l,m
Garro 2	271.4750	-17.7000	1.58 $^{+0.44}_{-0.47}$			2.5 $^{+0.9}_{-0.8}$	13.74 \pm 0.31	5.6 $^{+0.9}_{-0.7}$	8.3	-5.4 \pm 1.2	n
Gran 2	257.8900	-24.8490	1.07 \pm 0.03			5.2 \pm 0.1	16.10	16.6	10.2	-5.9	d
Gran 3	256.2560	-35.4960	1.70 \pm 0.20			5.9 $^{+0.8}_{-0.7}$	15.40	12.0			i,d,m
Gran 4	278.1130	-23.1140	2.20 $^{+0.50}_{-0.40}$			14.8 $^{+3.4}_{-3.1}$	16.84	23.3	10.4	-6.4	d,m
Gran 5	267.2280	-24.1700	0.94 \pm 0.04			1.2 \pm 0.0	13.25	4.5	8.1	-5.2 \pm 0.2	b,d
Mercer 5	275.8292	-13.6672					13.69	5.5			c,o
Minni 48	263.3250	-28.0006	6.00 \pm 1.00			14.6 $^{+2.4}_{-2.5}$	14.62 \pm 0.08	8.4 \pm 0.3	8.1	-6.5 \pm 0.8	p
Patchick 122	145.6279	-52.4281					13.72 \pm 0.05	5.5 \pm 0.1			i
Patchick 126	256.4108	-47.3422	0.48			1.2	14.66 \pm 0.02	8.6 \pm 0.1	11.0	-3.6 \pm 0.3	a,b,i
Patchick 99	273.9458	-29.8128	1.87			3.5	14.02 \pm 0.04	6.4 \pm 0.1	8.8	-5.2	q
Pfleiderer 2	269.6667	-5.0750	1.24 \pm 0.13			5.9 \pm 0.6	16.07	16.4	13.6	-2.5	r
Ryu 059	244.2850	-44.5941	0.55 \pm 0.03			4.6 \pm 0.7	17.30 \pm 0.30	28.8 $^{+4.3}_{-3.7}$	9.1	-8.2 \pm 0.3	s
Ryu 879	281.3674	-5.1926	0.47 \pm 0.01			2.2 \pm 0.3	16.00 \pm 0.30	15.8 $^{+2.3}_{-2.0}$	8.0	-8.0 \pm 0.3	s
VVV CL0001	268.6771	-24.0147	1.00			2.4	14.58	8.2	8.0	-6.6 \pm 0.5	b,t,u
VVV CL0002	256.5263	-28.8451	0.75 \pm 0.10			1.6 \pm 0.3	14.32 \pm 0.23	7.3 $^{+0.8}_{-0.7}$	10.9	-3.4 \pm 0.3	v

Table 20 continued on next page

Table 20 (*continued*)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
VVV CL160	271.7380	-20.0150	2.20			2.6	13.01 ± 0.10	4.0 ± 0.2	8.2	-4.8 ± 0.5	b,w

NOTE— Citations: (a) [Baumgardt & Hilker \(2018\)](#) (b) [Baumgardt et al. \(2020\)](#) (c) [Baumgardt & Vasiliev \(2021\)](#) (d) [Gran et al. \(2022\)](#) (e) [Barbá et al. \(2019\)](#) (f) [Dias et al. \(2022\)](#) (g) [Minniti et al. \(2017a\)](#) (h) [Obasi et al. \(2021\)](#) (i) [Garro et al. \(2022b\)](#) (j) [Koposov et al. \(2017\)](#) (k) [Simpson et al. \(2017\)](#) (l) [Garro et al. \(2020\)](#) (m) [Pace et al. \(2023\)](#) (n) [Garro et al. \(2022a\)](#) (o) [Longmore et al. \(2011\)](#) (p) [Minniti et al. \(2021b\)](#) (q) [Garro et al. \(2021\)](#) (r) [Ortolani et al. \(2009\)](#) (s) [Ryu & Lee \(2018b\)](#) (t) [Minniti et al. \(2011\)](#) (u) [Olivares Carvajal et al. \(2022\)](#) (v) [Moni Bidin et al. \(2011\)](#) (w) [Minniti et al. \(2021a\)](#)

Table 21. Properties of Milky Way new disk/bulge star clusters

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
BH 140	303.1706	-4.3064					-14.848 ± 0.024	1.224 ± 0.024	a
ESO 456-29	358.7671	-3.9767	77.0 ± 3.6		-1.13 ± 0.06		-8.163 ± 0.038	-8.045 ± 0.036	b,a
ESO 93-SC08	293.5082	-4.0404					-4.068 ± 0.033	1.400 ± 0.034	a
FSR 1716	329.7781	-1.5926	-30.3 ± 1.2	2.50 ± 0.90	-1.38 ± 0.20		-4.354 ± 0.033	-8.832 ± 0.031	c,a
FSR 1758	349.2166	-3.2924	224.9 ± 0.7	3.51 ± 0.49	-1.43 ± 0.08		-2.881 ± 0.026	2.519 ± 0.025	d,a
FSR 1776	354.7201	-5.2500	-103.7 ± 0.4		0.02 ± 0.01	0.14	-2.300 ± 1.100	-2.600 ± 0.800	e
FSR 19	5.4986	6.0708					-2.500 ± 0.760	-5.020 ± 0.470	f
FSR 25	7.5343	5.6491					-2.610 ± 1.270	-5.230 ± 0.740	f
Ferrero 54	262.8029	-2.5708	56.1 ± 3.2				-1.330 ± 0.270	1.310 ± 0.340	g,h
Gaia 1	227.3383	-8.7474	58.3 ± 0.2	0.94 ± 0.15	-0.13 ± 0.13				i
Gaia 2	132.1478	-8.7357	-54.4 ± 3.8						h
Garro 1	310.8278	-3.9443	31.0 ± 0.1	< 0.80	-0.30 ± 0.03		-4.350 ± 0.020	-1.090 ± 0.020	j
Garro 2	12.0478	1.6461			-1.30		-6.070 ± 0.620	-6.150 ± 0.750	k
Gran 2	359.2293	8.5861	61.2 ± 2.7		-1.46 ± 0.13		0.190	-2.570	l,b
Gran 3	349.7563	3.4235	90.9 ± 0.4	1.90 ± 0.30	$-1.83^{+0.03}_{-0.04}$		-3.740 ± 0.030	$0.710^{+0.010}_{-0.020}$	j
Gran 4	10.1964	-6.3885	-266.4 ± 0.2	1.40 ± 0.20	-1.84 ± 0.02		0.510 ± 0.010	-3.510 ± 0.010	j
Gran 5	4.4592	1.8385	-59.2 ± 4.9		-1.02 ± 0.11		-5.320	-9.200	l,b
Mercer 5	17.5936	-0.1086					-3.965 ± 0.114	-7.220 ± 0.111	a
Minni 48	359.3514	2.7902					-3.500 ± 0.500	-6.000 ± 0.500	m
Patchick 122	276.3398	0.4062	98.7 ± 3.4				-3.720 ± 0.120	3.810 ± 0.120	g,h
Patchick 126	340.3805	-3.8263	-123.6 ± 2.9				-4.750 ± 0.460	-6.680 ± 0.620	g,h
Patchick 99	2.4885	-6.1453					-2.980 ± 1.740	-5.490 ± 2.020	n
Pfleiderer 2	22.2807	9.3223					-2.784 ± 0.034	-4.158 ± 0.031	a
Ryu 059	336.8697	4.3031					1.022 ± 0.055	0.770 ± 0.047	a
Ryu 879	27.6310	-1.0422					-2.396 ± 0.077	-1.794 ± 0.069	a
VVV CL0001	5.2675	0.7797	-324.9 ± 0.8		-2.04 ± 0.02		-3.487 ± 0.144	-1.652 ± 0.107	o,a
VVV CL0002	355.2410	7.2282					-8.867 ± 0.142	2.390 ± 0.085	a

Table 21 continued on next page

Table 21 (*continued*)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{\text{[Fe/H]}}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
VVV CL160	10.1478	0.2999	245.3 ± 0.8				-2.300 ± 0.100	-16.800 ± 0.100	h,p

NOTE— Citations: (a) [Vasiliev & Baumgardt \(2021\)](#) (b) [Gran et al. \(2023\)](#) (c) [Koch et al. \(2017\)](#) (d) [Romero-Colmenares et al. \(2021\)](#) (e) [Dias et al. \(2022\)](#) (f) [Obasi et al. \(2021\)](#) (g) [Garro et al. \(2022b\)](#) (h) [Garro et al. \(2023\)](#) (i) [Simpson et al. \(2017\)](#) (j) [Pace et al. \(2023\)](#) (k) [Garro et al. \(2022a\)](#) (l) [Gran et al. \(2022\)](#) (m) [Minniti et al. \(2021b\)](#) (n) [Garro et al. \(2021\)](#) (o) [Olivares Carvajal et al. \(2022\)](#) (p) [Minniti et al. \(2021a\)](#)

Table 22. Properties of Milky Way Harris catalog globular clusters

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
ARP 2		19:28:44.1	-30:21:20.3				Star Cluster
BH 176		15:39:07.5	-50:03:09.8				Star Cluster
BH 261	AL 3	18:14:06.6	-28:38:06.0				Star Cluster
	ESO 456-78						
	MWSC 2847						
E 3		09:20:57.1	-77:16:54.8				Star Cluster
ESO280 SC06		18:09:06.0	-46:25:24.0				Star Cluster
HP 1	BH 229	17:31:05.2	-29:58:54.0				Star Cluster
	ESO 455-11						
IC 1257		17:27:08.5	-07:05:35.0				Star Cluster
IC 1276	Palomar 7	18:10:44.3	-07:12:27.3				Star Cluster
IC 4499		15:00:18.5	-82:12:49.7				Star Cluster
Liller 1		17:33:24.6	-33:23:22.4				Star Cluster
Lynga 7	BH 184	16:11:03.7	-55:19:04.0				Star Cluster
NGC 104		00:24:05.7	-72:04:52.7				Star Cluster
NGC 1261		03:12:16.2	-55:12:58.4				Star Cluster
NGC 1851		05:14:06.8	-40:02:47.6				Star Cluster
NGC 1904	M 79	05:24:11.0	-24:31:27.9				Star Cluster
NGC 2298		06:48:59.4	-36:00:19.1				Star Cluster
NGC 2808		09:12:03.1	-64:51:48.6				Star Cluster
NGC 288		00:52:45.2	-26:34:57.4				Star Cluster
NGC 3201		10:17:36.8	-46:24:44.9				Star Cluster
NGC 362		01:03:14.3	-70:50:55.6				Star Cluster
NGC 4147		12:10:06.3	+18:32:33.5				Star Cluster
NGC 4372		12:25:45.4	-72:39:32.7				Star Cluster
NGC 4590	M 68	12:39:28.0	-26:44:38.6				Star Cluster
NGC 4833		12:59:33.9	-70:52:35.4				Star Cluster

Table 22 continued on next page

Table 22 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
NGC 5024	M 53	13:12:55.3	+18:10:05.4				Star Cluster
NGC 5053		13:16:27.1	+17:42:00.9				Star Cluster
NGC 5139	omega Cen Caldwell 80	13:26:47.3	-47:28:46.1				Star Cluster
NGC 5272	M 3	13:42:11.6	+28:22:38.2				Star Cluster
NGC 5286		13:46:26.8	-51:22:27.3				Star Cluster
NGC 5466		14:05:27.3	+28:32:04.0				Star Cluster
NGC 5634		14:29:37.3	-05:58:35.1				Star Cluster
NGC 5897		15:03:58.6	-33:04:05.3				Star Cluster
NGC 5897		15:17:24.4	-21:00:36.4				Star Cluster
NGC 5904	M 5	15:18:33.2	+02:04:51.7				Star Cluster
NGC 5927		15:28:00.7	-50:40:22.9				Star Cluster
NGC 5946		15:35:28.6	-50:39:35.0				Star Cluster
NGC 5986		15:46:03.0	-37:47:11.1				Star Cluster
NGC 6093	M 80	16:17:02.4	-22:58:33.9				Star Cluster
NGC 6101		16:25:48.1	-72:12:07.9				Star Cluster
NGC 6121	M 4	16:23:35.2	-26:31:32.7				Star Cluster
NGC 6139		16:27:40.4	-38:50:55.6				Star Cluster
NGC 6144		16:27:13.9	-26:01:24.6				Star Cluster
NGC 6171	M 107	16:32:31.9	-13:03:13.6				Star Cluster
NGC 6205	M 13	16:41:41.2	+36:27:35.5				Star Cluster
NGC 6218	M 12	16:47:14.2	-01:56:54.7				Star Cluster
NGC 6235		16:53:25.4	-22:10:38.8				Star Cluster
NGC 6254	M 10	16:57:09.1	-04:06:01.1				Star Cluster
NGC 6256		16:59:32.7	-37:07:15.5				Star Cluster
NGC 6266	M 62	17:01:13.0	-30:06:48.2				Star Cluster
NGC 6273	M 19	17:02:37.8	-26:16:04.7				Star Cluster
NGC 6284		17:04:28.8	-24:45:53.3				Star Cluster
NGC 6287		17:05:09.3	-22:42:28.8				Star Cluster
NGC 6293		17:10:10.2	-26:34:55.5				Star Cluster

Table 22 *continued on next page*

Table 22 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
NGC 6304		17:14:32.3	-29:27:43.3				Star Cluster
NGC 6316		17:16:37.3	-28:08:24.4				Star Cluster
NGC 6325		17:17:59.1	-23:46:03.6				Star Cluster
NGC 6333	M9	17:19:11.8	-18:30:58.5				Star Cluster
NGC 6341	M92	17:17:07.4	+43:08:09.4				Star Cluster
NGC 6342		17:21:10.0	-19:35:15.6				Star Cluster
NGC 6352		17:25:29.1	-48:25:19.8				Star Cluster
NGC 6355		17:23:58.4	-26:21:10.2				Star Cluster
NGC 6356		17:23:35.0	-17:48:46.9				Star Cluster
NGC 6362		17:31:55.0	-67:02:54.0				Star Cluster
NGC 6366		17:27:44.2	-05:04:47.5				Star Cluster
NGC 6380	Ton 1	17:34:28.5	-39:04:10.3				Star Cluster
NGC 6388		17:36:17.2	-44:44:07.8				Star Cluster
NGC 6397		17:40:42.1	-53:40:27.6				Star Cluster
NGC 6401	MWSC 2653	17:38:36.5	-23:54:34.6				Star Cluster
NGC 6402	M 14	17:37:36.2	-03:14:45.3				Star Cluster
NGC 6426		17:44:54.7	+03:10:12.5				Star Cluster
NGC 6440		17:48:52.8	-20:21:37.5				Star Cluster
NGC 6441		17:50:13.1	-37:03:05.2				Star Cluster
NGC 6453		17:50:51.7	-34:35:54.5				Star Cluster
NGC 6496		17:59:03.7	-44:15:57.4				Star Cluster
NGC 6517		18:01:50.6	-08:57:31.6				Star Cluster
NGC 6522		18:03:34.1	-30:02:02.3				Star Cluster
NGC 6528		18:04:49.6	-30:03:20.8				Star Cluster
NGC 6535		18:03:50.5	-00:17:51.5				Star Cluster
NGC 6539		18:04:49.7	-07:35:09.1				Star Cluster
NGC 6540	Djorg 3 MWSC 2804	18:06:08.6	-27:45:55.0				Star Cluster
NGC 6541		18:08:02.4	-43:42:53.6				Star Cluster
NGC 6544		18:07:20.1	-24:59:53.6				Star Cluster

Table 22 *continued on next page*

Table 22 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
NGC 6553		18:09:17.5	-25:54:29.0				Star Cluster
NGC 6558		18:10:17.8	-31:45:52.2				Star Cluster
NGC 6569	ESO 456-77	18:13:38.8	-31:49:36.8				Star Cluster
NGC 6584		18:18:37.6	-52:12:56.8				Star Cluster
NGC 6624		18:23:40.5	-30:21:39.7				Star Cluster
NGC 6626	M 28	18:24:32.9	-24:52:11.4				Star Cluster
NGC 6637	M 69	18:31:23.1	-32:20:53.1				Star Cluster
NGC 6638	Gcl 95	18:30:56.1	-25:29:50.9				Star Cluster
NGC 6642	MWSC 2941	18:31:54.2	-23:28:32.2				Star Cluster
NGC 6652		18:35:45.6	-32:59:26.6				Star Cluster
NGC 6656	M 22	18:36:23.9	-23:54:17.1				Star Cluster
NGC 6681	M 70	18:43:12.8	-32:17:31.6				Star Cluster
NGC 6712		18:53:04.3	-08:42:21.5				Star Cluster
NGC 6715	M 54	18:55:03.3	-30:28:47.5	Sagittarius			Star Cluster
NGC 6717	Palomar 9	18:55:06.0	-22:42:05.3				Star Cluster
NGC 6723		18:59:33.1	-36:37:56.1				Star Cluster
NGC 6749		19:05:15.4	+01:53:59.1				Star Cluster
NGC 6752		19:10:52.1	-59:59:04.4				Star Cluster
NGC 6760		19:11:12.1	+01:01:49.7				Star Cluster
NGC 6779	M 56	19:16:35.6	+30:11:00.5				Star Cluster
NGC 6809	M 55	19:39:59.7	-30:57:53.1				Star Cluster
NGC 6838	M 71	19:53:46.5	+18:46:45.1				Star Cluster
NGC 6864	M 75	20:06:04.7	-21:55:16.2				Star Cluster
NGC 6934		20:34:11.4	+07:24:16.1				Star Cluster
NGC 6981	M 72	20:53:27.7	-12:32:14.3				Star Cluster
NGC 7006		21:01:29.4	+16:11:14.4				Star Cluster
NGC 7078	M 15	21:29:58.3	+12:10:01.2				Star Cluster
NGC 7089	M 2	21:33:27.0	-00:49:23.7				Star Cluster
NGC 7099	M 30	21:40:22.1	-23:10:47.5				Star Cluster
NGC 7492		23:08:26.7	-15:36:41.3				Star Cluster

Table 22 *continued on next page*

Table 22 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
Palomar 1		03:33:20.0	+79:34:51.8				Star Cluster
Palomar 10		19:18:02.1	+18:34:18.0				Star Cluster
Palomar 11		19:45:14.4	-08:00:26.0				Star Cluster
Palomar 12		21:46:38.8	-21:15:09.4				Star Cluster
Palomar 5		15:16:04.6	-00:07:15.6				Star Cluster
Palomar 6	ESO 520-21	17:43:42.2	-26:13:30.0				Star Cluster
Palomar 8		18:41:30.5	-19:49:43.9				Star Cluster
Rup 106		12:38:40.2	-51:09:01.0				Star Cluster
UKS 1		17:54:27.2	-24:08:43.0				Star Cluster
NGC 5694		14:39:36.3	-26:32:19.6				Star Cluster
NGC 6229		16:46:58.9	+47:31:40.1				Star Cluster
NGC 2419		07:38:08.5	+38:52:55.0				Star Cluster
Palomar 13		23:06:44.4	+12:46:17.5		Wilson (1955)		Star Cluster
Palomar 2		04:46:05.9	+31:22:53.4		Abell (1955)		Star Cluster
Palomar 3		10:05:31.6	+00:04:18.0		Abell (1955)		Star Cluster
					Wilson (1955)		
Palomar 4		11:29:16.4	+28:58:24.1		Abell (1955)		Star Cluster
Palomar 15		16:59:51.0	-00:32:20.4		Zwicky (1959)		Star Cluster
Ton 2	ESO 333-16	17:36:10.1	-38:33:22.0		Pišmiš (1959)		Star Cluster
	Pismis 26						
	Tonantzintla 2						
Palomar 14		16:11:00.6	+14:57:28.0		Arp & van den Bergh (1960)		Star Cluster
Terzan 1	HP2	17:35:47.2	-30:28:54.4		Terzan (1966)		Star Cluster
	ESO 455-23						
	Haute-Provence 2						
	MWSC 2635						
Terzan 2	HP 3	17:27:33.1	-30:48:08.4		Terzan (1967)		Star Cluster
	ESO 454-29						
	MWSC 2600						
	Haute-Provence 3						

Table 22 *continued on next page*

Table 22 (*continued*)

Name	Other Name	RA deg	DEC deg	Host	Original Publication	Candidate?	Classification
	BH 228						
Terzan 3		16:28:39.0	-35:20:23.4		Terzan (1968)		Star Cluster
Terzan 4	HP 4	17:30:39.0	-31:35:43.9		Terzan (1968)		Star Cluster
	Gcl 66.1						
Terzan 5	Terzan 11	17:48:04.8	-24:46:44.6		Terzan (1968)		Star Cluster
Terzan 6	HP 5	17:50:46.4	-31:16:31.4		Terzan (1968)		Star Cluster
	ESO 455-49						
	Haute-Provence 5						
	BH 249						
	MWSC 2719						
Terzan 7		19:17:43.9	-34:39:27.8		Terzan (1968)		Star Cluster
Terzan 8	ESO 398-SC 021	19:41:44.4	-33:59:58.1		Terzan (1968)		Star Cluster
Terzan 10	ESO 521-16	18:02:57.8	-26:04:01.0		Terzan (1971)		Star Cluster
	MWSC 2793						
Terzan 12	ESO 522-1	18:12:15.8	-22:44:31.0		Terzan (1971)		Star Cluster
	MWSC 2838						
Terzan 9	Gcl 80.1	18:01:38.8	-26:50:23.0		Terzan (1971)		Star Cluster
	MWSC 2778						
AM 1		03:55:02.3	-49:36:55.0		Lauberts (1976)		Star Cluster
Eridanus		04:24:44.5	-21:11:12.4		Cesarsky et al. (1977)		Star Cluster
Djorgovski 2	ESO456	18:01:49.1	-27:49:32.9		Holmberg et al. (1978)		Star Cluster
	Djorg 2				Djorgovski (1987)		
	ESO 456-38						
	MWSC 2779						
ESO 452-SC11		16:39:25.0	-28:23:57.0		Lauberts et al. (1981)		Star Cluster
AM 4		13:56:21.4	-27:09:54.6		Madore & Arp (1982)		Star Cluster
Djorgovski 1	Djorg 1	17:47:28.7	-33:03:59.0		Djorgovski (1987)		Star Cluster
Pyxis	C J0907-372	09:07:56.9	-37:13:35.8		Weinberger (1995)		Star Cluster
					Da Costa (1995)		
					Irwin et al. (1995)		

Table 22 *continued on next page*

Table 22 (*continued*)

Name	Other Name	RA	DEC	Host	Original Publication	Candidate?	Classification
		deg	deg				
2MASS GC-01		18:08:21.8	-19:49:47.0		Hurt et al. (2000)		Star Cluster
2MASS GC-02		18:09:36.5	-20:46:44.0		Hurt et al. (2000)		Star Cluster
Whiting 1	WHI B0200-03	02:02:57.0	-03:15:10.0		Whiting et al. (2002)		
Glimpse 1	GLIMPSE-C01	18:48:49.7	-01:29:50.0		Kobulnicky et al. (2005)		
					Mercer et al. (2005)		
Glimpse 2	GLIMPSE-C02	18:18:30.5	-16:58:38.0		Mercer et al. (2005)		
	Mercer 3				Kurtev et al. (2008)		
					Strader & Kobulnicky (2008)		
FSR 1735	2MASS GC-03	16:52:10.6	-47:03:29.0		Froebrich et al. (2007)		Star Cluster

NOTE—

Table 23. Properties of Milky Way Harris catalog globular clusters

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
2MASS GC-01	272.0909	-19.8297	4.07			4.0	12.64 ± 0.40	$3.4^{+0.7}_{-0.6}$	6.6	-6.1	a,b,c
2MASS GC-02	272.4021	-20.7789	1.39			1.0	$11.99^{+0.36}_{-0.40}$	$2.5^{+0.5}_{-0.4}$	8.7	-3.3	a,b,c
AM 1	58.7596	-49.6153	0.43			14.9	20.38 ± 0.06	$118.9^{+3.4}_{-3.3}$	14.3	-6.1 ± 0.1	a,b,c
AM 4	209.0891	-27.1652	0.77			6.5	17.31 ± 0.07	$29.0^{+1.0}_{-0.9}$	16.4	-1.0 ± 0.1	a,b,c
ARP 2	292.1838	-30.3556	1.70			14.2	17.29 ± 0.03	28.7 ± 0.3	11.3	-6.0 ± 0.0	a,b,c
BH 176	234.7810	-50.0527	0.90			4.0	15.91	15.2	11.6	-4.3	d
BH 261	273.5275	-28.6350	1.65			2.9	13.93 ± 0.09	6.1 ± 0.3	10.2	-3.8 ± 0.0	a,b,c
Djorgovski 1	266.8696	-33.0664	1.43			4.1	14.97 ± 0.14	$9.9^{+0.7}_{-0.6}$	8.2	-6.8 ± 0.1	a,b,c
Djorgovski 2	270.4544	-27.8258	1.82			4.6	14.71 ± 0.04	8.8 ± 0.2	8.2	-6.5 ± 0.1	a,b,c
E 3	140.2378	-77.2819	1.92			4.4	14.48 ± 0.07	$7.9^{+0.3}_{-0.2}$	10.9	-3.6 ± 0.0	a,b,c
ESO 452-SC11	249.8542	-28.3992	1.15			2.5	14.34 ± 0.06	7.4 ± 0.2	10.3	-4.0 ± 0.1	a,b,c
ESO280 SC06	272.2750	-46.4233	1.15			7.0	16.61 ± 0.07	$20.9^{+0.7}_{-0.6}$	11.7	-4.9 ± 0.2	a,b,e
Eridanus	66.1856	-21.1868	0.55			13.5	19.64 ± 0.07	$84.7^{+2.9}_{-2.8}$	14.2	-5.4 ± 0.0	a,b,c
FSR 1735	253.0442	-47.0581	0.79			2.1	14.79 ± 0.13	9.1 ± 0.5	7.9	-6.9 ± 0.1	a,b,c
Glimpse 1	282.2071	-1.4972	0.60			0.5	$12.46^{+0.33}_{-0.38}$	3.1 ± 0.5	4.0	-8.4	f
Glimpse 2	274.6271	-16.9772	1.73			2.3	$13.30^{+0.31}_{-0.30}$	$4.6^{+0.7}_{-0.6}$	7.1	-6.2	g,h
HP 1	262.7717	-29.9817	1.52			3.1	14.22 ± 0.04	7.0 ± 0.1	7.6	-6.6 ± 0.1	a,b,c
IC 1257	261.7854	-7.0931	0.53			4.1	17.12 ± 0.12	$26.6^{+1.5}_{-1.4}$	12.0	-5.2	a,b,c
IC 1276	272.6844	-7.2076	2.42			3.2	13.29 ± 0.12	$4.6^{+0.3}_{-0.2}$	6.6	-6.7 ± 0.1	a,b,c
IC 4499	225.0772	-82.2138	1.87			10.3	16.38 ± 0.03	18.9 ± 0.3	9.1	-7.3 ± 0.1	a,b,c
Liller 1	263.3523	-33.3896	0.55			1.3	14.53 ± 0.09	$8.1^{+0.4}_{-0.3}$	5.5	-9.0 ± 0.2	a,b,c
Lynga 7	242.7652	-55.3178	1.70			3.9	14.49 ± 0.04	7.9 ± 0.2	7.6	-6.9 ± 0.1	a,b,c
NGC 104	6.0238	-72.0813	3.07			4.0	13.28 ± 0.01	4.5 ± 0.0	4.0	-9.3 ± 0.1	a,b,c
NGC 1261	48.0675	-55.2162	0.68			3.2	16.07 ± 0.03	16.4 ± 0.2	8.3	-7.8 ± 0.0	a,b,c
NGC 1851	78.5282	-40.0466	0.50			1.7	15.39 ± 0.02	12.0 ± 0.1	7.0	-8.4 ± 0.0	a,b,c
NGC 1904	81.0458	-24.5244	0.68			2.6	15.58 ± 0.03	13.1 ± 0.2	7.9	-7.7 ± 0.0	a,b,c
NGC 2298	102.2475	-36.0053	0.84			2.4	14.96 ± 0.04	9.8 ± 0.2	8.6	-6.3 ± 0.0	a,b,c

Table 23 continued on next page

Table 23 (*continued*)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
NGC 2419	114.5353	38.8819	0.77			19.8	19.73 ± 0.06	88.5 ± 2.4	10.3	-9.4 ± 0.0	a,b,c
NGC 2808	138.0129	-64.8635	0.84			2.5	15.01 ± 0.02	10.1 ± 0.1	5.5	-9.6 ± 0.0	a,b,c
NGC 288	13.1885	-26.5826	2.23			5.8	14.77 ± 0.02	9.0 ± 0.1	8.0	-6.8 ± 0.0	a,b,c
NGC 3201	154.4034	-46.4125	3.75			5.2	13.38 ± 0.02	4.7 ± 0.0	6.0	-7.3 ± 0.0	a,b,c
NGC 362	15.8094	-70.8488	0.86			2.2	14.73 ± 0.02	8.8 ± 0.1	6.3	-8.4 ± 0.0	a,b,c
NGC 4147	182.5263	18.5426	0.47			2.5	16.34 ± 0.03	18.5 ± 0.2	10.2	-6.1 ± 0.0	a,b,c
NGC 4372	186.4391	-72.6591	3.47			5.8	13.78 ± 0.08	5.7 ± 0.2	6.2	-7.6 ± 0.1	a,b,c
NGC 4590	189.8666	-26.7441	1.47			4.4	15.09 ± 0.02	10.4 ± 0.1	7.8	-7.2 ± 0.0	a,b,c
NGC 4833	194.8913	-70.8765	1.73			3.3	14.06 ± 0.03	6.5 ± 0.1	6.2	-7.9 ± 0.0	a,b,c
NGC 5024	198.2302	18.1682	1.20			6.5	16.34 ± 0.02	18.5 ± 0.2	7.6	-8.7 ± 0.0	a,b,c
NGC 5053	199.1129	17.7003	2.43			12.4	16.22 ± 0.03	17.5 ± 0.2	9.9	-6.3 ± 0.0	a,b,c
NGC 5139	201.6970	-47.4795	4.79			7.6	13.67 ± 0.02	5.4 ± 0.0	3.1	-10.5 ± 0.0	a,b,c
NGC 5272	205.5484	28.3773	1.15			3.4	15.04 ± 0.02	10.2 ± 0.1	6.4	-8.7 ± 0.0	a,b,c
NGC 5286	206.6117	-51.3742	0.73			2.4	15.23 ± 0.03	11.1 ± 0.1	6.6	-8.6 ± 0.0	a,b,c
NGC 5466	211.3637	28.5344	2.04			9.6	16.04 ± 0.02	16.1 ± 0.2	9.3	-6.7 ± 0.0	a,b,c
NGC 5634	217.4053	-5.9764	0.61			4.6	17.07 ± 0.05	26.0 ± 0.6	9.4	-7.7 ± 0.1	a,b,c
NGC 5694	219.9012	-26.5388	0.30			3.0	17.71 ± 0.05	34.8 ± 0.7	9.6	-8.1 ± 0.1	a,b,c
NGC 5897	229.3517	-21.0101	2.09			7.6	15.49 ± 0.04	12.5 ± 0.2	8.2	-7.3 ± 0.0	a,b,c
NGC 5897	225.9942	-33.0681	0.49			4.5	17.51 ± 0.04	31.7 ± 0.6	8.4	-9.1 ± 0.1	a,b,c
NGC 5904	229.6384	2.0810	1.62			3.5	14.37 ± 0.02	7.5 ± 0.1	5.9	-8.5 ± 0.0	a,b,c
NGC 5927	232.0029	-50.6730	1.29			3.1	14.59 ± 0.03	8.3 ± 0.1	6.3	-8.2 ± 0.0	a,b,c
NGC 5946	233.8691	-50.6597	0.70			2.0	14.92 ± 0.12	9.6 ± 0.5	7.8	-7.1 ± 0.1	a,b,c
NGC 5986	236.5125	-37.7864	0.93			2.9	15.11 ± 0.03	10.5 ± 0.1	6.8	-8.3 ± 0.0	a,b,c
NGC 6093	244.2600	-22.9761	0.64			1.9	15.07 ± 0.02	10.3 ± 0.1	6.9	-8.2 ± 0.0	a,b,c
NGC 6101	246.4505	-72.2022	2.28			9.6	15.80 ± 0.03	14.4 ± 0.2	8.5	-7.3 ± 0.0	a,b,c
NGC 6121	245.8967	-26.5257	4.65			2.5	11.34 ± 0.02	1.9 ± 0.0	4.3	-7.0 ± 0.0	a,b,c
NGC 6139	246.9185	-38.8488	0.63			1.8	15.01 ± 0.10	$10.0^{+0.5}_{-0.4}$	6.7	-8.3 ± 0.1	a,b,c
NGC 6144	246.8078	-26.0235	1.56			3.7	14.56 ± 0.03	8.2 ± 0.1	8.1	-6.4 ± 0.0	a,b,c
NGC 6171	248.1328	-13.0538	1.58			2.6	13.75 ± 0.03	5.6 ± 0.1	7.3	-6.5 ± 0.0	a,b,c
NGC 6205	250.4218	36.4599	1.61			3.5	14.35 ± 0.02	7.4 ± 0.1	5.8	-8.6 ± 0.0	a,b,c

Table 23 *continued on next page*

Table 23 (continued)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
NGC 6218	251.8091	-1.9485	1.83			2.7	13.54 ± 0.02	5.1 ± 0.0	6.5	-7.0 ± 0.0	a,b,c
NGC 6229	251.7452	47.5278	0.36			3.2	17.39 ± 0.03	30.1 ± 0.5	9.3	-8.1 ± 0.1	a,b,c
NGC 6235	253.3557	-22.1774	0.97			3.4	15.38 ± 0.07	11.9 ± 0.4	8.7	-6.7 ± 0.0	a,b,c
NGC 6254	254.2877	-4.1003	2.03			3.0	13.52 ± 0.03	5.1 ± 0.1	5.8	-7.8 ± 0.0	a,b,c
NGC 6256	254.8861	-37.1210	1.40			2.9	14.30 ± 0.09	7.2 ± 0.3	7.2	-7.1 ± 0.1	a,b,c
NGC 6266	255.3042	-30.1134	0.99			1.8	14.04 ± 0.04	6.4 ± 0.1	5.2	-8.9 ± 0.1	a,b,c
NGC 6273	255.6575	-26.2680	1.30			3.2	14.61 ± 0.04	8.3 ± 0.2	5.7	-8.9 ± 0.0	a,b,c
NGC 6284	256.1201	-24.7648	0.71			2.9	15.76 ± 0.06	14.2 ± 0.4	8.1	-7.6 ± 0.1	a,b,c
NGC 6287	256.2889	-22.7080	0.84			1.9	14.50 ± 0.10	7.9 ± 0.4	7.5	-6.9 ± 0.1	a,b,c
NGC 6293	257.5425	-26.5821	0.83			2.2	14.82 ± 0.07	9.2 ± 0.3	7.4	-7.4 ± 0.1	a,b,c
NGC 6304	258.6344	-29.4620	1.02			1.8	13.95 ± 0.05	6.2 ± 0.1	6.5	-7.4 ± 0.1	a,b,c
NGC 6316	259.1554	-28.1401	0.97			3.1	$15.24^{+0.07}_{-0.08}$	11.2 ± 0.4	7.3	-7.9 ± 0.2	a,b,c
NGC 6325	259.4963	-23.7677	0.79			1.7	14.38 ± 0.09	7.5 ± 0.3	8.1	-6.3 ± 0.0	a,b,c
NGC 6333	259.7991	-18.5163	1.13			2.7	14.60 ± 0.04	8.3 ± 0.1	6.5	-8.1 ± 0.0	a,b,c
NGC 6341	259.2808	43.1359	0.82			2.0	14.65 ± 0.02	8.5 ± 0.1	6.5	-8.2 ± 0.0	a,b,c
NGC 6342	260.2916	-19.5877	0.64			1.5	14.52 ± 0.06	8.0 ± 0.2	8.4	-6.1 ± 0.1	a,b,c
NGC 6352	261.3713	-48.4222	2.00			3.2	13.72 ± 0.03	5.5 ± 0.1	7.4	-6.3 ± 0.0	a,b,c
NGC 6355	260.9935	-26.3528	0.94			2.4	14.69 ± 0.06	8.7 ± 0.2	7.5	-7.1 ± 0.1	a,b,c
NGC 6356	260.8958	-17.8130	0.88			4.0	15.97 ± 0.13	15.7 ± 0.9	7.5	-8.5 ± 0.1	a,b,c
NGC 6362	262.9791	-67.0483	2.31			5.1	14.42 ± 0.02	7.6 ± 0.1	7.2	-7.2 ± 0.0	a,b,c
NGC 6366	261.9344	-5.0799	3.78			3.8	12.69 ± 0.03	3.4 ± 0.1	6.7	-6.0 ± 0.0	a,b,c
NGC 6380	263.6186	-39.0695	1.12			3.1	14.91 ± 0.07	9.6 ± 0.3	7.1	-7.8 ± 0.1	a,b,c
NGC 6388	264.0718	-44.7355	0.80			2.6	15.24 ± 0.03	11.2 ± 0.2	5.7	-9.6 ± 0.0	a,b,c
NGC 6397	265.1754	-53.6743	3.01			2.2	11.97 ± 0.02	2.5 ± 0.0	4.9	-7.1 ± 0.0	a,b,c
NGC 6401	264.6522	-23.9096	1.07			2.5	14.53 ± 0.06	8.1 ± 0.2	7.1	-7.4 ± 0.1	a,b,c
NGC 6402	264.4007	-3.2459	1.33			3.5	14.81 ± 0.06	$9.1^{+0.3}_{-0.2}$	6.0	-8.8 ± 0.1	a,b,c
NGC 6426	266.2280	3.1701	0.86			5.2	16.58 ± 0.04	$20.7^{+0.4}_{-0.3}$	10.0	-6.6 ± 0.0	a,b,c
NGC 6440	267.2202	-20.3604	0.55			1.3	14.58 ± 0.06	8.2 ± 0.2	5.7	-8.9 ± 0.1	a,b,c
NGC 6441	267.5544	-37.0514	0.58			2.1	15.52 ± 0.03	12.7 ± 0.2	5.7	-9.9 ± 0.1	a,b,c
NGC 6453	267.7155	-34.5985	0.94			2.8	15.02 ± 0.05	10.1 ± 0.2	7.2	-7.8 ± 0.1	a,b,c

Table 23 continued on next page

Table 23 (*continued*)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
NGC 6496	269.7654	-44.2659	1.52			4.3	14.92 ± 0.03	$9.6^{+0.2}_{-0.1}$	8.2	-6.7 ± 0.1	a,b,c
NGC 6517	270.4608	-8.9588	0.63			1.7	14.82 ± 0.13	$9.2^{+0.6}_{-0.5}$	7.4	-7.5 ± 0.1	a,b,c
NGC 6522	270.8920	-30.0340	1.17			2.5	14.31 ± 0.06	7.3 ± 0.2	6.8	-7.5 ± 0.0	a,b,c
NGC 6528	271.2067	-30.0558	1.08			2.5	14.47 ± 0.07	7.8 ± 0.2	8.0	-6.4 ± 0.1	a,b,c
NGC 6535	270.9604	-0.2976	1.46			2.7	14.02 ± 0.04	6.4 ± 0.1	9.1	-5.0 ± 0.0	a,b,c
NGC 6539	271.2073	-7.5859	1.55			3.7	14.56 ± 0.10	8.2 ± 0.4	6.8	-7.8 ± 0.0	a,b,c
NGC 6540	271.5357	-27.7653	1.54			2.6	13.86 ± 0.10	5.9 ± 0.3	7.7	-6.2 ± 0.1	a,b,c
NGC 6541	272.0098	-43.7149	1.03			2.3	14.41 ± 0.03	7.6 ± 0.1	6.2	-8.2 ± 0.0	a,b,c
NGC 6544	271.8338	-24.9982	2.05			1.5	12.06 ± 0.05	2.6 ± 0.1	5.5	-6.6 ± 0.2	a,b,c
NGC 6553	272.3230	-25.9081	1.48			2.3	13.63 ± 0.05	5.3 ± 0.1	6.1	-7.5 ± 0.1	a,b,c
NGC 6558	272.5740	-31.7645	0.68			1.5	14.37 ± 0.08	7.5 ± 0.3	8.3	-6.1 ± 0.1	a,b,c
NGC 6569	273.4117	-31.8269	$0.68^{+0.14}_{-0.17}$			2.1 ± 0.5	15.11 ± 0.05	10.5 ± 0.3	7.4	-7.7 ± 0.0	b,c,i
NGC 6584	274.6566	-52.2158	0.88			3.5	15.67 ± 0.03	13.6 ± 0.2	8.3	-7.4 ± 0.0	a,b,c
NGC 6624	275.9188	-30.3610	0.73			1.7	14.52 ± 0.03	8.0 ± 0.1	7.2	-7.4 ± 0.1	a,b,c
NGC 6626	276.1370	-24.8698	1.03			1.6	13.65 ± 0.04	5.4 ± 0.1	5.6	-8.0 ± 0.1	a,b,c
NGC 6637	277.8463	-32.3481	0.93			2.4	14.75 ± 0.03	8.9 ± 0.1	7.2	-7.6 ± 0.0	a,b,c
NGC 6638	277.7337	-25.4975	0.65			1.8	$14.95^{+0.08}_{-0.07}$	9.8 ± 0.3	7.5	-7.4 ± 0.1	a,b,c
NGC 6642	277.9760	-23.4756	0.59			1.4	14.53 ± 0.05	8.1 ± 0.2	8.2	-6.3 ± 0.1	a,b,c
NGC 6652	278.9401	-32.9907	0.53			1.5	14.88 ± 0.03	9.5 ± 0.1	8.6	-6.2 ± 0.0	a,b,c
NGC 6656	279.0998	-23.9047	3.31			3.2	12.60 ± 0.02	3.3 ± 0.0	4.0	-8.6 ± 0.0	a,b,c
NGC 6681	280.8032	-32.2921	0.79			2.2	14.86 ± 0.03	9.4 ± 0.1	7.7	-7.2 ± 0.0	a,b,c
NGC 6712	283.2680	-8.7060	1.19			2.6	14.34 ± 0.07	7.4 ± 0.2	7.2	-7.1 ± 0.0	a,b,c
NGC 6715	283.7639	-30.4799	0.47			3.6	17.10 ± 0.03	26.3 ± 0.3	7.1	-10.0 ± 0.1	a,b,c
NGC 6717	283.7752	-22.7015	1.20			2.6	14.38 ± 0.04	7.5 ± 0.1	8.3	-6.1 ± 0.0	a,b,c
NGC 6723	284.8881	-36.6322	1.51			3.6	14.59 ± 0.03	8.3 ± 0.1	7.1	-7.5 ± 0.0	a,b,c
NGC 6749	286.3141	1.8998	1.89			4.2	14.40 ± 0.06	7.6 ± 0.2	6.3	-8.1 ± 0.1	a,b,c
NGC 6752	287.7171	-59.9846	2.39			2.9	13.08 ± 0.02	4.1 ± 0.0	5.2	-7.9 ± 0.1	a,b,c
NGC 6760	287.8003	1.0305	1.37			3.4	14.62 ± 0.11	8.4 ± 0.4	6.5	-8.1 ± 0.1	a,b,c
NGC 6779	289.1482	30.1835	0.98			3.0	15.09 ± 0.03	10.4 ± 0.1	7.3	-7.7 ± 0.1	a,b,c
NGC 6809	294.9988	-30.9647	2.96			4.6	13.64 ± 0.02	5.3 ± 0.1	6.0	-7.6 ± 0.0	a,b,c

Table 23 *continued on next page*

Table 23 (continued)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
NGC 6838	298.4437	18.7792	2.85			3.3	13.01 ± 0.03	$4.0^{+0.1}_{-0.0}$	6.4	-6.6 ± 0.0	a,b,c
NGC 6864	301.5198	-21.9212	0.34			2.0	16.56 ± 0.05	$20.5^{+0.5}_{-0.4}$	8.0	-8.5 ± 0.0	a,b,c
NGC 6934	308.5474	7.4045	0.65			3.0	15.98 ± 0.02	15.7 ± 0.2	8.4	-7.6 ± 0.0	a,b,c
NGC 6981	313.3654	-12.5373	0.85			4.1	16.11 ± 0.02	16.7 ± 0.2	9.2	-6.9 ± 0.0	a,b,c
NGC 7006	315.3726	16.1873	0.38			4.3	17.97 ± 0.03	39.3 ± 0.6	10.5	-7.5 ± 0.0	a,b,c
NGC 7078	322.4930	12.1670	0.65			2.0	15.15 ± 0.02	10.7 ± 0.1	6.0	-9.2 ± 0.1	a,b,c
NGC 7089	323.3626	-0.8233	0.90			3.1	15.34 ± 0.02	11.7 ± 0.1	6.3	-9.1 ± 0.0	a,b,c
NGC 7099	325.0921	-23.1799	1.03			2.5	14.64 ± 0.02	8.5 ± 0.1	7.3	-7.4 ± 0.1	a,b,c
NGC 7492	347.1112	-15.6115	1.07			7.6	16.94 ± 0.05	24.4 ± 0.6	11.1	-5.9 ± 0.0	a,b,c
Palomar 1	53.3335	79.5811	0.62			2.0	15.24 ± 0.06	11.2 ± 0.3	13.5	-1.8 ± 0.0	a,b,c
Palomar 10	289.5087	18.5717	1.55			4.0	$14.76^{+0.29}_{-0.28}$	$8.9^{+1.3}_{-1.1}$	7.2	-7.5 ± 0.0	a,b,c
Palomar 11	296.3100	-8.0072	1.50			6.1	15.73 ± 0.08	14.0 ± 0.5	10.6	-5.1 ± 0.0	a,b,c
Palomar 12	326.6618	-21.2526	1.31			7.0	16.34 ± 0.04	18.5 ± 0.3	11.9	-4.4 ± 0.0	a,b,c
Palomar 13	346.6852	12.7715	1.72			11.7	16.85 ± 0.04	23.5 ± 0.4	13.7	-3.1 ± 0.1	a,b,c
Palomar 14	242.7525	14.9578	1.29			27.6	19.33 ± 0.05	73.6 ± 1.6	14.0	-5.3 ± 0.0	a,b,c
Palomar 15	254.9626	-0.5390	1.56			20.0	18.22 ± 0.06	$44.1^{+1.2}_{-1.1}$	12.7	-5.6 ± 0.1	a,b,c
Palomar 2	71.5246	31.3815	0.63			4.8	17.09 ± 0.11	26.2 ± 1.3	8.8	-8.3 ± 0.1	a,b,c
Palomar 3	151.3816	0.0717	0.73			20.1	19.89 ± 0.07	$94.8^{+3.3}_{-3.2}$	14.4	-5.4 ± 0.0	a,b,c
Palomar 4	172.3183	28.9734	0.54			15.9	20.03 ± 0.06	$101.4^{+2.6}_{-2.5}$	14.2	-5.9 ± 0.0	a,b,c
Palomar 5	229.0192	-0.1210	3.20			20.4	16.71 ± 0.05	21.9 ± 0.5	11.8	-4.9 ± 0.0	a,b,c
Palomar 6	265.9258	-26.2250	1.11			2.3	14.24 ± 0.14	$7.0^{+0.5}_{-0.4}$	7.1	-7.1 ± 0.1	a,b,c
Palomar 8	280.3773	-19.8289	1.05			3.5	15.27 ± 0.12	$11.3^{+0.7}_{-0.6}$	9.1	-6.1 ± 0.1	a,b,c
Pyxis	136.9869	-37.2266	1.60			17.0	17.81 ± 0.04	36.5 ± 0.7	12.3	-5.5 ± 0.0	a,b,c
Rup 106	189.6675	-51.1503	1.26			7.6	16.58 ± 0.04	20.7 ± 0.4	10.4	-6.2 ± 0.0	a,b,c
Terzan 1	263.9467	-30.4818	0.89			1.5	13.77 ± 0.07	5.7 ± 0.2	6.3	-7.5 ± 0.1	a,b,c
Terzan 10	270.7408	-26.0669	1.16			3.4	15.05 ± 0.09	10.2 ± 0.4	8.0	-7.0 ± 0.1	a,b,c
Terzan 12	273.0658	-22.7419	1.18			1.8	13.57 ± 0.16	5.2 ± 0.4	7.5	-6.1 ± 0.1	a,b,c
Terzan 2	261.8879	-30.8023	1.06			2.4	14.45 ± 0.09	7.8 ± 0.3	7.3	-7.1 ± 0.1	a,b,c
Terzan 3	247.1625	-35.3398	2.11			4.7	14.42 ± 0.09	7.6 ± 0.3	8.3	-6.1 ± 0.2	a,b,c
Terzan 4	262.6625	-31.5955	1.48			3.3	14.40 ± 0.09	7.6 ± 0.3	7.1	-7.3 ± 0.3	a,b,c

Table 23 continued on next page

Table 23 (*continued*)

Name	RA	DEC	r_h	ϵ	θ	$r_{1/2}$	$(m - M)_0$	d	V	M_V	Ref
	deg	deg	arcmin			pc		kpc			
Terzan 5	267.0202	-24.7791	0.92			1.8	14.10 ± 0.05	$6.6^{+0.2}_{-0.1}$	5.0	-9.1 ± 0.1	a,b,c
Terzan 6	267.6932	-31.2754	0.50			1.1	14.31 ± 0.10	$7.3^{+0.4}_{-0.3}$	7.2	-7.1 ± 0.1	a,b,c
Terzan 7	289.4330	-34.6577	0.90			6.4	16.93 ± 0.04	24.3 ± 0.5	11.6	-5.3 ± 0.0	a,b,c
Terzan 8	295.4350	-33.9995	1.89			15.1	17.20 ± 0.03	27.5 ± 0.4	10.7	-6.5 ± 0.0	a,b,c
Terzan 9	270.4117	-26.8397	0.99			1.7	13.81 ± 0.13	$5.8^{+0.4}_{-0.3}$	7.2	-6.6 ± 0.1	a,b,c
Ton 2	264.0420	-38.5561	1.41			2.9	14.22 ± 0.10	7.0 ± 0.3	7.4	-6.8 ± 0.1	a,b,c
UKS 1	268.6133	-24.1453	0.66			3.0	15.96 ± 0.08	$15.6^{+0.6}_{-0.5}$	9.2	-6.8	a,b,c
Whiting 1	30.7375	-3.2528	1.06			9.4	17.43 ± 0.08	$30.6^{+1.2}_{-1.1}$	13.2	-4.2 ± 0.1	a,b,c

NOTE— Citations: (a) [Baumgardt & Hilker \(2018\)](#) (b) [Baumgardt et al. \(2020\)](#) (c) [Baumgardt & Vasiliev \(2021\)](#) (d) [Harris \(1996\)](#) (e) [Simpson \(2018\)](#) (f) [Kobulnicky et al. \(2005\)](#) (g) [Kurtev et al. \(2008\)](#) (h) [Strader & Kobulnicky \(2008\)](#) (i) [Pallanca et al. \(2023\)](#)

Table 24. Properties of Milky Way Harris catalog globular clusters

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
2MASS GC-01	10.4710	0.1001	-31.3 ± 0.5						a
2MASS GC-02	9.7821	-0.6152	-87.0 ± 7.0						b
AM 1	258.3613	-48.4707	118.0 ± 14.1		-1.70		0.291 ± 0.107	-0.177 ± 0.086	a,c
AM 4	320.2830	33.5098	151.2 ± 2.9		-1.30		-0.291 ± 0.445	-2.512 ± 0.344	a,c
ARP 2	8.5454	-20.7854	122.6 ± 0.3		-1.75		-2.331 ± 0.031	-1.475 ± 0.029	a,c
BH 176	328.4131	4.3366	90.3 ± 0.3		0.00		-3.989 ± 0.029	-3.057 ± 0.029	a,c
BH 261	3.3617	-5.2704	-61.0 ± 2.6	6.10 ± 1.90	$-1.07^{+0.11}_{-0.10}$	< 0.38	3.566 ± 0.043	-3.590 ± 0.037	d,c
Djorgovski 1	356.6750	-2.4836	-359.2 ± 1.6		-1.51		-4.693 ± 0.046	-8.468 ± 0.041	a,c
Djorgovski 2	2.7635	-2.5083	-149.8 ± 1.1		-1.05 ± 0.08		0.662 ± 0.042	-2.983 ± 0.037	a,c
E 3	292.2682	-19.0170	11.7 ± 0.3		-0.83		-2.727 ± 0.027	7.083 ± 0.027	a,c
ESO 452-SC11	351.9094	12.0976	16.4 ± 0.4		-1.50		-1.423 ± 0.031	-6.472 ± 0.030	a,c
ESO280 SC06	346.8985	-12.5710	92.5 ± 2.0		$-2.48^{+0.06}_{-0.11}$		-0.688 ± 0.039	-2.777 ± 0.033	e,c
Eridanus	218.1060	-41.3320	-23.1 ± 0.7		-1.43		0.510 ± 0.039	-0.301 ± 0.041	a,c
FSR 1735	339.1876	-1.8532	-69.8 ± 4.9				-4.439 ± 0.054	-1.534 ± 0.048	a,c
Glimpse 1	31.3020	-0.1022							
Glimpse 2	14.1277	-0.6452							
HP 1	357.4252	2.1150	39.8 ± 1.2		0.10		2.523 ± 0.039	-10.093 ± 0.037	a,c
IC 1257	16.5278	15.1450	-138.0 ± 2.0		-1.70		-1.007 ± 0.040	-1.492 ± 0.032	a,c
IC 1276	21.8321	5.6683	155.1 ± 0.7		-0.75		-2.553 ± 0.026	-4.568 ± 0.026	a,c
IC 4499	307.3537	-20.4734	38.4 ± 0.3		0.12		0.466 ± 0.025	-0.489 ± 0.025	a,c
Liller 1	354.8403	-0.1606	60.4 ± 2.4		-0.33		-5.403 ± 0.109	-7.431 ± 0.077	a,c
Lynga 7	328.7691	-2.7973	17.9 ± 0.8		-1.01		-3.851 ± 0.027	-7.050 ± 0.027	a,c
NGC 104	305.8947	-44.8893	-17.4 ± 0.2		-0.72		5.252 ± 0.021	-2.551 ± 0.021	a,c
NGC 1261	270.5387	-52.1244	71.3 ± 0.2		-1.27		1.596 ± 0.025	-2.064 ± 0.025	a,c
NGC 1851	244.5132	-35.0360	321.4 ± 1.6		-1.18		2.145 ± 0.024	-0.650 ± 0.024	a,c
NGC 1904	227.2299	-29.3501	205.8 ± 0.2		-1.60		2.469 ± 0.025	-1.594 ± 0.025	a,c
NGC 2298	245.6286	-16.0064	147.2 ± 0.6		-1.92		3.320 ± 0.025	-2.175 ± 0.026	a,c

Table 24 continued on next page

Table 24 (*continued*)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
NGC 2419	180.3696	25.2415	-21.1 ± 0.3		-2.15		0.007 ± 0.028	-0.523 ± 0.026	a,c
NGC 2808	282.1930	-11.2526	103.6 ± 0.3		-1.14		0.994 ± 0.024	0.273 ± 0.024	a,c
NGC 288	151.2852	-89.3804	-44.5 ± 0.1		-1.32		4.164 ± 0.024	-5.705 ± 0.024	a,c
NGC 3201	277.2288	8.6404	493.6 ± 0.2		-1.59		8.348 ± 0.022	-1.958 ± 0.022	a,c
NGC 362	301.5330	-46.2474	223.1 ± 0.3		-1.26		6.694 ± 0.025	-2.535 ± 0.024	a,c
NGC 4147	252.8483	77.1895	179.3 ± 0.3		-1.80		-1.707 ± 0.027	-2.090 ± 0.027	a,c
NGC 4372	300.9932	-9.8841	75.6 ± 0.3		-2.17		-6.409 ± 0.024	3.297 ± 0.024	a,c
NGC 4590	299.6258	36.0508	-93.1 ± 0.2		-2.23		-2.739 ± 0.024	1.779 ± 0.024	a,c
NGC 4833	303.6040	-8.0154	202.0 ± 0.4		-1.85		-8.377 ± 0.025	-0.963 ± 0.025	a,c
NGC 5024	332.9630	79.7642	-63.4 ± 0.2		-2.10		-0.133 ± 0.024	-1.331 ± 0.024	a,c
NGC 5053	335.6988	78.9461	42.8 ± 0.2		-2.27		-0.329 ± 0.025	-1.213 ± 0.025	a,c
NGC 5139	309.1020	14.9683	232.8 ± 0.2		-1.53		-3.250 ± 0.022	-6.746 ± 0.022	a,c
NGC 5272	42.2169	78.7069	-147.2 ± 0.3		-1.50		-0.152 ± 0.023	-2.670 ± 0.022	a,c
NGC 5286	311.6142	10.5678	62.4 ± 0.4		-1.69		0.198 ± 0.025	-0.153 ± 0.025	a,c
NGC 5466	42.1502	73.5922	106.8 ± 0.2		-1.98		-5.342 ± 0.025	-0.822 ± 0.024	a,c
NGC 5634	342.2097	49.2603	-16.1 ± 0.6		-1.88		-1.692 ± 0.027	-1.478 ± 0.026	a,c
NGC 5694	331.0556	30.3600	-139.6 ± 0.5		-1.98		-0.464 ± 0.029	-1.105 ± 0.029	a,c
NGC 5897	342.9460	30.2943	101.3 ± 0.2		-1.90		-5.422 ± 0.025	-3.393 ± 0.025	a,c
NGC 5897	332.5549	22.0705	-25.2 ± 0.5		-1.91		-1.189 ± 0.026	-2.234 ± 0.026	a,c
NGC 5904	3.8587	46.7964	53.5 ± 0.2		-1.29		4.086 ± 0.023	-9.870 ± 0.023	a,c
NGC 5927	326.6041	4.8598	-104.1 ± 0.3		-0.49		-5.056 ± 0.025	-3.217 ± 0.025	a,c
NGC 5946	327.5828	4.1909	137.6 ± 0.9		-1.29		-5.331 ± 0.028	-1.657 ± 0.027	a,c
NGC 5986	337.0222	13.2684	101.2 ± 0.4		-1.59		-4.192 ± 0.026	-4.568 ± 0.026	a,c
NGC 6093	352.6732	19.4630	10.9 ± 0.4		-1.75		-2.934 ± 0.027	-5.578 ± 0.026	a,c
NGC 6101	317.7461	-15.8248	366.3 ± 0.3		-1.98		1.756 ± 0.024	-0.258 ± 0.025	a,c
NGC 6121	350.9729	15.9722	71.2 ± 0.1		-1.16		-12.514 ± 0.023	-19.022 ± 0.023	a,c
NGC 6139	342.3659	6.9388	24.4 ± 0.9		-1.65		-6.081 ± 0.027	-2.711 ± 0.026	a,c
NGC 6144	351.9289	15.7006	194.8 ± 0.6		-1.76		-1.744 ± 0.026	-2.607 ± 0.026	a,c
NGC 6171	3.3733	23.0106	-34.7 ± 0.2		-1.02		-1.939 ± 0.025	-5.979 ± 0.025	a,c
NGC 6205	59.0074	40.9129	-244.9 ± 0.3		-1.53		-3.149 ± 0.023	-2.574 ± 0.023	a,c

Table 24 *continued on next page*

Table 24 (*continued*)

Name	l deg	b deg	v_{los} km s ⁻¹	σ_{los} km s ⁻¹	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha*}$ mas yr ⁻¹	μ_{δ} mas yr ⁻¹	Ref
NGC 6218	15.7152	26.3133	-41.7 ± 0.1		-1.37		-0.191 ± 0.024	-6.802 ± 0.024	a,c
NGC 6229	73.6386	40.3063	-137.9 ± 0.7		-1.47		-1.171 ± 0.026	-0.467 ± 0.027	a,c
NGC 6235	358.9178	13.5182	126.7 ± 0.3		-1.28		-3.931 ± 0.027	-7.587 ± 0.027	a,c
NGC 6254	15.1371	23.0760	74.2 ± 0.2		-1.56		-4.758 ± 0.024	-6.597 ± 0.024	a,c
NGC 6256	347.7920	3.3067	-99.8 ± 0.7		-1.02		-3.715 ± 0.031	-1.637 ± 0.030	a,c
NGC 6266	353.5746	7.3178	-74.0 ± 0.7		-1.18		-4.978 ± 0.026	-2.947 ± 0.026	a,c
NGC 6273	356.8689	9.3823	145.5 ± 0.6		-1.74		-3.249 ± 0.026	1.660 ± 0.025	a,c
NGC 6284	358.3472	9.9390	28.6 ± 0.7		-1.26		-3.200 ± 0.029	-2.002 ± 0.028	a,c
NGC 6287	0.1316	11.0233	-294.7 ± 1.6		-2.10		-5.010 ± 0.029	-1.883 ± 0.028	a,c
NGC 6293	357.6202	7.8343	-143.7 ± 0.4		-1.99		0.870 ± 0.028	-4.326 ± 0.028	a,c
NGC 6304	355.8256	5.3755	-108.6 ± 0.4		-0.45		-4.070 ± 0.029	-1.088 ± 0.028	a,c
NGC 6316	357.1754	5.7645	99.7 ± 0.8		-0.45		-4.969 ± 0.031	-4.592 ± 0.030	a,c
NGC 6325	0.9715	8.0029	29.5 ± 0.6		-1.25		-8.289 ± 0.030	-9.000 ± 0.029	a,c
NGC 6333	5.5444	10.7051	310.8 ± 2.1		-1.77		-2.180 ± 0.026	-3.222 ± 0.026	a,c
NGC 6341	68.3384	34.8589	-120.5 ± 0.3		-2.31		-4.935 ± 0.024	-0.625 ± 0.024	a,c
NGC 6342	4.8982	9.7253	115.8 ± 0.9		-0.55		-2.903 ± 0.027	-7.116 ± 0.026	a,c
NGC 6352	341.4214	-7.1662	-125.6 ± 1.0		-0.64		-2.158 ± 0.025	-4.447 ± 0.025	a,c
NGC 6355	359.5851	5.4287	-195.8 ± 0.6		-1.37		-4.738 ± 0.031	-0.572 ± 0.030	a,c
NGC 6356	6.7237	10.2197	48.2 ± 1.8		-0.40		-3.750 ± 0.026	-3.392 ± 0.026	a,c
NGC 6362	325.5545	-17.5698	-14.6 ± 0.2		-0.99		-5.506 ± 0.024	-4.763 ± 0.024	a,c
NGC 6366	18.4086	16.0356	-120.7 ± 0.2		-0.59		-0.332 ± 0.025	-5.160 ± 0.024	a,c
NGC 6380	350.1820	-3.4219	-1.5 ± 0.7		-0.75		-2.183 ± 0.031	-3.233 ± 0.030	a,c
NGC 6388	345.5565	-6.7377	83.1 ± 0.5		-0.55		-1.316 ± 0.026	-2.709 ± 0.026	a,c
NGC 6397	338.1650	-11.9595	18.5 ± 0.1		-2.02		3.260 ± 0.023	-17.664 ± 0.022	a,c
NGC 6401	3.4504	3.9801	-105.4 ± 2.5		-1.00 ± 0.12		-2.748 ± 0.035	1.444 ± 0.034	a,c
NGC 6402	21.3239	14.8044	-60.7 ± 0.5		-1.28		-3.590 ± 0.025	-5.059 ± 0.025	a,c
NGC 6426	28.0870	16.2336	-210.5 ± 0.5		-2.15		-1.828 ± 0.026	-2.999 ± 0.026	a,c
NGC 6440	7.7287	3.8007	-69.4 ± 0.9		-0.36		-1.187 ± 0.036	-4.020 ± 0.035	a,c
NGC 6441	353.5322	-5.0058	18.5 ± 0.6		-0.46		-2.551 ± 0.028	-5.348 ± 0.028	a,c
NGC 6453	355.7180	-3.8722	-99.2 ± 1.2		-1.50		0.203 ± 0.036	-5.934 ± 0.037	a,c

Table 24 *continued on next page*

Table 24 (*continued*)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha\star}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
NGC 6496	348.0269	-10.0138	-134.7 ± 0.3		-0.46		-3.060 ± 0.027	-9.271 ± 0.026	a,c
NGC 6517	19.2252	6.7625	-35.1 ± 1.6		-1.23		-1.551 ± 0.029	-4.470 ± 0.028	a,c
NGC 6522	1.0246	-3.9255	-15.2 ± 0.5		-1.34		-6.827 ± 0.059	-2.588 ± 0.050	a,c
NGC 6528	1.1386	-4.1741	211.9 ± 0.4		-0.11		-2.157 ± 0.043	-5.649 ± 0.039	a,c
NGC 6535	27.1755	10.4358	-214.8 ± 0.5		-1.79		-4.214 ± 0.027	-2.939 ± 0.026	a,c
NGC 6539	20.7951	6.7757	35.2 ± 0.5		-0.63		-6.896 ± 0.026	-3.537 ± 0.026	a,c
NGC 6540	3.2850	-3.3129	-16.5 ± 0.8		-1.04 ± 0.15		-3.702 ± 0.032	-2.791 ± 0.032	a,c
NGC 6541	349.2861	-11.1882	-164.0 ± 0.5		-1.81		0.287 ± 0.025	-8.847 ± 0.025	a,c
NGC 6544	5.8365	-2.2024	-38.5 ± 0.7		-1.40		-2.304 ± 0.031	-18.604 ± 0.030	a,c
NGC 6553	5.2533	-3.0292	-0.3 ± 0.3		-0.18		0.344 ± 0.030	-0.454 ± 0.029	a,c
NGC 6558	0.1990	-6.0234	-195.1 ± 0.7		-1.32		-1.720 ± 0.036	-4.144 ± 0.034	a,c
NGC 6569	0.4809	-6.6809	-48.5 ± 0.3		-0.84 ± 0.01		-4.125 ± 0.028	-7.354 ± 0.028	f,c
NGC 6584	342.1435	-16.4139	260.6 ± 1.6		-1.50		-0.090 ± 0.026	-7.202 ± 0.025	a,c
NGC 6624	2.7883	-7.9135	54.8 ± 0.4		-0.44		0.124 ± 0.029	-6.936 ± 0.029	a,c
NGC 6626	7.7982	-5.5807	11.1 ± 0.6		-1.32		-0.278 ± 0.028	-8.922 ± 0.028	a,c
NGC 6637	1.7229	-10.2694	47.5 ± 1.0		-0.64		-5.034 ± 0.028	-5.832 ± 0.028	a,c
NGC 6638	7.8965	-7.1530	8.6 ± 2.0		-0.95		-2.518 ± 0.029	-4.076 ± 0.029	a,c
NGC 6642	9.8145	-6.4393	-60.6 ± 1.4		-1.11 ± 0.25		-0.173 ± 0.030	-3.892 ± 0.030	a,c
NGC 6652	1.5339	-11.3768	-95.4 ± 0.9		-0.81		-5.484 ± 0.027	-4.274 ± 0.027	a,c
NGC 6656	9.8923	-7.5517	-148.7 ± 0.8	7.80	-1.70		9.851 ± 0.023	-5.617 ± 0.023	a,c
NGC 6681	2.8529	-12.5099	216.6 ± 0.8	5.20	-1.62		1.431 ± 0.027	-4.744 ± 0.026	a,c
NGC 6712	25.3541	-4.3180	-107.5 ± 0.3	4.30	-1.02		3.363 ± 0.027	-4.436 ± 0.027	a,c
NGC 6715	5.6070	-14.0871	143.1 ± 0.4	10.50	-1.49		-2.679 ± 0.025	-1.387 ± 0.025	a,c
NGC 6717	12.8760	-10.9002	30.2 ± 0.9		-1.26		-3.125 ± 0.027	-5.008 ± 0.027	a,c
NGC 6723	0.0693	-17.2989	-94.4 ± 0.3		-1.10		1.028 ± 0.025	-2.418 ± 0.025	a,c
NGC 6749	36.2000	-2.2054	-58.4 ± 1.0		-1.60		-2.829 ± 0.028	-6.006 ± 0.027	a,c
NGC 6752	336.4929	-25.6283	-26.0 ± 0.1	4.90	-1.54		-3.161 ± 0.022	-4.027 ± 0.022	a,c
NGC 6760	36.1078	-3.9243	-2.4 ± 1.3		-0.40		-1.107 ± 0.026	-3.615 ± 0.026	a,c
NGC 6779	62.6594	8.3364	-137.0 ± 0.5	4.00	-1.98		-2.018 ± 0.025	1.618 ± 0.025	a,c
NGC 6809	8.7926	-23.2716	174.7 ± 0.2	4.00	-1.94		-3.432 ± 0.024	-9.311 ± 0.024	a,c

Table 24 *continued on next page*

Table 24 (continued)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
NGC 6838	56.7459	-4.5644	-22.7 ± 0.2	2.30	-0.78		-3.416 ± 0.025	-2.656 ± 0.024	a,c
NGC 6864	20.3041	-25.7472	-189.1 ± 1.1	10.30	-1.29		-0.598 ± 0.026	-2.810 ± 0.026	a,c
NGC 6934	52.1033	-18.8930	-406.2 ± 0.7	5.10	-1.47		-2.655 ± 0.026	-4.689 ± 0.026	a,c
NGC 6981	35.1623	-32.6831	-331.4 ± 1.5		-1.42		-1.274 ± 0.026	-3.361 ± 0.026	a,c
NGC 7006	63.7696	-19.4072	-383.5 ± 0.7		-1.52		-0.128 ± 0.027	-0.633 ± 0.027	a,c
NGC 7078	65.0126	-27.3126	-106.8 ± 0.3	13.50	-2.37		-0.659 ± 0.024	-3.803 ± 0.024	a,c
NGC 7089	53.3709	-35.7698	-3.8 ± 0.3	8.20	-1.65		3.435 ± 0.025	-2.159 ± 0.024	a,c
NGC 7099	27.1791	-46.8355	-185.2 ± 0.2	5.50	-2.27		-0.737 ± 0.025	-7.299 ± 0.024	a,c
NGC 7492	53.3863	-63.4776	-176.7 ± 0.3	1.20	-1.78		0.756 ± 0.028	-2.320 ± 0.028	a,c
Palomar 1	130.0648	19.0281	-75.7 ± 0.3		-0.65		-0.252 ± 0.034	0.007 ± 0.037	a,c
Palomar 10	52.4364	2.7249	-31.7 ± 0.2		-0.10		-4.322 ± 0.029	-7.173 ± 0.029	a,c
Palomar 11	31.8051	-15.5759	-67.6 ± 0.8		-0.40		-1.766 ± 0.030	-4.971 ± 0.028	a,c
Palomar 12	30.5101	-47.6816	27.9 ± 0.3		-0.85		-3.220 ± 0.029	-3.333 ± 0.028	a,c
Palomar 13	87.1033	-42.7002	25.3 ± 0.2	0.90	-1.88		1.748 ± 0.049	0.104 ± 0.047	a,c
Palomar 14	28.7456	42.1915	72.3 ± 0.1	0.40	-1.62		-0.463 ± 0.038	-0.413 ± 0.038	a,c
Palomar 15	18.8486	24.3369	72.3 ± 1.7		-2.07		-0.592 ± 0.037	-0.901 ± 0.034	a,c
Palomar 2	170.5302	-9.0722	-136.0 ± 1.6		-1.42		1.045 ± 0.034	-1.522 ± 0.031	a,c
Palomar 3	240.1404	41.8636	94.0 ± 0.8		-1.63		0.086 ± 0.060	-0.148 ± 0.071	a,c
Palomar 4	202.3114	71.8012	72.4 ± 0.2		-1.41		-0.188 ± 0.042	-0.476 ± 0.041	a,c
Palomar 5	0.8389	45.8559	-58.6 ± 0.1	1.10	-1.41		-2.730 ± 0.028	-2.654 ± 0.027	a,c
Palomar 6	2.0900	1.7788	174.3 ± 1.6		-1.10		-9.222 ± 0.038	-5.347 ± 0.036	g,c
Palomar 8	14.1031	-6.8007	-31.5 ± 0.2		-0.37		-1.987 ± 0.027	-5.694 ± 0.027	a,c
Pyxis	261.3212	6.9915	40.5 ± 0.2		-1.20		1.030 ± 0.032	0.138 ± 0.035	a,c
Rup 106	300.8880	11.6708	-38.4 ± 0.3		-1.68		-1.254 ± 0.026	0.401 ± 0.026	a,c
Terzan 1	357.5576	0.9911	56.8 ± 1.6		-0.71 ± 0.15		-2.806 ± 0.055	-4.861 ± 0.055	a,c
Terzan 10	4.4212	-1.8643	211.4 ± 2.3		-1.64 ± 0.09		2.566 ± 0.039	-6.438 ± 0.036	a,c
Terzan 12	8.3581	-2.1008	95.6 ± 1.2		-0.48 ± 0.16		-6.222 ± 0.037	-3.052 ± 0.034	a,c
Terzan 2	356.3194	2.2981	134.6 ± 1.0		-0.54 ± 0.10		-2.170 ± 0.041	-6.263 ± 0.038	a,c
Terzan 3	345.0841	9.1990	-135.8 ± 0.6		-0.74		-5.577 ± 0.027	-1.760 ± 0.026	a,c
Terzan 4	356.0240	1.3077	-49.0 ± 1.6		-1.41		-5.462 ± 0.060	-3.711 ± 0.048	a,c

Table 24 continued on next page

Table 24 (*continued*)

Name	l	b	v_{los}	σ_{los}	[Fe/H]	$\sigma_{[\text{Fe}/\text{H}]}$	$\mu_{\alpha*}$	μ_{δ}	Ref
	deg	deg	km s ⁻¹	km s ⁻¹			mas yr ⁻¹	mas yr ⁻¹	
Terzan 5	3.8395	1.6868	-82.6 ± 0.7		-0.34		-1.989 ± 0.068	-5.243 ± 0.066	a,c
Terzan 6	358.5713	-2.1618	136.4 ± 1.5		-0.56		-4.979 ± 0.048	-7.431 ± 0.039	a,c
Terzan 7	3.3868	-20.0666	159.8 ± 0.1		-0.32		-3.002 ± 0.029	-1.651 ± 0.029	a,c
Terzan 8	5.7592	-24.5588	148.4 ± 0.2		-2.16		-2.496 ± 0.027	-1.581 ± 0.026	a,c
Terzan 9	3.6031	-1.9888	68.5 ± 0.6		-1.15 ± 0.12		-2.121 ± 0.052	-7.763 ± 0.049	a,c
Ton 2	350.7934	-3.4236	-184.7 ± 1.1		-0.57 ± 0.13		-5.904 ± 0.031	-0.755 ± 0.029	a,c
UKS 1	5.1254	0.7640	59.4 ± 2.6		-0.64		-2.040 ± 0.095	-2.754 ± 0.063	a,c
Whiting 1	161.6176	-60.6359	-130.4 ± 1.8				-0.228 ± 0.065	-2.046 ± 0.056	a,c

NOTE— Citations: (a) [Baumgardt & Hilker \(2018\)](#) (b) [Kunder et al. \(2021\)](#) (c) [Vasiliev & Baumgardt \(2021\)](#) (d) [Kunder et al. \(2023\)](#) (e) [Simpson \(2018\)](#) (f) [Pallanca et al. \(2023\)](#) (g) [Souza et al. \(2021\)](#)

REFERENCES

- Abell, G. O. 1955, *PASP*, 67, 258, doi: [10.1086/126815](#)
- Adams, E. A. K., & Oosterloo, T. A. 2018, *A&A*, 612, A26, doi: [10.1051/0004-6361/201732017](#)
- Armandroff, T. E., Davies, J. E., & Jacoby, G. H. 1998, *AJ*, 116, 2287, doi: [10.1086/300619](#)
- Arp, H., & van den Bergh, S. 1960, *PASP*, 72, 48, doi: [10.1086/127473](#)
- Balbinot, E., Santiago, B. X., da Costa, L., et al. 2013, *ApJ*, 767, 101, doi: [10.1088/0004-637X/767/2/101](#)
- Barb , R. H., Minniti, D., Geisler, D., et al. 2019, *ApJL*, 870, L24, doi: [10.3847/2041-8213/aaf811](#)
- Barnard, E. E. 1884, *Astronomische Nachrichten*, 110, 125, doi: [10.1002/asna.18841100805](#)
- Barnes, D. G., & de Blok, W. J. G. 2001, *AJ*, 122, 825, doi: [10.1086/321170](#)
- Battaglia, G., Rejkuba, M., Tolstoy, E., Irwin, M. J., & Beccari, G. 2012, *MNRAS*, 424, 1113, doi: [10.1111/j.1365-2966.2012.21286.x](#)
- Battaglia, G., Taibi, S., Thomas, G. F., & Fritz, T. K. 2022, *A&A*, 657, A54, doi: [10.1051/0004-6361/202141528](#)
- Baumgardt, H., & Hilker, M. 2018, *MNRAS*, 478, 1520, doi: [10.1093/mnras/sty1057](#)
- Baumgardt, H., Sollima, A., & Hilker, M. 2020, *PASA*, 37, e46, doi: [10.1017/pasa.2020.38](#)
- Baumgardt, H., & Vasiliev, E. 2021, *MNRAS*, 505, 5957, doi: [10.1093/mnras/stab1474](#)
- Beasley, M. A., Leaman, R., Gallart, C., et al. 2019, *MNRAS*, 487, 1986, doi: [10.1093/mnras/stz1349](#)
- Bechtol, K., Drlica-Wagner, A., Balbinot, E., et al. 2015, *ApJ*, 807, 50, doi: [10.1088/0004-637X/807/1/50](#)
- Begum, A., Chengalur, J. N., Karachentsev, I. D., & Sharina, M. E. 2005, *MNRAS*, 359, L53, doi: [10.1111/j.1745-3933.2005.00040.x](#)
- Bell, E. F., Slater, C. T., & Martin, N. F. 2011, *ApJL*, 742, L15, doi: [10.1088/2041-8205/742/1/L15](#)
- Bellazzini, M., Gennari, N., & Ferraro, F. R. 2005, *MNRAS*, 360, 185, doi: [10.1111/j.1365-2966.2005.09027.x](#)
- Belokurov, V., Irwin, M. J., Koposov, S. E., et al. 2014, *MNRAS*, 441, 2124, doi: [10.1093/mnras/stu626](#)
- Belokurov, V., Zucker, D. B., Evans, N. W., et al. 2006, *ApJL*, 647, L111, doi: [10.1086/507324](#)
- . 2007, *ApJ*, 654, 897, doi: [10.1086/509718](#)
- Belokurov, V., Walker, M. G., Evans, N. W., et al. 2008, *ApJL*, 686, L83, doi: [10.1086/592962](#)
- . 2009, *MNRAS*, 397, 1748, doi: [10.1111/j.1365-2966.2009.15106.x](#)
- . 2010, *ApJL*, 712, L103, doi: [10.1088/2041-8205/712/1/L103](#)
- Bernstein-Cooper, E. Z., Cannon, J. M., Elson, E. C., et al. 2014, *AJ*, 148, 35, doi: [10.1088/0004-6256/148/2/35](#)
- Bica, E., Pavani, D. B., Bonatto, C. J., & Lima, E. F. 2019, *AJ*, 157, 12, doi: [10.3847/1538-3881/aaef8d](#)
- Boettcher, E., Willman, B., Fadelty, R., et al. 2013, *AJ*, 146, 94, doi: [10.1088/0004-6256/146/4/94](#)
- Borisova, J., Chen , A. N., Ram rez Alegria, S., et al. 2014, *A&A*, 569, A24, doi: [10.1051/0004-6361/201322483](#)
- Bouchard, A., Jerjen, H., Da Costa, G. S., & Ott, J. 2005, *AJ*, 130, 2058, doi: [10.1086/496977](#)
- Bruce, J., Li, T. S., Pace, A. B., et al. 2023, *ApJ*, 950, 167, doi: [10.3847/1538-4357/acc943](#)
- Brunthaler, A., Reid, M. J., Falcke, H., Henkel, C., & Menten, K. M. 2007, *A&A*, 462, 101, doi: [10.1051/0004-6361:20066430](#)
- Caldwell, N., Strader, J., Sand, D. J., Willman, B., & Seth, A. C. 2017, *PASA*, 34, e039, doi: [10.1017/pasa.2017.35](#)
- Cannon, R. D., Hawarden, T. G., & Tritton, S. B. 1977, *MNRAS*, 180, 81P, doi: [10.1093/mnras/180.1.81P](#)
- Cantat-Gaudin, T., Jordi, C., Vallenari, A., et al. 2018, *A&A*, 618, A93, doi: [10.1051/0004-6361/201833476](#)
- Canterna, R., & Flower, P. J. 1977, *ApJL*, 212, L57, doi: [10.1086/182374](#)
- Cantu, S. A., Pace, A. B., Marshall, J., et al. 2021, *ApJ*, 916, 81, doi: [10.3847/1538-4357/ac0443](#)
- Carlin, J. L., Grillmair, C. J., Mu oz, R. R., Nidever, D. L., & Majewski, S. R. 2009, *ApJL*, 702, L9, doi: [10.1088/0004-637X/702/1/L9](#)
- Carlin, J. L., & Sand, D. J. 2018, *ApJ*, 865, 7, doi: [10.3847/1538-4357/aadec1](#)
- Carlin, J. L., Sand, D. J., Mu oz, R. R., et al. 2017, *AJ*, 154, 267, doi: [10.3847/1538-3881/aa94d0](#)
- Carlin, J. L., Garling, C. T., Peter, A. H. G., et al. 2019, *ApJ*, 886, 109, doi: [10.3847/1538-4357/ab4c32](#)
- Cerny, W., Pace, A. B., Drlica-Wagner, A., et al. 2021a, *ApJL*, 920, L44, doi: [10.3847/2041-8213/ac2dba](#)
- . 2021b, *ApJ*, 910, 18, doi: [10.3847/1538-4357/abefaf](#)
- Cerny, W., Mart nez-V zquez, C. E., Drlica-Wagner, A., et al. 2023a, *ApJ*, 953, 1, doi: [10.3847/1538-4357/acdd78](#)
- Cerny, W., Simon, J. D., Li, T. S., et al. 2023b, *ApJ*, 942, 111, doi: [10.3847/1538-4357/acalc3](#)
- Cerny, W., Drlica-Wagner, A., Li, T. S., et al. 2023c, *ApJL*, 953, L21, doi: [10.3847/2041-8213/aced84](#)
- Cesarsky, D. A., Laustsen, S., Lequeux, J., Schuster, H. E., & West, R. M. 1977, *A&A*, 61, L31
- Charles, E. J. E., Collins, M. L. M., Rich, R. M., et al. 2023, *MNRAS*, 521, 3527, doi: [10.1093/mnras/stad752](#)
- Chiti, A., Simon, J. D., Prebel, A., et al. 2022, *ApJ*, 939, 41, doi: [10.3847/1538-4357/ac96ed](#)

- Chiti, A., Frebel, A., Ji, A. P., et al. 2023, *AJ*, 165, 55, doi: [10.3847/1538-3881/aca416](https://doi.org/10.3847/1538-3881/aca416)
- Cole, A. A., Weisz, D. R., Skillman, E. D., et al. 2017, *ApJ*, 837, 54, doi: [10.3847/1538-4357/aa5df6](https://doi.org/10.3847/1538-4357/aa5df6)
- Collins, M. L. M., Charles, E. J. E., Martínez-Delgado, D., et al. 2022, *MNRAS*, 515, L72, doi: [10.1093/mnras/stac063](https://doi.org/10.1093/mnras/stac063)
- Collins, M. L. M., Tollert, E. J., Rich, R. M., et al. 2020, *MNRAS*, 491, 3496, doi: [10.1093/mnras/stz3252](https://doi.org/10.1093/mnras/stz3252)
- Collins, M. L. M., Chapman, S. C., Rich, R. M., et al. 2013, *ApJ*, 768, 172, doi: [10.1088/0004-637X/768/2/172](https://doi.org/10.1088/0004-637X/768/2/172)
- Collins, M. L. M., Read, J. I., Bata, R. A., et al. 2021, *MNRAS*, 505, 5686, doi: [10.1093/mnras/stab1624](https://doi.org/10.1093/mnras/stab1624)
- Collins, M. L. M., Karim, N., Martínez-Delgado, D., et al. 2023, arXiv e-prints, arXiv:2305.13966, doi: [10.48550/arXiv.2305.13966](https://doi.org/10.48550/arXiv.2305.13966)
- Conn, B. C., Jerjen, H., Kim, D., & Schirmer, M. 2018, *ApJ*, 852, 68, doi: [10.3847/1538-4357/aa9eda](https://doi.org/10.3847/1538-4357/aa9eda)
- Correnti, M., Bellazzini, M., & Ferraro, F. R. 2009, *MNRAS*, 397, L26, doi: [10.1111/j.1745-3933.2009.00677.x](https://doi.org/10.1111/j.1745-3933.2009.00677.x)
- Corwin, H. G., de Vaucouleurs, A., & de Vaucouleurs, G. 1985, Southern galaxy catalogue. A catalogue of 5481 galaxies south of declination -17 grad. found on 1.2m UK Schmidt IIIa J plates
- Crnojević, D., Sand, D. J., Zaritsky, D., et al. 2016, *ApJL*, 824, L14, doi: [10.3847/2041-8205/824/1/L14](https://doi.org/10.3847/2041-8205/824/1/L14)
- Cusano, F., Garofalo, A., Clementini, G., et al. 2016, *ApJ*, 829, 26, doi: [10.3847/0004-637X/829/1/26](https://doi.org/10.3847/0004-637X/829/1/26)
- Da Costa, G. S. 1995, *PASP*, 107, 937, doi: [10.1086/133642](https://doi.org/10.1086/133642)
- Da Costa, G. S., Grebel, E. K., Jerjen, H., Rejkuba, M., & Sharina, M. E. 2009, *AJ*, 137, 4361, doi: [10.1088/0004-6256/137/5/4361](https://doi.org/10.1088/0004-6256/137/5/4361)
- Dalcanton, J. J., Williams, B. F., Seth, A. C., et al. 2009, *ApJS*, 183, 67, doi: [10.1088/0067-0049/183/1/67](https://doi.org/10.1088/0067-0049/183/1/67)
- Dall'Ora, M., Clementini, G., Kinemuchi, K., et al. 2006, *ApJL*, 653, L109, doi: [10.1086/510665](https://doi.org/10.1086/510665)
- Dall'Ora, M., Kinemuchi, K., Ripepi, V., et al. 2012, *ApJ*, 752, 42, doi: [10.1088/0004-637X/752/1/42](https://doi.org/10.1088/0004-637X/752/1/42)
- Dias, B., Palma, T., Minniti, D., et al. 2022, *A&A*, 657, A67, doi: [10.1051/0004-6361/202141580](https://doi.org/10.1051/0004-6361/202141580)
- Djorgovski, S. 1987, *ApJL*, 317, L13, doi: [10.1086/184903](https://doi.org/10.1086/184903)
- Drica-Wagner, A., Bechtol, K., Rykoff, E. S., et al. 2015, *ApJ*, 813, 109, doi: [10.1088/0004-637X/813/2/109](https://doi.org/10.1088/0004-637X/813/2/109)
- Drica-Wagner, A., Bechtol, K., Allam, S., et al. 2016, *ApJL*, 833, L5, doi: [10.3847/2041-8205/833/1/L5](https://doi.org/10.3847/2041-8205/833/1/L5)
- Drica-Wagner, A., Bechtol, K., Mau, S., et al. 2020, *ApJ*, 893, 47, doi: [10.3847/1538-4357/ab7eb9](https://doi.org/10.3847/1538-4357/ab7eb9)
- Dunlop, J. 1828, Philosophical Transactions of the Royal Society of London Series I, 118, 113
- Eadie, G. M., Harris, W. E., & Springfield, A. 2022, *ApJ*, 926, 162, doi: [10.3847/1538-4357/ac33b0](https://doi.org/10.3847/1538-4357/ac33b0)
- Fadely, R., Willman, B., Geha, M., et al. 2011, *AJ*, 142, 88, doi: [10.1088/0004-6256/142/3/88](https://doi.org/10.1088/0004-6256/142/3/88)
- Fahion, K., Miller, O., Rejkuba, M., et al. 2020, *A&A*, 634, A53, doi: [10.1051/0004-6361/201937120](https://doi.org/10.1051/0004-6361/201937120)
- Fritz, T. K., Carrera, R., Battaglia, G., & Taibi, S. 2019, *A&A*, 623, A129, doi: [10.1051/0004-6361/201833458](https://doi.org/10.1051/0004-6361/201833458)
- Froebich, D., Scholz, A., & Raftery, C. L. 2007, *MNRAS*, 374, 399, doi: [10.1111/j.1365-2966.2006.11148.x](https://doi.org/10.1111/j.1365-2966.2006.11148.x)
- Gaia Collaboration, Helmi, A., van Leeuwen, F., et al. 2018, *A&A*, 616, A12, doi: [10.1051/0004-6361/201832698](https://doi.org/10.1051/0004-6361/201832698)
- Garofalo, A., Cusano, F., Clementini, G., et al. 2013, *ApJ*, 767, 62, doi: [10.1088/0004-637X/767/1/62](https://doi.org/10.1088/0004-637X/767/1/62)
- Garro, E. R., Minniti, D., Gómez, M., et al. 2021, *A&A*, 649, A86, doi: [10.1051/0004-6361/202039255](https://doi.org/10.1051/0004-6361/202039255)
- . 2022a, *A&A*, 662, A95, doi: [10.1051/0004-6361/202243342](https://doi.org/10.1051/0004-6361/202243342)
- . 2020, *A&A*, 642, L19, doi: [10.1051/0004-6361/202039233](https://doi.org/10.1051/0004-6361/202039233)
- Garro, E. R., Minniti, D., Alessi, B., et al. 2022b, *A&A*, 659, A155, doi: [10.1051/0004-6361/202142248](https://doi.org/10.1051/0004-6361/202142248)
- Garro, E. R., Fernández-Trincado, J. G., Minniti, D., et al. 2023, *A&A*, 669, A136, doi: [10.1051/0004-6361/202245119](https://doi.org/10.1051/0004-6361/202245119)
- Gatto, M., Ripepi, V., Bellazzini, M., et al. 2021, Research Notes of the American Astronomical Society, 5, 159, doi: [10.3847/2515-5172/ac14bf](https://doi.org/10.3847/2515-5172/ac14bf)
- . 2022, *ApJL*, 929, L21, doi: [10.3847/2041-8213/ac6421](https://doi.org/10.3847/2041-8213/ac6421)
- Gatto, M., Bellazzini, M., Tortora, C., et al. 2023, arXiv e-prints, arXiv:2311.06037, <https://arxiv.org/abs/2311.06037>
- Georgiev, I. Y., Puzia, T. H., Hilker, M., & Goudrooij, P. 2009, *MNRAS*, 392, 879, doi: [10.1111/j.1365-2966.2008.14104.x](https://doi.org/10.1111/j.1365-2966.2008.14104.x)
- Gionanelli, R., Haynes, M. P., Adams, E. A. K., et al. 2013, *AJ*, 146, 15, doi: [10.1088/0004-6256/146/1/15](https://doi.org/10.1088/0004-6256/146/1/15)
- Gran, F., Zoccali, M., Contreras Ramos, R., et al. 2019, *A&A*, 628, A45, doi: [10.1051/0004-6361/201834986](https://doi.org/10.1051/0004-6361/201834986)
- Gran, F., Zoccali, M., Saviane, I., et al. 2022, *MNRAS*, 509, 4962, doi: [10.1093/mnras/stab2463](https://doi.org/10.1093/mnras/stab2463)
- Gran, F., Kordopatis, G., Zoccali, M., et al. 2023, arXiv e-prints, arXiv:2310.09868, <https://arxiv.org/abs/2310.09868>
- Grebel, E. K., Dolphin, A. E., & Guhathakurta, P. 2000, in Astronomische Gesellschaft Meeting Abstracts, Vol. 17, Astronomische Gesellschaft Meeting Abstracts
- Greco, C., Clementini, G., Catejan, M., et al. 2007, *ApJ*, 670, 332, doi: [10.1086/522102](https://doi.org/10.1086/522102)

- Greco, C., Dall’Ora, M., Clementini, G., et al. 2008, *ApJL*, 675, L73, doi: [10.1086/533385](https://doi.org/10.1086/533385)
- Grillmair, C. J. 2009, *ApJ*, 693, 1118, doi: [10.1088/0004-637X/693/2/1118](https://doi.org/10.1088/0004-637X/693/2/1118)
- Grocholski, A. J., Cole, A. A., Sarajedini, A., Geisler, D., & Smith, V. V. 2006, *AJ*, 132, 1630, doi: [10.1086/507303](https://doi.org/10.1086/507303)
- Hargis, J. R., Albers, S., Crnojević, D., et al. 2020, *ApJ*, 888, 31, doi: [10.3847/1538-4357/ab58d2](https://doi.org/10.3847/1538-4357/ab58d2)
- Harrington, R. G., & Wilson, A. G. 1950, *PASP*, 62, 118, doi: [10.1086/126249](https://doi.org/10.1086/126249)
- Harris, W. E. 1996, *AJ*, 112, 1487, doi: [10.1086/118116](https://doi.org/10.1086/118116)
- Heiger, M. E., Li, T. S., Pace, A. B., et al. 2023, *arXiv e-prints*, [arXiv:2308.08602](https://arxiv.org/abs/2308.08602), doi: [10.48550/arXiv.2308.08602](https://doi.org/10.48550/arXiv.2308.08602)
- Henning, P. A., Staveley-Smith, L., Ekers, R. D., et al. 2000, *AJ*, 119, 2686, doi: [10.1086/301374](https://doi.org/10.1086/301374)
- Herschel, J. F. W. 1833, *Philosophical Transactions of the Royal Society of London Series I*, 123, 359
- Herschel, John Frederick William, S. 1847, Results of astronomical observations made during the years 1834, 5, 6, 7, 8, at the Cape of Good Hope; being the completion of a telescopic survey of the whole surface of the visible heavens, commenced in 1825
- Herschel, W. 1789, *Philosophical Transactions of the Royal Society of London Series I*, 79, 212
- Higgs, C. R., McConnachie, A. W., Annau, N., et al. 2021, *MNRAS*, 503, 176, doi: [10.1093/mnras/stab002](https://doi.org/10.1093/mnras/stab002)
- Ho, N., Geha, M., Munoz, R. R., et al. 2012, *ApJ*, 758, 124, doi: [10.1088/0004-637X/758/2/124](https://doi.org/10.1088/0004-637X/758/2/124)
- Hodge, P. W. 1961, *AJ*, 66, 83, doi: [10.1086/108378](https://doi.org/10.1086/108378)
- Hodge, P. W., Dolphin, A. E., Smith, T. R., & Mateo, M. 1999, *ApJ*, 521, 577, doi: [10.1086/307595](https://doi.org/10.1086/307595)
- Hoessel, J. G., & Mould, J. R. 1982, *ApJ*, 254, 38, doi: [10.1086/159702](https://doi.org/10.1086/159702)
- Hoffman, G. L., Salpeter, E. E., Farhat, B., et al. 1996, *ApJS*, 105, 269, doi: [10.1086/192314](https://doi.org/10.1086/192314)
- Holmberg, E. 1958, *Medd. Lunds Astron. Obs. Ser. II*, 128
- Holmberg, E. B., Lauberts, A., Schuster, H. E., & West, R. M. 1977, *A&AS*, 27, 295
- . 1978, *A&AS*, 34, 285
- Homma, D., Chiba, M., Okamoto, S., et al. 2016, *ApJ*, 832, 21, doi: [10.3847/0004-637X/832/1/21](https://doi.org/10.3847/0004-637X/832/1/21)
- . 2018, *PASJ*, 70, S18, doi: [10.1093/pasj/psx050](https://doi.org/10.1093/pasj/psx050)
- Homma, D., Chiba, M., Komiyama, Y., et al. 2019, *PASJ*, 71, 94, doi: [10.1093/pasj/psz076](https://doi.org/10.1093/pasj/psz076)
- . 2023, *arXiv e-prints*, [arXiv:2311.05439](https://arxiv.org/abs/2311.05439), <https://arxiv.org/abs/2311.05439>
- Humason, M. L., Mayall, N. U., & Sandage, A. R. 1956, *AJ*, 61, 97, doi: [10.1086/107297](https://doi.org/10.1086/107297)
- Hurt, R. L., Jarrett, T. H., Kirkpatrick, J. D., et al. 2000, *AJ*, 120, 1876, doi: [10.1086/301549](https://doi.org/10.1086/301549)
- Ibata, R., Martin, N. F., Irwin, M., et al. 2007, *ApJ*, 671, 1591, doi: [10.1086/522574](https://doi.org/10.1086/522574)
- Ibata, R. A., Gilmore, G., & Irwin, M. J. 1994, *Nature*, 370, 194, doi: [10.1038/370194a0](https://doi.org/10.1038/370194a0)
- Irwin, M. J., Binclark, P. S., Bridgeand, M. T., & McMahon, R. G. 1990, *MNRAS*, 244, 16P
- Irwin, M. J., Demers, S., & Kunkel, W. E. 1995, *ApJL*, 453, L21, doi: [10.1086/513301](https://doi.org/10.1086/513301)
- Irwin, M. J., Ferguson, A. M. N., Huxor, A. P., et al. 2008, *ApJL*, 676, L17, doi: [10.1086/587100](https://doi.org/10.1086/587100)
- Irwin, M. J., Belokurov, V., Evans, N. W., et al. 2007, *ApJL*, 656, L13, doi: [10.1086/512183](https://doi.org/10.1086/512183)
- Jenkins, S. A., Li, T. S., Pace, A. B., et al. 2021, *ApJ*, 920, 92, doi: [10.3847/1538-4357/ac1353](https://doi.org/10.3847/1538-4357/ac1353)
- Ji, A. P., Koposov, S. E., Li, T. S., et al. 2021, *ApJ*, 921, 32, doi: [10.3847/1538-4357/ac1869](https://doi.org/10.3847/1538-4357/ac1869)
- Jones, M. G., Murlu-Pakdil, B., Sand, D. J., et al. 2023, *ApJL*, 957, L5, doi: [10.3847/2041-8213/ad0130](https://doi.org/10.3847/2041-8213/ad0130)
- Kacharov, N., Battaglia, G., Rejkuba, M., et al. 2017, *MNRAS*, 466, 2006, doi: [10.1093/mnras/stw3188](https://doi.org/10.1093/mnras/stw3188)
- Karachentsev, I. D., & Karachentseva, V. E. 1999, *A&A*, 341, 355
- Karachentsev, I. D., Karachentseva, V. E., & Huchmeier, W. K. 2001a, *A&A*, 366, 428, doi: [10.1051/0004-6361/20000262](https://doi.org/10.1051/0004-6361/20000262)
- Karachentsev, I. D., Karachentseva, V. E., Huchmeier, W. K., & Makarov, D. I. 2004, *AJ*, 127, 2031, doi: [10.1086/382905](https://doi.org/10.1086/382905)
- Karachentsev, I. D., Kniazev, A. Y., & Sharina, M. E. 2015a, *Astronomische Nachrichten*, 336, 707, doi: [10.1002/asna.201512207](https://doi.org/10.1002/asna.201512207)
- Karachentsev, I. D., Makarov, D. I., & Kaisina, E. I. 2013a, *AJ*, 145, 101, doi: [10.1088/0004-6256/145/4/101](https://doi.org/10.1088/0004-6256/145/4/101)
- . 2013b, *AJ*, 145, 101, doi: [10.1088/0004-6256/145/4/101](https://doi.org/10.1088/0004-6256/145/4/101)
- Karachentsev, I. D., Makarova, L. N., Makarov, D. I., Tully, R. B., & Rizzi, L. 2015b, *MNRAS*, 447, L85, doi: [10.1093/mnras/stu181](https://doi.org/10.1093/mnras/stu181)
- Karachentsev, I. D., Makarova, L. N., Tully, R. B., Wu, P.-F., & Kniazev, A. Y. 2014, *MNRAS*, 443, 1281, doi: [10.1093/mnras/stu1217](https://doi.org/10.1093/mnras/stu1217)
- Karachentsev, I. D., Sharina, M. E., Dolphin, A. E., et al. 2001b, *A&A*, 379, 407, doi: [10.1051/0004-6361/20011344](https://doi.org/10.1051/0004-6361/20011344)
- Karachentsev, I. D., Dolphin, A., Tully, R. B., et al. 2006, *AJ*, 131, 1361, doi: [10.1086/500013](https://doi.org/10.1086/500013)
- Karachentseva, V. E. 1976, *Soobshcheniya Spetsial’noj Astrofizicheskoy Observatorii*, 18, 42
- Karachentseva, V. E., & Karachentsev, I. D. 1998, *A&AS*, 127, 409, doi: [10.1051/aas:1998109](https://doi.org/10.1051/aas:1998109)

- . 2000, *A&AS*, 146, 359, doi: [10.1051/aas:2000275](https://doi.org/10.1051/aas:2000275)
- Karachentseva, V. E., Karachentsev, I. D., & Richter, G. M. 1999, *A&AS*, 135, 221, doi: [10.1051/aas:1999173](https://doi.org/10.1051/aas:1999173)
- Karczmarek, P., Pietrzyński, G., Gieren, W., et al. 2015, *AJ*, 150, 90, doi: [10.1088/0004-6256/150/3/90](https://doi.org/10.1088/0004-6256/150/3/90)
- Kim, D., & Jerjen, H. 2015a, *ApJL*, 808, L39, doi: [10.1088/2041-8205/808/2/L39](https://doi.org/10.1088/2041-8205/808/2/L39)
- . 2015b, *ApJ*, 799, 73, doi: [10.1088/0004-637X/799/1/73](https://doi.org/10.1088/0004-637X/799/1/73)
- Kim, D., Jerjen, H., Mackey, D., Da Costa, G. S., & Milone, A. P. 2015a, *ApJL*, 804, L44, doi: [10.1088/2041-8205/804/2/L44](https://doi.org/10.1088/2041-8205/804/2/L44)
- . 2016a, *ApJ*, 820, 119, doi: [10.3847/0004-637X/820/2/119](https://doi.org/10.3847/0004-637X/820/2/119)
- Kim, D., Jerjen, H., Milone, A. P., Mackey, D., & Da Costa, G. S. 2015b, *ApJ*, 803, 63, doi: [10.1088/0004-637X/803/2/63](https://doi.org/10.1088/0004-637X/803/2/63)
- Kim, D., Jerjen, H., Geba, M., et al. 2016b, *ApJ*, 833, 16, doi: [10.3847/0004-637X/833/1/16](https://doi.org/10.3847/0004-637X/833/1/16)
- Kirby, E. N., Boylan-Kolchin, M., Cohen, J. G., et al. 2013, *ApJ*, 770, 16, doi: [10.1088/0004-637X/770/1/16](https://doi.org/10.1088/0004-637X/770/1/16)
- Kirby, E. N., Bullock, J. S., Boylan-Kolchin, M., Kaplinghat, M., & Cohen, J. G. 2014, *MNRAS*, 439, 1015, doi: [10.1093/mnras/stu025](https://doi.org/10.1093/mnras/stu025)
- Kirby, E. N., Cohen, J. G., Simon, J. D., et al. 2017a, *ApJ*, 838, 83, doi: [10.3847/1538-4357/a66570](https://doi.org/10.3847/1538-4357/a66570)
- Kirby, E. N., Rizzi, L., Held, E. V., et al. 2017b, *ApJ*, 834, 9, doi: [10.3847/1538-4357/834/1/9](https://doi.org/10.3847/1538-4357/834/1/9)
- Kirby, E. N., Simon, J. D., & Cohen, J. G. 2015, *ApJ*, 810, 56, doi: [10.1088/0004-637X/810/1/56](https://doi.org/10.1088/0004-637X/810/1/56)
- Kobulnicky, H. A., Monson, A. J., Buckalew, B. A., et al. 2005, *AJ*, 129, 239, doi: [10.1086/426337](https://doi.org/10.1086/426337)
- Koch, A., Kunder, A., & Wojno, J. 2017, *A&A*, 605, A128, doi: [10.1051/0004-6361/201731771](https://doi.org/10.1051/0004-6361/201731771)
- Koposov, S., de Jong, J. T. A., Belokurov, V., et al. 2007, *ApJ*, 669, 337, doi: [10.1086/521422](https://doi.org/10.1086/521422)
- Koposov, S. E., Belokurov, V., & Torrealba, G. 2017, *MNRAS*, 470, 2702, doi: [10.1093/mnras/stx1182](https://doi.org/10.1093/mnras/stx1182)
- Koposov, S. E., Belokurov, V., Torrealba, G., & Evans, N. W. 2015a, *ApJ*, 805, 130, doi: [10.1088/0004-637X/805/2/130](https://doi.org/10.1088/0004-637X/805/2/130)
- Koposov, S. E., Gilmore, G., Walker, M. G., et al. 2011, *ApJ*, 736, 146, doi: [10.1088/0004-637X/736/2/146](https://doi.org/10.1088/0004-637X/736/2/146)
- Koposov, S. E., Casey, A. R., Belokurov, V., et al. 2015b, *ApJ*, 811, 62, doi: [10.1088/0004-637X/811/1/62](https://doi.org/10.1088/0004-637X/811/1/62)
- Koposov, S. E., Walker, M. G., Belokurov, V., et al. 2018, *MNRAS*, 479, 5343, doi: [10.1093/mnras/sty1772](https://doi.org/10.1093/mnras/sty1772)
- Kopylov, A. I., Tikhonov, N. A., Fabrika, S., Drozdovsky, I., & Valeev, A. F. 2008, *MNRAS*, 387, L45, doi: [10.1111/j.1745-3933.2008.00482.x](https://doi.org/10.1111/j.1745-3933.2008.00482.x)
- Korbalski, B. S., Staveley-Smith, L., Kilborn, V. A., et al. 2004, *AJ*, 128, 16, doi: [10.1086/421744](https://doi.org/10.1086/421744)
- Kowal, C. T., Lo, K. Y., & Sargent, W. L. W. 1978, *IAUC*, 3305, 2
- Kuehn, C., Kinemuchi, K., Ripepi, V., et al. 2008, *ApJL*, 674, L81, doi: [10.1086/529137](https://doi.org/10.1086/529137)
- Kunder, A., Crabb, R. E., Debattista, V. P., Koch-Hansen, A. J., & Huhmann, B. M. 2021, *AJ*, 162, 86, doi: [10.3847/1538-3881/ac0888](https://doi.org/10.3847/1538-3881/ac0888)
- Kunder, A., Prudli, Z., Covey, K., et al. 2023, *arXiv e-prints*, arXiv:2310.18575, <https://arxiv.org/abs/2310.18575>
- Kurtev, R., Ivanov, V. D., Borissova, J., & Ortolani, S. 2008, *A&A*, 489, 583, doi: [10.1051/0004-6361:200809425](https://doi.org/10.1051/0004-6361:200809425)
- Laevens, B. P. M., Martin, N. F., Sesar, B., et al. 2014, *ApJL*, 786, L3, doi: [10.1088/2041-8205/786/1/L3](https://doi.org/10.1088/2041-8205/786/1/L3)
- Laevens, B. P. M., Martin, N. F., Ibata, R. A., et al. 2015a, *ApJL*, 802, L18, doi: [10.1088/2041-8205/802/2/L18](https://doi.org/10.1088/2041-8205/802/2/L18)
- Laevens, B. P. M., Martin, N. F., Bernard, E. J., et al. 2015b, *ApJ*, 813, 44, doi: [10.1088/0004-637X/813/1/44](https://doi.org/10.1088/0004-637X/813/1/44)
- Larsen, S. S., Brodie, J. P., & Strader, J. 2012, *A&A*, 546, A53, doi: [10.1051/0004-6361/201219895](https://doi.org/10.1051/0004-6361/201219895)
- Lauberts, A. 1976, *A&A*, 52, 309
- . 1982, *ESO/Uppsala survey of the ESO(B) atlas*
- Lauberts, A., Holmberg, E. B., Schuster, H. E., & West, R. M. 1981, *A&AS*, 43, 307
- Lavery, R. J. 1990, *IAUC*, 5139, 2
- Lavery, R. J., & Mighell, K. J. 1992, *AJ*, 103, 81, doi: [10.1086/116042](https://doi.org/10.1086/116042)
- Leaman, R., Venn, K. A., Brooks, A. M., et al. 2013, *ApJ*, 767, 131, doi: [10.1088/0004-637X/767/2/131](https://doi.org/10.1088/0004-637X/767/2/131)
- Leaman, R., Ruiz-Lara, T., Cole, A. A., et al. 2020, *MNRAS*, 492, 5102, doi: [10.1093/mnras/staa004](https://doi.org/10.1093/mnras/staa004)
- Lee, M. G., Yuk, I.-S., Park, H. S., Harris, J., & Zaritsky, D. 2009, *ApJ*, 703, 692, doi: [10.1088/0004-637X/703/1/692](https://doi.org/10.1088/0004-637X/703/1/692)
- Letarte, B., Hill, V., Jablonka, P., et al. 2006, *A&A*, 453, 547, doi: [10.1051/0004-6361:20054439](https://doi.org/10.1051/0004-6361:20054439)
- Li, T. S., Simon, J. D., Drlica-Wagner, A., et al. 2017, *ApJ*, 838, 8, doi: [10.3847/1538-4357/a61113](https://doi.org/10.3847/1538-4357/a61113)
- Li, T. S., Simon, J. D., Pace, A. B., et al. 2018, *ApJ*, 857, 145, doi: [10.3847/1538-4357/aab666](https://doi.org/10.3847/1538-4357/aab666)
- Longeard, N., Martin, N., Ibata, R. A., et al. 2019, *MNRAS*, 490, 1498, doi: [10.1093/mnras/stz2592](https://doi.org/10.1093/mnras/stz2592)
- Longeard, N., Martin, N., Starckeburg, E., et al. 2018, *MNRAS*, 480, 2609, doi: [10.1093/mnras/sty1986](https://doi.org/10.1093/mnras/sty1986)
- Longeard, N., Martin, N., Ibata, R. A., et al. 2021, *MNRAS*, 503, 2754, doi: [10.1093/mnras/stab604](https://doi.org/10.1093/mnras/stab604)

- Longmore, A. J., Hawarden, T. G., Webster, B. L., Goss, W. M., & Mebold, U. 1978, *MNRAS*, 183, 97P, doi: [10.1093/mnras/183.1.97P](https://doi.org/10.1093/mnras/183.1.97P)
- Longmore, A. J., Kurtsev, R., Lucas, P. W., et al. 2011, *MNRAS*, 416, 465, doi: [10.1111/j.1365-2966.2011.19056.x](https://doi.org/10.1111/j.1365-2966.2011.19056.x)
- Lunt, J. 1902, *MNRAS*, 62, 468, doi: [10.1093/mnras/62.7.468](https://doi.org/10.1093/mnras/62.7.468)
- Luque, E., Queiroz, A., Santiago, B., et al. 2016, *MNRAS*, 458, 603, doi: [10.1093/mnras/stw302](https://doi.org/10.1093/mnras/stw302)
- Luque, E., Santiago, B., Pieres, A., et al. 2018, *MNRAS*, 478, 2006, doi: [10.1093/mnras/sty1039](https://doi.org/10.1093/mnras/sty1039)
- Maakey, A. D., & Gilmore, G. F. 2003a, *MNRAS*, 340, 175, doi: [10.1046/j.1365-8711.2003.06275.x](https://doi.org/10.1046/j.1365-8711.2003.06275.x)
- . 2003b, *MNRAS*, 345, 747, doi: [10.1046/j.1365-8711.2003.07001.x](https://doi.org/10.1046/j.1365-8711.2003.07001.x)
- Madore, B. F., & Arp, H. C. 1982, *PASP*, 94, 40, doi: [10.1086/130938](https://doi.org/10.1086/130938)
- Majewski, S. R., Beaton, R. L., Patterson, R. J., et al. 2007, *ApJL*, 670, L9, doi: [10.1086/524033](https://doi.org/10.1086/524033)
- Makarova, L. N., Tully, R. B., Anand, G. S., et al. 2023, *ApJ*, 943, 139, doi: [10.3847/1538-4357/acbd48](https://doi.org/10.3847/1538-4357/acbd48)
- Martin, N. F., Ibata, R. A., Irwin, M. J., et al. 2006, *MNRAS*, 371, 1983, doi: [10.1111/j.1365-2966.2006.10823.x](https://doi.org/10.1111/j.1365-2966.2006.10823.x)
- Martin, N. F., McConnachie, A. W., Irwin, M., et al. 2009, *ApJ*, 705, 758, doi: [10.1088/0004-637X/705/1/758](https://doi.org/10.1088/0004-637X/705/1/758)
- Martin, N. F., Slater, C. T., Schlafly, E. F., et al. 2013a, *ApJ*, 772, 15, doi: [10.1088/0004-637X/772/1/15](https://doi.org/10.1088/0004-637X/772/1/15)
- Martin, N. F., Schlafly, E. F., Slater, C. T., et al. 2013b, *ApJL*, 779, L10, doi: [10.1088/2041-8205/779/1/L10](https://doi.org/10.1088/2041-8205/779/1/L10)
- Martin, N. F., Chambers, K. C., Collins, M. L. M., et al. 2014, *ApJL*, 793, L14, doi: [10.1088/2041-8205/793/1/L14](https://doi.org/10.1088/2041-8205/793/1/L14)
- Martin, N. F., Nidever, D. L., Besla, G., et al. 2015, *ApJL*, 804, L5, doi: [10.1088/2041-8205/804/1/L5](https://doi.org/10.1088/2041-8205/804/1/L5)
- Martin, N. F., Jungbluth, V., Nidever, D. L., et al. 2016a, *ApJL*, 830, L10, doi: [10.3847/2041-8205/830/1/L10](https://doi.org/10.3847/2041-8205/830/1/L10)
- Martin, N. F., Ibata, R. A., Lewis, G. F., et al. 2016b, *ApJ*, 833, 167, doi: [10.3847/1538-4357/833/2/167](https://doi.org/10.3847/1538-4357/833/2/167)
- Martínez-Delgado, D., Karim, N., Charles, E. J. E., et al. 2022, *MNRAS*, 509, 16, doi: [10.1093/mnras/stab2797](https://doi.org/10.1093/mnras/stab2797)
- Martínez-Vázquez, C. E., Monelli, M., Bono, G., et al. 2015, *MNRAS*, 454, 1509, doi: [10.1093/mnras/stv2014](https://doi.org/10.1093/mnras/stv2014)
- Martínez-Vázquez, C. E., Monelli, M., Bernard, E. J., et al. 2017, *ApJ*, 850, 137, doi: [10.3847/1538-4357/aa9381](https://doi.org/10.3847/1538-4357/aa9381)
- Martínez-Vázquez, C. E., Vivas, A. K., Gurevich, M., et al. 2019, *MNRAS*, 490, 2183, doi: [10.1093/mnras/stz2609](https://doi.org/10.1093/mnras/stz2609)
- Martínez-Vázquez, C. E., Monelli, M., Cassisi, S., et al. 2021, *MNRAS*, 508, 1064, doi: [10.1093/mnras/stab2493](https://doi.org/10.1093/mnras/stab2493)
- Mateo, M., Olszewski, E. W., & Walker, M. G. 2008, *ApJ*, 675, 201, doi: [10.1086/522326](https://doi.org/10.1086/522326)
- Mau, S., Drlica-Wagner, A., Bechtol, K., et al. 2019, *ApJ*, 875, 154, doi: [10.3847/1538-4357/ab0bb8](https://doi.org/10.3847/1538-4357/ab0bb8)
- Mau, S., Cerny, W., Pace, A. B., et al. 2020, *ApJ*, 890, 136, doi: [10.3847/1538-4357/ab6c67](https://doi.org/10.3847/1538-4357/ab6c67)
- McConnachie, A. W. 2012, *AJ*, 144, 4, doi: [10.1088/0004-6256/144/1/4](https://doi.org/10.1088/0004-6256/144/1/4)
- McConnachie, A. W., & Irwin, M. J. 2006, *MNRAS*, 365, 1263, doi: [10.1111/j.1365-2966.2005.09806.x](https://doi.org/10.1111/j.1365-2966.2005.09806.x)
- McConnachie, A. W., Huxor, A., Martin, N. F., et al. 2008, *ApJ*, 688, 1009, doi: [10.1086/591313](https://doi.org/10.1086/591313)
- McNanna, M., Bechtol, K., Mau, S., et al. 2023, *arXiv e-prints*, arXiv:2309.04467, doi: [10.48550/arXiv.2309.04467](https://doi.org/10.48550/arXiv.2309.04467)
- McQuinn, K. B. W., Mao, Y.-Y., Buckley, M. R., et al. 2023a, *ApJ*, 944, 14, doi: [10.3847/1538-4357/acac9](https://doi.org/10.3847/1538-4357/acac9)
- McQuinn, K. B. W., Mao, Y.-Y., Cohen, R. E., et al. 2023b, *arXiv e-prints*, arXiv:2307.08738, doi: [10.48550/arXiv.2307.08738](https://doi.org/10.48550/arXiv.2307.08738)
- McQuinn, K. B. W., Skillman, E. D., Dolphin, A., et al. 2015, *ApJ*, 812, 158, doi: [10.1088/0004-637X/812/2/158](https://doi.org/10.1088/0004-637X/812/2/158)
- McQuinn, K. B. W., Boyer, M. L., Mitchell, M. B., et al. 2017, *ApJ*, 834, 78, doi: [10.3847/1538-4357/834/1/78](https://doi.org/10.3847/1538-4357/834/1/78)
- Medina, G. E., Muñoz, R. R., Vivas, A. K., et al. 2018, *ApJ*, 855, 43, doi: [10.3847/1538-4357/aaad02](https://doi.org/10.3847/1538-4357/aaad02)
- Melotte, P. J. 1926, *MNRAS*, 86, 636, doi: [10.1093/mnras/86.8.636](https://doi.org/10.1093/mnras/86.8.636)
- Mercet, E. P., Clemens, D. P., Meade, M. R., et al. 2005, *ApJ*, 635, 560, doi: [10.1086/497260](https://doi.org/10.1086/497260)
- Milone, A. P., Cordoni, G., Marino, A. F., et al. 2023, *A&A*, 672, A161, doi: [10.1051/0004-6361/202244798](https://doi.org/10.1051/0004-6361/202244798)
- Minniti, D., Alonso-García, J., Braga, V., et al. 2017a, *Research Notes of the American Astronomical Society*, 1, 16, doi: [10.3847/2515-5172/aa9ab7](https://doi.org/10.3847/2515-5172/aa9ab7)
- Minniti, D., Alonso-García, J., & Pullen, J. 2017b, *Research Notes of the American Astronomical Society*, 1, 54, doi: [10.3847/2515-5172/aa3ed](https://doi.org/10.3847/2515-5172/aa3ed)
- Minniti, D., Fernández-Trincado, J. G., Gómez, M., et al. 2021a, *A&A*, 650, L11, doi: [10.1051/0004-6361/202141129](https://doi.org/10.1051/0004-6361/202141129)
- Minniti, D., Hempel, M., Toledo, I., et al. 2011, *A&A*, 527, A81, doi: [10.1051/0004-6361/201015795](https://doi.org/10.1051/0004-6361/201015795)
- Minniti, D., Palma, T., Camargo, D., et al. 2021b, *A&A*, 652, A129, doi: [10.1051/0004-6361/202140347](https://doi.org/10.1051/0004-6361/202140347)
- Moni Bidin, C., Mauro, F., Geisler, D., et al. 2011, *A&A*, 535, A33, doi: [10.1051/0004-6361/201117488](https://doi.org/10.1051/0004-6361/201117488)
- Moskowitz, A. G., & Walker, M. G. 2020, *ApJ*, 892, 27, doi: [10.3847/1538-4357/ab7459](https://doi.org/10.3847/1538-4357/ab7459)
- Muñoz, R. R., Côté, P., Santana, F. A., et al. 2018, *ApJ*, 860, 66, doi: [10.3847/1538-4357/aac16b](https://doi.org/10.3847/1538-4357/aac16b)

- Muñoz, R. R., Geha, M., Côté, P., et al. 2012, *ApJL*, 753, L15, doi: [10.1088/2041-8205/753/1/L15](https://doi.org/10.1088/2041-8205/753/1/L15)
- Muraveva, T., Clementini, G., Garofalo, A., & Cusano, F. 2020, *MNRAS*, 499, 4040, doi: [10.1093/mnras/staa2984](https://doi.org/10.1093/mnras/staa2984)
- Musella, I., Ripepi, V., Clementini, G., et al. 2009, *ApJL*, 695, L83, doi: [10.1088/0004-637X/695/1/L83](https://doi.org/10.1088/0004-637X/695/1/L83)
- Mutlu-Pakdil, B., Sand, D. J., Carlin, J. L., et al. 2018, *ApJ*, 863, 25, doi: [10.3847/1538-4357/aacd0e](https://doi.org/10.3847/1538-4357/aacd0e)
- Mutlu-Pakdil, B., Sand, D. J., Crnojević, D., et al. 2020, *ApJ*, 902, 106, doi: [10.3847/1538-4357/abb40b](https://doi.org/10.3847/1538-4357/abb40b)
- Nemec, J. M., Wehlau, A., & Mendes de Oliveira, C. 1988, *AJ*, 96, 528, doi: [10.1086/114830](https://doi.org/10.1086/114830)
- Nilson, P. 1974, *Uppsala Astronomical Observatory Reports*, 5, 0
- Oakes, E. K., Hoyt, T. J., Freedman, W. L., et al. 2022, *ApJ*, 929, 116, doi: [10.3847/1538-4357/ac5d07](https://doi.org/10.3847/1538-4357/ac5d07)
- Obasi, C., Gómez, M., Minniti, D., & Alonso-García, J. 2021, *A&A*, 654, A39, doi: [10.1051/0004-6361/202141332](https://doi.org/10.1051/0004-6361/202141332)
- Olivares Carvajal, J., Zoccali, M., Rojas-Arriagada, A., et al. 2022, *MNRAS*, 513, 3993, doi: [10.1093/mnras/stac934](https://doi.org/10.1093/mnras/stac934)
- Ortolani, S., Bonatto, C., Bica, E., & Barbuy, B. 2009, *AJ*, 138, 889, doi: [10.1088/0004-6256/138/3/889](https://doi.org/10.1088/0004-6256/138/3/889)
- Pace, A. B., Erkal, D., & Li, T. S. 2022, *ApJ*, 940, 136, doi: [10.3847/1538-4357/ac997b](https://doi.org/10.3847/1538-4357/ac997b) [arXiv:2205.05699](https://arxiv.org/abs/2205.05699)
- Pace, A. B., Walker, M. G., Koposov, S. E., et al. 2021, *ApJ*, 923, 77, doi: [10.3847/1538-4357/ac2cd2](https://doi.org/10.3847/1538-4357/ac2cd2)
- Pace, A. B., Koposov, S. E., Walker, M. G., et al. 2023, *MNRAS*, 526, 1075, doi: [10.1093/mnras/stad2760](https://doi.org/10.1093/mnras/stad2760)
- Pallanca, C., Leanza, S., Ferraro, F. R., et al. 2023, *ApJ*, 950, 138, doi: [10.3847/1538-4357/acccc9](https://doi.org/10.3847/1538-4357/acccc9)
- Pederos, M. H., & Gallart, C. 2002, in *Extragalactic Star Clusters*, ed. D. P. Geisler, E. K. Grebel, & D. Minniti, Vol. 207, 177–179
- Pfeiderer, J., Weinberger, R., & Mros, R. 1977, in *Star Cluster Symposium*, Vol. 5, 39
- Piatti, A. E., & Lucchini, S. 2022, *MNRAS*, 515, 4005, doi: [10.1093/mnras/stac1980](https://doi.org/10.1093/mnras/stac1980)
- Pickering, E. C. 1908, *Annals of Harvard College Observatory*, 60, 147
- Pickering, E. C., & Stewart, D. L. 1899, *ApJ*, 9, 173, doi: [10.1086/140571](https://doi.org/10.1086/140571)
- Pisniš, P. 1959, *Boletín de los Observatorios Tonantzintla y Tacubaya*, 2, 37
- Puche, D., Carignan, C., & Wainscoat, R. J. 1991, *AJ*, 101, 447, doi: [10.1086/115695](https://doi.org/10.1086/115695)
- Putman, M. E., Zheng, Y., Price-Whelan, A. M., et al. 2021, *ApJ*, 913, 53, doi: [10.3847/1538-4357/abe391](https://doi.org/10.3847/1538-4357/abe391)
- Reaves, G. 1956, *AJ*, 61, 69, doi: [10.1086/107292](https://doi.org/10.1086/107292)
- Rhode, K. L., Smith, N. J., Crnojevic, D., et al. 2023, *arXiv e-prints*, [arXiv:2309.01045](https://arxiv.org/abs/2309.01045), doi: [10.48550/arXiv.2309.01045](https://doi.org/10.48550/arXiv.2309.01045)
- Richardson, J. C., Irwin, M. J., McConnachie, A. W., et al. 2011, *ApJ*, 732, 76, doi: [10.1088/0004-637X/732/2/76](https://doi.org/10.1088/0004-637X/732/2/76)
- Richstein, H., Patel, E., Kallivayalil, N., et al. 2022, *ApJ*, 933, 217, doi: [10.3847/1538-4357/ac7226](https://doi.org/10.3847/1538-4357/ac7226)
- Romanowsky, A. J., Larsen, S. S., Villaume, A., et al. 2023, *MNRAS*, 518, 3164, doi: [10.1093/mnras/stac2898](https://doi.org/10.1093/mnras/stac2898)
- Romero-Colmeneros, M., Fernández-Trincado, J. G., Geisler, D., et al. 2021, *A&A*, 652, A158, doi: [10.1051/0004-6361/202141294](https://doi.org/10.1051/0004-6361/202141294)
- Ryu, J., & Lee, M. G. 2018a, *ApJ*, 856, 152, doi: [10.3847/1538-4357/aab1ff](https://doi.org/10.3847/1538-4357/aab1ff)
- . 2018b, *ApJL*, 863, L38, doi: [10.3847/2041-8213/aad8b7](https://doi.org/10.3847/2041-8213/aad8b7)
- Sakamoto, T., & Hasegawa, T. 2006, *ApJL*, 653, L29, doi: [10.1086/510332](https://doi.org/10.1086/510332)
- Sand, D. J., Spekkens, K., Crnojević, D., et al. 2015, *ApJL*, 812, L13, doi: [10.1088/2041-8205/812/1/L13](https://doi.org/10.1088/2041-8205/812/1/L13)
- Sand, D. J., Strader, J., Willman, B., et al. 2012, *ApJ*, 756, 79, doi: [10.1088/0004-637X/756/1/79](https://doi.org/10.1088/0004-637X/756/1/79)
- Sand, D. J., Mutlu-Pakdil, B., Jones, M. G., et al. 2022, *ApJL*, 935, L17, doi: [10.3847/2041-8213/ac85ce](https://doi.org/10.3847/2041-8213/ac85ce)
- Savino, A., Weisz, D. R., Skillman, E. D., et al. 2022, *ApJ*, 938, 101, doi: [10.3847/1538-4357/ac91cb](https://doi.org/10.3847/1538-4357/ac91cb)
- Schuster, H. E., & West, R. M. 1976, *A&A*, 49, 129
- Sérsic, J. L. 1974, *Ap&SS*, 28, 365, doi: [10.1007/BF00641933](https://doi.org/10.1007/BF00641933)
- Shapley, H. 1938a, *Nature*, 142, 715, doi: [10.1038/142715b0](https://doi.org/10.1038/142715b0)
- . 1938b, *Harvard College Observatory Bulletin*, 908, 1
- Sharina, M. E., Shmansky, V. V., & Kniazev, A. Y. 2017, *MNRAS*, 471, 1955, doi: [10.1093/mnras/stx1605](https://doi.org/10.1093/mnras/stx1605)
- Simon, J. D., & Geha, M. 2007, *ApJ*, 670, 313, doi: [10.1086/521816](https://doi.org/10.1086/521816)
- Simon, J. D., Geha, M., Minor, Q. E., et al. 2011, *ApJ*, 733, 46, doi: [10.1088/0004-637X/733/1/46](https://doi.org/10.1088/0004-637X/733/1/46)
- Simon, J. D., Li, T. S., Drlica-Wagner, A., et al. 2017, *ApJ*, 838, 11, doi: [10.3847/1538-4357/aa5be7](https://doi.org/10.3847/1538-4357/aa5be7)
- Simon, J. D., Li, T. S., Erkal, D., et al. 2020, *ApJ*, 892, 137, doi: [10.3847/1538-4357/ab7ccb](https://doi.org/10.3847/1538-4357/ab7ccb)
- Simon, J. D., Brown, T. M., Drlica-Wagner, A., et al. 2021, *ApJ*, 908, 18, doi: [10.3847/1538-4357/abd31b](https://doi.org/10.3847/1538-4357/abd31b)
- Simpson, J. D. 2018, *MNRAS*, 477, 4565, doi: [10.1093/mnras/sty847](https://doi.org/10.1093/mnras/sty847)
- Simpson, J. D., De Silva, G. M., Martell, S. L., et al. 2017, *MNRAS*, 471, 4087, doi: [10.1093/mnras/stx1892](https://doi.org/10.1093/mnras/stx1892)
- Slater, C. T., Bell, E. F., & Martin, N. F. 2011, *ApJL*, 742, L14, doi: [10.1088/2041-8205/742/1/L14](https://doi.org/10.1088/2041-8205/742/1/L14)

- Slater, C. T., Bell, E. F., Martin, N. F., Tollerud, E. J., & Ho, N. 2015, *ApJ*, 806, 230, doi: [10.1088/0004-637X/806/2/230](https://doi.org/10.1088/0004-637X/806/2/230)
- Smith, S. E. T., Jensen, J., Roediger, J., et al. 2023a, *AJ*, 166, 76, doi: [10.3847/1538-3881/acdd77](https://doi.org/10.3847/1538-3881/acdd77)
- Smith, S. E. T., Cerny, W., Hayes, C. R., et al. 2023b, *arXiv e-prints*, arXiv:2311.10147, <https://arxiv.org/abs/2311.10147>
- Sohn, S. T., Patel, E., Fardal, M. A., et al. 2020, *ApJ*, 901, 43, doi: [10.3847/1538-4357/abaf49](https://doi.org/10.3847/1538-4357/abaf49)
- Souza, S. O., Valentini, M., Barbuy, B., et al. 2021, *A&A*, 656, A78, doi: [10.1051/0004-6361/202141768](https://doi.org/10.1051/0004-6361/202141768)
- Spekkens, K., Urbancic, N., Mason, B. S., Willman, B., & Aguirre, J. E. 2014, *ApJL*, 795, L5, doi: [10.1088/2041-8205/795/1/L5](https://doi.org/10.1088/2041-8205/795/1/L5)
- Spencer, M. E., Mateo, M., Olszewski, E. W., et al. 2018, *AJ*, 156, 257, doi: [10.3847/1538-3881/aae3c4](https://doi.org/10.3847/1538-3881/aae3c4)
- Spencer, M. E., Mateo, M., Walker, M. G., & Olszewski, E. W. 2017, *ApJ*, 836, 202, doi: [10.3847/1538-4357/836/2/202](https://doi.org/10.3847/1538-4357/836/2/202)
- Stephens, A. W., Catelan, M., & Contreras, R. P. 2006, *AJ*, 131, 1426, doi: [10.1086/500300](https://doi.org/10.1086/500300)
- Stetson, P. B., Fiorentino, G., Bono, G., et al. 2014, *PASP*, 126, 616, doi: [10.1086/677352](https://doi.org/10.1086/677352)
- Strader, J., & Kobulnicky, H. A. 2008, *AJ*, 136, 2102, doi: [10.1088/0004-6256/136/5/2102](https://doi.org/10.1088/0004-6256/136/5/2102)
- Swift, L. 1888, *Astronomische Nachrichten*, 120, 33, doi: [10.1002/asna.18891200302](https://doi.org/10.1002/asna.18891200302)
- Taibi, S., Battaglia, G., Rejkuba, M., et al. 2020, *A&A*, 635, A152, doi: [10.1051/0004-6361/201937240](https://doi.org/10.1051/0004-6361/201937240)
- Terzan, A. 1966, *Academie des Sciences Paris Comptes Rendus Serie B Sciences Physiques*, 263, 221
- . 1967, *Academie des Sciences Paris Comptes Rendus Serie B Sciences Physiques*, 265, 734
- . 1968, *Academie des Sciences Paris Comptes Rendus Serie B Sciences Physiques*, 267, 1245
- . 1971, *A&A*, 12, 477
- Tollerud, E. J., Geha, M. C., Vargas, L. C., & Bullock, J. S. 2013, *ApJ*, 768, 50, doi: [10.1088/0004-637X/768/1/50](https://doi.org/10.1088/0004-637X/768/1/50)
- Tollerud, E. J., Beaton, R. L., Geha, M. C., et al. 2012, *ApJ*, 752, 45, doi: [10.1088/0004-637X/752/1/45](https://doi.org/10.1088/0004-637X/752/1/45)
- Torrealba, G., Belokurov, V., & Koposov, S. E. 2019a, *MNRAS*, 484, 2181, doi: [10.1093/mnras/stz071](https://doi.org/10.1093/mnras/stz071)
- Torrealba, G., Koposov, S. E., Belokurov, V., & Irwin, M. 2016a, *MNRAS*, 459, 2370, doi: [10.1093/mnras/stw733](https://doi.org/10.1093/mnras/stw733)
- Torrealba, G., Koposov, S. E., Belokurov, V., et al. 2016b, *MNRAS*, 463, 712, doi: [10.1093/mnras/stw2051](https://doi.org/10.1093/mnras/stw2051)
- Torrealba, G., Belokurov, V., Koposov, S. E., et al. 2018, *MNRAS*, 475, 5085, doi: [10.1093/mnras/sty170](https://doi.org/10.1093/mnras/sty170)
- . 2019b, *MNRAS*, 488, 2743, doi: [10.1093/mnras/stz1624](https://doi.org/10.1093/mnras/stz1624)
- Tully, R. B., Rizzi, L., Shaya, E. J., et al. 2009a, *AJ*, 138, 323, doi: [10.1088/0004-6256/138/2/323](https://doi.org/10.1088/0004-6256/138/2/323)
- . 2009b, *AJ*, 138, 323, doi: [10.1088/0004-6256/138/2/323](https://doi.org/10.1088/0004-6256/138/2/323)
- van de Rydt, F., Demers, S., & Kunkel, W. E. 1991, *AJ*, 102, 130, doi: [10.1086/115861](https://doi.org/10.1086/115861)
- van den Bergh, S. 1959, *Publications of the David Dunlap Observatory*, 2, 147
- . 1972, *ApJL*, 171, L31, doi: [10.1086/180861](https://doi.org/10.1086/180861)
- Vasiliev, E., & Baumgardt, H. 2021, *MNRAS*, 505, 5978, doi: [10.1093/mnras/stab1475](https://doi.org/10.1093/mnras/stab1475)
- Vivas, A. K., Martínez-Vázquez, C., & Walker, A. R. 2020, *ApJS*, 247, 35, doi: [10.3847/1538-4365/ab67c0](https://doi.org/10.3847/1538-4365/ab67c0)
- Vivas, A. K., Martínez-Vázquez, C. E., Walker, A. R., et al. 2022, *ApJ*, 926, 78, doi: [10.3847/1538-4357/ac43bd](https://doi.org/10.3847/1538-4357/ac43bd)
- Vivas, A. K., Olsen, K., Blum, R., et al. 2016, *AJ*, 151, 118, doi: [10.3847/0004-6256/151/5/118](https://doi.org/10.3847/0004-6256/151/5/118)
- Vögel, K., Hilker, M., Baumgardt, H., et al. 2016, *MNRAS*, 460, 3384, doi: [10.1093/mnras/stw1132](https://doi.org/10.1093/mnras/stw1132)
- Vorontsov-Vel'Yaminov, B. A. 1959, *Atlas and Catalog of Interacting Galaxies* (1959, 0
- Vorontsov-Vel'Yaminov, B. A., & Krasnogorskaya, A. A. 1962, *Trudy Gosudarstvennogo Astronomicheskogo Instituta*, 32, 207
- Walker, M. G., Mateo, M., & Olszewski, E. W. 2009, *AJ*, 137, 3100, doi: [10.1088/0004-6256/137/2/3100](https://doi.org/10.1088/0004-6256/137/2/3100)
- Walker, M. G., Mateo, M., Olszewski, E. W., et al. 2015a, *ApJ*, 808, 108, doi: [10.1088/0004-637X/808/2/108](https://doi.org/10.1088/0004-637X/808/2/108)
- Walker, M. G., Olszewski, E. W., & Mateo, M. 2015b, *MNRAS*, 448, 2717, doi: [10.1093/mnras/stv009](https://doi.org/10.1093/mnras/stv009)
- Walsh, S. M., Jerjen, H., & Willman, B. 2007, *ApJL*, 662, L83, doi: [10.1086/519684](https://doi.org/10.1086/519684)
- Walsh, S. M., Willman, B., Sand, D., et al. 2008, *ApJ*, 688, 245, doi: [10.1086/592076](https://doi.org/10.1086/592076)
- Wang, M. Y., de Boer, T., Piers, A., et al. 2019a, *ApJ*, 881, 118, doi: [10.3847/1538-4357/ab31a9](https://doi.org/10.3847/1538-4357/ab31a9)
- Wang, M. Y., Koposov, S., Drlica-Wagner, A., et al. 2019b, *ApJL*, 875, L13, doi: [10.3847/2041-8213/ab14f5](https://doi.org/10.3847/2041-8213/ab14f5)
- Warfield, J. T., Kallivayalil, N., Zivick, P., et al. 2023, *MNRAS*, 519, 1189, doi: [10.1093/mnras/stac3647](https://doi.org/10.1093/mnras/stac3647)
- Weinberger, R. 1995, *PASP*, 107, 58, doi: [10.1086/133515](https://doi.org/10.1086/133515)
- Weisz, D. R., Koposov, S. E., Dolphin, A. E., et al. 2016, *ApJ*, 822, 32, doi: [10.3847/0004-637X/822/1/32](https://doi.org/10.3847/0004-637X/822/1/32)
- Westmeier, T., Braun, R., & Koribalski, B. S. 2011, *MNRAS*, 410, 2217, doi: [10.1111/j.1365-2966.2010.17596.x](https://doi.org/10.1111/j.1365-2966.2010.17596.x)
- Whiting, A. B., Hau, G. K. T., & Irwin, M. 1999, *AJ*, 118, 2767, doi: [10.1086/301142](https://doi.org/10.1086/301142)
- . 2002, *ApJS*, 141, 123, doi: [10.1086/340037](https://doi.org/10.1086/340037)
- Whiting, A. B., Irwin, M. J., & Hau, G. K. T. 1997, *AJ*, 114, 996, doi: [10.1086/118530](https://doi.org/10.1086/118530)

- Willman, B., Geha, M., Strader, J., et al. 2011, *AJ*, 142, 128, doi: [10.1088/0004-6256/142/4/128](https://doi.org/10.1088/0004-6256/142/4/128)
- Willman, B., & Strader, J. 2012, *AJ*, 144, 76, doi: [10.1088/0004-6256/144/3/76](https://doi.org/10.1088/0004-6256/144/3/76)
- Willman, B., Blanton, M. R., West, A. A., et al. 2005a, *AJ*, 129, 2692, doi: [10.1086/430214](https://doi.org/10.1086/430214)
- Willman, B., Dalcanton, J. J., Martínez-Delgado, D., et al. 2005b, *ApJL*, 626, L85, doi: [10.1086/431760](https://doi.org/10.1086/431760)
- Willman, B., Masjedi, M., Hogg, D. W., et al. 2006, arXiv e-prints, astro. <https://arxiv.org/abs/astro-ph/0603486>
- Wilson, A. G. 1955, *PASP*, 67, 27, doi: [10.1086/126754](https://doi.org/10.1086/126754)
- Wolf, J., Martínez, G. D., Bullock, J. S., et al. 2010, *MNRAS*, 406, 1220, doi: [10.1111/j.1365-2966.2010.16753.x](https://doi.org/10.1111/j.1365-2966.2010.16753.x)
- Wolf, M. 1906, *MNRAS*, 67, 91
- . 1909, *Astronomische Nachrichten*, 183, 187, doi: [10.1002/asna.19091831204](https://doi.org/10.1002/asna.19091831204)
- Young, L. M., Skillman, E. D., Weisz, D. R., & Dolphin, A. E. 2007, *ApJ*, 659, 331, doi: [10.1086/512153](https://doi.org/10.1086/512153)
- Young, L. M., van Zee, L., Lo, K. Y., Dohm-Palmer, R. C., & Beierle, M. E. 2003, *ApJ*, 592, 111, doi: [10.1086/375581](https://doi.org/10.1086/375581)
- Zoutendijk, S. L., Brinchmann, J., Boogaard, L. A., et al. 2020, *AA&A*, 635, A107, doi: [10.1051/0004-6361/201936155](https://doi.org/10.1051/0004-6361/201936155)
- Zoutendijk, S. L., Jitío, M. P., Brinchmann, J., et al. 2021, arXiv e-prints, arXiv:2112.09374, <https://arxiv.org/abs/2112.09374>
- Zucker, D. B., Kniazev, A. Y., Bell, E. F., et al. 2004, *ApJL*, 612, L121, doi: [10.1086/424691](https://doi.org/10.1086/424691)
- Zucker, D. B., Belokurov, V., Evans, N. W., et al. 2006a, *ApJL*, 643, L103, doi: [10.1086/505216](https://doi.org/10.1086/505216)
- . 2006b, *ApJL*, 650, L41, doi: [10.1086/508628](https://doi.org/10.1086/508628)
- Zucker, D. B., Kniazev, A. Y., Martínez-Delgado, D., et al. 2007, *ApJL*, 659, L21, doi: [10.1086/516748](https://doi.org/10.1086/516748)
- Zwicky, F. 1942, *Physical Review*, 61, 489, doi: [10.1103/PhysRev.61.489](https://doi.org/10.1103/PhysRev.61.489)
- . 1959, *Carnegie Inst. Washington Yearbook*, 58, 60