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Zwicky Galaxy Cluster 1400+0949

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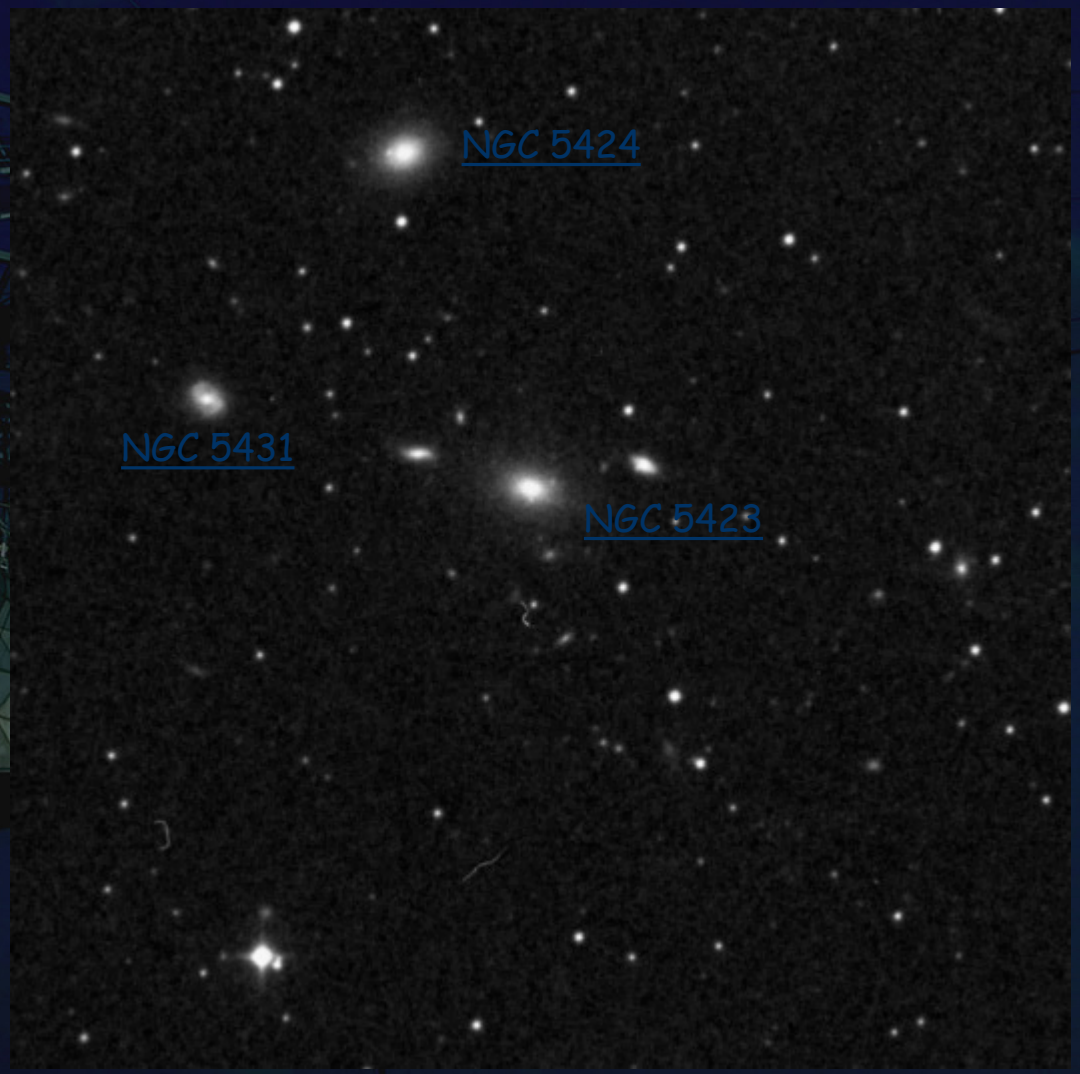
Original POSS Red Plate

- $14^h02^m48^s$ +09°19′48″ (J2000)

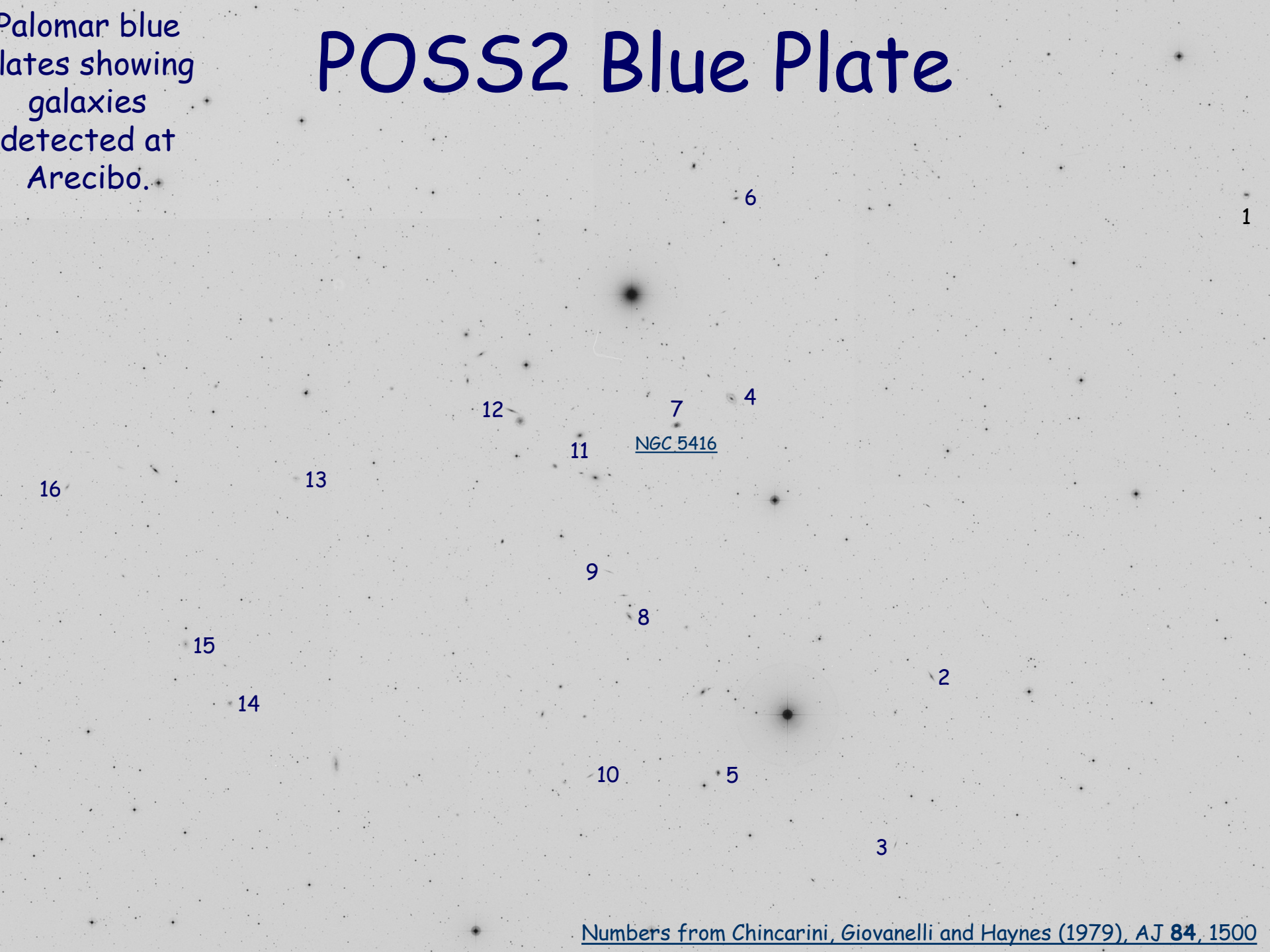


1′

Zwicky, Herzog, Wild, Karpowicz & Kowal, 1961-1968. Catalog of Galaxies and Clusters of Galaxies, Vols. 1-6. Pasadena: California Institute of Technology

Palomar blue plates showing galaxies detected at Arecibo.

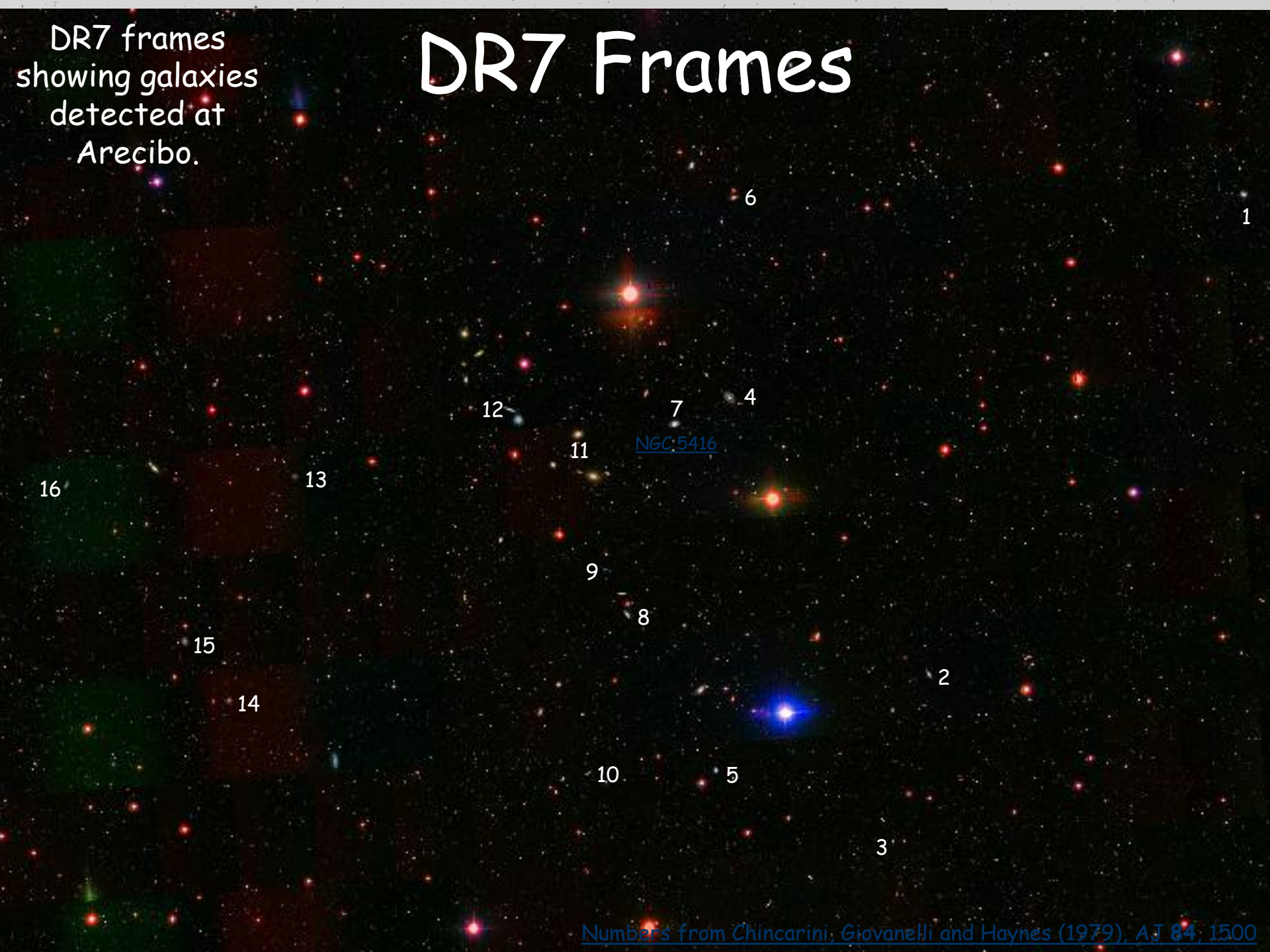
POSS2 Blue Plate



Numbers from Chincarini, Giovanelli and Haynes (1979), AJ **84**, 1500

DR7 Frames

DR7 frames showing galaxies detected at Arecibo.



Numbers from Chincarini, Giovanelli and Haynes (1979), AJ 84, 1500

POSS Blue Plate

Arecibo Observations 1978

Palomar blue plate showing galaxies detected at Arecibo.

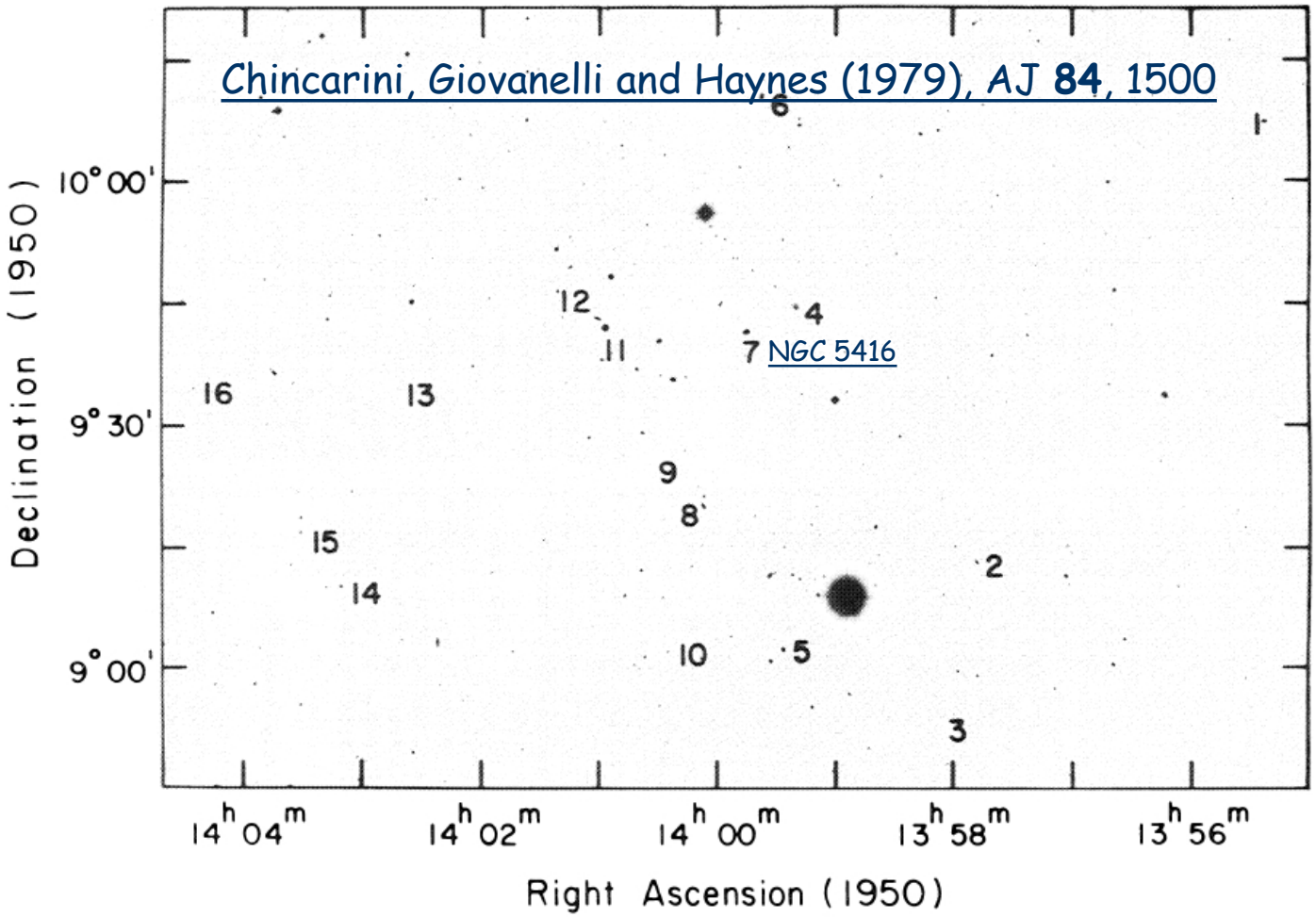
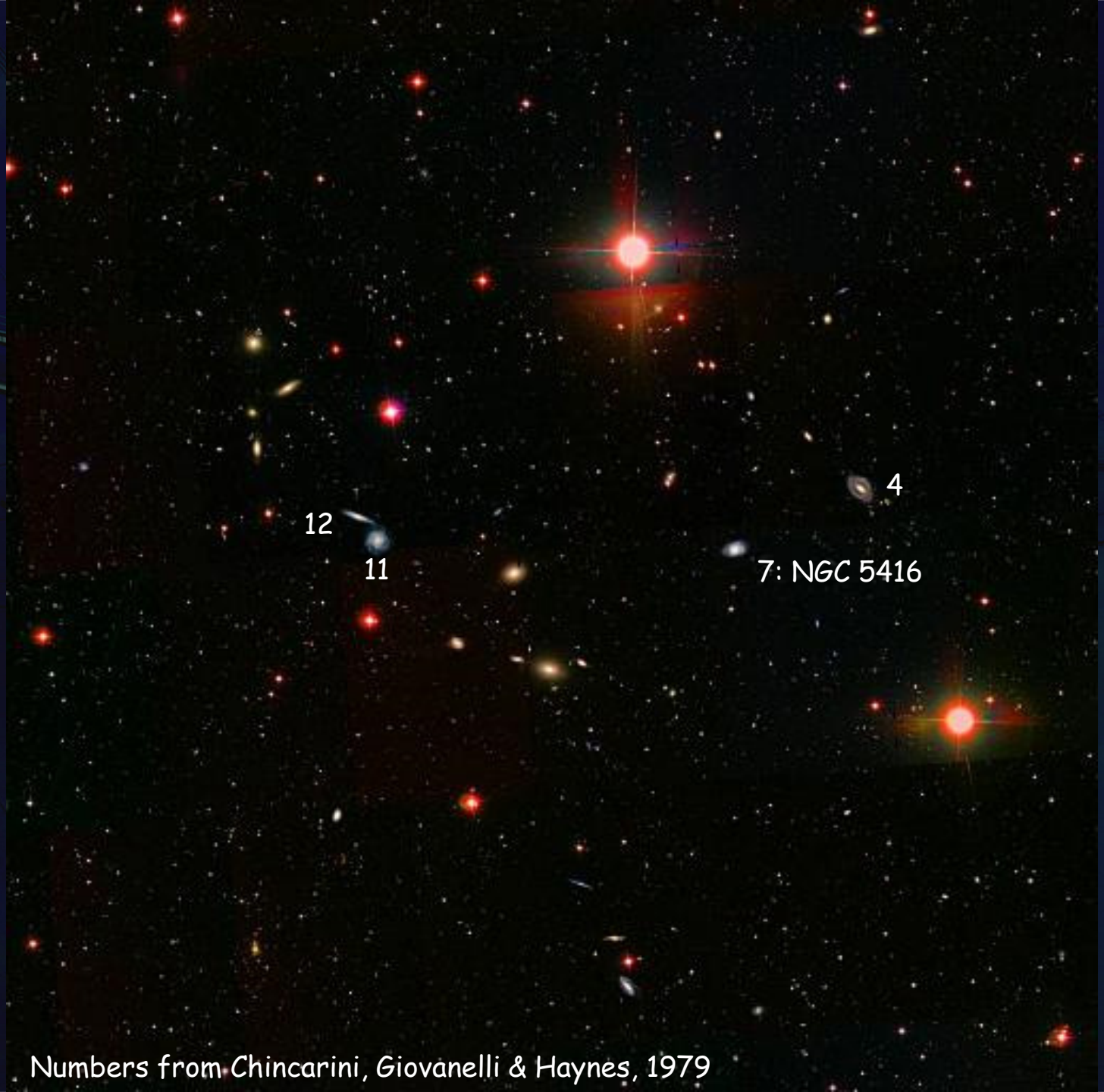


FIG. 1. An enlargement of the Palomar Observatory Sky Survey blue print is shown, and the detected galaxies are indicated by their program number, as coded in Table I. NGC 5416 is galaxy number 7.

SDSS Image

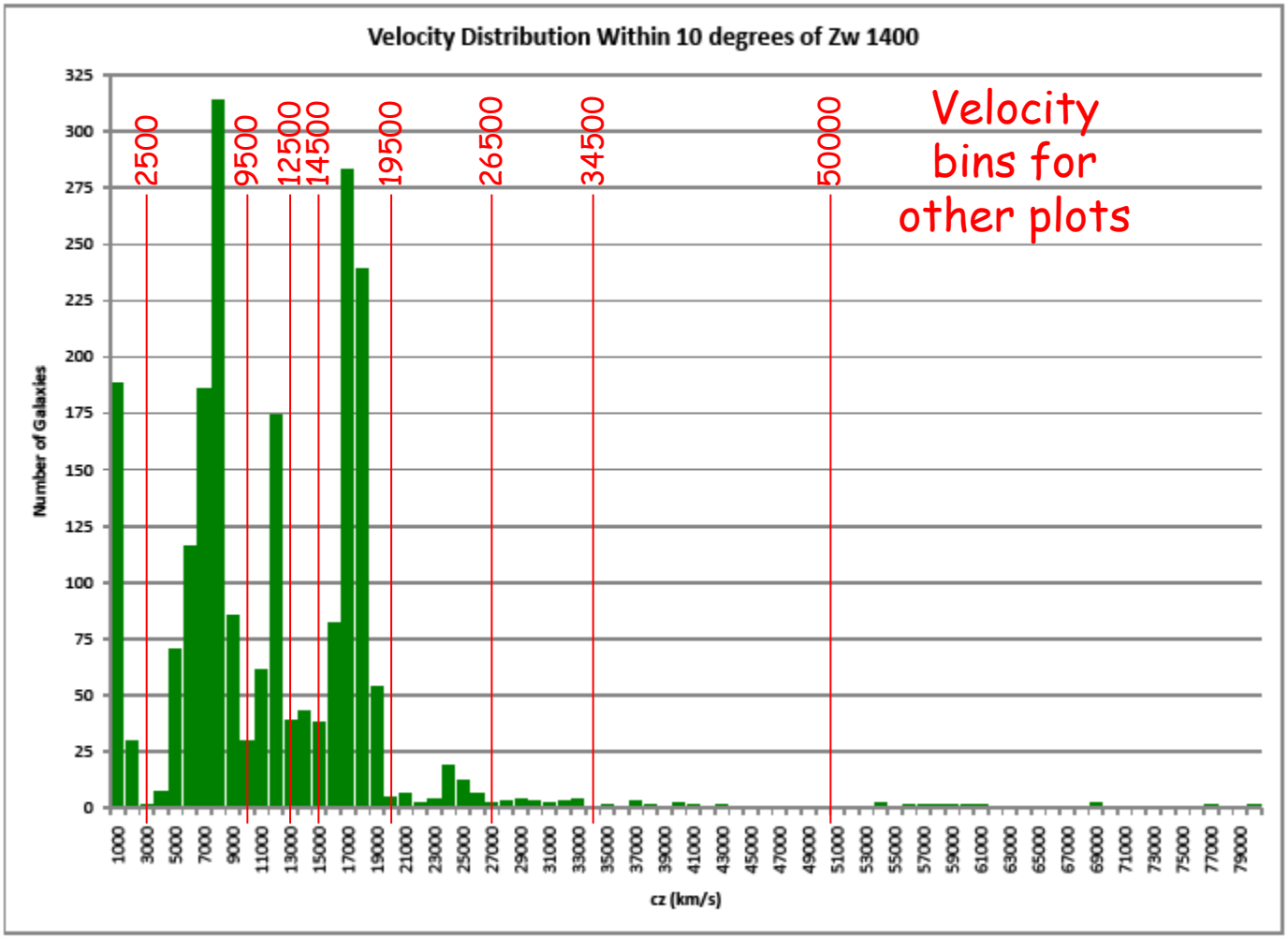
$14^h02^m48^s$ +09°19′48″ (J2000)



Numbers from Chincarini, Giovanelli & Haynes, 1979

Velocity Histogram

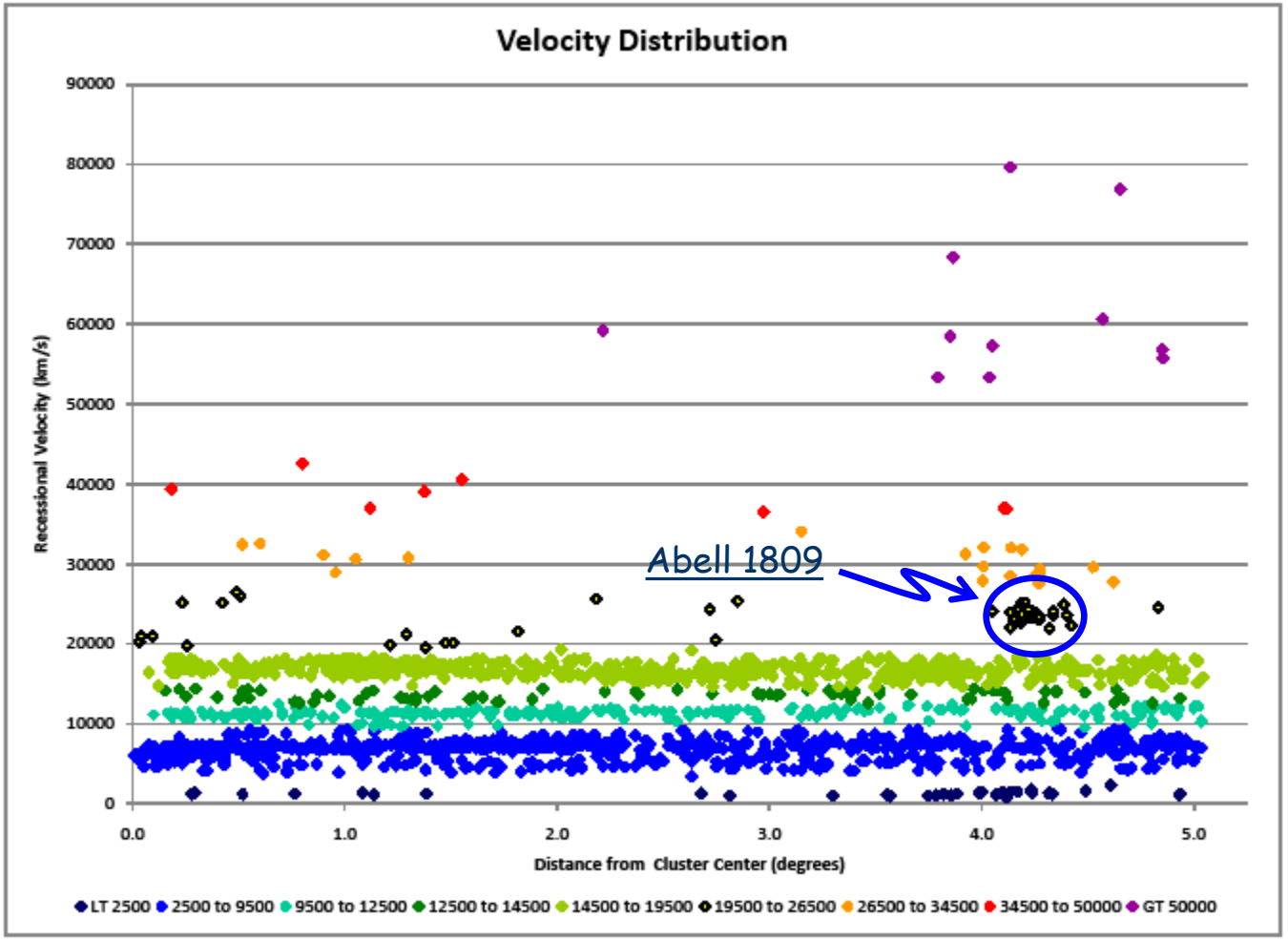
ALFALFA Zw1400b Histogram AOD 7/13/2010



SLU Physics Department

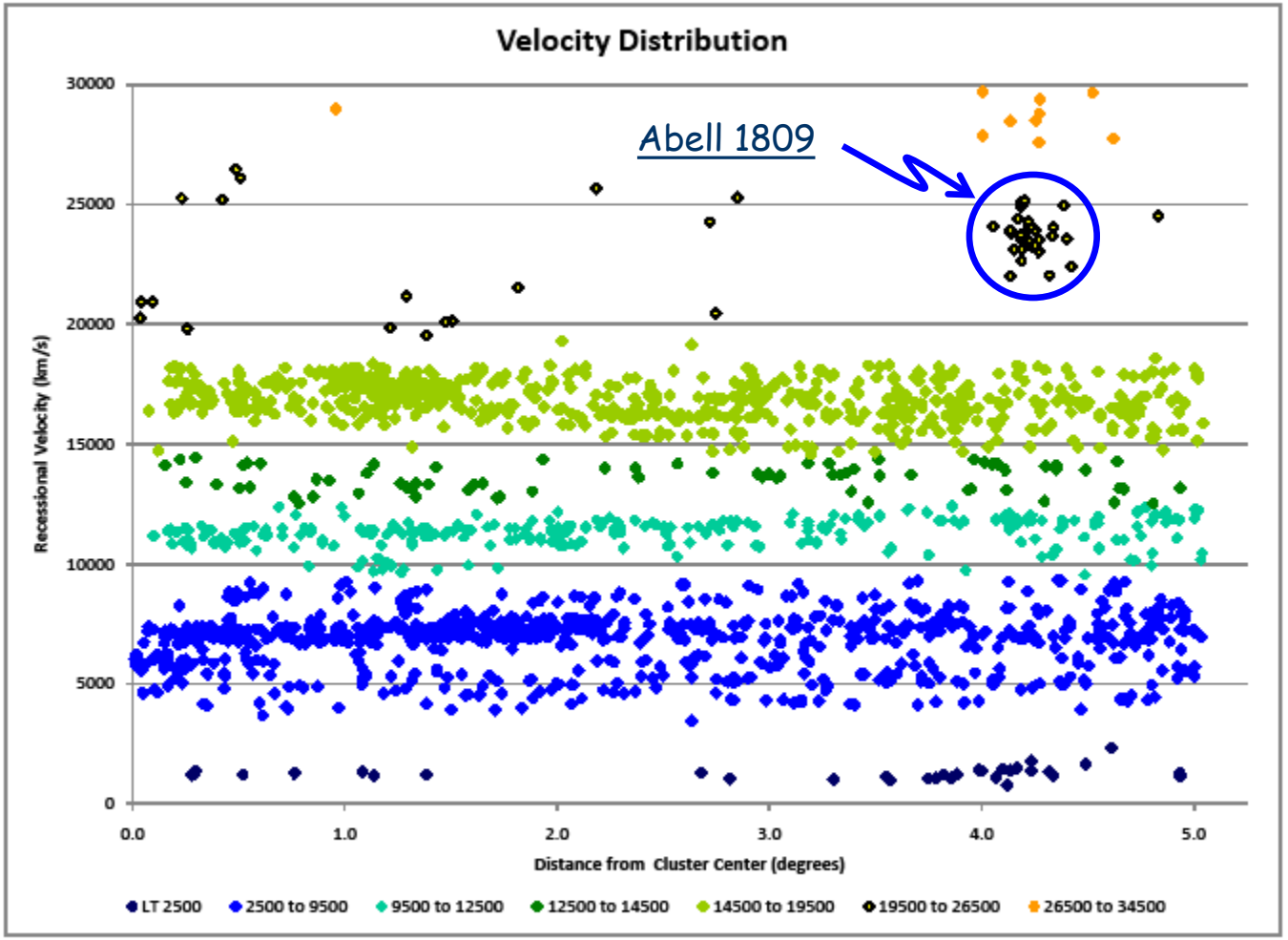
Velocity & Radial Distance

ALFALFA Zw Cl 1400.4+0949 AOD 7/13/2010

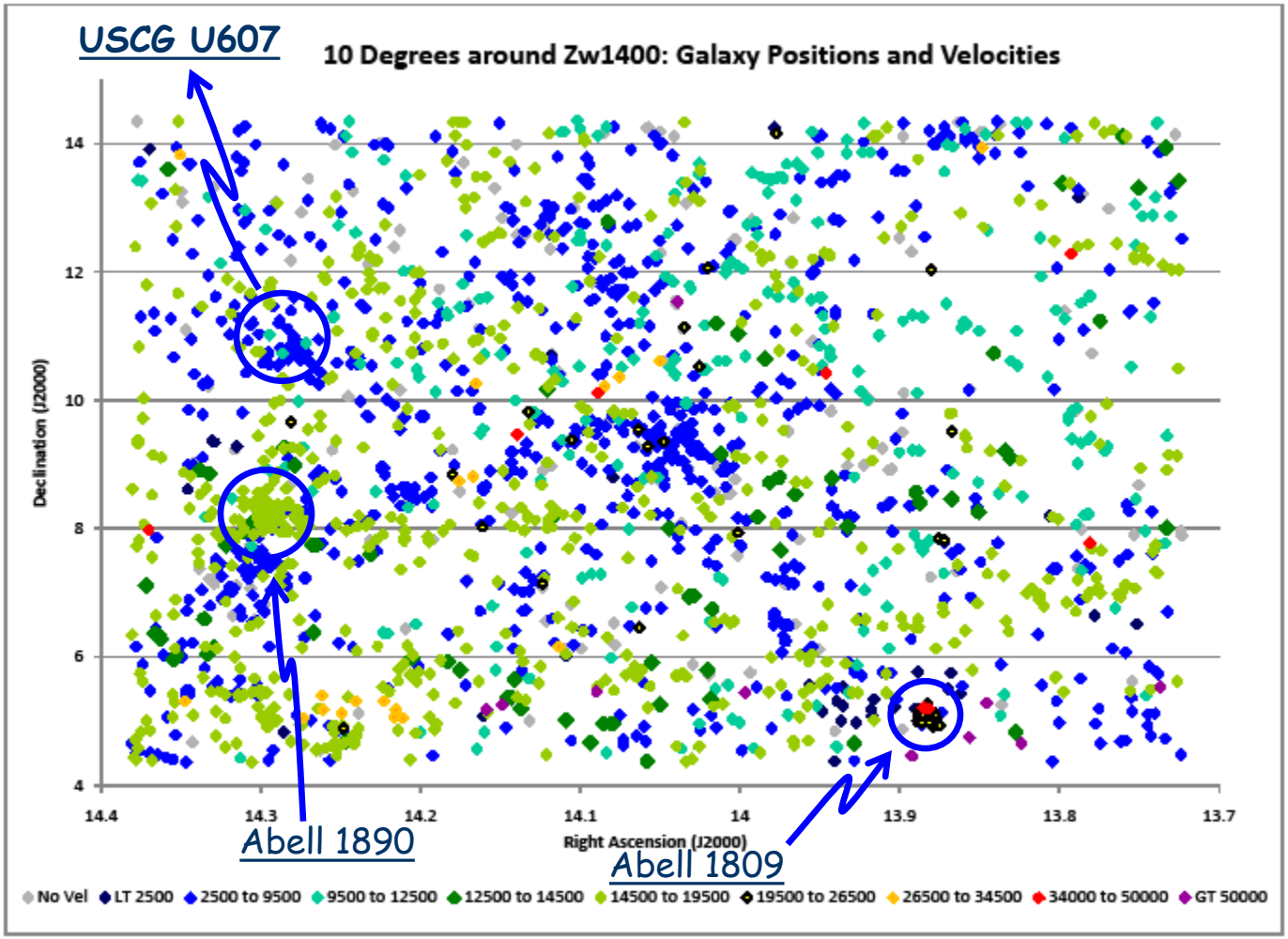


SLU Physics Department

Velocity & Radial Distance

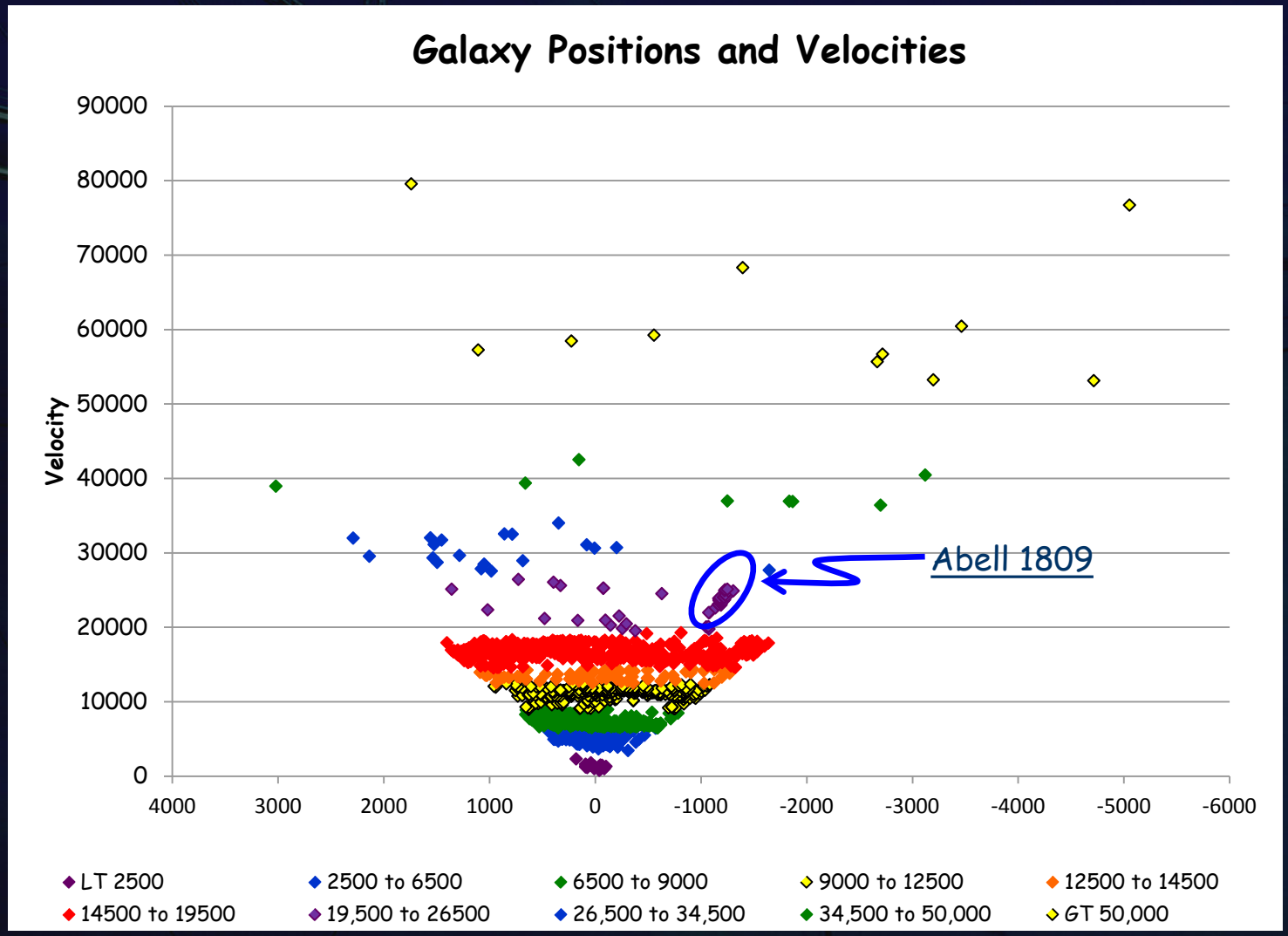


Sky Position with Velocity



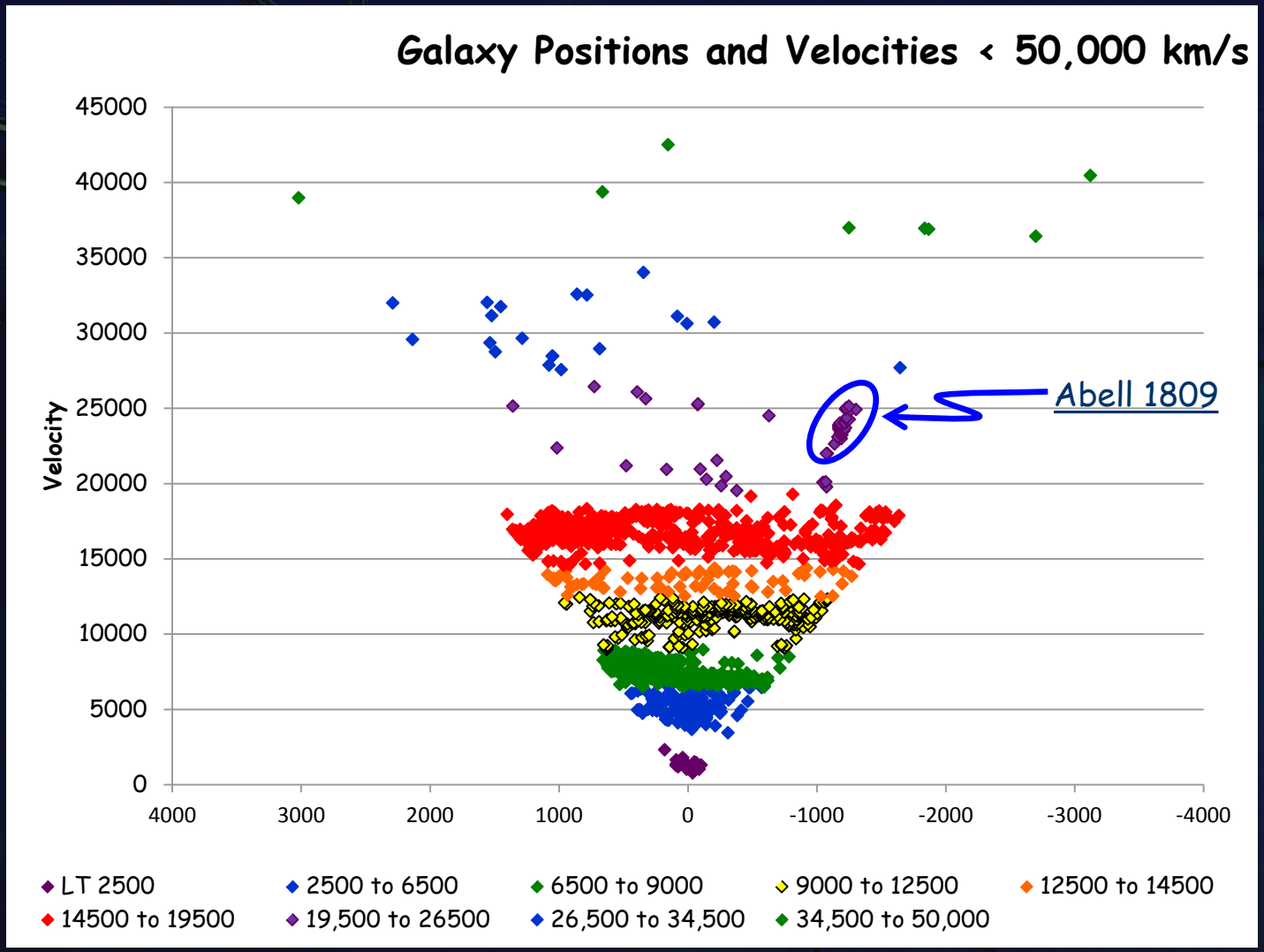
Wedge Plot

- Taking $z = r$, $x = r\sin(\alpha - 14.075^h)$, $y = r\cos(\alpha - 14.075^h)$



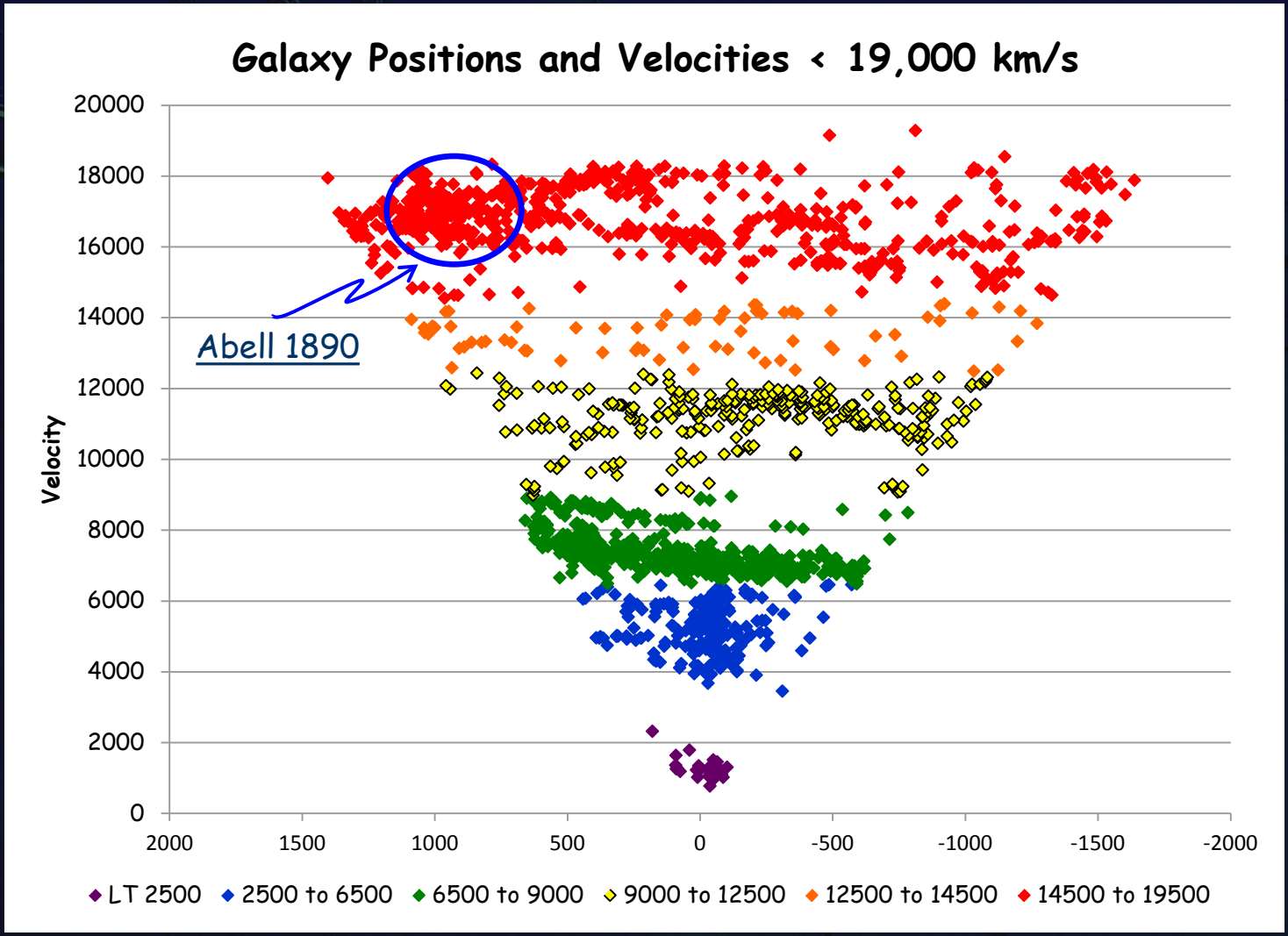
Wedge Plot

- Taking $z = r$, $x = r\sin(\alpha - 14.075^h)$, $y = r\cos(\alpha - 14.075^h)$



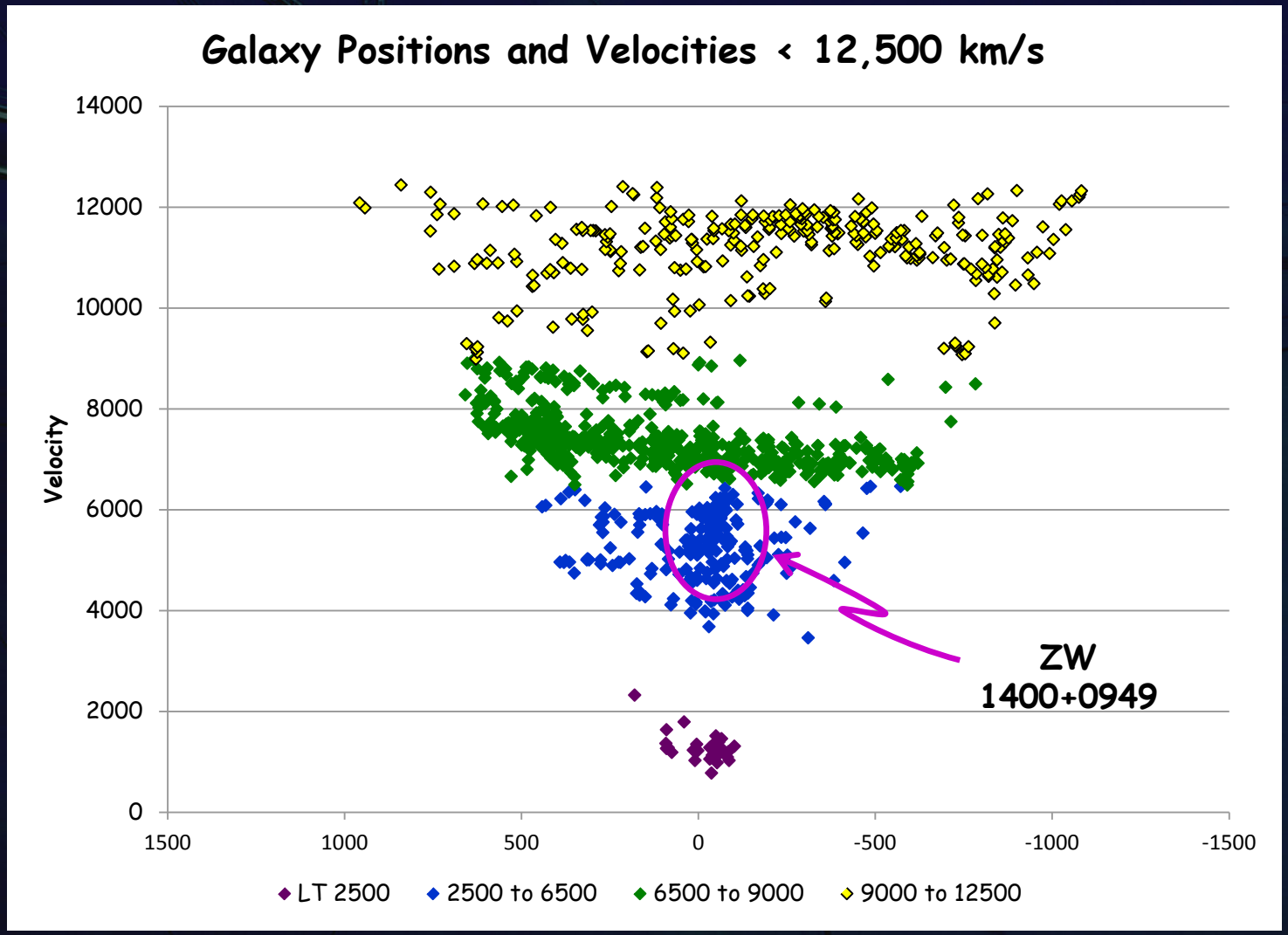
Wedge Plot

- Taking z = r, x = rsin(α - 14.075^h), y = rcos(α - 14.075^h)



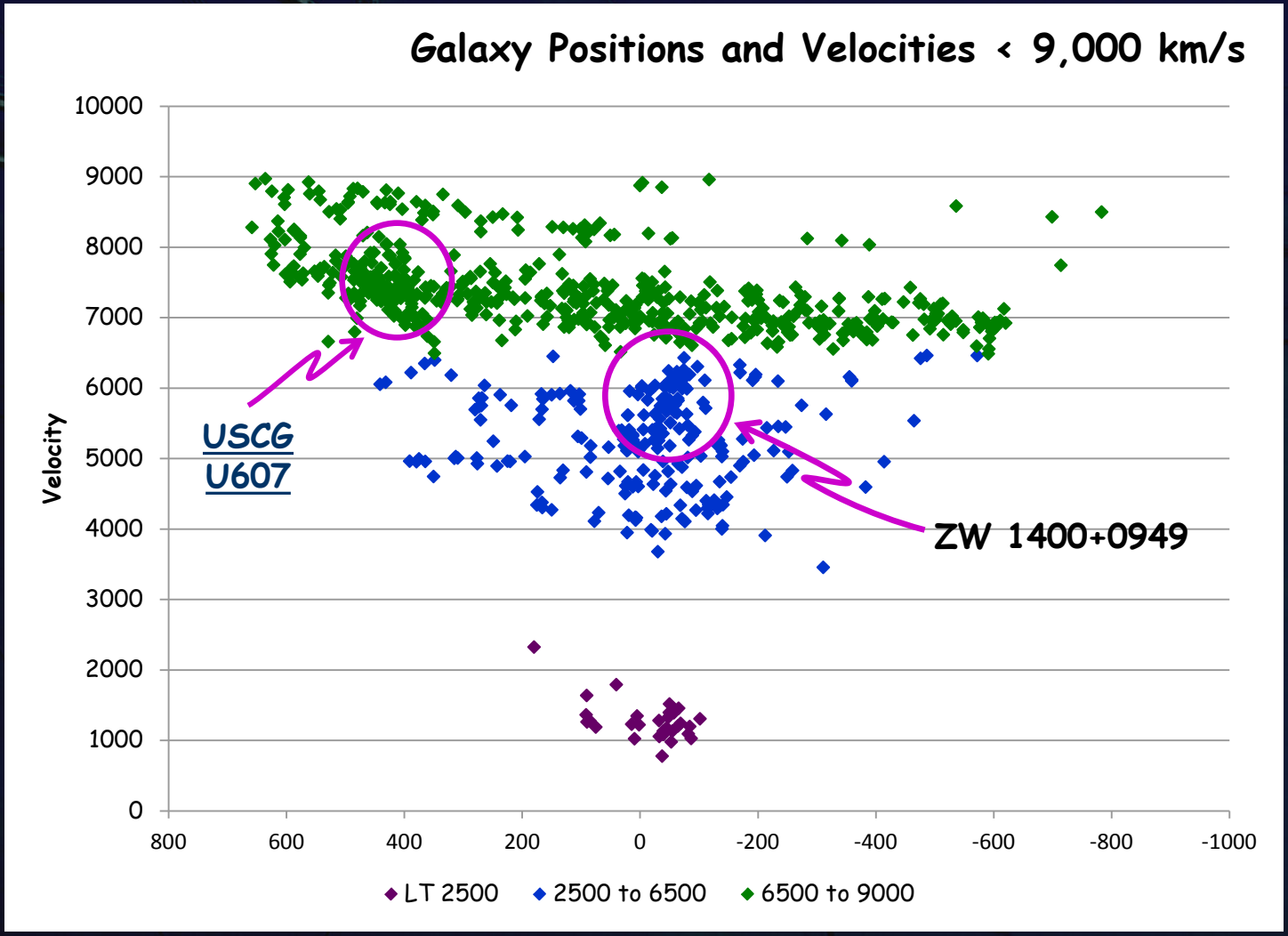
Wedge Plot

- Taking $z = r$, $x = r\sin(\alpha - 14.075^h)$, $y = r\cos(\alpha - 14.075^h)$

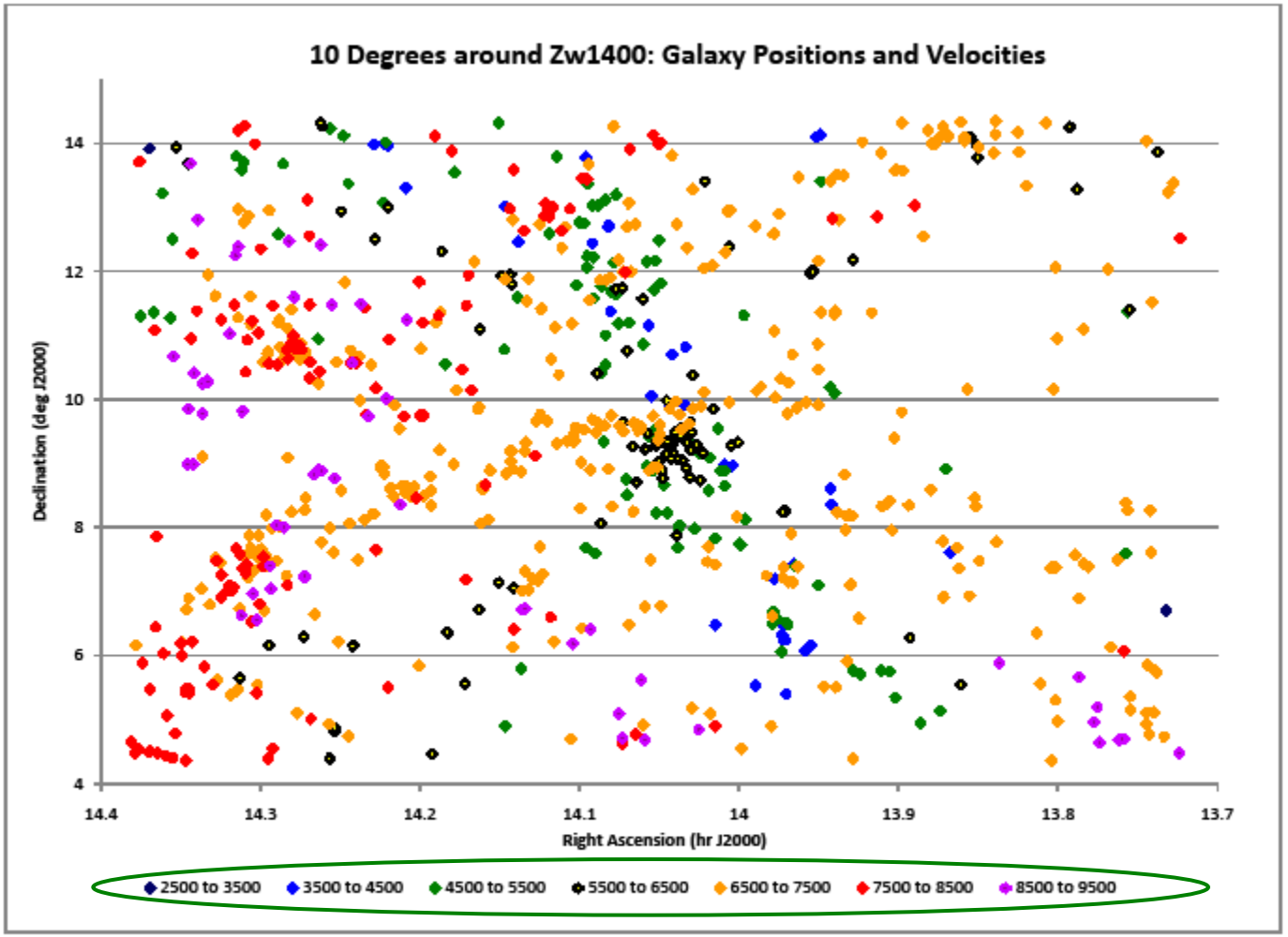


Wedge Plot

- Taking $z = r$, $x = r\sin(\alpha - 14.075^h)$, $y = r\cos(\alpha - 14.075^h)$

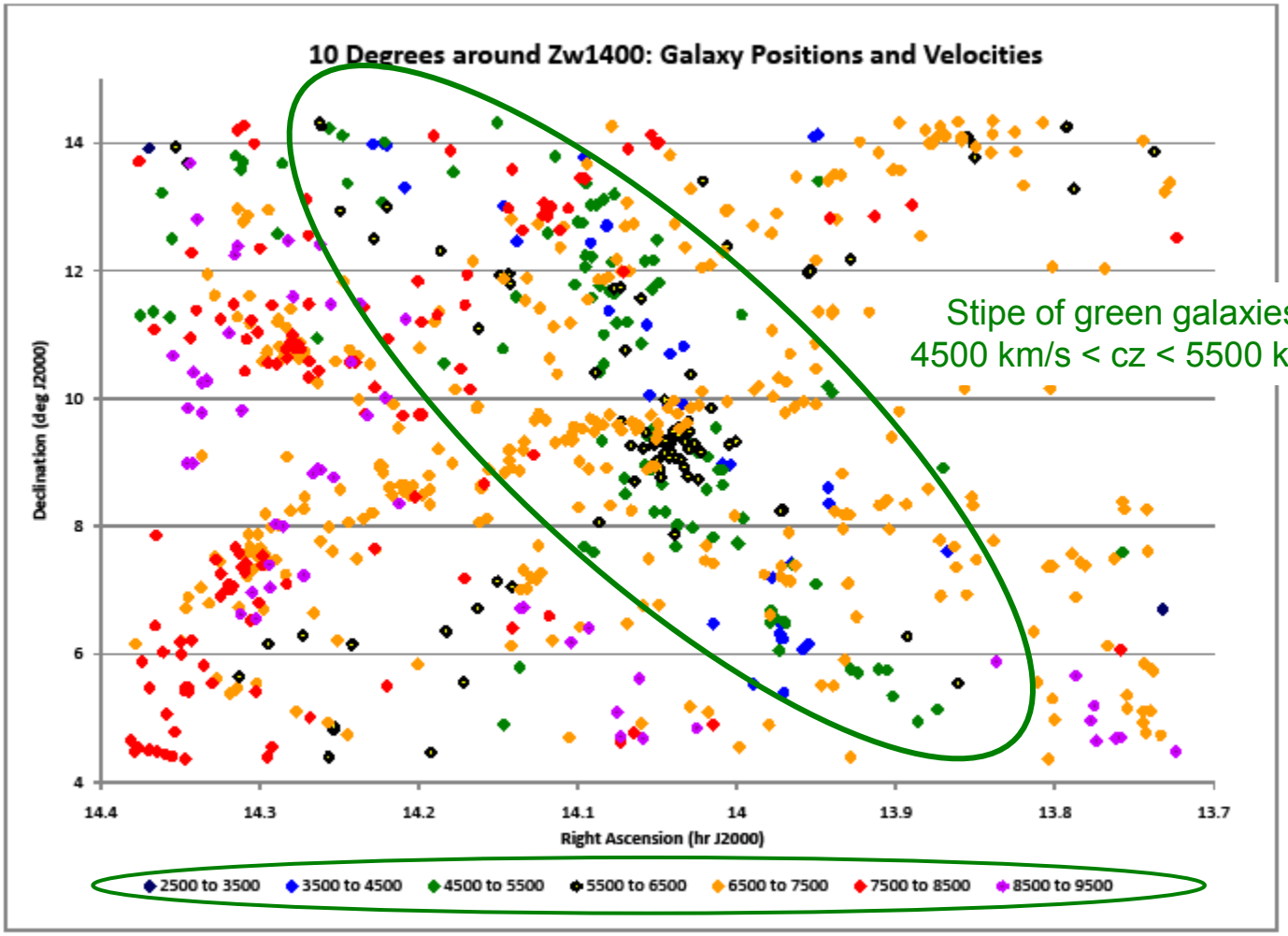


Sky Position with Velocity



Velocities in histogram's Zw1400 "hump" between 2500 and 9500 km/s

Sky Position with Velocity



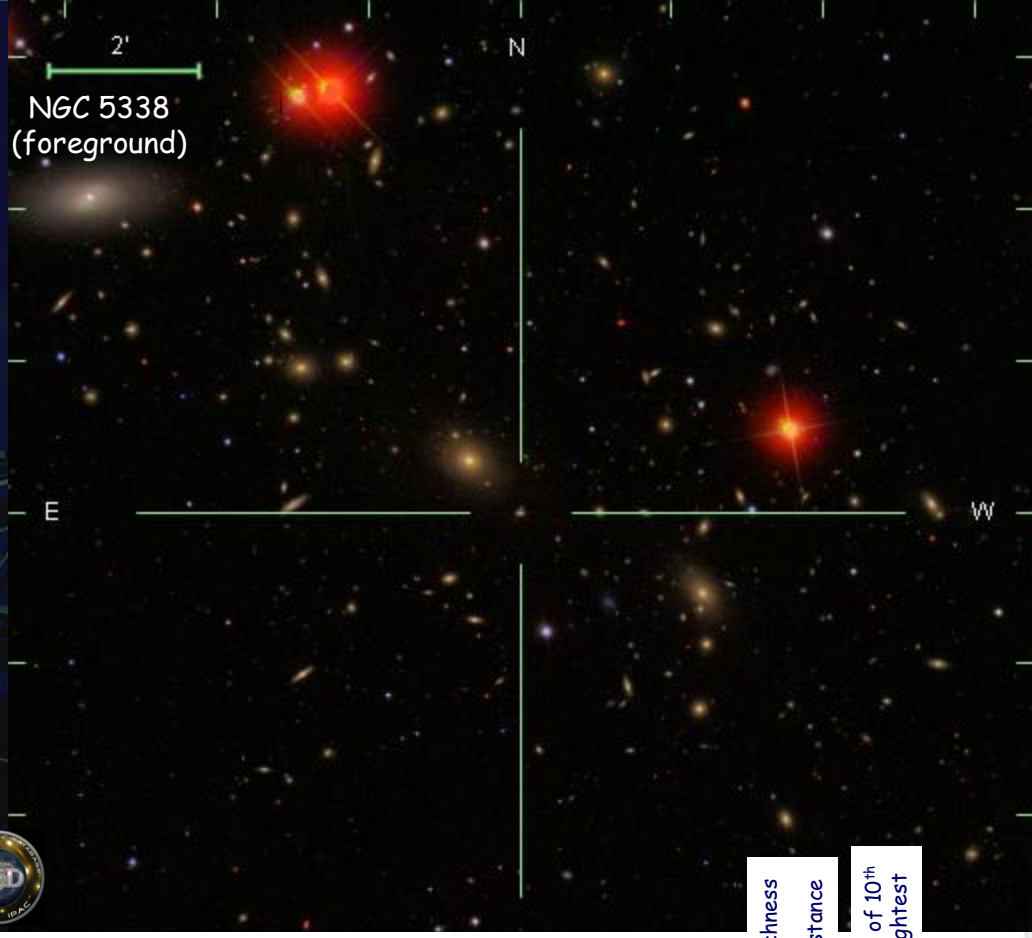
Stipe of green galaxies:
4500 km/s < cz < 5500 km/s

Velocities in histogram's Zw1400 "hump" between 2500 and 9500 km/s

Abell 1809

13 53 03.7 +05 08 17.7

cz = 23721 km/s



Abell, Corwin & Olowin 1989 p. 37

Abell	RA(1950)Dec	RA(2000)Dec	l	b	x	y	T_{B-M}	C	z	R	D	m
			galactic coords		POSS coords		B-M Type	Members		Classes		
1809	1350.8+0524	1353.3+0509	339.54	63.54	39	168	II:	78	0.0788	1	4	15.8
1810	1350.4+3630	1352.6+3615	71.85	74.14	318	228	III	65		0	5	17.2

Richness = Distance = mag of 10th brightest

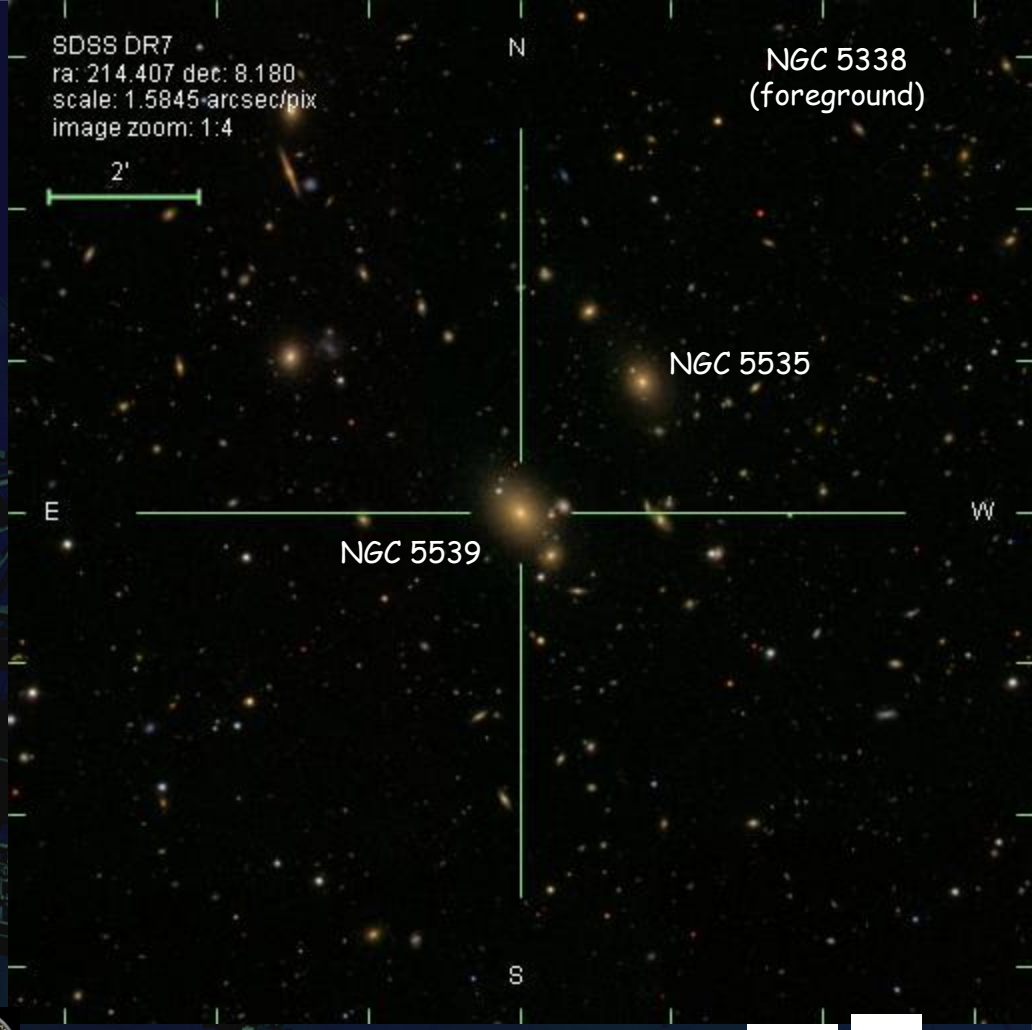
Ebeling et al, 1998 p. 24 (ROSAT cluster Sample)

z, contam. extent, serend. flag	cluster name	α (J2000) [deg]	δ (J2000) [deg]	n_H [10^{20} cm^{-2}]	RASS exp. time [s]	VTP count rate [s^{-1}]	r_{VTP} [arcmin]	final count rate [s^{-1}]	count rate error [s^{-1}]	kT [keV]	z	f_X (0.1–2.4 kev) [10^{-12} erg cm^{-2} s^{-1}]	L_X (0.1–2.4 kev) [10^{44} erg s^{-1}]	z reference
VS	A1800	207.365	28.106	1.2	441	0.84	8.2	1.00	0.14	5.1[e]	0.0748	12.8	3.05	(20)
V	A1809	208.275	5.158	2.0	407	0.35	5.8	0.41	0.09	3.9[e]	0.0790	6.0	1.61	(20)
V	A1831	209.802	27.978	1.3	473	0.78	7.1	0.91	0.12	4.2[e]	0.0612	11.9	1.90	(20)

Abell 1890

14 17 37.7 +08 10 46.6

cz = 17208 km/s



Abell, Corwin & Olowin 1989 p. 37

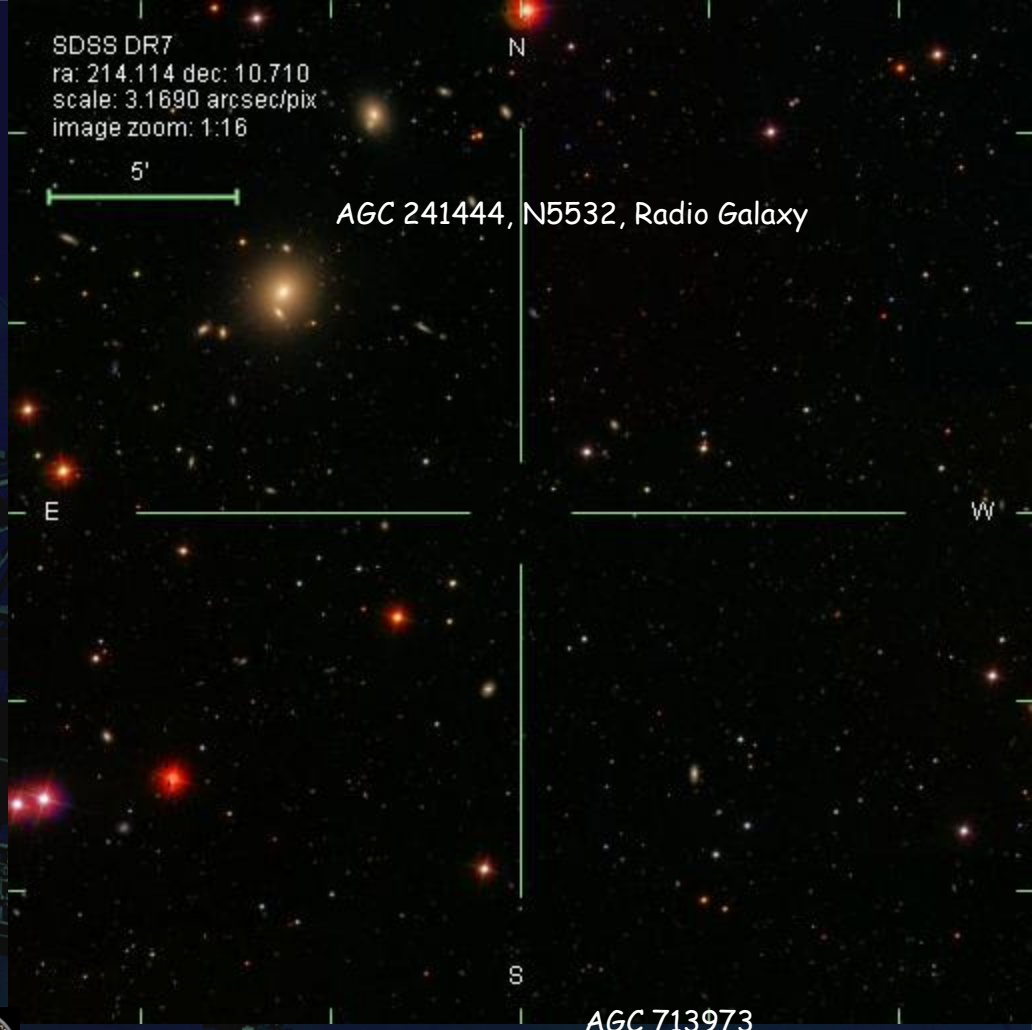
Abell	RA(1950)Dec	RA(2000)Dec	l	b	x	y	T_{B-M}	C	z	R	D	m
			galactic coords		POSS coords		B-M Type	Members		Classes		
1886	1412.5+2722	1414.7+2708	37.75	71.49	287	57	III	73		0	5	17.2
1887	1414.1+1749	1416.5+1735	11.43	68.19	50	189		36		0	0	17.2
1888	1414.7+1406	1417.1+1352	03.66	66.02	42	312		40		0	0	17.5
1889	1414.5+3057	1416.7+3043	48.91	71.03	260	249	III	112	0.1860	2	6	17.3
1890	1415.1+0825	1417.6+0811	354.04	62.17	35	328	I-II:	37	0.0570	0	3	15.5

Richness
Distance
mag of 10th brightest

USGC U607

14 16 27.4 +10 42 35

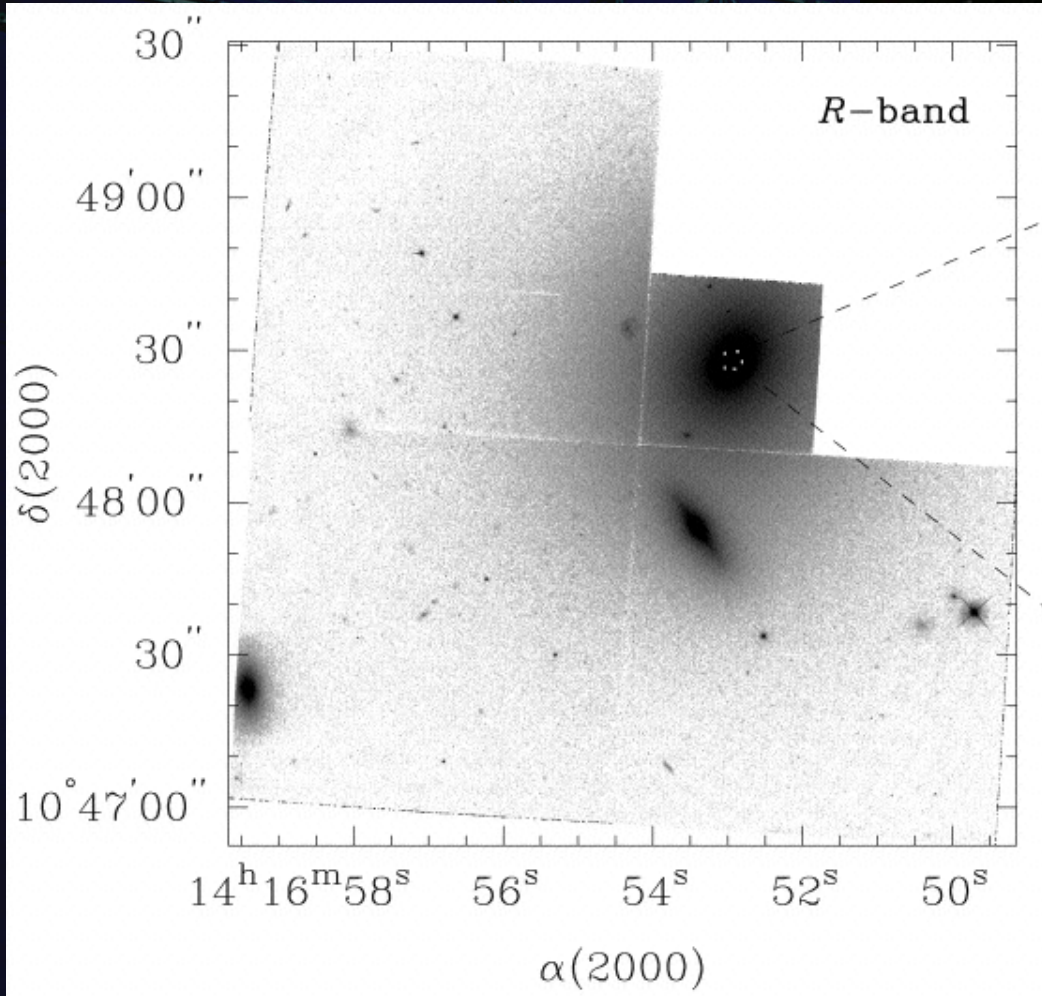
cz = 7588 km/s

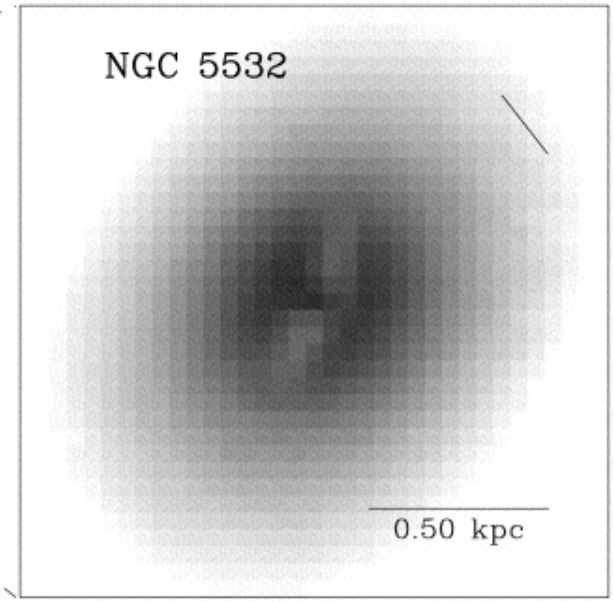


USGC U607

14 16 27.4 +10 42 35

cz = 7588 km/s





Martel et al, 2000