

YOUR TITLE HERE IN ALL CAPS

FIRST M LAST

Dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy

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Acknowledgments

 $Some \ acknowledgements \ here$

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(Order No.

FIRST M LAST

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ABSTRACT

Abstract here

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List of Abbreviations

OAH	Other Acronyms Here
SDSS	Sloan Digital Sky Survey
SN	Supernova
TLA	Three Letter Acronym
TWAA	TLA Within Another Acronym

or

Chapter title

Example reference to Section 1.1. Example reference to Figure 1.1. Example reference to Equation 1.1. Example reference to better Equation 1.2. Example reference to Table 1.1. Example reference to Table 1.2. Example parenthetical citation: (e.g Gosling, 1993, for example). Example textual citation to Gosling (1993). Example call of a Three Letter Acronym (TLA). Additionally, Other Acronyms Here (OAH). If you are referring to plural TLAs, it can also be done, and the glossary package will simply add an 's' to the end of the acronym. If you have something trickier, that can also be done. For example, if you have two Supernovae (SNe), as long as you define it in the main thesis.tex file, it comes out with the correct first usage plural. And if we want to refer to it again, we can (like here: SNe) and it will be plural (or it can be singular as well: SN). Here is an example of using a TLA Within Another Acronym (TWAA). Further uses look like TWAA. And using a symbol as an acronym can also be done, for example Sloan Digital Sky Survey (SDSS). I want SDSS to be italicized and I always forget, so I made it a command. Further information about the Glossaries package can be found at http://www.math.washington.edu/tex-archive/macros/latex/contrib/glossaries/glossar

CTAN site: http://ctan.org/tex-archive/macros/latex/contrib/glossaries where you can download and install the package. Also, that was an example of using the hyperref package and the url tag. As we can see, the hyperref package doesn't

at

the

always play nice with the margins of the document. I highly recommend checking every hyperref call you make at some point. When you print, the boxes don't show up, but it won't help with the page format. Setting breaklinks=True doesn't seem to help. So if you have this issue in your dissertation, I would recommend turning off the hyperref package. Hopefully that will help. Otherwise, take a look at the hyperref documentation.

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1.1 Second Section

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1.1.1 Subsection

Subsubsection

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$$R_L = \frac{mv_\perp}{qB} \tag{1.1}$$

Of course, I have to add my own equation, because the above equation doesn't pertain to me. The velocity dispersion of a galaxy cluster is defined as:

$$\sigma_r = \langle (v_r - \langle v_r \rangle)^2 \rangle^{1/2} \tag{1.2}$$

which only holds as long as the distribution is Gaussian, i.e.:

$$p(v_r) dv_r = \frac{1}{\sigma_r \sqrt[2]{2\pi}} e^{\frac{-(v_r - \langle v_r \rangle)^2}{2\sigma_r^2}} dv_r$$
(1.3)

where $p(v_r) dv_r$ is the probability that the velocity falls between v_r and $v_r + dv_r$. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent nec velit magna. In vehicula accumsan blandit. Duis vestibulum eros et ante posuere et pharetra nibh

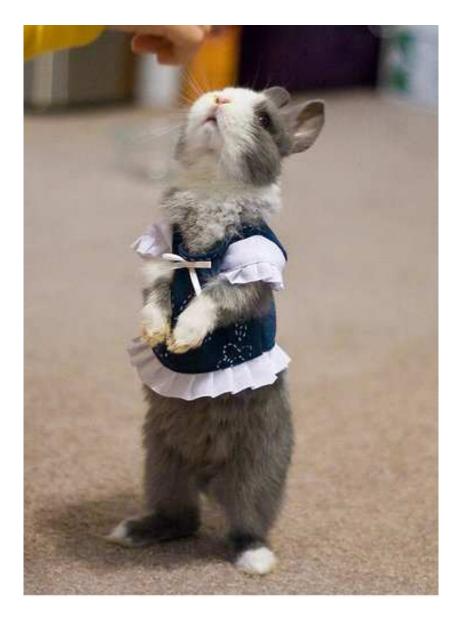


Fig. 1.1 Caption to be shown under the figure here

dapibus. Pellentesque quis nibh vestibulum urna fermentum convallis. Duis ultricies felis eget orci sodales sed varius ante facilisis. Vivamus nec lorem nulla. Donec id quam id arcu fringilla euismod. Etiam ullamcorper posuere ipsum, vel egestas ipsum bibendum faucibus. Proin volutpat dolor vel nulla egestas in ultricies mi pellentesque. Vivamus ut nulla ligula.

Here is an example of a deluxetable (Table 1.1). You can use deluxetable as long as you don't use the array package in the main thesis.tex file. The choice is yours. This is a very intricate deluxetable, with both numerical and alphabetical references. There are also tablecomments in addition to the table caption. The only issue with deluxetable is that if the table spans multiple pages, each page of the table gets added to the list of tables as a separate entry with the same name. This doesn't particularly bother me, but if it bothers you, the other option is to use longtable. An example longtable (provided by Susanna Finn) is shown below.

This is an example of the longtable table format in action (Table 1.2). There are lots of cool things it can do (except for mix alphabetical and numerical footnotes or do tablecomments), and I highly suggest reading up on it if you have further questions. Some relevant information is found at: http://www2.astro.psu.edu/gradinfo/psuthesis/longtable.html and at: http://texblog.org/2011/05/15/multi-page-tables-using-longtable/.

Table 1.1. Sources located in rich cluster environments

Source Name	Smpl^1	α	δ	m_r	M_r	S	Angle	$P_{1440 \text{ MHz}}$	FR^2	FR^3	z	$N_{1.0}^{-19}$	f_c
(1)	(2)	(3)	(4)	(mag) (5)	(mag) (6)	(mJy) (7)	(deg) (8)	$(W Hz^{-1})$ (9)	(10)	(11)	(12)	(13)	(14)
J002859.3 + 002000	S	00:28:59.38	+00:20:00.6	17.12	-23.40	19.8	169.5	2.77e + 24	I	I	0.222^{a}	61	1.00
J005625.7 - 011543	V	00:56:25.70	-01:15:43.0	13.36	-24.48	515.3	85.0	7.60e + 24	I	I	$0.078^{ m b}$	52	1.00
J005702.0 - 005230	A	00:57:02.07	-00:52:30.7	13.41	-23.11	72.5	147.2	3.29e + 23	I	I	0.044^{a}	53	1.00
J005702.1 - 005231	V	00:57:02.10	-00:52:31.0	13.41	-23.11	72.5	147.0	3.29e + 23	I	I	0.044^{a}	53	1.00
$\rm J010242.5\!-\!005032$	V	01:02:42.50	-00:50:32.0	17.46	-23.54	66.5	87.0	1.33e + 25	I	I	$0.261^{\rm b}$	64	1.00
J010456.5 + 000423	V	01:04:56.50	+00:04:23.0	18.26	-23.26	83.4	8.0	2.50e + 25	I	I	$0.312^{\rm b}$	206	1.37
J011403.1 - 011058	V	01:14:03.10	-01:10:58.0	16.90	-23.15	16.5	139.0	1.59e + 24	I	I	0.187^{a}	55	1.00
J011403.1 - 011057	A	01:14:03.15	-01:10:58.0	16.90	-23.15	16.5	138.9	1.59e + 24	I	I	0.187^{a}	55	1.00
J011633.3 - 092753	S	01:16:33.38	-09:27:53.3	18.17	-22.74	22.1	179.2	4.13e + 24	I	I	$0.253^{\rm b}$	47	1.00
J013503.8 + 011325	S	01:35:03.81	+01:13:25.3	18.90	-23.08	20.7	175.9	8.56e + 24	I	I	$0.359^{\rm b}$	122	1.91
J022736.7 - 005253	V	02:27:36.70	-00:52:53.0	20.26	-19.24	69.7	85.0	4.84e + 24	II	II?	$0.161^{\rm b}$	49	1.00
J023027.9 + 010847	A	02:30:27.96	+01:08:47.2	17.45	-23.65	130.9	87.8	2.77e + 25	I	I	0.267^{a}	103	1.05
J023028.1 + 010850	V	02:30:28.10	+01:08:50.0	17.45	-23.65	130.9	88.0	2.77e + 25	I	I	0.267^{a}	108	1.05
J030259.5 - 001136	V	03:02:59.50	-00:11:36.0	17.29	-22.38	63.8	97.0	4.23e + 24	I	I	0.158^{a}	49	1.00
J072244.7+302842	S	07:22:44.71	+30:28:42.4	19.38	-22.90	15.8	176.5	7.44e + 24	I	I	$0.380^{\rm b}$	106	2.47
J072248.4 + 412921	A	07:22:48.43	+41:29:21.2	15.60	-22.78	31.7	146.2	7.37e + 23	I	I	$0.097^{\rm b}$	42	1.00

Note. — A question mark in Col. 11 represents a dubious visual FR I/II classification. Three successive question marks represent an inability to visually cradio source as either FR I or II.

 $^{^{1}\}mathrm{The}$ sample each source belongs to: V = visual bent sample, A = auto bent sample, and S = straight sample.

 $^{^2\}mathrm{FR}$ type determined following Ledlow & Owen (1996).

 $^{^3{}m FR}$ type determined visually.

 $^{^{\}rm a}{\rm The}$ redshift comes from a spectroscopic measurement.

 $^{^{\}rm b}{\rm The}$ redshift comes from a photometric measurement.

 $^{^{\}mathrm{c}}$ The difference in redshift between the identified Abell cluster (from NED) and the radio cluster is greater than 1500 km s $^{-1}$.

 $^{^{\}rm d}{\rm The}$ Abell cluster does not have a confirmed redshift in NED.

Table 1.2: Fourth Quadrant IRDC Candidates Detected in CS

IRDC Candidate a	Coord	inates	Peak	Peak T_A^*	Velocity	FWHM	Int. Int. ^b	$R_{Gal}^{\ c}$	D_{near}^{c}
MSXDC	ℓ°	b°	Contrast	K	$km\ s^{-1}$	$km\ s^{-1}$	$K \mathrm{km} \mathrm{s}^{-1}$	kpc	kpc
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G282.28-00.73 (a)	282.29	-0.74	0.39	0.43	5.9	1.7	0.79	8.44	0.29
G287.17-00.38 (a)	287.18	-0.38	0.40	0.22	-21.3	1.2	0.28	8.12	2.51
G291.40-00.19 (a)	291.40	-0.19	0.76	0.57	-6.1	1.6	0.97	8.10	1.37
G293.34 -00.85 (a) *	293.35	-0.86	0.42	0.68	-27.6	1.4	1.02	7.80	3.37
G293.34 -00.85 (a) *	293.35	-0.86	0.42	0.30	-23.1	0.9	0.30	7.80	3.37
G305.51+00.76 (a)	305.52	0.77	0.36	0.70	-28.1	3.2	2.35	7.38	2.36
G306.57+00.34 (a)	306.58	0.34	0.39	0.13	-45.2	7.3	1.02	6.84	4.57
G306.65 - 00.21 (a)	306.67	-0.21	0.38	2.01	-27.4	1.0	2.04	7.39	2.22
G306.92-00.05 (a)	306.92	-0.06	0.45	1.05	-28.4	1.4	1.51	7.36	2.30
G308.39 - 00.18 (a)	308.40	-0.18	0.43	0.32	-25.0	2.0	0.69	7.45	1.94
G309.14-00.16 (a)	309.14	-0.15	0.52	0.46	-45.0	3.8	1.85	6.80	3.70

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IRDC Candidate a	Coord	inates	Peak	Peak T_A^*	Velocity	FWHM	Int. Int. ^b	$R_{Gal}^{\ c}$	$D_{near}^{\ c}$
MSXDC	ℓ°	b°	Contrast	K	$km\ s^{-1}$	$km\ s^{-1}$	$K \mathrm{km} \mathrm{s}^{-1}$	kpc	kpc
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G309.34 - 00.69 (a)	309.35	-0.71	0.36	0.35	-49.7	4.6	1.71	6.65	4.39
G309.42-00.64 (a)	309.42	-0.64	0.46	0.40	-42.2	3.1	1.32	6.88	3.33
G312.87-00.66 (a)	312.88	-0.66	0.35	0.27	-51.0	2.6	0.74	6.52	3.85
G313.70 -00.31 (a) *	313.68	-0.31	0.54	0.22	-39.4	2.3	0.51	6.89	2.76
G313.70 -00.31 (a) *	313.68	-0.31	0.54	0.30	-44.1	2.3	0.69	6.73	3.13
G313.70-00.31 (b)	313.70	-0.30	0.53	0.46	-44.2	4.2	2.05	6.73	3.14
G313.70-00.31 (c)	313.74	-0.30	0.44	0.80	-44.3	3.5	2.98	6.72	3.15
G313.79-00.26 (a)	313.80	-0.25	0.40	0.25	-42.5	4.2	1.13	6.78	3.00
G314.25+00.07 (a)	314.26	0.07	0.36	0.44	-51.6	3.1	1.45	6.46	3.77
G314.67+00.21 (a)	314.69	0.21	0.41	0.15	-44.1	4.2	0.65	6.70	3.08
G315.01-00.15 (a)	315.02	-0.16	0.48	0.23	-47.5	2.7	0.66	6.58	3.34
G316.44-00.65 (a)	316.44	-0.66	0.37	0.55	-43.8	3.4	2.00	6.67	2.98
G316.73+00.07 (a)	316.72	0.09	0.56	1.17	-38.5	4.3	5.02	6.85	2.60

Table 1.2 – Continued

IRDC Candidate ^a	Coord	inates	Peak	Peak T_A^*	Velocity	FWHM	Int. Int. ^b	$R_{Gal}^{\ c}$	D_{near}^{c}
MSXDC	ℓ°	b°	Contrast	K	$km\ s^{-1}$	$km\ s^{-1}$	$K \mathrm{km} \mathrm{s}^{-1}$	kpc	kpc
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G316.73+00.07 (b)	316.74	0.03	0.45	1.12	-37.8	6.4	7.59	6.87	2.55
G316.73+00.07 (c)	316.72	0.07	0.40	0.98	-38.9	4.1	4.28	6.83	2.63
G317.58+00.08 (a)	317.59	0.09	0.33	0.32	-45.8	3.2	1.08	6.56	3.08
G317.69+00.11 (a)	317.70	0.13	0.47	0.34	-43.1	4.5	1.63	6.65	2.89
G317.69+00.11 (b)	317.71	0.10	0.43	0.35	-43.2	4.5	1.67	6.65	2.90
G318.15 - 00.32 (a)	318.16	-0.34	0.36	0.41	-42.1	3.0	1.30	6.68	2.81
G318.71-00.78 (a)	318.73	-0.79	0.40	0.31	-49.0	2.5	0.81	6.41	3.28
G318.73+00.65 (a)	318.74	0.65	0.38	0.61	-44.0	2.3	1.45	6.59	2.93
G320.25+00.29 (a)	320.27	0.29	0.42	0.45	-32.1	2.2	1.07	6.99	2.13
G321.71+00.06 (a)	321.72	0.06	0.48	0.74	-32.2	3.0	2.38	6.95	2.14
G321.75+00.03 (a)	321.76	0.03	0.45	1.02	-32.1	3.1	3.31	6.95	2.13
G322.66+00.03 (a)	322.65	0.05	0.36	0.63	-64.3	2.8	1.73	5.71	4.30
G323.50+00.03 (a)	323.50	0.05	0.37	0.54	-67.8	1.9	1.11	5.56	4.53

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IRDC Candidate a	Coord	inates	Peak	Peak T_A^*	Velocity	FWHM	Int. Int. ^b	$R_{Gal}^{\ c}$	$D_{near}^{\ c}$
MSXDC	ℓ°	b°	Contrast	K	$km\ s^{-1}$	$km\ s^{-1}$	$K \mathrm{km} \mathrm{s}^{-1}$	kpc	kpc
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G323.71-00.28 (a)	323.72	-0.28	0.51	0.64	-48.9	3.1	2.01	6.22	3.20
G326.18-00.53 (a)	326.16	-0.53	0.39	0.19	-70.9	2.0	0.37	5.32	4.64
G326.37+00.44 (a)	326.42	0.50	0.36	1.00	-42.1	1.9	2.04	6.37	2.79
G326.49+00.87 (a)	326.49	0.88	0.41	0.59	-39.3	4.7	2.96	6.48	2.61
G326.78-00.12 (a)	326.77	-0.13	0.39	0.48	-56.4	4.6	2.35	5.78	3.69
G326.79+00.38 (a) *	326.80	0.39	0.49	0.18	-41.5	2.7	0.52	6.37	2.76
G326.79+00.38 (a) *	326.80	0.39	0.49	0.85	-20.4	2.6	2.33	7.31	1.47
G326.94 $-$ 00.16 (a) *	326.94	-0.17	0.44	0.23	-63.7	3.3	0.82	5.50	4.16
G326.94-00.16 (a) *	326.94	-0.17	0.44	0.39	-45.5	2.7	1.14	6.20	3.01
G326.95+00.56 (a)	326.96	0.58	0.42	0.41	-42.1	1.9	0.82	6.34	2.80
G326.98-00.02 (a)	326.98	-0.03	0.39	0.20	-55.8	13.1	2.80	5.79	3.66
G327.20+00.25 (a)	327.22	0.26	0.36	0.32	-52.4	2.6	0.83	5.90	3.45
G327.24-00.31 (a)	327.21	-0.22	0.33	0.17	-60.0	7.3	1.23	5.62	3.92

Table 1.2 – Continued

IRDC Candidate a	Coord	linates	Peak	Peak T_A^*	Velocity	FWHM	Int. Int. ^b	$R_{Gal}^{\ c}$	D_{near}^{c}
MSXDC	ℓ°	b°	Contrast	K	$km\ s^{-1}$	$km\ s^{-1}$	$K \mathrm{km} \mathrm{s}^{-1}$	kpc	kpc
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G327.41 - 00.73 (a)	327.39	-0.74	0.42	0.51	-37.2	3.0	1.60	6.53	2.50
G327.88 -00.55 (a) *	327.86	-0.58	0.39	0.32	-46.8	3.1	1.05	6.09	3.11
G327.88-00.55 (a) *	327.86	-0.58	0.39	0.38	-66.6	4.4	1.75	5.35	4.34
G327.93+00.45 (a)	327.90	0.43	0.44	0.28	-45.6	2.9	0.84	6.14	3.04
G327.98-00.70 (a)	327.99	-0.71	0.36	0.33	-40.9	3.4	1.18	6.34	2.75
G328.03-00.48 (a)	328.05	-0.47	0.37	0.45	-47.1	2.3	1.09	6.07	3.13
G328.06-00.28 (a)	328.09	-0.32	0.38	0.34	-43.2	3.9	1.42	6.23	2.89
G328.13-00.42 (a)	328.13	-0.43	0.39	0.53	-44.2	3.0	1.67	6.19	2.95
G328.20-00.35 (a)	328.25	-0.41	0.47	1.00	-37.9	2.5	2.62	6.46	2.56
G328.25-00.51 (a)	328.25	-0.52	0.50	3.00	-45.2	5.8	18.52	6.14	3.02
G328.80+00.64 (a) *	328.79	0.62	0.43	0.29	-103.0	3.4	1.03	4.40	7.27
G328.80+00.64 (a) *	328.79	0.62	0.43	1.63	-41.7	2.9	5.01	6.26	2.82
G329.02-00.21 (a)	329.03	-0.20	0.50	1.50	-43.7	8.0	12.77	6.17	2.94

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IRDC Candidate a Peak Peak T_A^* FWHM Int. Int.^b $R_{Gal}^{\ c}$ $D_{near}^{\ c}$ Coordinates Velocity Contrast MSXDC ℓ° b° K $km\ s^{-1}$ $K{\rm km\,s^{-1}}$ $km\ s^{-1}$ kpckpc(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)G329.06-00.30 (a) 329.05 -0.310.460.68-43.96.4 4.626.152.96 G329.41-00.73 (a) 329.40 -0.746.440.370.25-37.10.90.252.54G329.65 - 00.38 (a) 329.66 0.460.26 -33.51.3 6.602.32 -0.420.35G329.67+00.85 (a) -48.5329.670.820.470.203.5 0.715.92 3.26 G330.37 - 00.03 (a) 330.35 -0.030.460.16-40.98.9 1.506.21 2.81 G330.87+00.19 (a) 330.770.26-43.82.3 6.063.01 0.440.230.58G331.19-00.30 (a) 331.20 -0.280.360.68-47.43.0 2.15 5.87 3.24 -43.1G331.24-00.43 (a) 331.23 -0.420.450.264.1 1.15 6.06 2.98 G331.34+00.13 (a) 331.38 0.150.440.36 -44.85.4 5.97 3.09 1.91 G331.64+00.51 (a) 331.63 0.41-52.23.3 0.500.451.58 5.643.55G332.15+00.58 (a) 332.20 0.630.460.37-38.82.3 0.836.202.75G332.16+00.01 (a) 332.20 -48.42.83 -0.050.480.733.9 5.76 3.34 G332.45 - 00.38 (a) 332.45 0.39 0.19-41.61.7 0.346.05 2.94 -0.39

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IRDC Candidate a Coordinates Peak Peak T_A^* Velocity FWHM Int. Int.^b $R_{Gal}^{\ c}$ $D_{near}^{\ c}$ Contrast MSXDC ℓ° b° K $km\ s^{-1}$ $K {\rm km \, s^{-1}}$ $km\ s^{-1}$ kpckpc(2)(1)(3)(4)(5)(6)(7)(8)(9)(10)G332.64+00.27 (a) 332.650.270.410.13-50.44.6 0.655.643.48 G332.92-00.75 (a) * 3.2 5.473.70 332.92 -0.710.410.15-53.90.50G332.92-00.75 (a) * 332.92 0.41 0.17-2.52.0 0.33 8.13 0.42-0.71G333.21+00.27 (a) 333.21 0.290.38 2.9 3.42 0.46-49.01.40 5.66G333.54+00.03 (a) * 333.52 0.050.350.13-41.56.9 0.925.98 2.98 G333.54+00.03 (a) * 0.050.350.21-49.93.7 5.60 3.49 333.520.78G333.65+00.37 (a) 333.68 0.370.440.61-34.52.8 1.81 6.33 2.54333.77 2.6 G333.76+00.33 (a) 0.340.480.38-33.31.06 6.39 2.46 G333.97+00.17 (a) 333.96 0.170.510.25-46.62.1 5.713.32 0.52G334.19-00.19 (a) 334.20 0.37-47.85.64 3.40 -0.200.354.71.75G334.45-00.02 (a) 334.44 -0.020.350.16-31.73.2 0.526.43 2.39 G334.45-00.02 (b) 334.46 -0.030.340.27-31.72.0 0.556.43 2.39 G334.45-00.02 (c) * 334.41 -0.020.310.16-43.92.2 0.36 5.80 3.17

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IRDC Candidate a	Coord	inates	Peak	Peak T_A^*	Velocity	FWHM	Int. Int. ^b	$R_{Gal}^{\ c}$	$D_{near}^{\ c}$
MSXDC	ℓ°	b°	Contrast	K	$km\ s^{-1}$	$km\ s^{-1}$	$K \mathrm{km} \mathrm{s}^{-1}$	kpc	kpc
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G334.45-00.02 (c) *	334.41	-0.02	0.31	0.19	-32.1	1.9	0.35	6.41	2.41
G334.70+00.02 (a)	334.70	0.03	0.27	0.27	-85.1	3.0	0.80	4.31	5.36
G335.10-00.40 (a)	335.07	-0.43	0.45	0.35	-38.5	3.4	1.18	6.02	2.87
G335.27 -00.33 (a) *	335.23	-0.32	0.49	0.15	-44.2	2.1	0.33	5.72	3.24
G335.27 -00.33 (a) *	335.23	-0.32	0.49	0.67	-39.8	2.5	1.63	5.94	2.96
G335.30-00.08 (a) *	335.28	-0.14	0.50	0.59	-44.9	3.5	2.20	5.69	3.28
G335.30-00.08 (a) *	335.28	-0.14	0.50	0.18	-38.8	3.9	0.74	5.99	2.90
G335.58-00.28 (a)	335.59	-0.29	0.55	2.00	-46.8	5.0	10.65	5.57	3.41
G337.16-00.38 (a)	337.13	-0.38	0.61	0.48	-40.9	3.0	1.46	5.73	3.15
G337.16-00.38 (b) *	337.19	-0.40	0.42	0.34	-19.7	1.7	0.58	6.98	1.68
G337.16-00.38 (b) *	337.19	-0.40	0.42	0.38	-40.6	3.0	1.15	5.74	3.14
G337.22+00.64 (a)	337.24	0.63	0.39	0.21	-44.9	1.6	0.36	5.52	3.41
G337.36-00.34 (a)	337.40	-0.40	0.35	0.32	-55.3	0.8	0.25	5.05	4.00

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IRDC Candidate a Peak Peak T_A^* FWHM Int. Int.^b $R_{Gal}^{\ c}$ $D_{near}^{\ c}$ Coordinates Velocity Contrast MSXDC ℓ° b° K $km\ s^{-1}$ $K{\rm km\,s^{-1}}$ $km\ s^{-1}$ kpckpc(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)G337.49 - 00.19 (a) 337.50 -0.190.29 0.26-54.31.8 0.475.08 3.95 G337.51-00.10 (a) 5.06 337.54 -0.080.470.24-54.71.3 0.323.98 G338.34+00.60 (a) 338.340.41-59.53.9 2.37 4.80 4.270.610.58G338.61-00.45 (a) -38.73.12 338.61 -0.440.380.231.8 0.455.71G338.86-00.48 (a) 338.86 -0.480.420.31-36.93.1 1.03 5.79 3.02 G338.92-00.42 (a) 338.93 0.39 0.21-38.42.3 3.12 -0.420.525.70 G339.32-00.47 (a) 339.35 -0.460.360.43-36.12.9 1.30 5.79 3.01 -38.13.7 G339.36 - 00.42 (a) 339.33 -0.410.400.361.35 5.67 3.14 G340.09 - 00.84 (a) 340.09 0.38 -31.51.9 0.985.99 2.74 -0.860.51G340.20-00.21 (a) 340.22 0.41 -52.85.8 3.25 4.874.07-0.170.56G340.40-00.43 (a) 340.39 -0.400.39 0.38 -46.55.8 2.20 5.13 3.75 G340.69 - 00.94 (a) 340.72 -28.72.2 2.416.12 -0.960.41 1.052.59G341.88+00.38 (a) 341.890.390.36 0.15-39.94.5 0.745.30 3.49

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IRDC Candidate a Coordinates Peak Peak T_A^* FWHM Int. Int.^b R_{Gal}^{c} D_{near}^{c} Velocity Contrast MSXDC ℓ° b° K $km\ s^{-1}$ $K {\rm km \, s^{-1}}$ $km\ s^{-1}$ kpckpc(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)G341.94-00.17 (a) 341.94 0.430.47-42.05.2 2.455.183.63 -0.18G342.18+00.49 (a) 2.52342.20 0.510.360.13-26.23.8 0.526.15G342.54+00.16 (a) 342.570.170.400.34-41.62.6 0.965.12 3.66 G342.67+00.11 (a) 342.68 0.120.39 0.46-41.93.7 1.81 5.093.70 G343.49 - 00.39 (a) 343.48 -0.410.530.70-28.82.6 1.80 5.81 2.87 G343.77-00.15 (a) * 1.21 -28.92.2 2.675.76 2.91 343.75-0.160.54G343.77-00.15 (a) * 343.75-0.160.540.57-25.88.5 4.846.002.65-26.42.71 G343.77 - 00.15 (b) 343.73-0.180.450.463.5 1.62 5.95 G343.92-00.09 (a) 343.94 0.370.22 -23.24.4 6.19 2.45-0.081.00 G345.02-00.23 (a) 345.05 0.48-27.43.7 2.94-0.210.331.24 5.71G345.02-00.23 (b) 344.99 -0.220.470.31-26.34.51.39 5.80 2.84G345.29+00.00 (a) 345.29 0.36 -18.72.3 2.17-0.000.490.846.42 G345.68+00.31 (a) 345.680.320.480.33 -17.62.5 0.826.48 2.11

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IRDC Candidate a Coordinates Peak Peak T_A^* Velocity FWHM Int. Int.^b R_{Gal}^{c} D_{near}^{c} Contrast MSXDC ℓ° b° K $km\ s^{-1}$ $K {\rm km \, s^{-1}}$ $km\ s^{-1}$ kpckpc(2)(1)(3)(4)(5)(6)(7)(8)(9)(10)G345.71-00.33 (a) 345.77-0.250.420.25-36.71.5 0.404.973.74G346.36 - 00.65 (a) 346.36 5.6 1.0 8.96 -0.650.480.991.02 ... G348.13+00.74 (a) 348.120.750.400.48-7.11.3 7.38 1.15 0.65G348.28+00.64 (a) * 348.29 0.38 -28.25.12 0.640.361.0 0.383.50 G348.28+00.64 (a) * 348.290.640.38 0.63-7.42.2 1.44 7.34 1.19 G348.31+00.70 (a) 348.320.710.390.20-6.51.5 0.31 7.45 1.08 G348.34+00.64 (a) * 348.350.650.380.29-7.61.2 0.377.30 1.23 G348.34+00.64 (a) * -28.51.4 348.350.650.380.380.575.09 3.54G348.40+00.47 (a) 348.400.480.470.72-6.82.9 2.07 7.41 1.12 G350.08 - 00.98 (a) 3.24 350.08 0.420.39-21.72.1 0.855.34 -0.98G350.92+00.74 (a) 350.92 0.740.60 0.48-4.13.8 1.80 7.60 0.91G350.93+00.66 (a) 350.93 0.37-4.32.2 0.82 7.16 1.36 0.660.50G351.00+00.99 (b) 350.99 0.880.36 0.39-4.81.0 0.387.481.04

Table 1.2 – Continued

IRDC Candidate ^a	Coord	inates	Peak	Peak T_A^*	Velocity	FWHM	Int. Int. ^b	$R_{Gal}^{\ c}$	D_{near}^{c}
MSXDC	ℓ°	b°	Contrast	K	$km\ s^{-1}$	$km\ s^{-1}$	$K \mathrm{km}\mathrm{s}^{-1}$	kpc	kpc
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
G351.52+00.69 (a)	351.52	0.69	0.39	1.18	-2.8	4.6	5.78	7.78	0.73
G351.56+00.61 (a)	351.57	0.60	0.40	0.98	-2.7	2.7	2.81	7.78	0.73
G351.77-00.51 (a)	351.79	-0.51	0.54	0.69	-3.1	4.9	3.41	7.70	0.81
G351.86+00.65 (a)	351.86	0.66	0.37	0.75	-1.8	4.2	3.35	7.93	0.57
G352.10+00.71 (a)	352.12	0.73	0.51	0.41	0.8	5.6	2.31	8.43	0.07
G352.10+00.71 (b)	352.07	0.69	0.46	0.53	0.6	2.5	1.34	8.40	0.10
G352.54+00.71 (a)	352.51	0.78	0.43	0.57	-1.2	3.3	1.99	8.02	0.48
G353.37-00.33 (a)	353.39	-0.34	0.43	1.00	-17.6	5.5	5.86	4.91	3.63
G353.51+00.59 (a)	353.50	0.67	0.44	0.63	-3.1	4.4	2.95	7.56	0.95
G353.51+00.59 (b)	353.50	0.58	0.41	0.49	-5.5	1.7	0.87	7.03	1.48
G353.90+00.25 (a)	353.85	0.23	0.62	0.77	3.8	2.6	2.08	9.35	
G353.90+00.25 (b)	353.95	0.24	0.59	0.63	2.8	2.5	1.71	9.06	
G353.90+00.25 (c)	353.92	0.25	0.50	0.43	3.1	3.2	1.48	9.15	

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IRDC Candidate a Peak Peak T_A^* Velocity FWHM Int. Int.^b R_{Gal}^{c} D_{near}^{c} Coordinates Contrast MSXDC ℓ° b° K $km\ s^{-1}$ $K{\rm km\,s^{-1}}$ $km\ s^{-1}$ kpckpc(1)(2)(3)(4)(5)(6)(7)(8)(9)(10)354.36G354.38+00.21 (a) 0.260.480.253.4 2.9 0.799.35... G355.17-00.33 (a) 7.32 355.18-0.410.400.91-3.15.75.46 1.19 G355.19 - 00.48 (a) 355.20 0.350.22 -5.12.3 6.72 1.79 -0.490.54G355.20-00.65 (a) -0.88.04 355.21-0.660.41 0.324.01.36 0.47G355.26-00.23 (a) 355.28 -0.200.420.38-0.72.9 1.17 8.05 0.45G355.40+00.10 (a) 355.41 0.100.390.754.6 3.1 2.47 10.55... G355.66+00.08 (a) 355.68 0.09 0.390.414.21.3 0.5710.34 ... 2.7 2.88 G356.40+00.01 (a) 356.41 0.030.570.33-6.90.955.63 G356.50+00.20 (a) 356.480.19 0.490.79-5.52.4 1.99 6.07 2.43 G356.51-00.43 (a) 356.54 0.36-18.23.18 5.35 -0.431.00 1.4 1.53G356.86 - 00.01 (a) 356.86 -0.000.431.69 -8.82.9 5.26 4.81 3.70 G357.07 - 00.78 (a) 357.07 3.7 1.2 0.84-0.780.430.6812.77... G358.06-00.47 (a) * 358.06 -0.470.39 0.21 9.5 1.6 0.37...

Table 1.2 – Continued

IRDC Candidate a	Coordinates		Peak	Peak T_A^*	Velocity	FWHM	Int. Int. ^b	$R_{Gal}^{\ c}$	D_{near}^{c}
MSXDC	ℓ°	b°	Contrast	K	$km\ s^{-1}$	$km\ s^{-1}$	$K \mathrm{km} \mathrm{s}^{-1}$	kpc	kpc
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
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G358.06 -00.47 (a) *	358.06	-0.47	0.39	0.30	-5.8	2.2	0.68	4.65	3.85
G358.52-00.25 (a)	358.50	-0.24	0.40	0.22	-26.0	3.5	0.82	1.48	7.04
G358.70-00.22 (a)	358.72	-0.24	0.27	0.20	-34.3	20.3	4.34	1.06	7.46
G358.97+00.08 (a)	358.98	0.08	0.47	0.76	-2.6	2.1	1.67	5.04	3.46
G359.20-00.20 (a)	359.21	-0.21	0.38	0.18	-17.5	15.8	3.04	1.23	7.28
G359.28+00.02 (a)	359.30	0.03	0.38	0.88	-1.3	2.1	1.96	5.63	2.87
G359.31+00.28 (a)	359.32	0.29	0.42	0.35	0.7	2.9	1.09	10.37	•••
G359.34-00.41 (a)	359.36	-0.42	0.23	0.42	13.8	1.5	0.67	•••	•••
G359.60-00.22 (a)	359.61	-0.23	0.36	1.40	19.0	3.4	5.03		•••
G359.91+00.17 (a) $*$	359.94	0.17	0.58	0.90	-0.9	6.0	5.75	1.60	6.90
G359.91+00.17 (a) $*$	359.94	0.17	0.58	0.41	15.2	2.0	0.88		

 $[^]a\mathrm{An}$ asterisk (*) denotes IRDCs with more than one detected velocity component.

Table 1.2 – Continued

IRDC Candidate a	Coordinates		Peak	Peak T_A^*	Velocity	FWHM	Int. Int. ^b	$R_{Gal}^{\ c}$	$D_{near}^{\ c}$
MSXDC	ℓ°	b°	Contrast	K	$km\ s^{-1}$	$km\ s^{-1}$	$K \mathrm{km} \mathrm{s}^{-1}$	kpc	kpc
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

 $[^]b$ Integrated Intensity

 $[^]c\mathrm{An}$ ellipsis $(\cdot\cdot\cdot)$ denotes IRDCs for which a kinematic distance could not be determined.

Chapter 2 Title

2.1 This Section Title

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2.1.1 Subsection

Chapter 3 Title

3.1 This Section Title

Chapter 4 Title

4.1 This Section Title

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4.1.1 Subsection

Chapter 5 Title

5.1 This Section Title

List of Journal Abbreviations

Ann. Geophys. Annales Geophysicae

Appl. Opt. Applied Optics

Astron. Astrophys. Astronomy and Astrophysics

Astrophys. J. Astrophysical Journal

Astrophys. J. Lett. Astrophysical Journal Letters

Geophys. Monogr. Geophysical Monograph

Geophys. Res. Lett. Geophysical Research Letters

J. Atmos. Solar Terr. Phys. Journal of Atmospheric and

Solar-Terrestrial Physics

J. Geophys. Res. Journal of Geophysical Research

Mon. Not. R. Astron. Soc. Monthly Notices of the Royal

Astronomical Society

Nucl. Instrum. Methods

Nuclear Instruments and Methods

Phys. Rev. Physical Review

Rev. Geophys. Space Phys. Reviews of Geophysics and Space Physics

Sol. Phys. Solar Physics

Space Sci. Rev. Space Science Reviews

Space Wea. J. Space Weather Journal

References

Gosling, J. T. 1993, J. Geophys. Res., 98, 18937

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