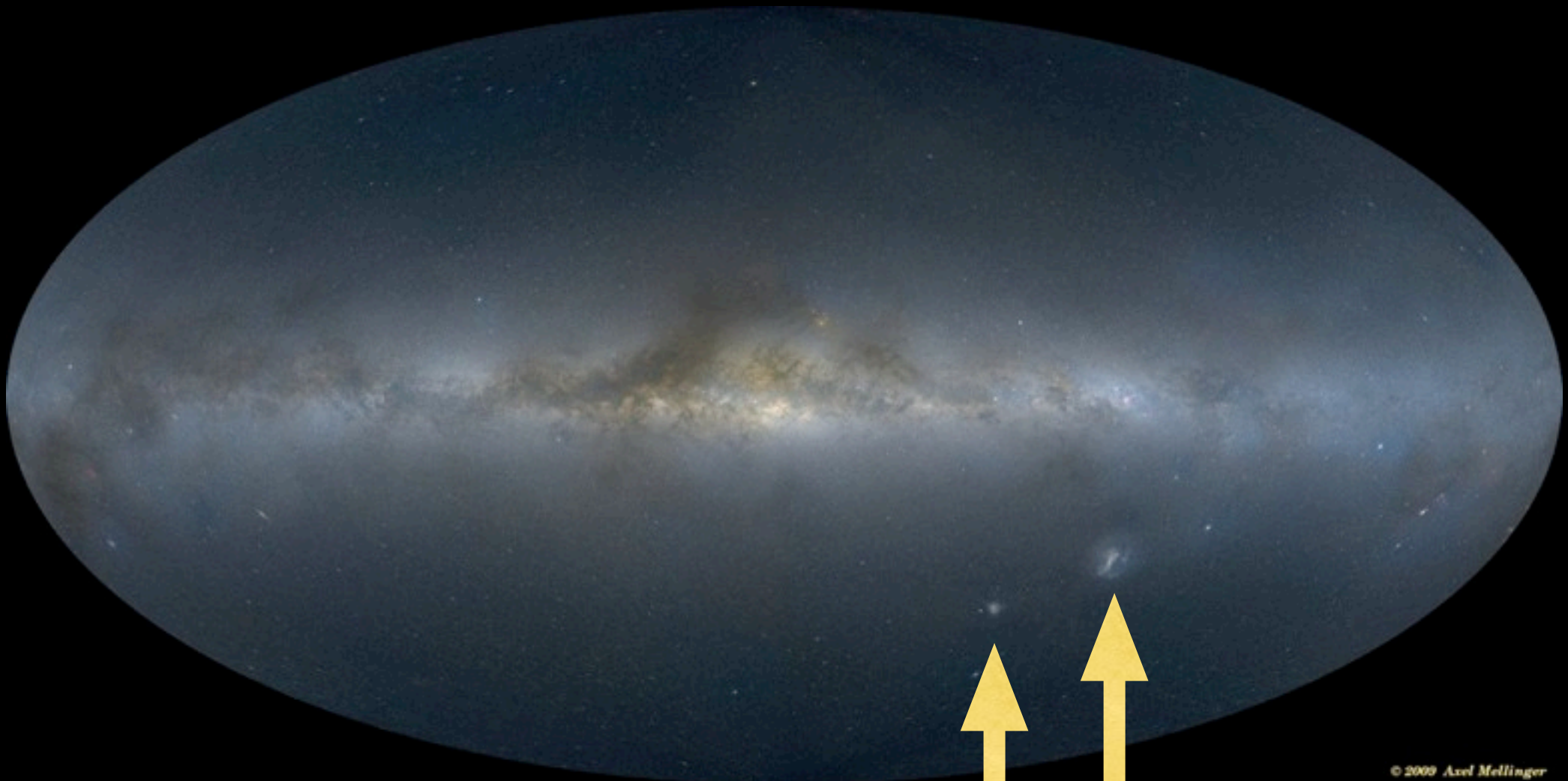


The Local Group

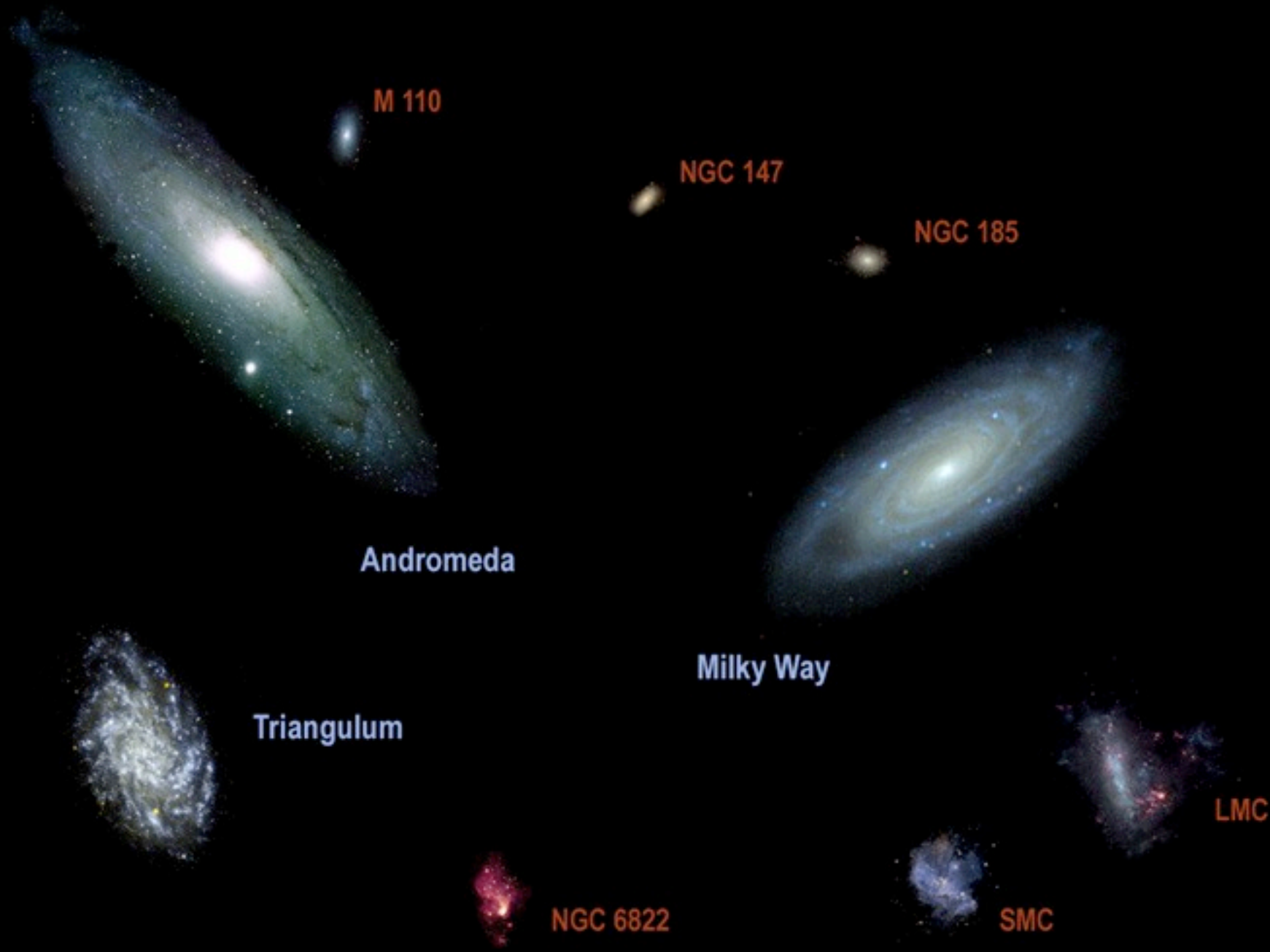
dwarf satellites of M31 and the MW

The Milky Way (all sky projection)



SMC
LMC

The Local Group



M 110

NGC 147

NGC 185

Andromeda

Milky Way

Triangulum

LMC

NGC 6822

SMC

The Local Group

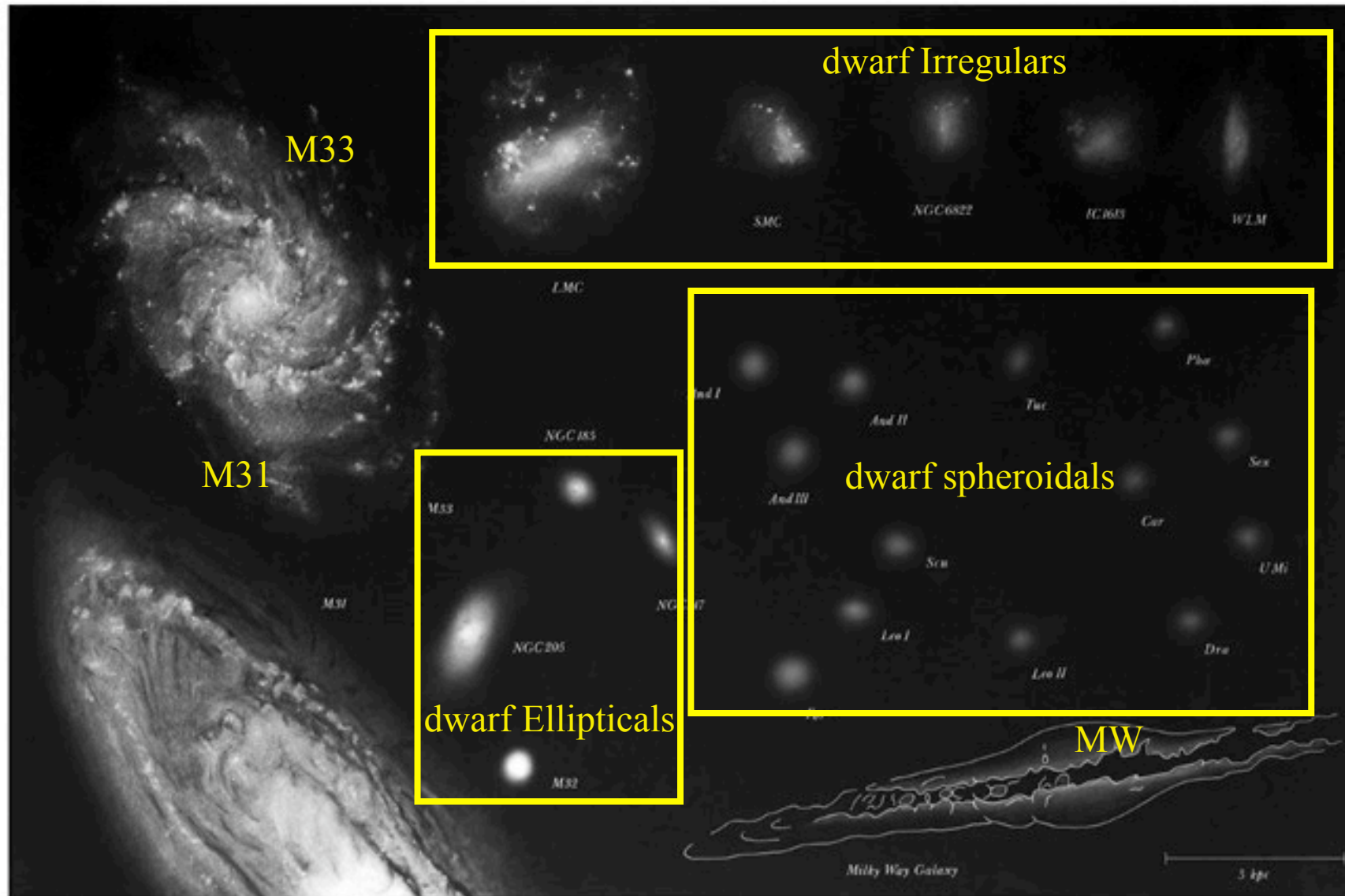


Fig 4.1 (B. Binggeli) 'Galaxies in the Universe' Sparke/Gallagher CUP 2007

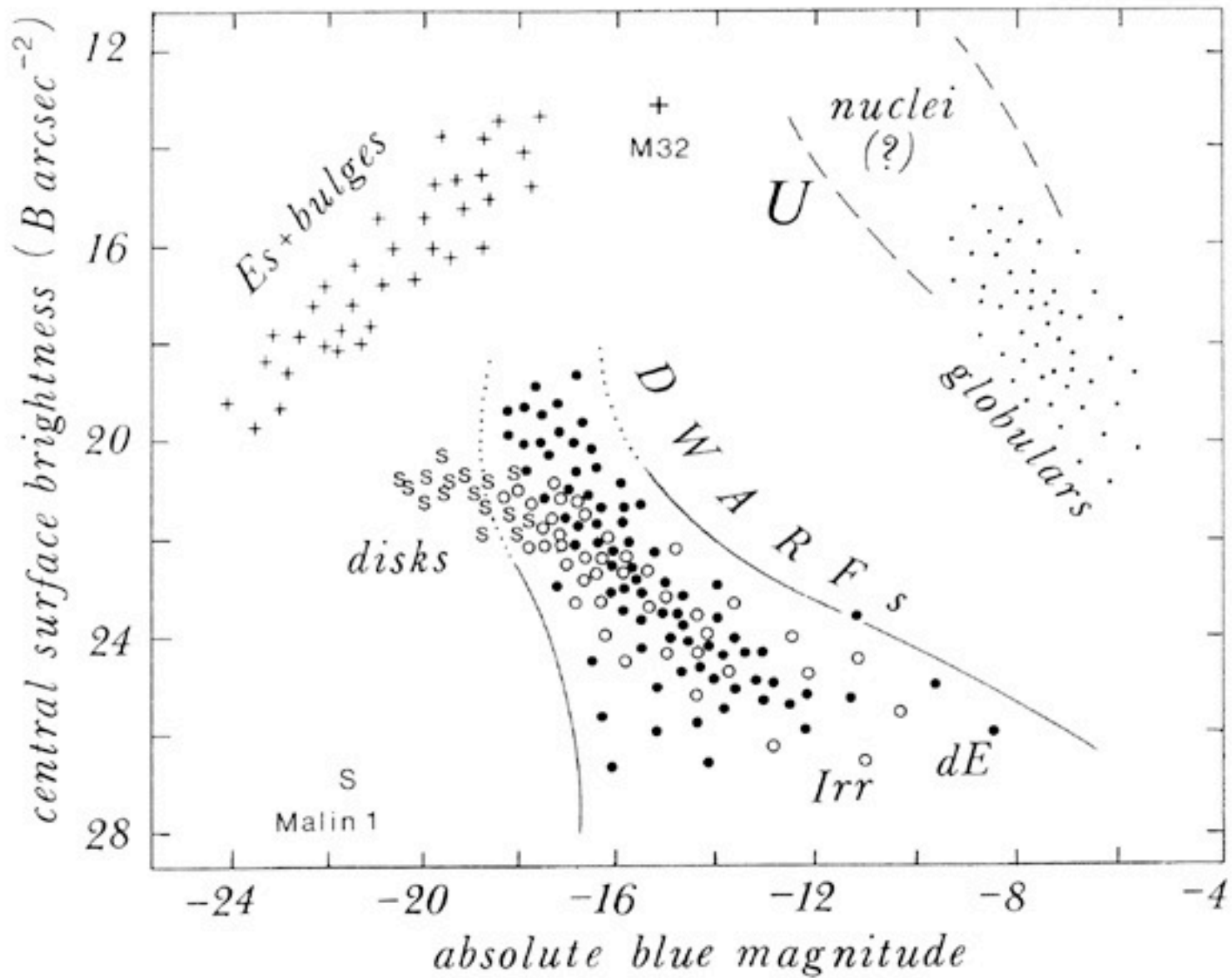
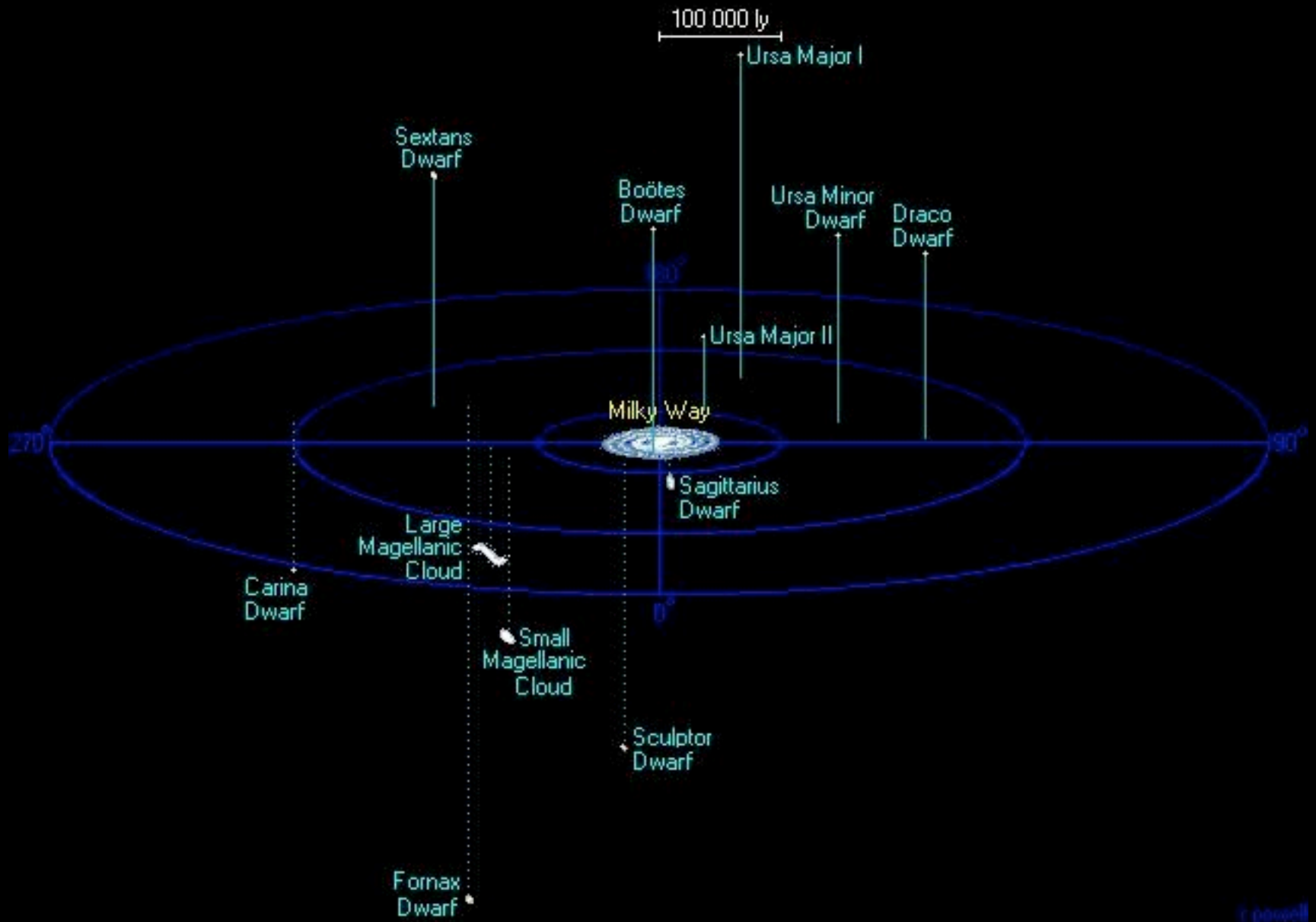


Fig 4.18 (B. Binggeli) 'Galaxies in the Universe' Sparke/Gallagher CUP 2007



	Name (in distance)	Diameter (kpc)	Distance (kpc)	Type	Discovered
I	Canis Major Dwarf	1.5	8	Irr	2003
II	Sagittarius Dwarf	2	20	Irr	1994
III	LMC	4	48.5	Irr	prehistoric
IV	SMC	2	61	Irr	prehistoric
V	Ursa Major II Dwarf	0.2	30	dG D	2006
VI	Ursa Minor Dwarf	0.4	60	dE4	1954
VII	Draco Dwarf	0.7	80	dE0	1954
VIII	Sculptor Dwarf Galaxy	0.8	90	dE3	1937
IX	Sextans Dwarf	0.5	90	dE3	1990
X	Carina Dwarf	0.5	100	dE3	1977
XI	Ursa Major I Dwarf	-	100	dG D	2005
XII	Fornax Dwarf	0.6	140	dE2	1938
XIII	Leo II	0.7	210	dE0	1950
XIV	Leo I	0.5	250	dE3	1950
?	Leo IV	0.3	160	dG D	2006
?	Leo T	0.34	420	dSph/dIrr	2006
?	Boötes I	0.3	60	dSph	2006
?	Boötes II	0.1	42	dSph	2007
?	Boötes III	1	46	?	2009
?	Coma Berenices	0.14	42	dSph	2006
?	Segue 2	0.07	35	dSph	2007
?	Canes Venatici I	2	220	dSph	2006
?	Canes Venatici II	0.3	155	dSph	2006
?	Hercules	0.7	135	dSph	2006
?	Pisces II	0.12	180	?	2010

“classical
dwarfs”

“ultrafaint
dwarfs”

The Local Group

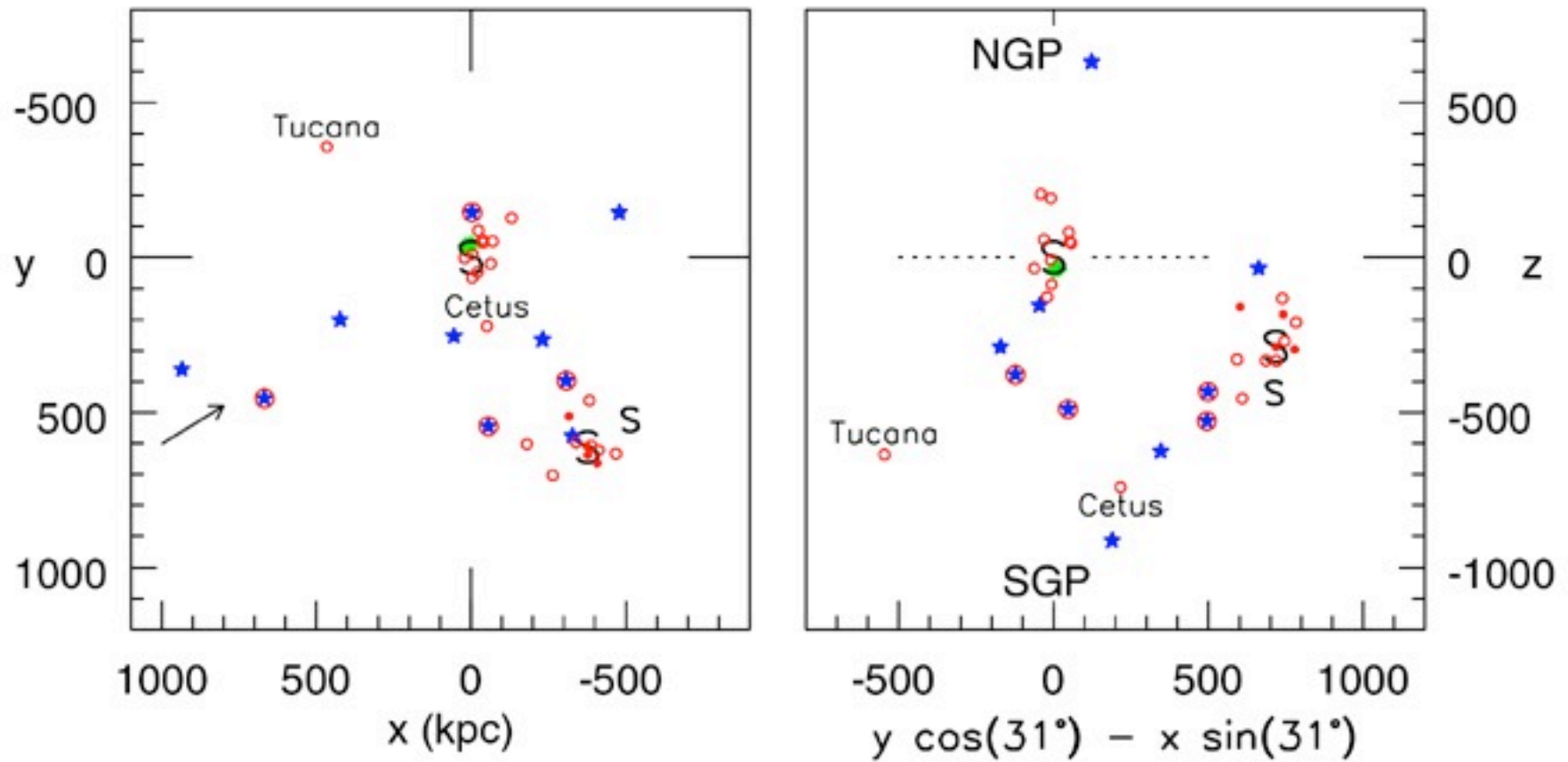
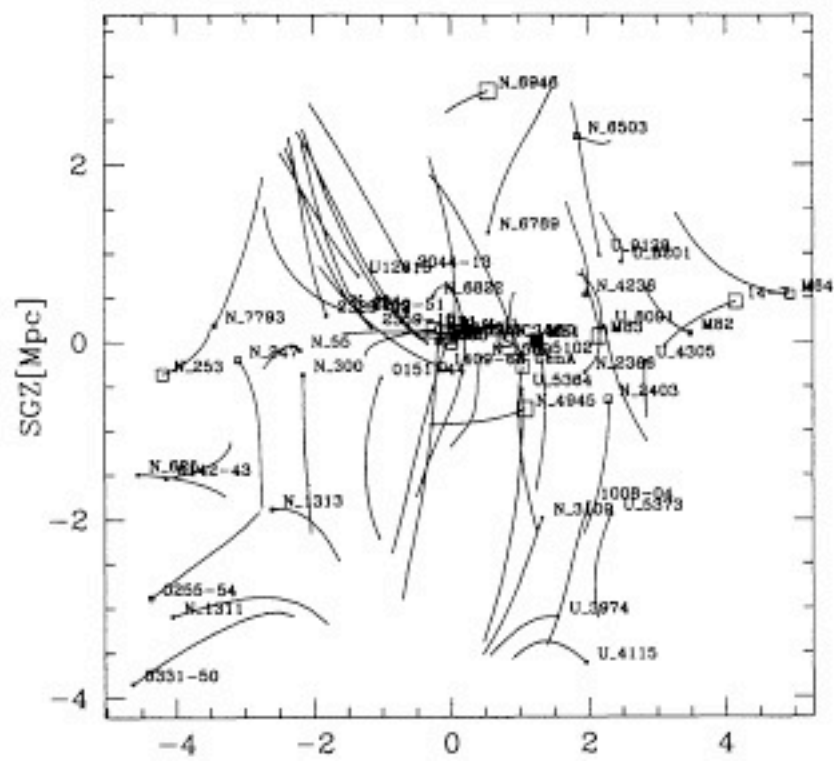
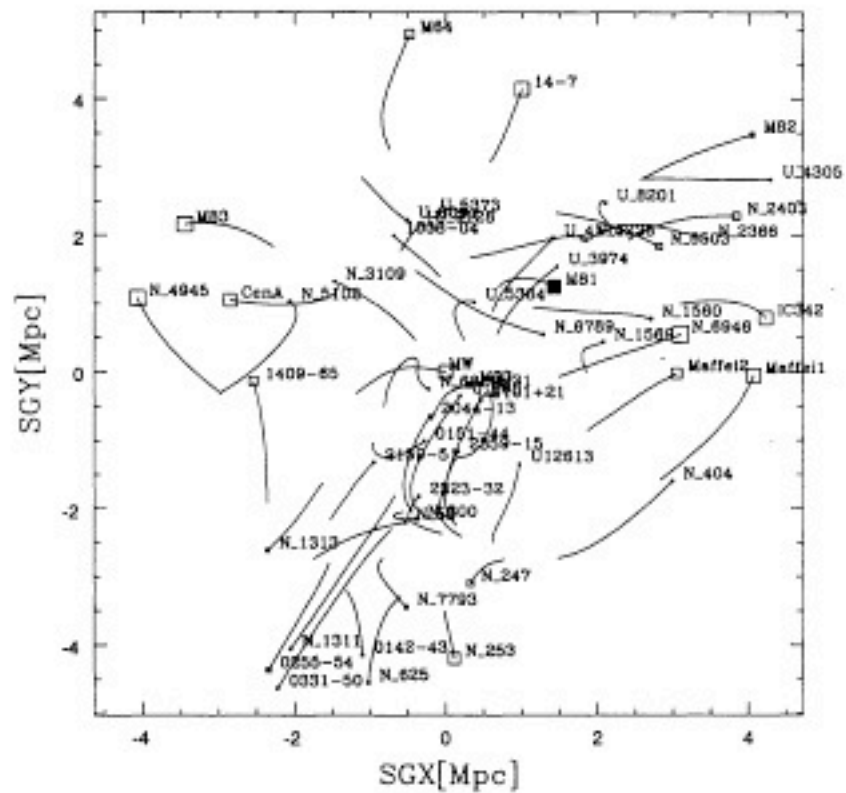


Fig 4.2 'Galaxies in the Universe' Sparke/Gallagher CUP 2007

The Local Group Infall and orbits



Nearby clusters (< 80 Mpc)

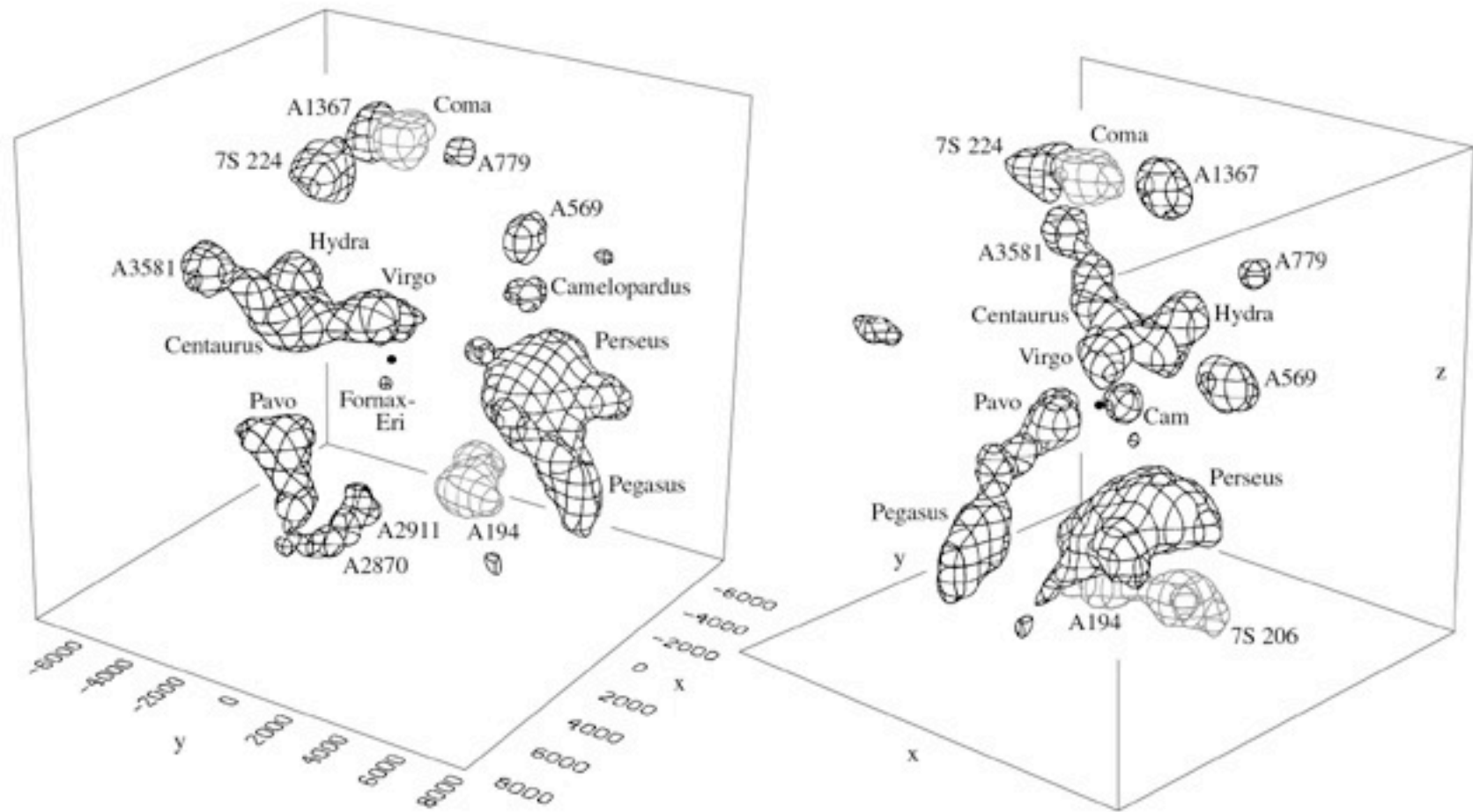


Fig 4.3 (M. Hudson) 'Galaxies in the Universe' Sparke/Gallagher CUP 2007

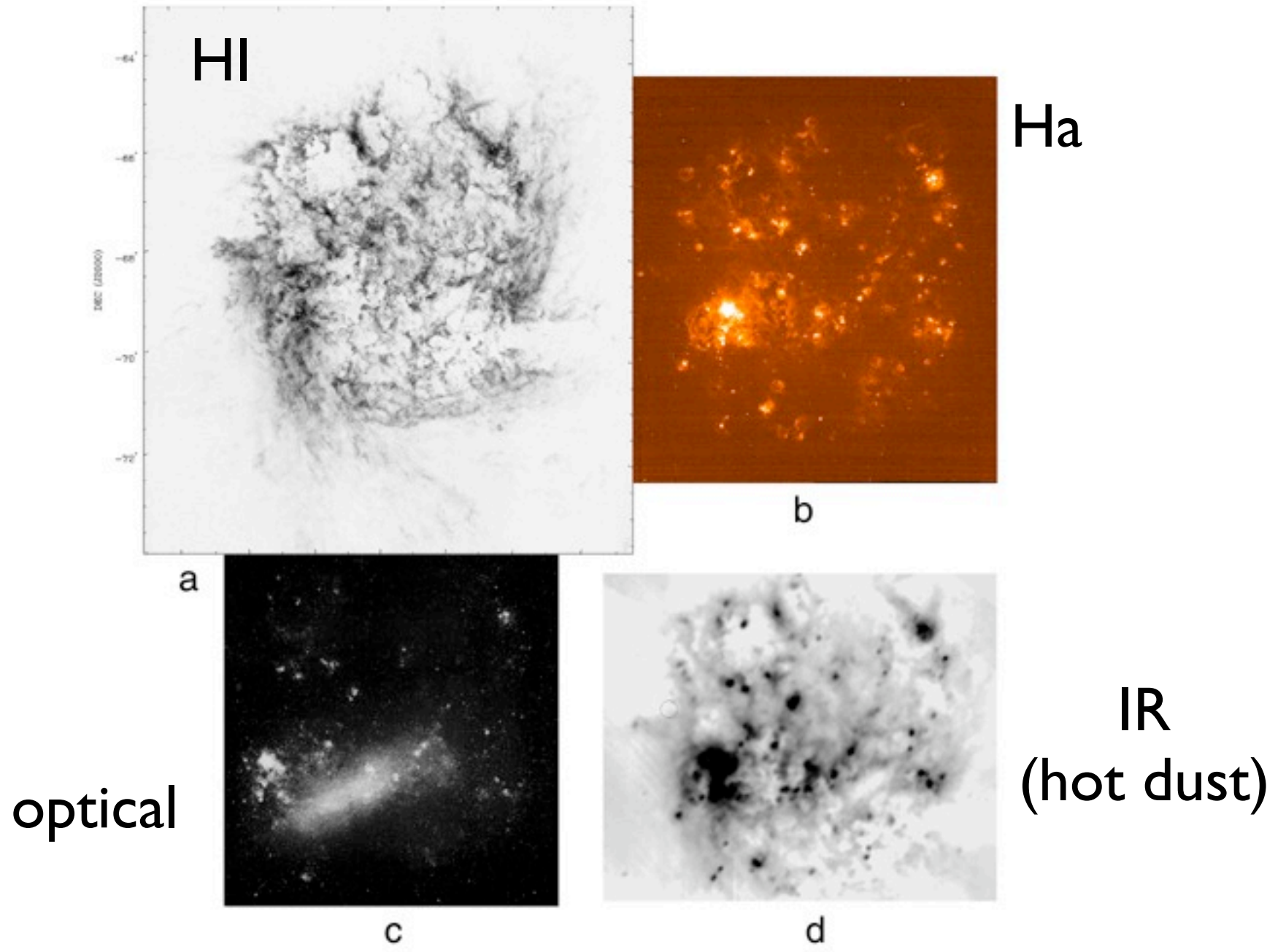
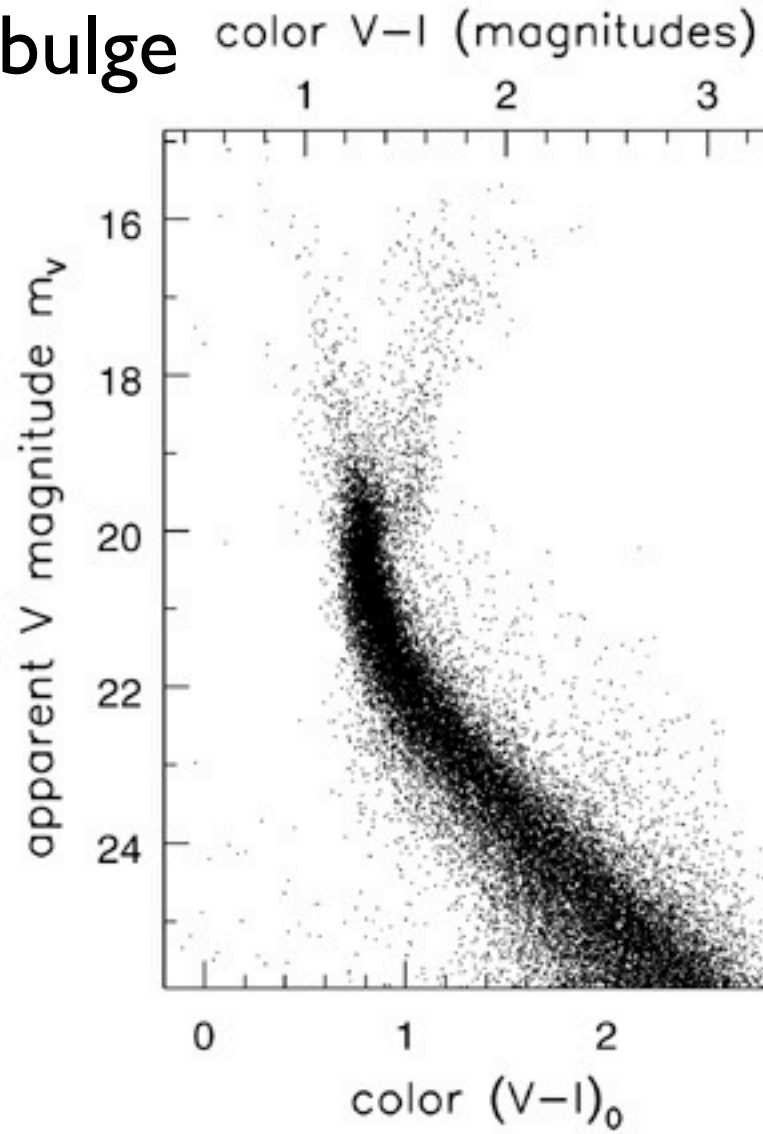


Fig 4.4 (Kim & Staveley-Smith, Henize, IRAS)
'Galaxies in the Universe' Sparke/Gallagher CUP 2007

MW bulge



LMC

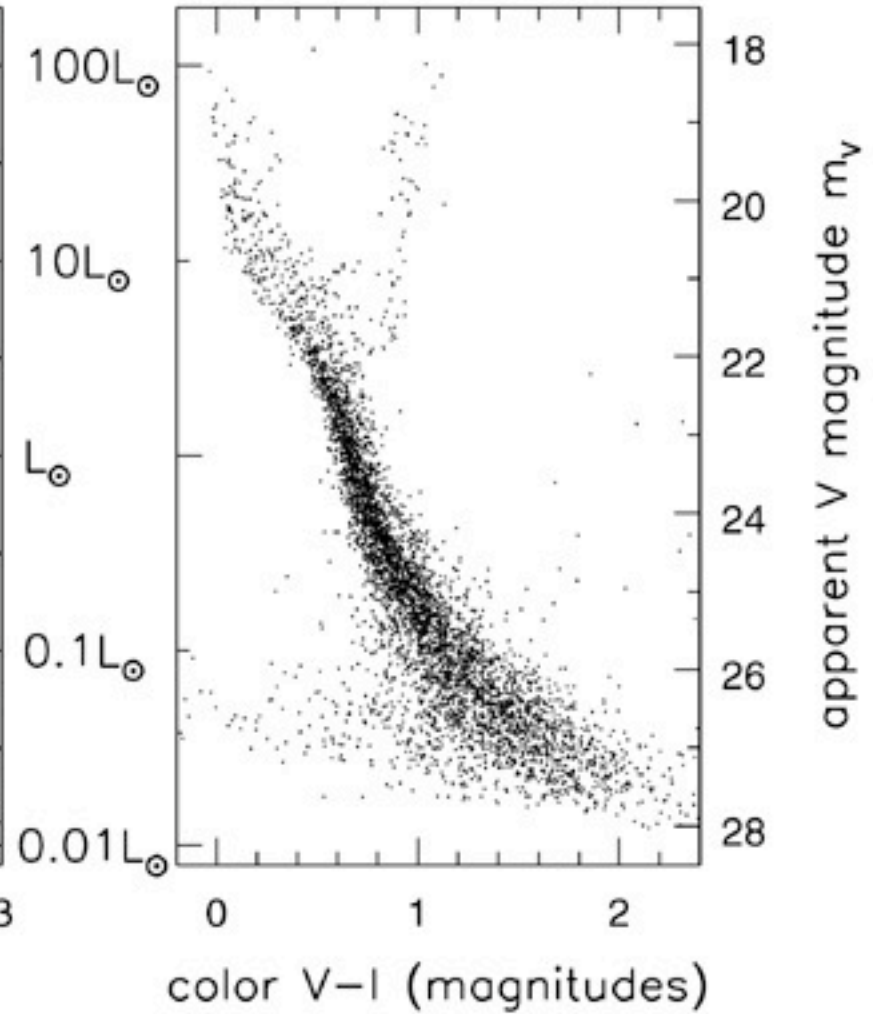
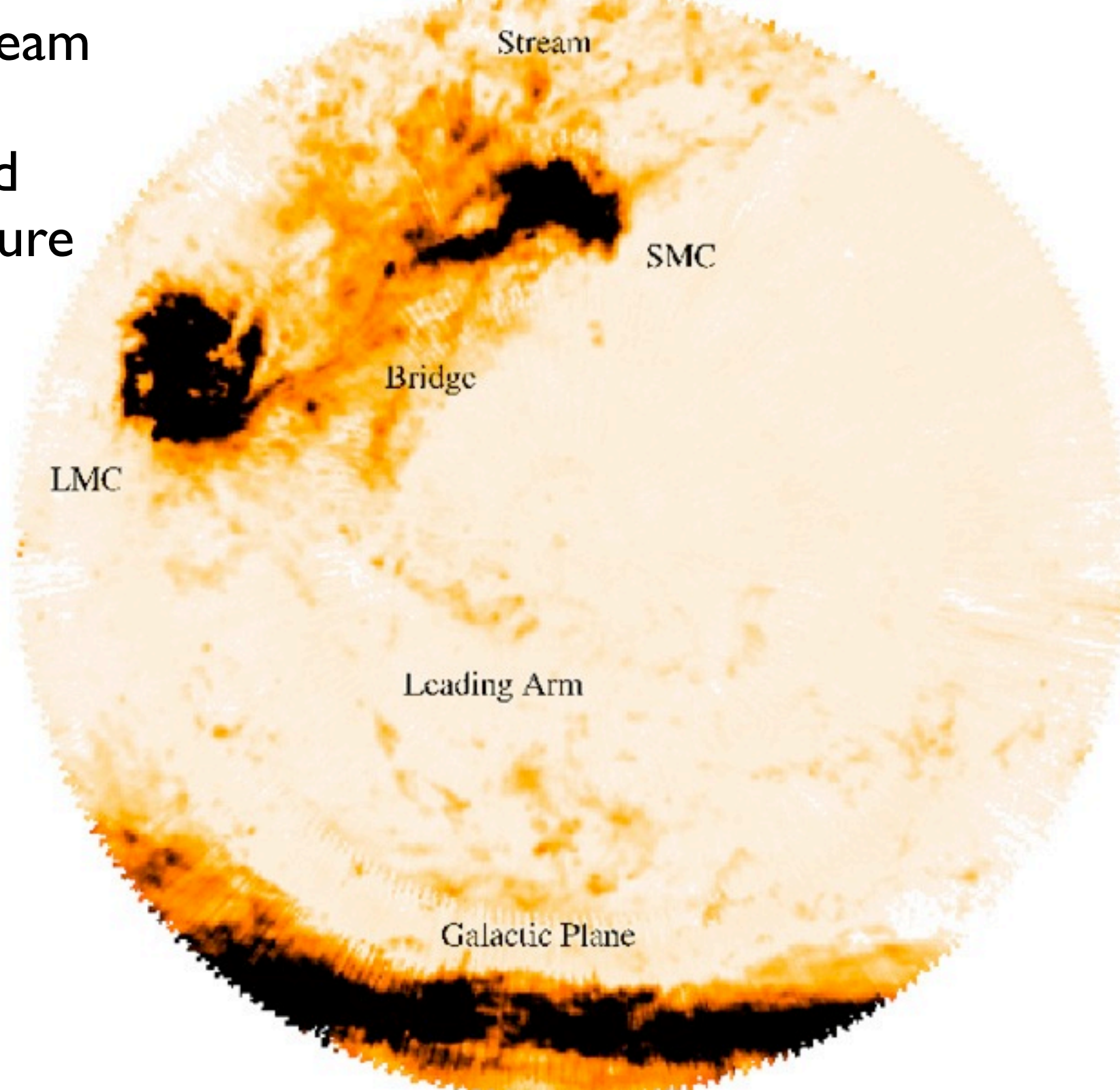


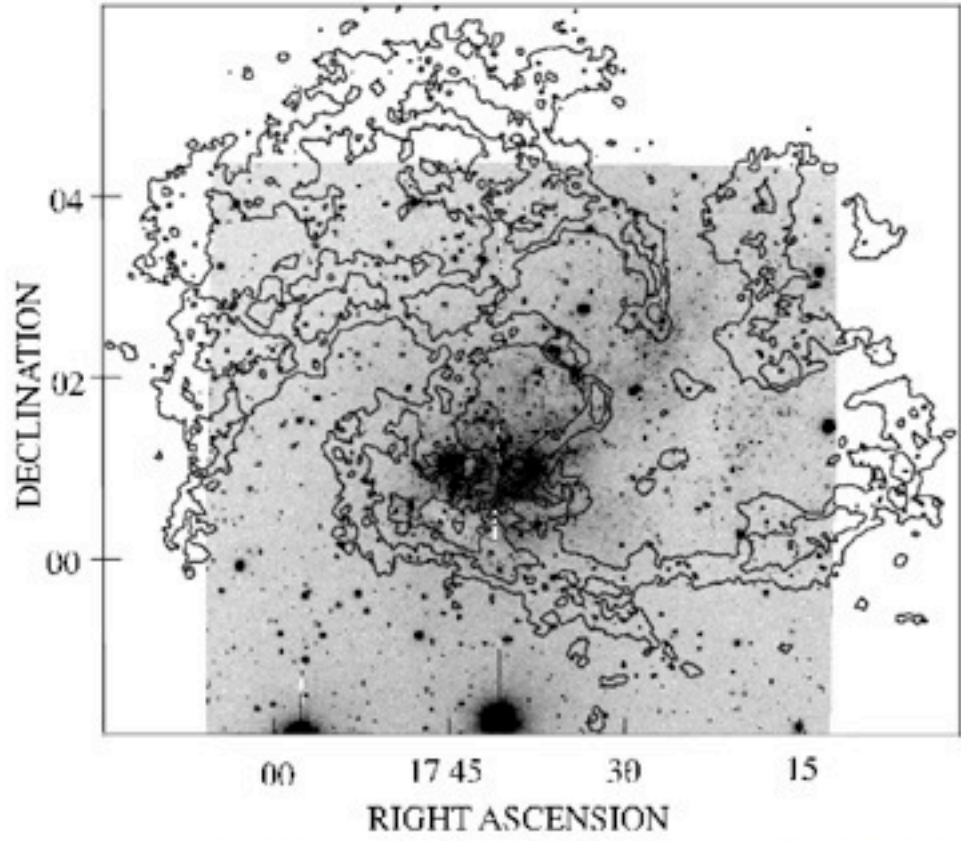
Fig 4.5 (J. Holtzman) 'Galaxies in the Universe' Sparke/Gallagher CUP 2007

Magellanic stream
HI gas
tidally stripped
(or ram pressure
or ???)



IC 10 - a distant dlrr

HI + optical



Ha

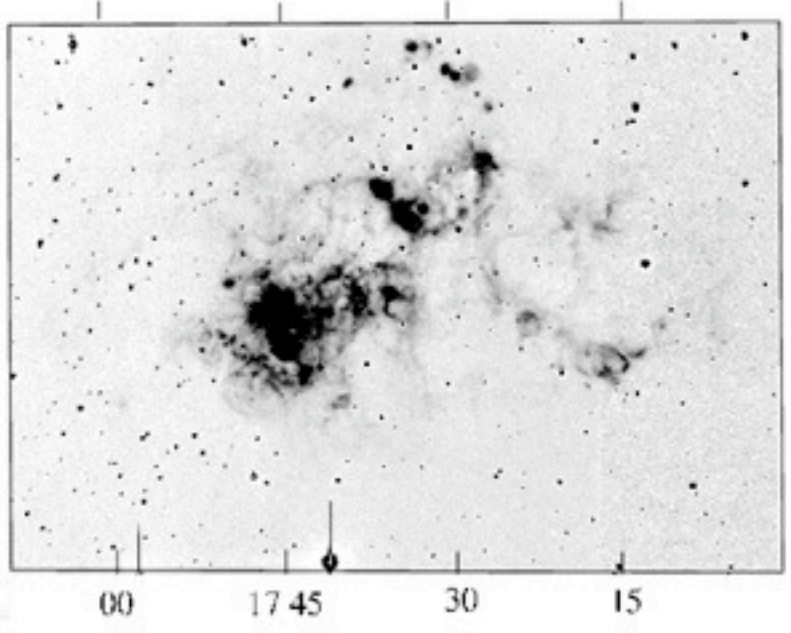


Fig 4.19 E. Wilcots 'Galaxies in the Universe' Sparke/Gallagher CUP 2007

HR diagram of active SF (M33; similar for LMC & other dlrr)

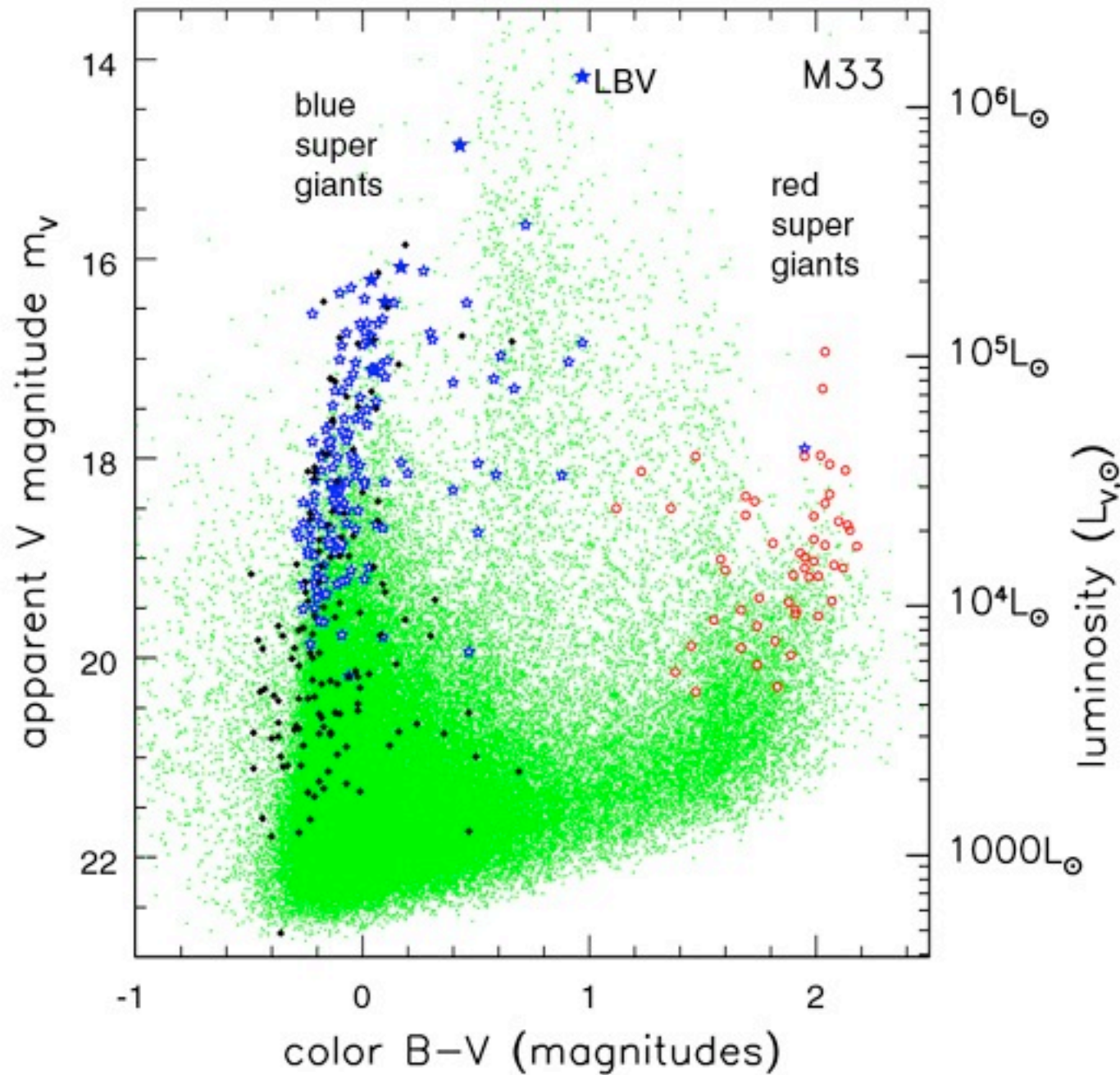


Fig 4.20 (P. Massey) 'Galaxies in the Universe' Sparke/Gallagher CUP 2007

Fornax dSph



Fig 4.8 (D. Malin) 'Galaxies in the Universe' Sparke/Gallagher CUP 2007

HR diagram of a dSph (Carina)

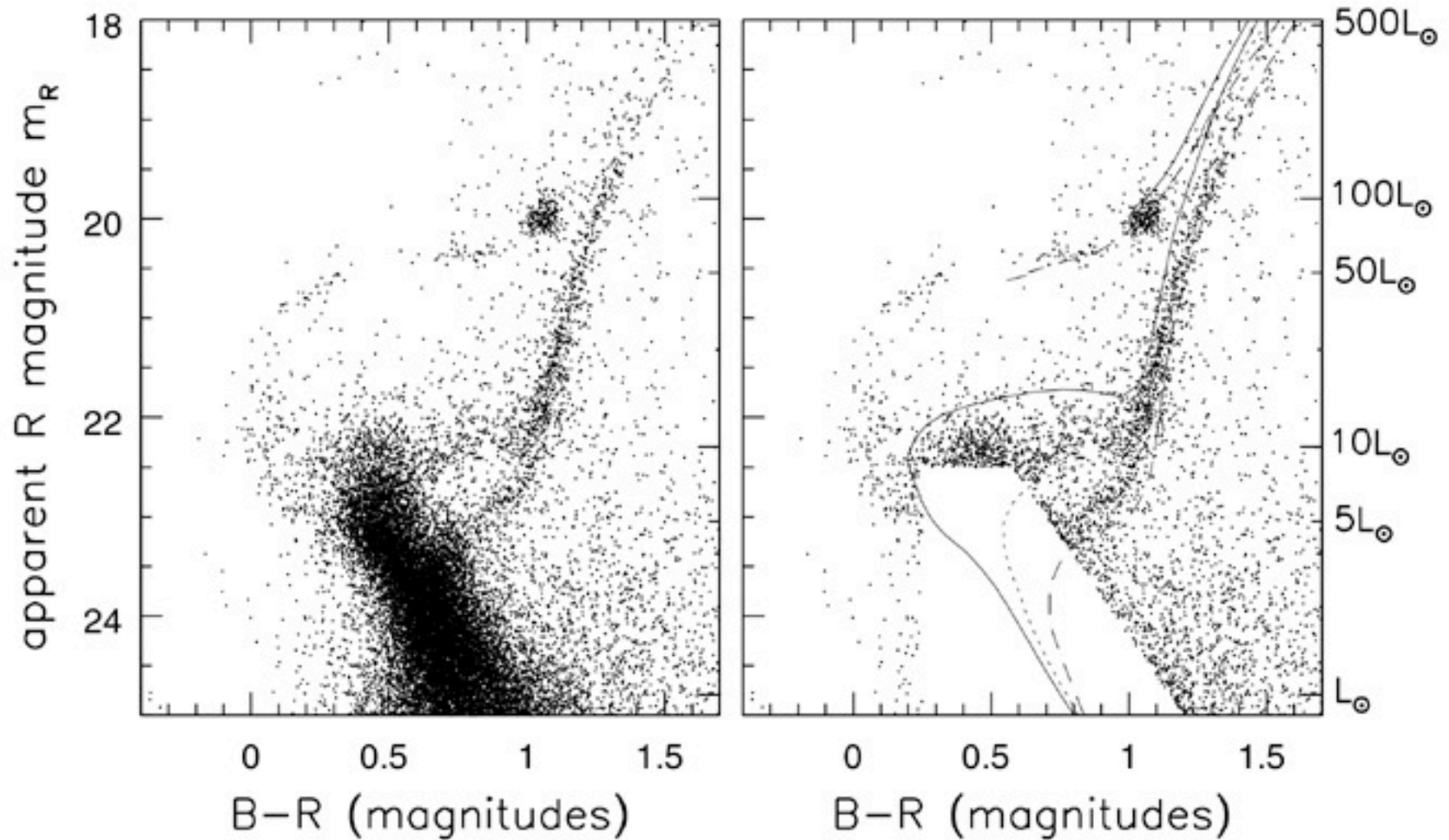


Fig 4.9 (Smecker-Hane, Cole) 'Galaxies in the Universe' Sparke/Gallagher CUP 2007

typically no gas in dSph galaxies

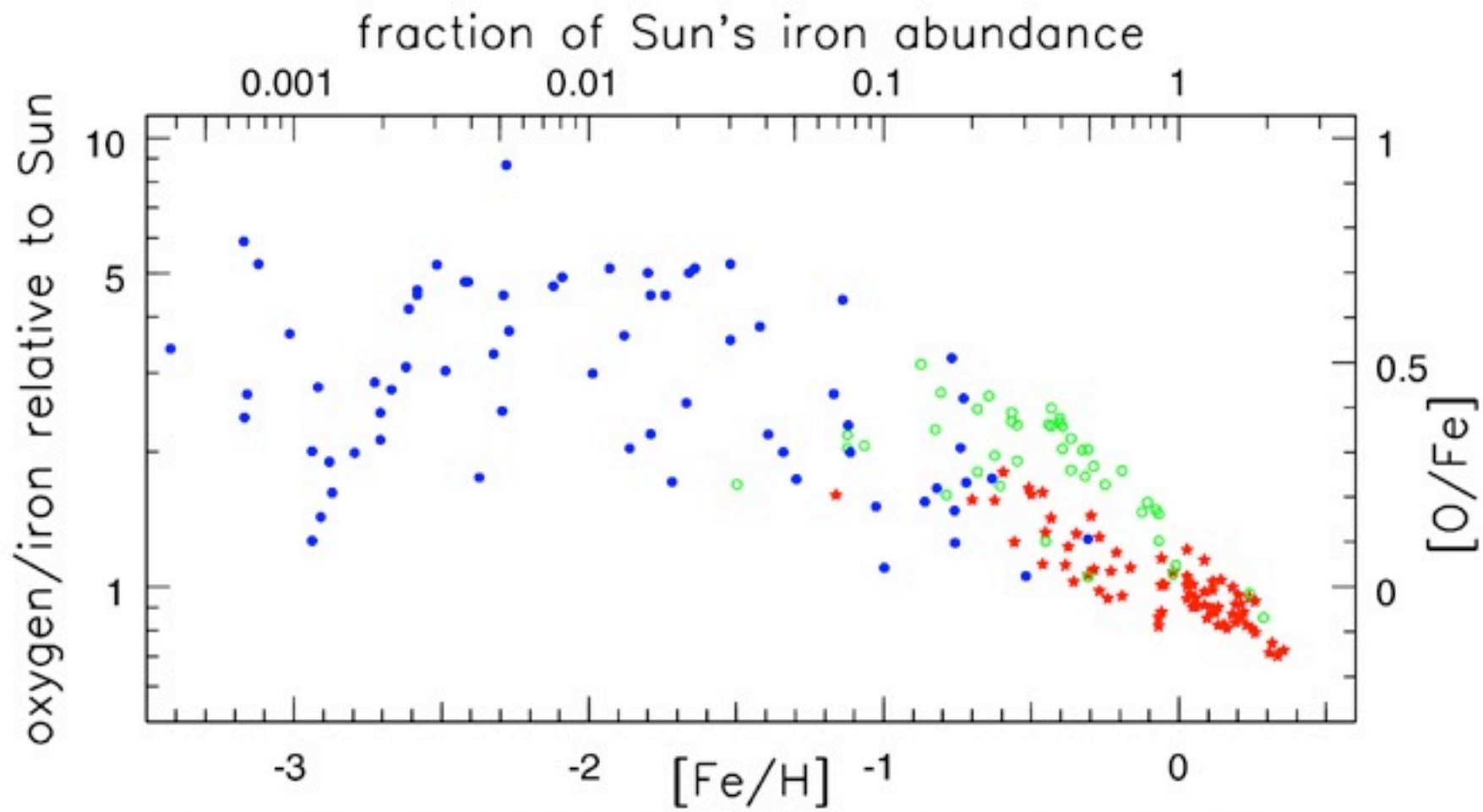
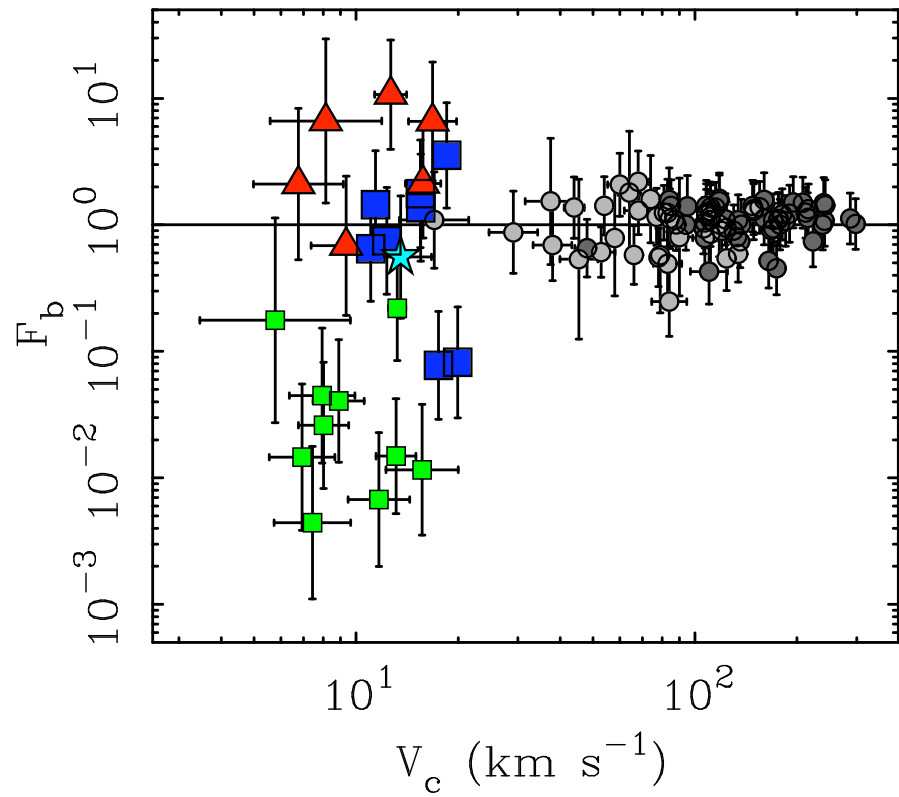
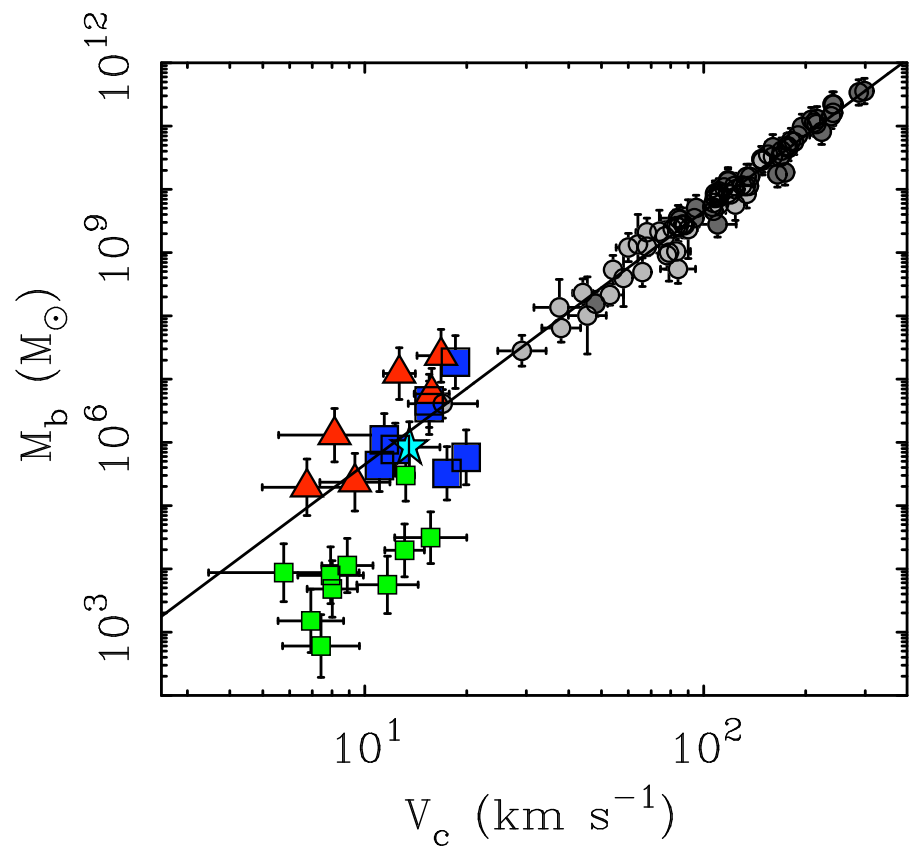
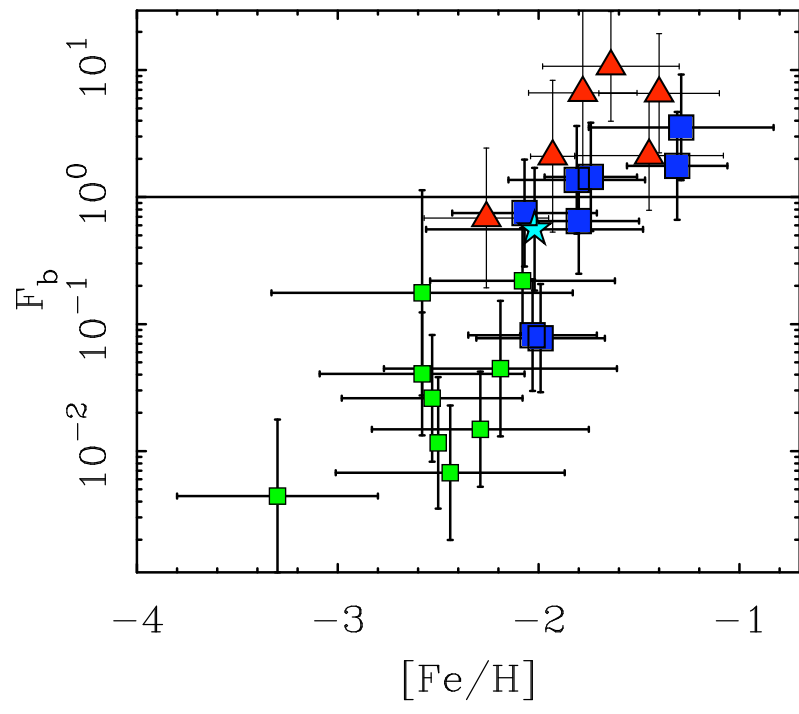
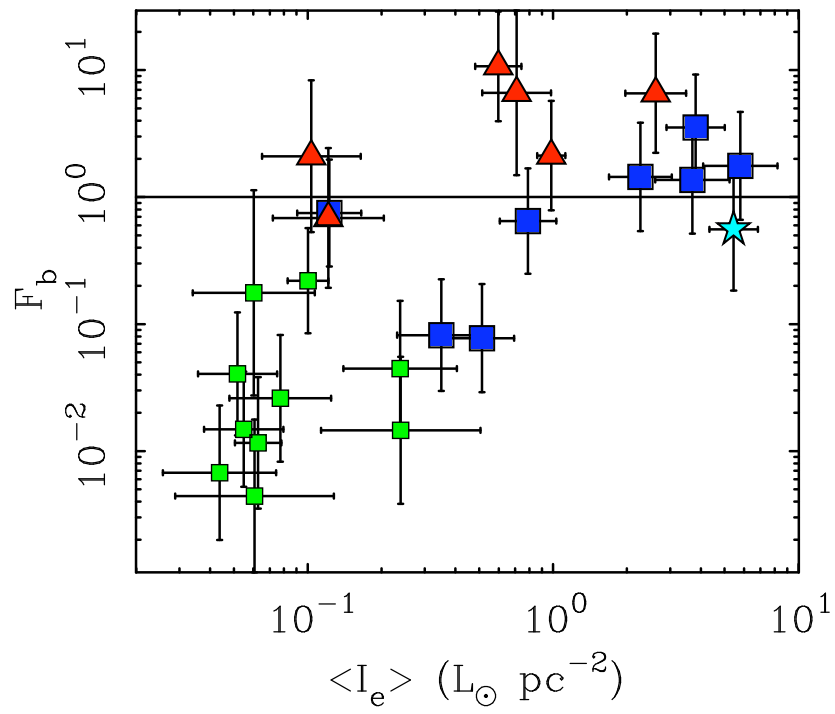
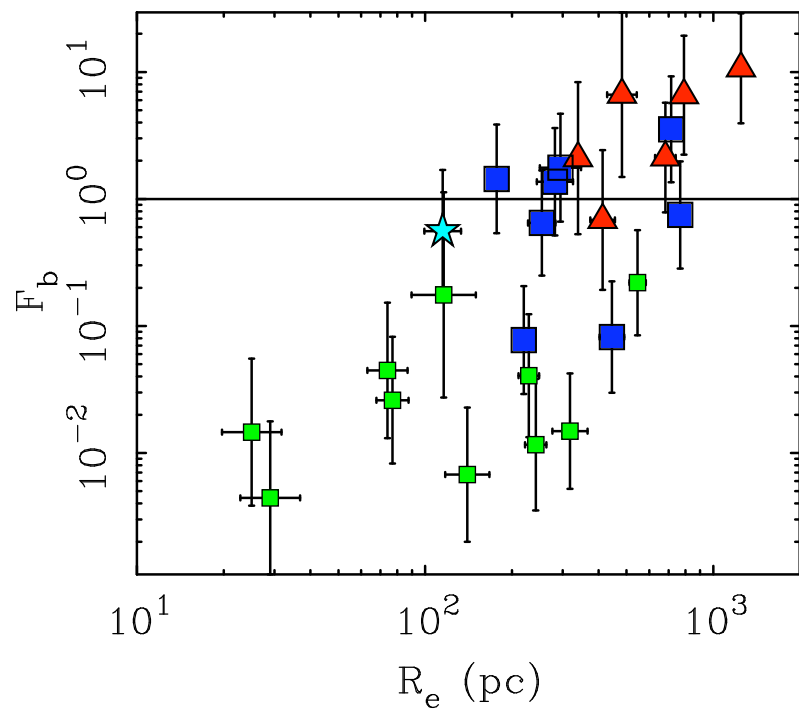
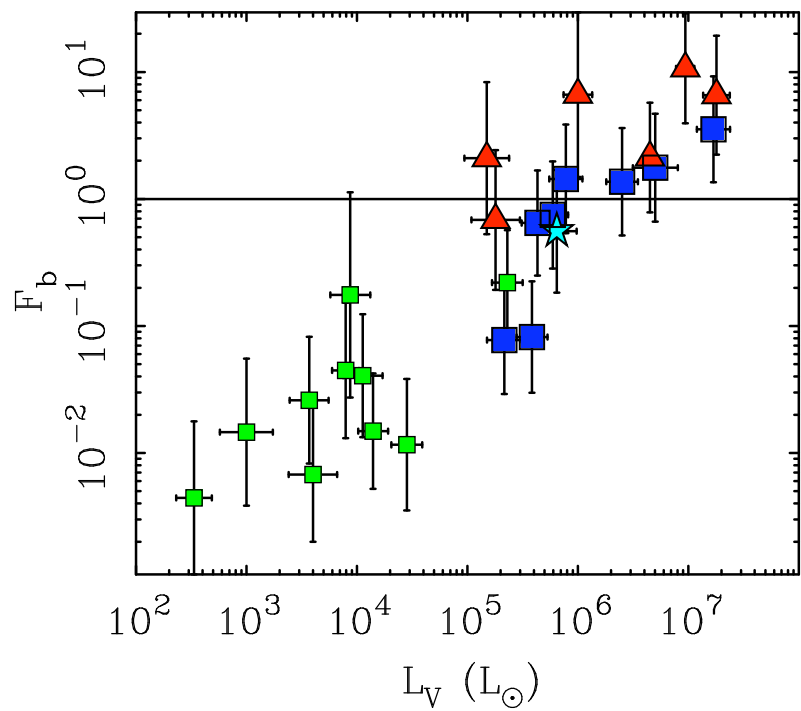
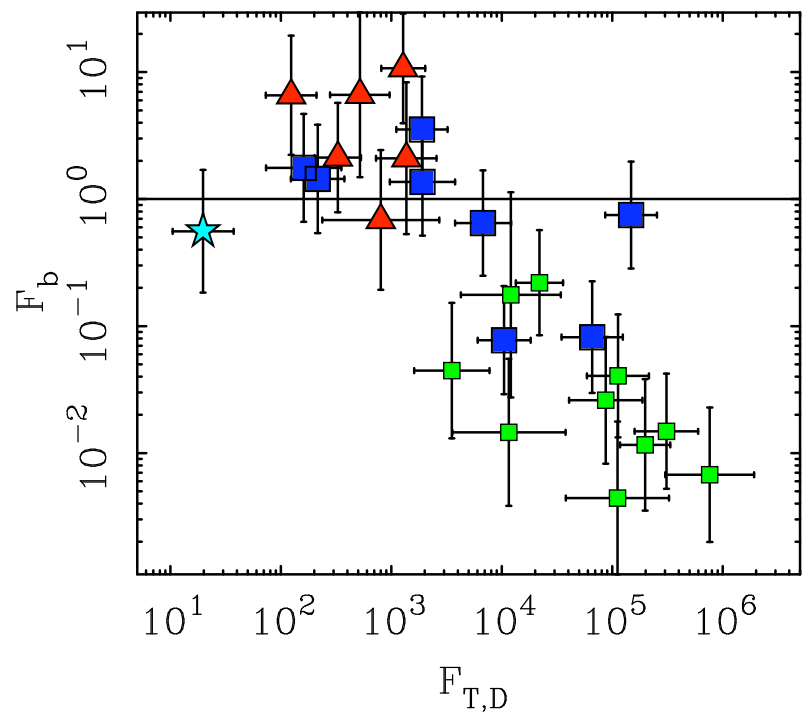
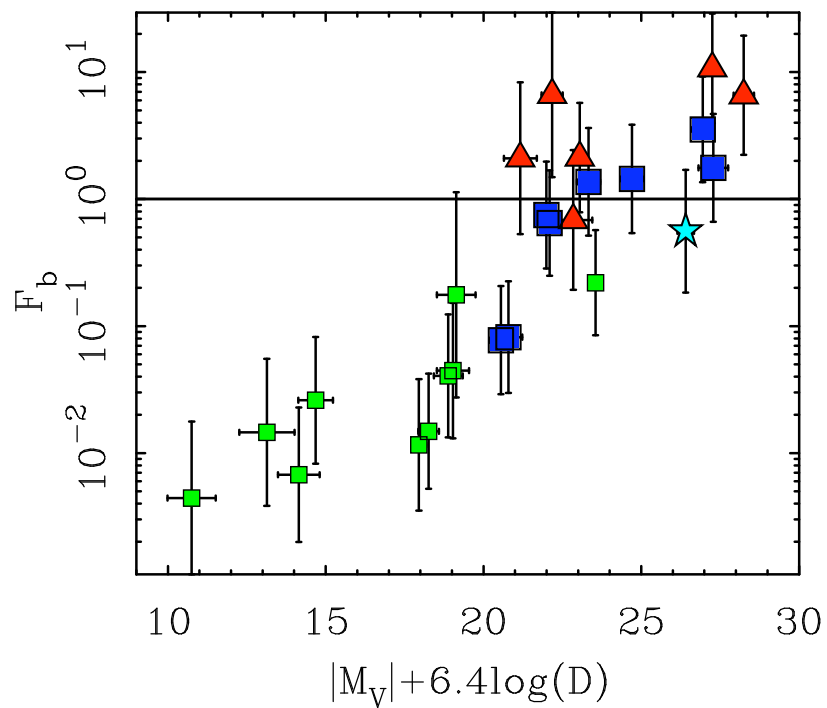
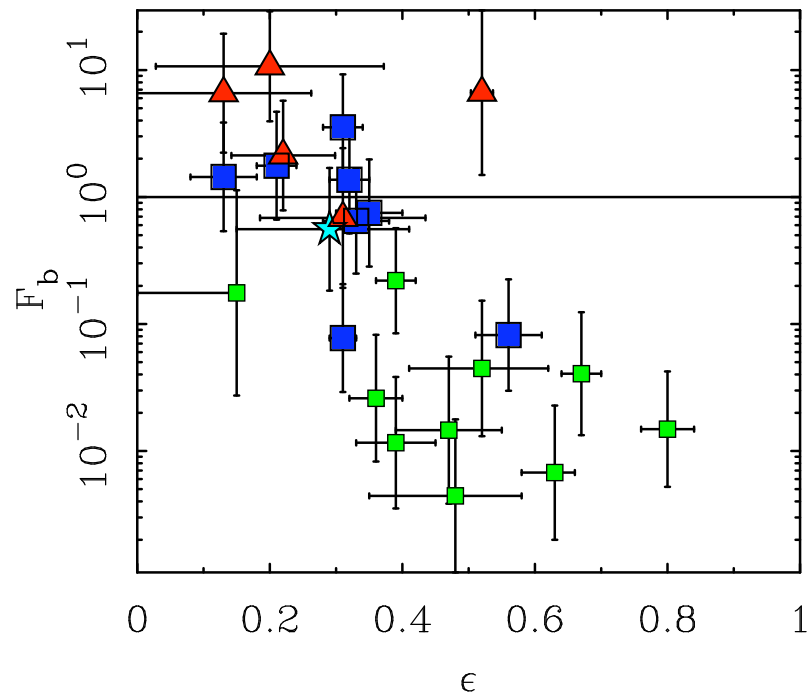
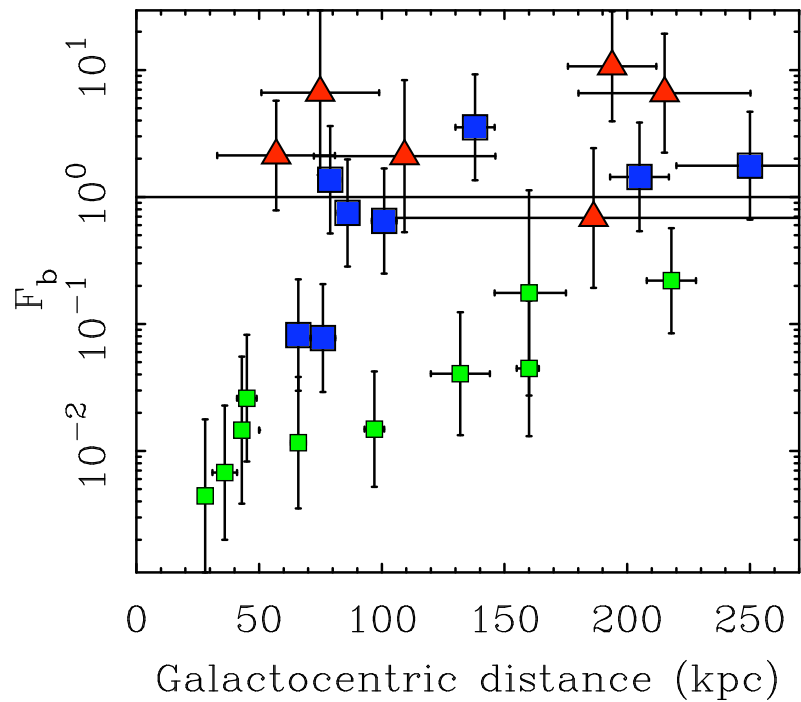
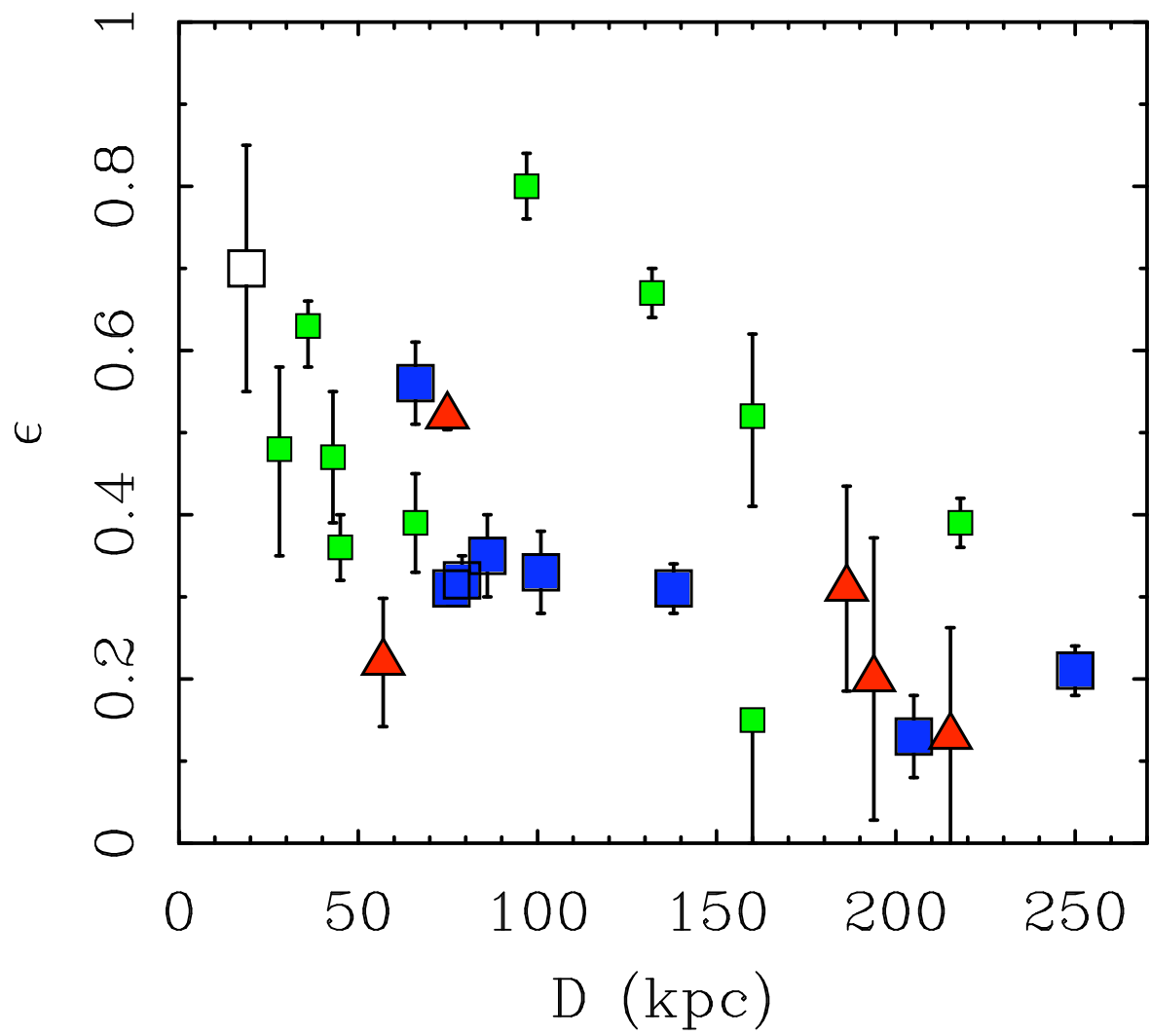


Fig 4.17 (T. Bensby) 'Galaxies in the Universe' Sparke/Gallagher CUP 2007









Sloan field of streams

