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Erratum: "The RESOLVE and ECO Gas in Galaxy Groups Initiative: The Group Finder and the Group H I–Halo Mass Relation" (2023, ApJ, 956, 51)

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We have corrected the labels and descriptions of the columns originally called `g3logmh200` and `foflogmh200` in the published ECO DR3 Galaxy Groups and RESOLVE DR4 data tables (Tables 5 and 6) of Z. L. Hutchens et al. (2023). These columns provide group halo masses from a halo abundance matching technique using the theoretical halo mass function of M. S. Warren et al. (2006). This mass function corresponds to an overdensity contrast of $\Delta = 280$ times the mean background density, not $\Delta = 200$ as implied in the published labels. In Tables 5 and 6 below, we correct these column labels to `g3logmh280` and `foflogmh280` and update their descriptions accordingly.

Table 5
ECO DR3 Galaxy Groups

Column	Designation	Description
1	name	ECO Galaxy Identifier
2	invole17	In-Volume Flag for E17 Groups (1)
3	g3grp	G3 Group Identifier
4	g3grpradeg	G3 Group Center R.A. J2000
5	g3grpdedeg	G3 Group Center Decl. J2000
6	g3grpcz	G3 Group Center *cz* (2)
7	involg3	In-volume Flag for G3 Groups (1)
8	g3grpngi	Number of Giants in G3 Group
9	g3grpndw	Number of Dwarfs in G3 Group
10	g3grpabsrmag	G3 Group-integrated *r*-band Absolute Magnitude
11	g3grpgiantabsrmag	G3 Group-integrated Giant *r*-band Absolute Magnitude
12	g3logmhvir	G3 HAM Log Group Mass (337b) (3)
13	g3logmh280	G3 HAM Log Group Mass (280b) (4)
14	g3grpmhi	G3 Log Group-integrated H I Mass
15	g3fc	G3 Central Galaxy Flag (5)
16	ccbremapped	Boundary Completeness Correction Factor (6)
17	fofgrp	FoF Group Identifier
18	fofgrpradeg	FoF Group Center R.A. J2000
19	fofgrpdedeg	FoF Group Center Decl. J2000
20	fofgrpcz	FoF Group Center *cz* (2)
21	involfof	In-volume Flag for FoF Groups (1)
22	fofgrpn	Number of Galaxies in FoF Group
23	fofgrpabsrmag	FoF Group-integrated *r*-band Absolute Magnitude
24	foflogmhvir	FoF HAM Log Group Mass (337b) (3)
25	foflogmh280	FoF HAM Log Group Mass (280b) (4)
26	fofgrpmhi	FoF Log Group-integrated H I Mass
27	foffc	FoF Central Galaxy Flag (5)

Note. Only a portion of this table is shown here to demonstrate its form and content. The full table is available online in machine-readable format. (1) Group in-volume flag, set to 1 if group satisfies $3000 < cz_{\rm grp}[{\rm km\ s^{-1}}] < 7000$. invole17 is calculated using Grpcz from Table 1 of E17, included here to enable reconstruction of prior survey membership by joining to absrmage16. (2) Local Group-corrected recession velocity of group center, derived using cz in Table 4 of Z. L. Hutchens et al. (2023). (3) HAM performed using the J. Tinker et al. (2008) halo mass function. (4) HAM performed using the M. S. Warren et al. (2006) halo mass function. (5) Set to 1 if galaxy is the group's central (most luminous in *r* band), 0 otherwise. (6) Correction factors for group galaxy number count incompleteness due to group peculiar velocities extending beyond the RESOLVE and ECO redshift limits; affects only Coma and two massive groups. If >1, the group extends beyond ECO's redshift range. Values as computed by E16 based on cze16, mapped to our new G3 group catalog as described in Appendix A.5 of Z. L. Hutchens et al. (2023).

(This table is available in its entirety in machine-readable form in the online article.)

Table 6
RESOLVE DR4

Column	Designation	Description
1	name	RESOLVE Galaxy Identifier
2	radeg	R.A. J2000
3	dedeg	Decl. J2000
4	cz	Local Group-corrected Recession Velocity of Galaxy (1)
5	czhel	Heliocentric Recession Velocity of Galaxy
6	loscmvgdist	Line-of-sight Comoving Distance to Galaxy
7	nuvmag	Apparent Magnitude in GALEX NUV Band (2)
8	e_nuvmag	Error in GALEX NUV Band
9	umag	Apparent Magnitude in SDSS u Band (2)
10	e_umag	Error in SDSS u Band
11	gmag	Apparent Magnitude in SDSS g Band (2)
12	e_gmag	Error in SDSS g Band
13	rmag	Apparent Magnitude in SDSS r Band (2)
14	e_rmag	Error in SDSS r Band
15	imag	Apparent Magnitude in SDSS i Band (2)
16	e_imag	Error in SDSS i Band
17	zmag	Apparent Magnitude in SDSS z Band (2)
18	e_zmag	Error in SDSS z Band
19	2jmag	Apparent Magnitude in 2MASS J Band (2)
20	e_2jmag	Error in 2MASS J Band
21	2hmag	Apparent Magnitude in 2MASS H Band (2)
22	e_2hmag	Error in 2MASS H Band
23	2kmag	Apparent Magnitude in 2MASS K Band (2)
24	e_2kmag	Error in 2MASS K Band
25	uymag	Apparent Magnitude in UKIDSS Y Band (2)
26	e_uymag	Error in UKIDSS Y Band
27	uhmag	Apparent Magnitude in UKIDSS H Band (2)
28	e_uhmag	Error in UKIDSS H Band
29	ukmag	Apparent Magnitude in UKIDSS K Band (2)
30	e_ukmag	Error in UKIDSS K Band
31	extnuv	Foreground Extinction in GALEX NUV Band (3)
32	extu	Foreground Extinction in SDSS u Band
33	extg	Foreground Extinction in SDSS g Band
34	extr	Foreground Extinction in SDSS r Band
35	exti	Foreground Extinction in SDSS i Band
36	extz	Foreground Extinction in SDSS z Band
37	exty	Foreground Extinction in UKIDSS Y Band
38	extj	Foreground Extinction in 2MASS J Band
39	exth	Foreground Extinction in 2MASS and UKIDSS H Bands
40	extk	Foreground Extinction in 2MASS and UKIDSS K Bands
41	rejectedphot	Photometry Rejected During SED Fitting
42	logmstar	Log Galaxy Stellar Mass (4)
43	absrmag	Absolute Magnitude in SDSS r Band (5)
44	modelabsrmag	Rest Frame SED Modeled Absolute Magnitude in SDSS r Band (6)
45	modelnuvr	Rest Frame SED Modeled (NUV $-$ r) Color (6)
46	modelur	Rest Frame SED Modeled ($u - r$) Color (6)
47	modelui	Rest Frame SED Modeled ($u - i$) Color (6)
48	modeluj	Rest Frame SED Modeled ($u - J$) Color (6)
49	modeluk	Rest Frame SED Modeled ($u - K$) Color (6)
50	modelgr	Rest Frame SED Modeled ($g - r$) Color (6)
51	modelgi	Rest Frame SED Modeled ($g - i$) Color (6)
52	modelgj	Rest Frame SED Modeled ($g - J$) Color (6)
53	modelgk	Rest Frame SED Modeled ($g - K$) Color (6)
54	modelurcorr	Rest Frame SED Modeled ($u - r$) Color Corrected for Internal Extinction (7)
55	r50	Half-light Radius in r Band
56	r90	90% Light Radius in r Band
57	axialratio	Axial Ratio
58	mudelta	Morphological Metric μ_{Δ} (8)
59	mhidet	Galaxy H I Mass from 21 cm Detection (9)
60	e_mhidet	Statistical Uncertainty on Galaxy H I Mass from 21 cm Detection (Even if Confused)
61	mhilim	Upper Limit on H I Mass (10)
62	logmgas	Best Estimate of Atomic Gas Mass (11)
63	logmgastype	Type Flag for Atomic Gas Mass Estimate (12)

Table 6
(Continued)

Column	Designation	Description
64	g3grp	G3 Group Identifier
65	g3grpradeg	G3 Group Center R.A. J2000
66	g3grpdedeg	G3 Group Center Decl. J2000
67	g3grpcz	G3 Group Center cz (13)
68	g3grpngi	Number of Giants in G3 Group
69	g3grpndw	Number of Dwarfs in G3 Group
70	g3grpabsrmag	G3 Group-integrated r-band Absolute Magnitude
71	g3logmhvir	G3 HAM Log Group Mass (337b) (14)
72	g3logmh280	G3 HAM Log Group Mass (280b) (15)
73	g3grpmhi	G3 Log Group-integrated H I Mass
74	g3fc	G3 Central Galaxy Flag (16)
75	g3skycutoffflag	RESOLVE-A Sky Cutoff Flag for G3 Groups (17)
76	involg3	In-volume Flag for G3 Groups (18)
77	fofgrp	FoF Group Identifier
78	fofgrpradeg	FoF Group Center R.A. J2000
79	fofgrpdedeg	FoF Group Center Decl. J2000
80	fofgrpcz	FoF Group Center cz (13)
81	fofgrpn	Number of Galaxies in FoF Group
82	fofgrpabsrmag	FoF Group-integrated r-band Absolute Magnitude
83	foflogmhvir	FoF HAM Log Group Mass (337b) (14)
84	foflogmh280	FoF HAM Log Group Mass (280b) (15)
85	fofgrpmhi	FoF Log Group-integrated H I Mass
86	foffc	FoF Central Galaxy Flag (16)
87	fofskycutoffflag	RESOLVE-A Sky Cutoff Flag for FoF Groups (17)
88	involfof	In-volume Flag for FoF Groups (18)

Note. Only a portion of this table is shown here to demonstrate its form and content. The full table is available online in machine-readable format. (1) Value unchanged from K. D. Eckert et al. (2015). (2) Custom remeasured value from E15, provided without foreground extinction correction. (3) NUV foreground extinction corrections supersede values from E15, which were inadvertently tabulated (but not used) at 10 times the true value. (4) Log galaxy stellar mass derived using cz to calculate cosmological luminosity distances. (5) Absolute magnitude based on custom r-band photometry of E15, foreground extinction correction included, derived using cz to calculate cosmological luminosity distances. (6) Values include foreground extinction corrections and k-corrections, but not internal extinction corrections. (7) Values include foreground extinction corrections, k-corrections, and internal extinction corrections. (8) Morphological metric μ_{Δ} defined in S. J. Kannappan et al. (2013), derived using cz to calculate cosmological angular diameter distances. (9) H I mass derived using cz to calculate cosmological luminosity distances; set to 0 if not detected or not observed. If the observation is confused, this column reports the total H I mass. (10) Upper limit on H I mass derived using cz to calculate cosmological luminosity distances; set to 0 if detected in H I or not observed. (11) Optimal atomic gas mass (1.4 $\times$ H I mass to include He) estimate based on detection, upper limit, confusion, and/or photometric gas fraction information; see Appendix A.6.2 in Z. L. Hutchens et al. (2023). (12) See Appendix A.6.2 in Z. L. Hutchens et al. (2023) for explanations of possible values. (13) Local Group-corrected recession velocity of group center, derived using cz. (14) HAM performed using the J. Tinker et al. (2008) halo mass function. (15) HAM performed using the M. S. Warren et al. (2006) halo mass function. (16) Set to 1 if galaxy is the group's central (most luminous in r band), or 0 otherwise. (17) RESOLVE-A sky cutoff flag, set to 1 for groups that have members both within RESOLVE-A and in the larger ECO survey outside RESOLVE-A (i.e., groups at the edges of the RESOLVE-A footprint). (18) Group in-volume flag, set to 1 if group satisfies $4500 < cz_{\rm grp}[{\rm km\ s^{-1}}] < 7000$. We do not tabulate invole17 for RESOLVE, as all quantities necessary to reconstruct prior RESOLVE membership have been published previously.

(This table is available in its entirety in machine-readable form in the online article.)

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