The Fornax Project:
Overview and first exploration of photometric relations of early-type galaxies with iDR3

Analía Smith Castelli

(On behalf of S-PLUS Project #59: The Fornax Cluster through S-PLUS)

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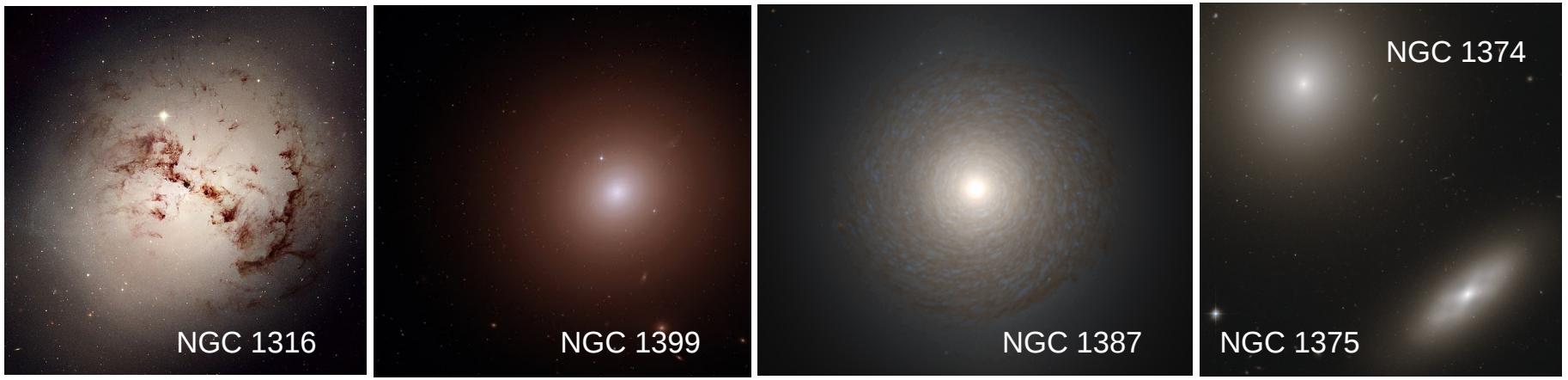

Why Fornax?

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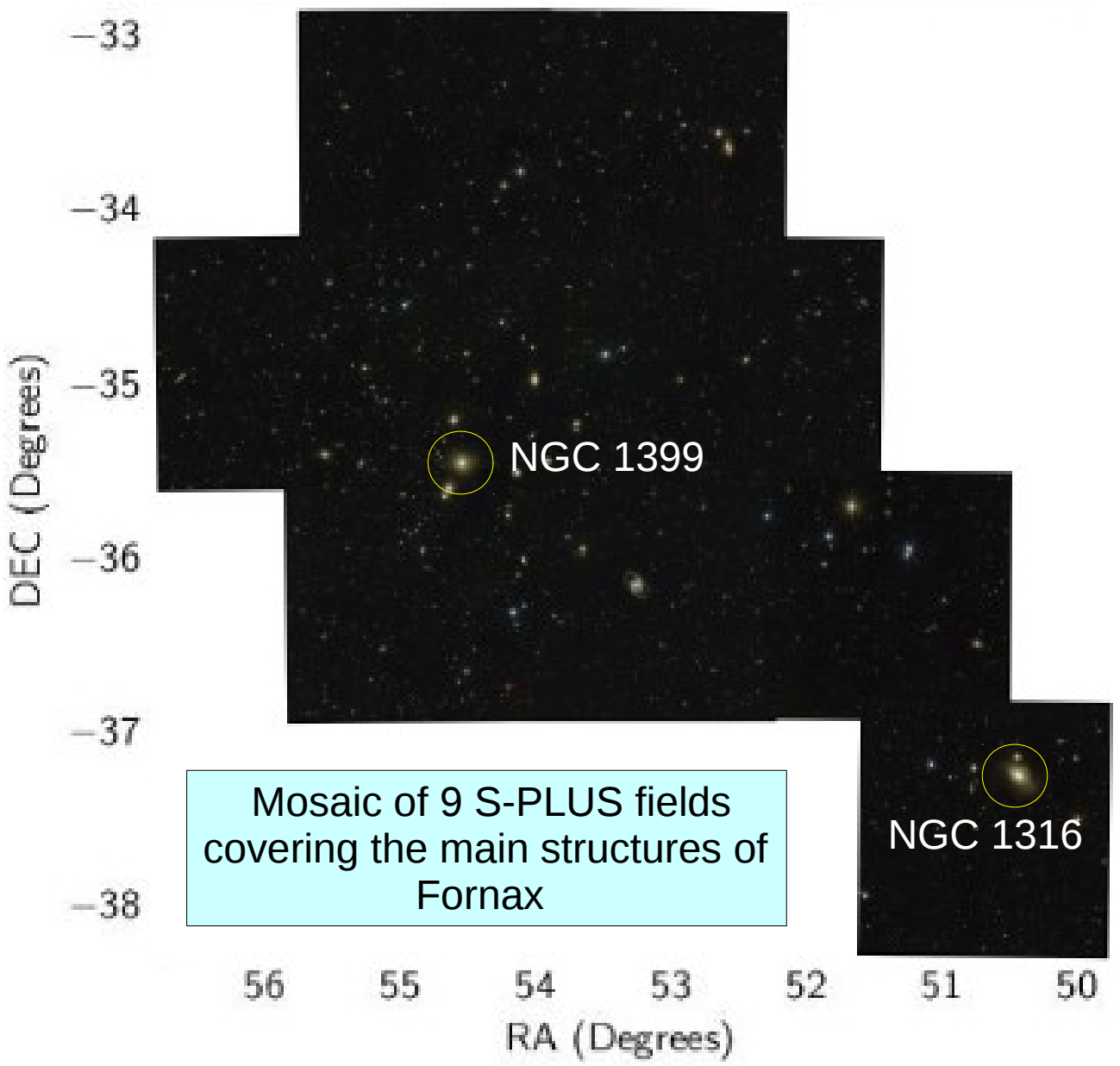

Mosaic of 9 S-PLUS fields covering the main structures of Fornax

The Fornax cluster is the small sibling of the Virgo cluster and it is located in the South Hemispher

► D~20 Mpc

► M~ 7×10^{13} $M_{\odot}$

► ~1/6 times the number of galaxies

► galaxy number density 2-3 times higher in Fornax than in Virgo

► more symmetric and dynamically evolved than Virgo

(Zabel+ 2020, MNRAS, 496, 2155)

Why Fornax?

ads

QUICK FIELD: Author First Auth

Start New Search

title:"Fornax cluster"

Your search returned **147** results

Collection
+astronomy

Property
+property:refereed

AUTHORS

Hilker, M	24	Napolitano, N	12	van de Ven, G	7	Baes, M	4	Bassino, L	3
Infante, L	18	Spavone, M	12	Kuntschner, H	6	Couch, W	4	Bekki, K	3
Mieske, S	17	Venhola, A	12	Lisker, T	6	Elson, R	4	Bianchi, S	3
Ferrarese, L	16	Gregg, M	11	Richtler, T	6	Forbes, D	4	Bomans, D	3
Iodice, E	16	Phillipps, S	11	Salo, H	6	Forman, W	4	Bothun, G	3
Peletier, R	15	Paolillo, M	10	Schipani, P	6	Janz, J	4	Brodie, J	3
Capaccioli, M	14	Mei, S	9	Serra, P	6	Jones, C	4	De Looze, I	3
Cote, P	14	Davies, J	8	Tonry, J	6	Kalloghlian, A	4	Dirsch, B	3
Drinkwater, M	14	Grado, A	8	Valentijn, E	6	Karick, A	4	Disney, M	3
Peng, E	14	West, M	8	Davis, T	5	Maddox, N	4	Forte, J	3
Blakeslee, J	13	Wittmann, C	8	Falcon-Barroso, J	5	Madore, B	4	Graham, J	3
Jordan, A	13	D'Abrusco, R	7	Ferguson, H	5	Mould, J	4	Grebel, E	3
Cantiello, M	12	Jones, J	7	Kissler-Patig, M	5	Ohashi, T	4	Grillmair, C	3
		Limatola, L	7	Laurikainen, E	5	Puzia, T	4	Grossi, M	3

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Dwarf Galaxies in the Fornax Cluster

PAUL W. HODGE,* DIANE M. PYPER, AND CAROL J. WEBB
Berkeley Astronomical Department, University of California
(Received 2 July 1965)

A survey of probable dwarf galaxies in the Fornax cluster reveals 50 objects. Some are apparently Sculptor-type dwarfs and others are dwarf irregular galaxies. Photoelectrically calibrated photometry of 13 of these leads to estimates of total apparent and absolute magnitudes and to profiles. Absolute magnitudes for the objects measured range from −13.8 to −16.0, and profiles are found in most cases to agree with King's and Michie's theoretical models. The spatial distributions of giant and of dwarf galaxies are sufficiently different to suggest the presence of a tendency for equipartition of galaxies of different masses.

And more……

S-PLUS Project #59:
The Fornax Cluster through S-PLUS

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Coordinator: Analía Smith Castelli

Amazing Team (alphabetic order):

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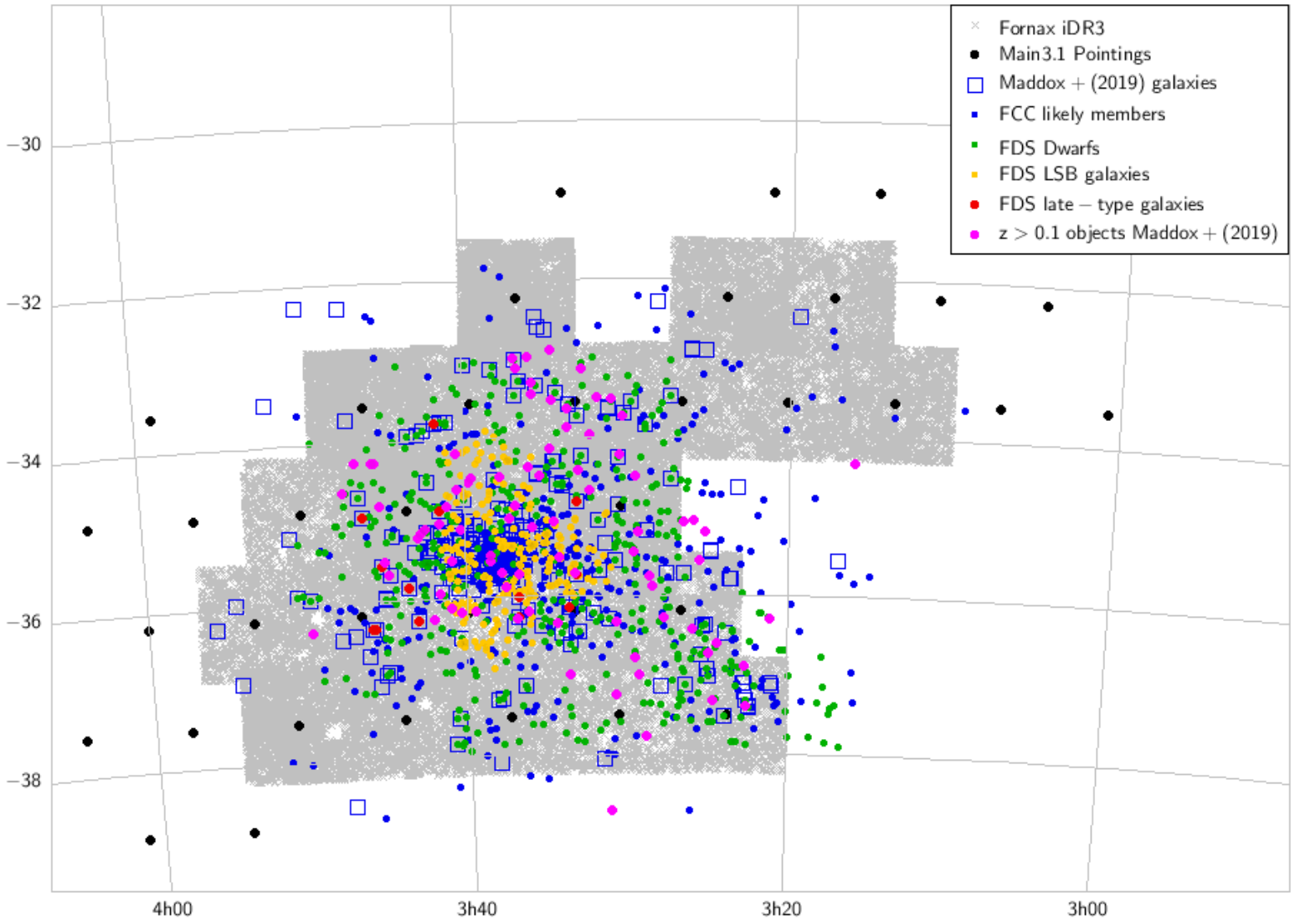
S-PLUS Project #59:
The Fornax Cluster through S-PLUS

Topics

Spectral Synthesis (Cid's yesterday talk)
Morphology of galaxies (Arianna's yesterday talk)
Pixel CMD (Carlos' today talk)
Star-forming dwarf galaxies (Marco's today talk)
Ultra-compact galaxies (Laerte's today talk)
Simulations (María Emilia's poster #10)
Early-type galaxies (Analía; this talk)
LSB galaxies (Kadu)
Rare objects and substructures/Hα emitters (Claudia)
Principal Component Analysis (Cid)
Dynamical properties (Laerte)
Radio Data (Juliana)
UV Data (María Luiza)
Jellyfish galaxies (Ana)
HII galaxies (Eduardo)
Background galaxies (Ileana)
…. among others

Fornax in iDR3



23 S-PLUS Fields

Catalog with ~200.00 objects

Class-star < 0.3 (galaxies) + PhotoFlagDet < 4 ▼ ~57.800 objects

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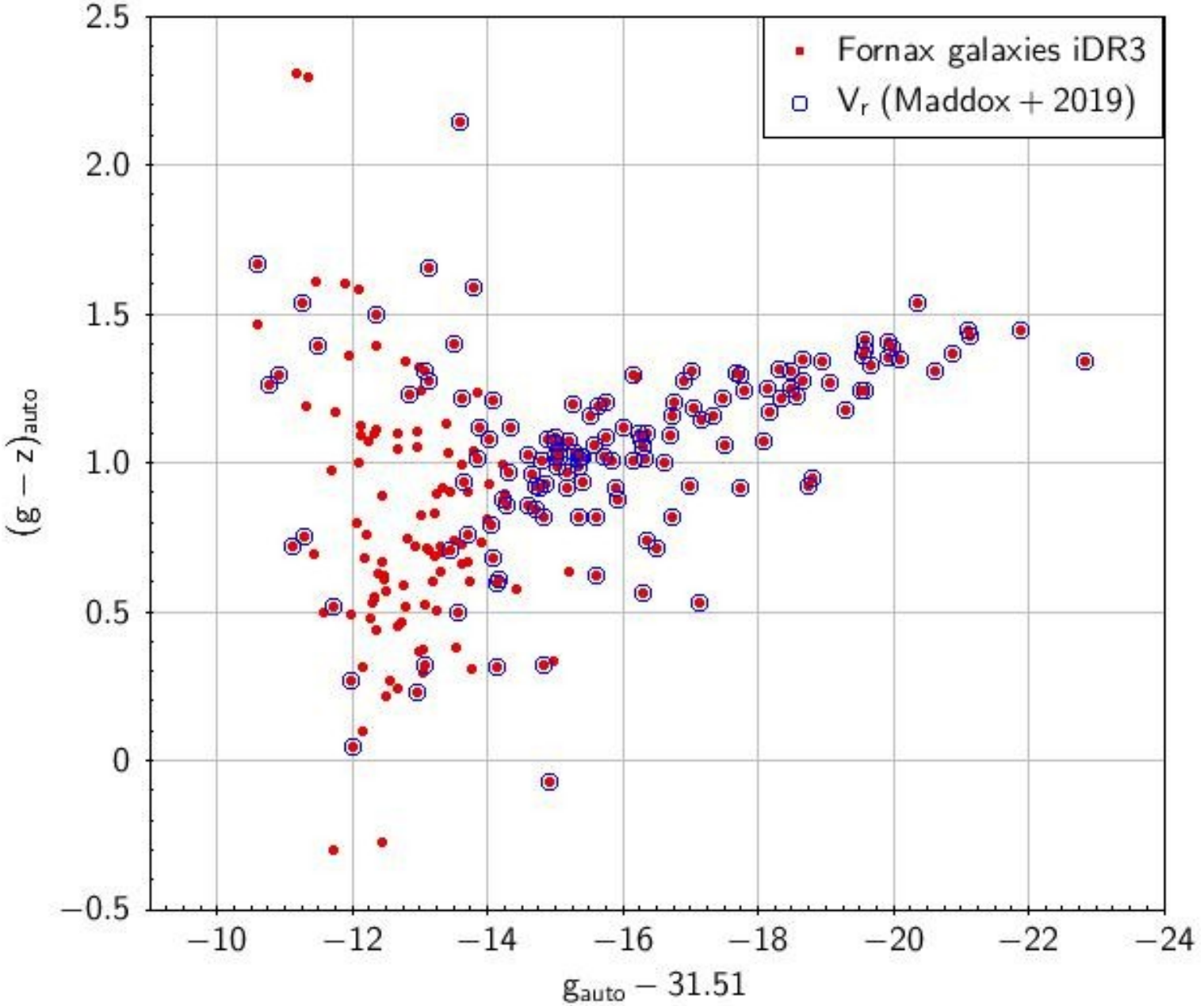


Conservative (!) Cross-matching (Separation<3")

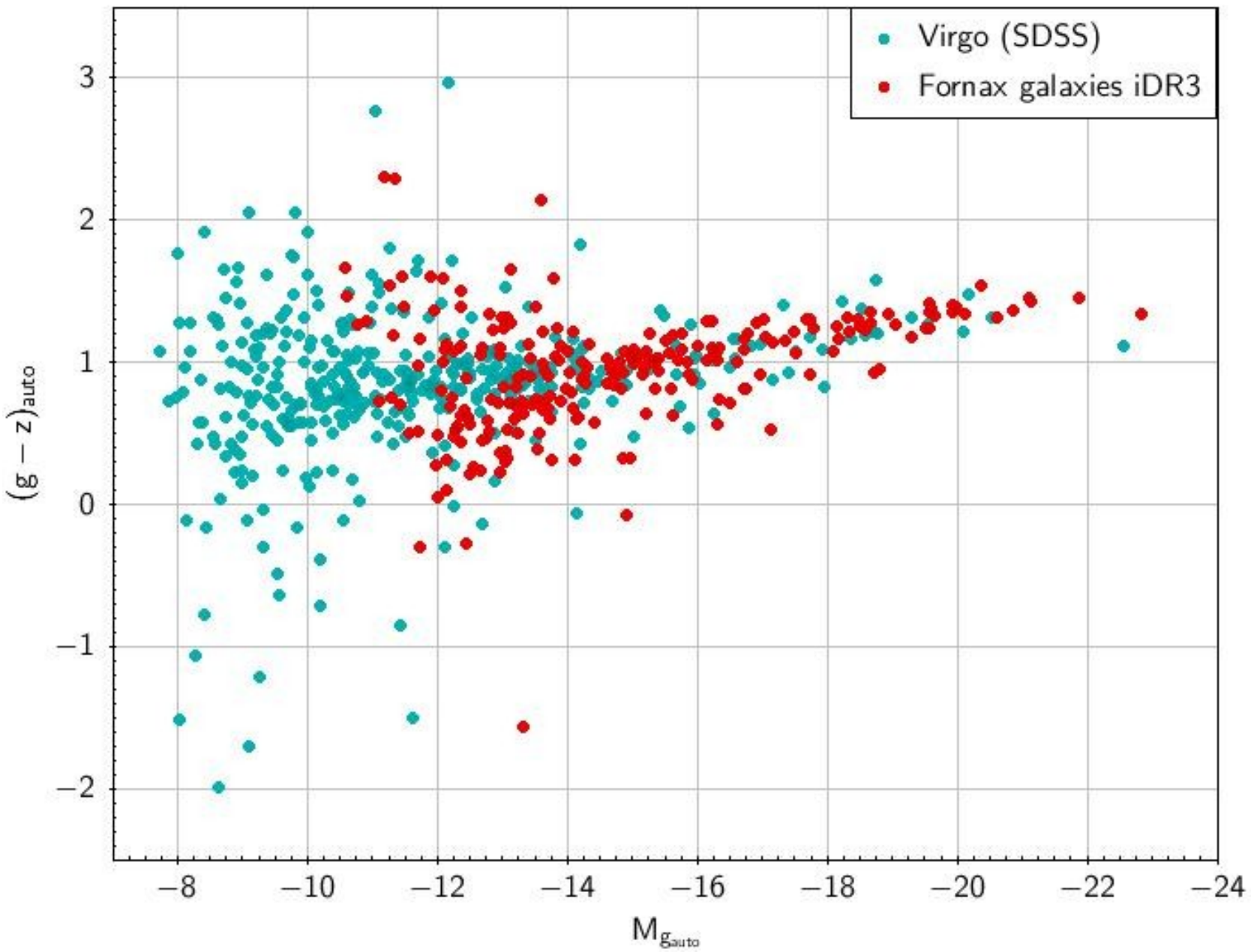
iDR3 galaxies in Fornax region

↕

Fornax catalogs (FCC, ACS FCS, FDS, etc)

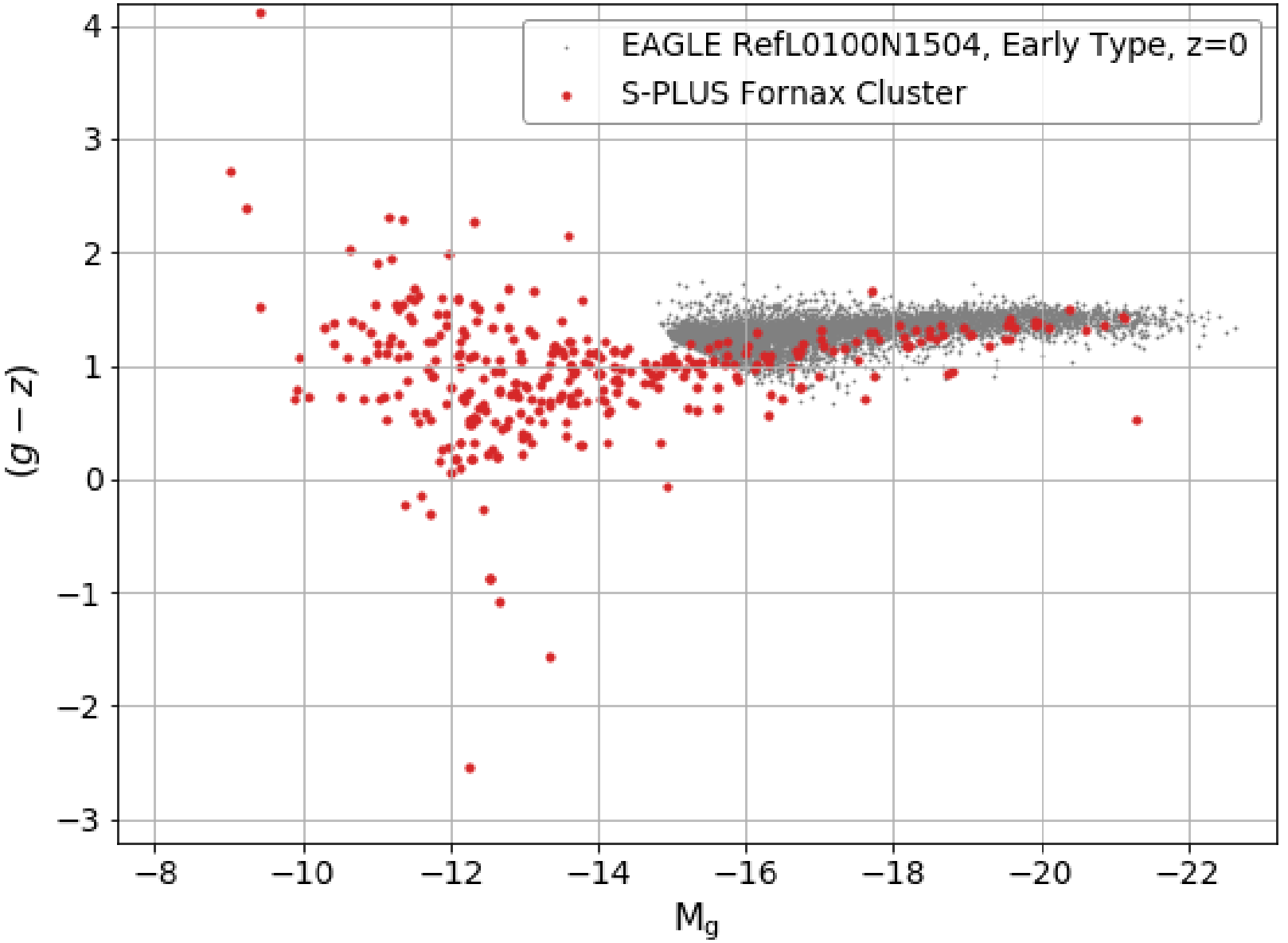
~240 Fornax galaxies with iDR3 photometry defining a nice CMR

Fornax in iDR3



Excellent agreement between the CMR of early-type galaxies in Virgo (SDSS) and the CMR obtained from iDR3 photometry in Fornax

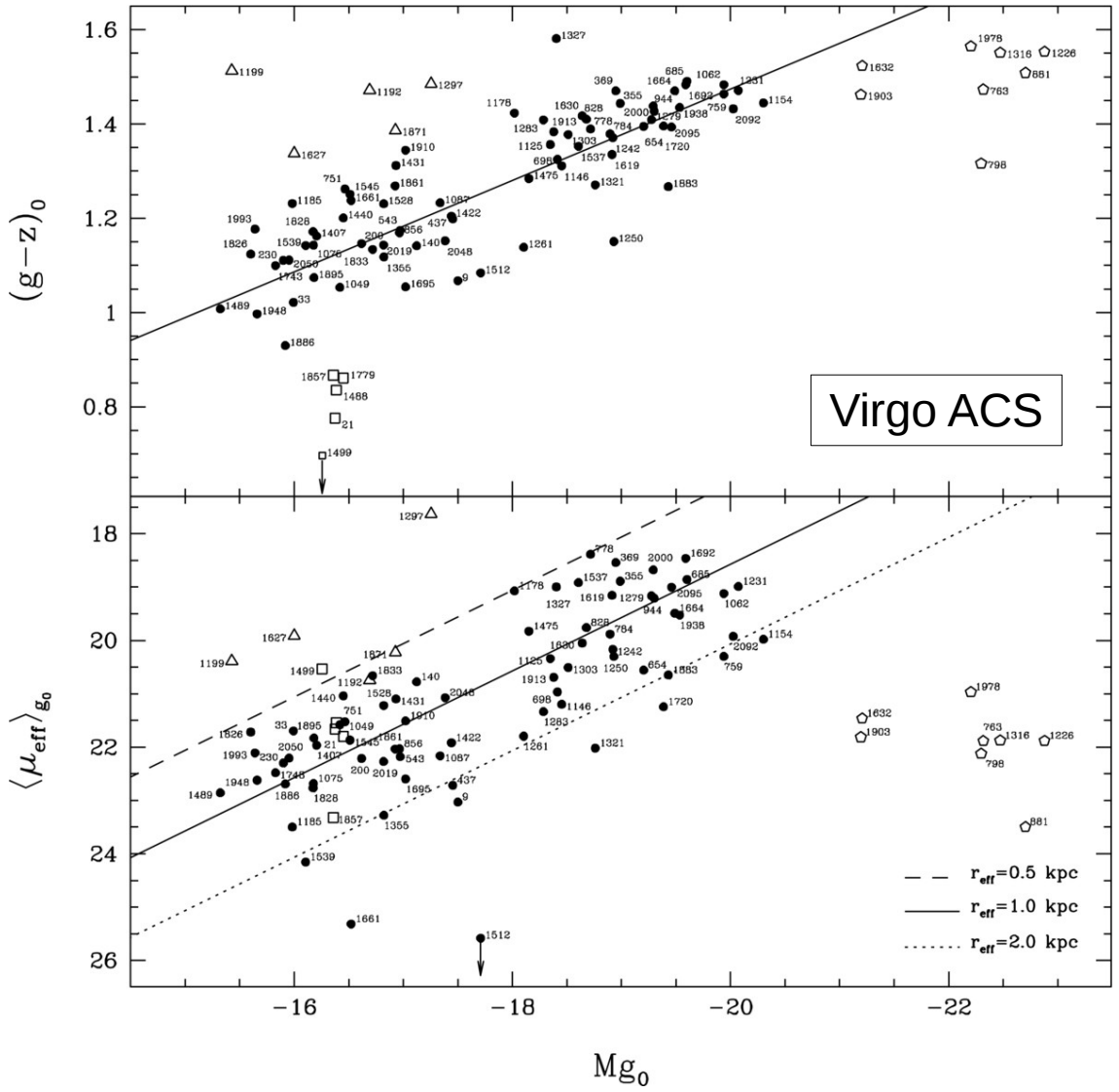
Fornax in iDR3



Excellent agreement with the Red Sequence of simulated early-type galaxies

Fornax in iDR3

Smith-Castelli+ (2013, ApJ, 772,.68)



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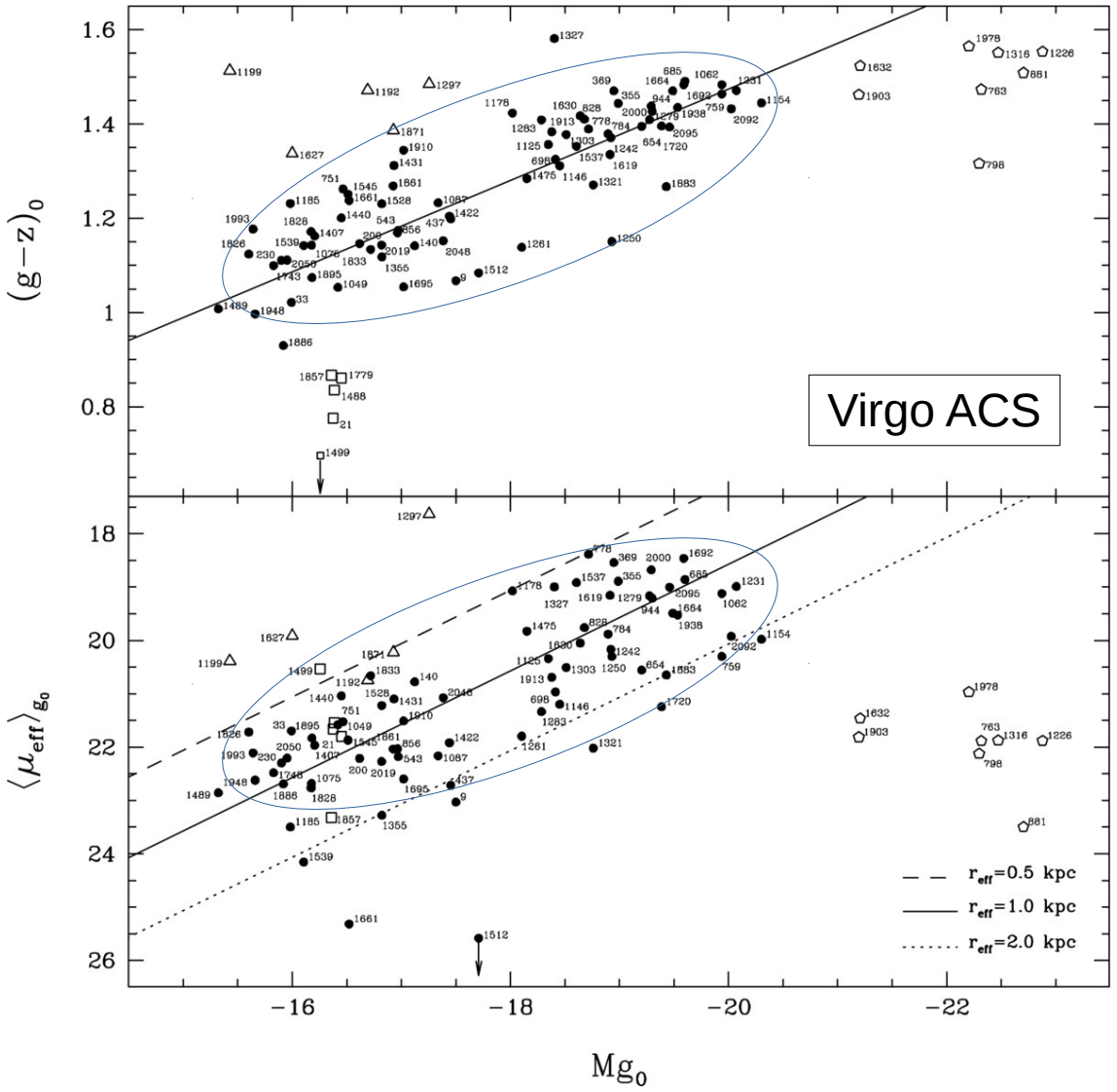

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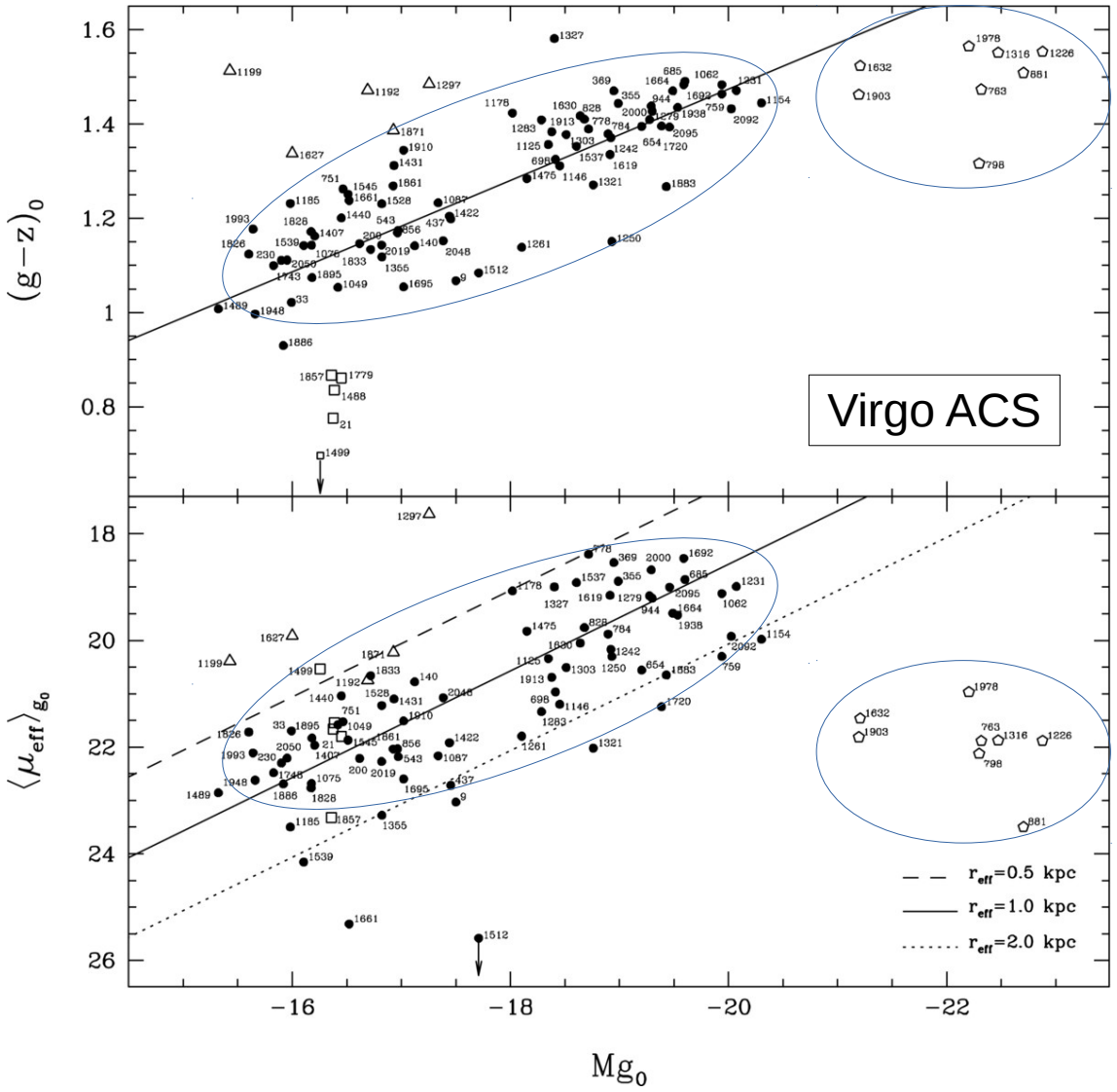

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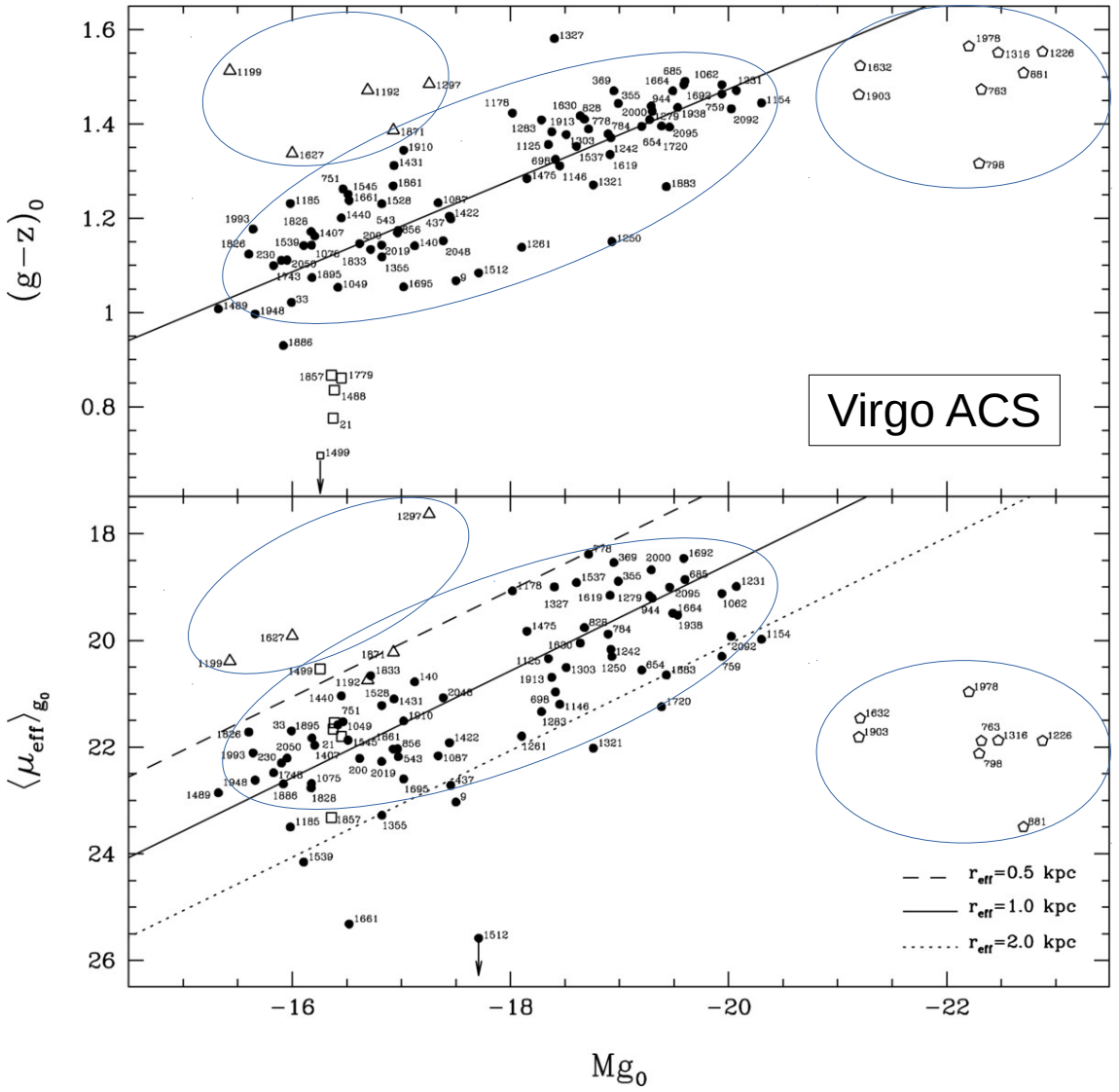

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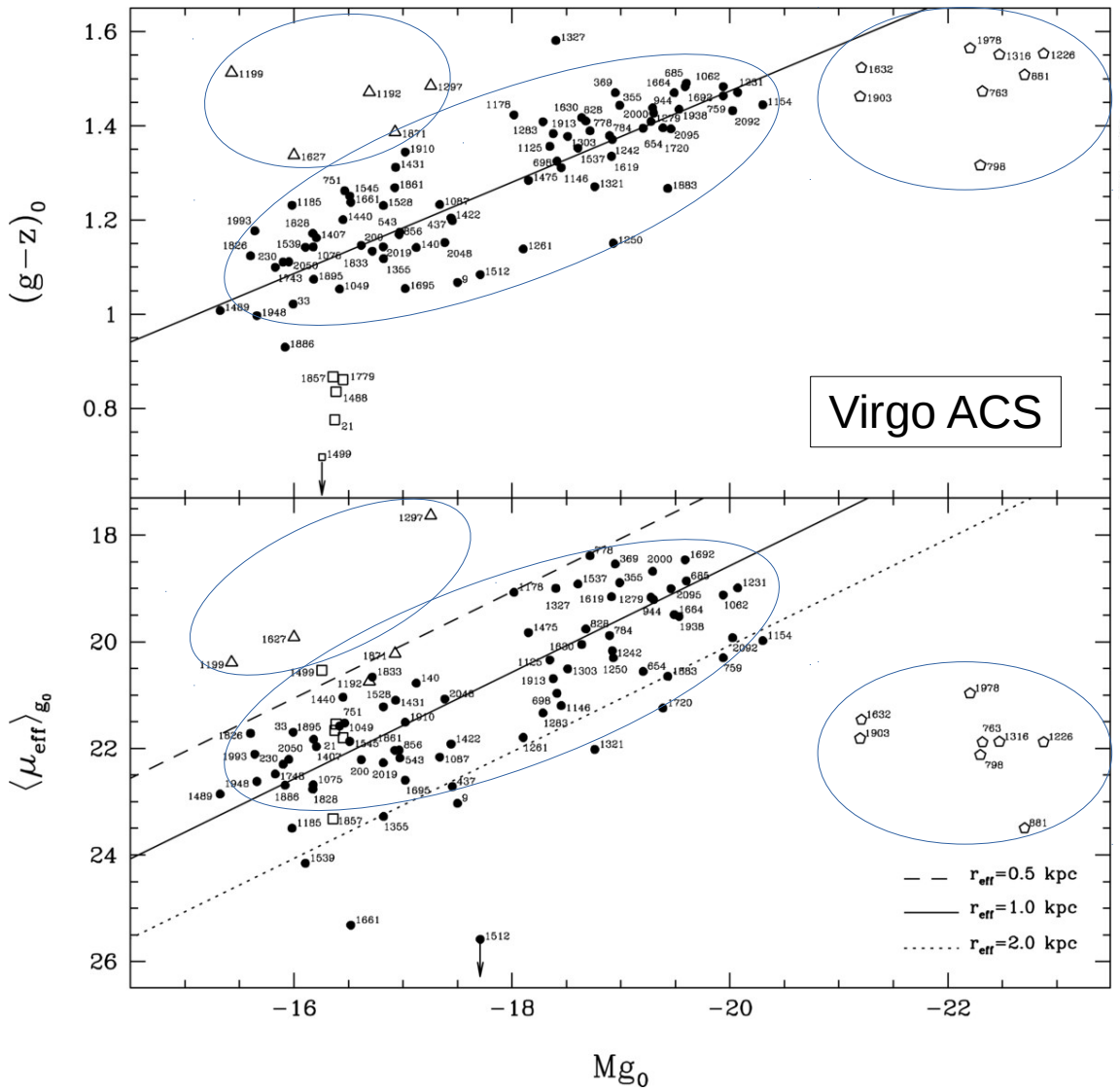

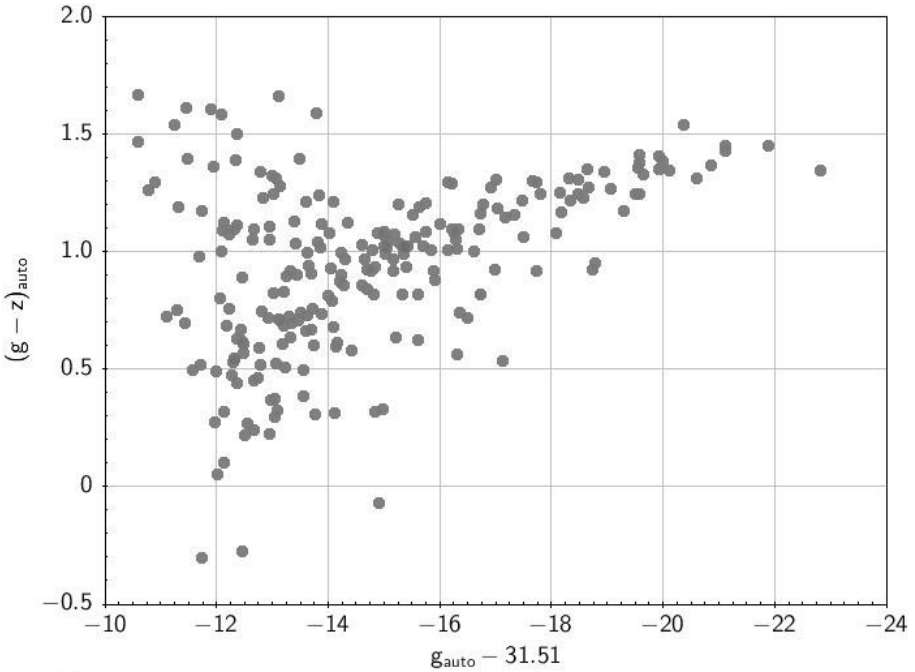

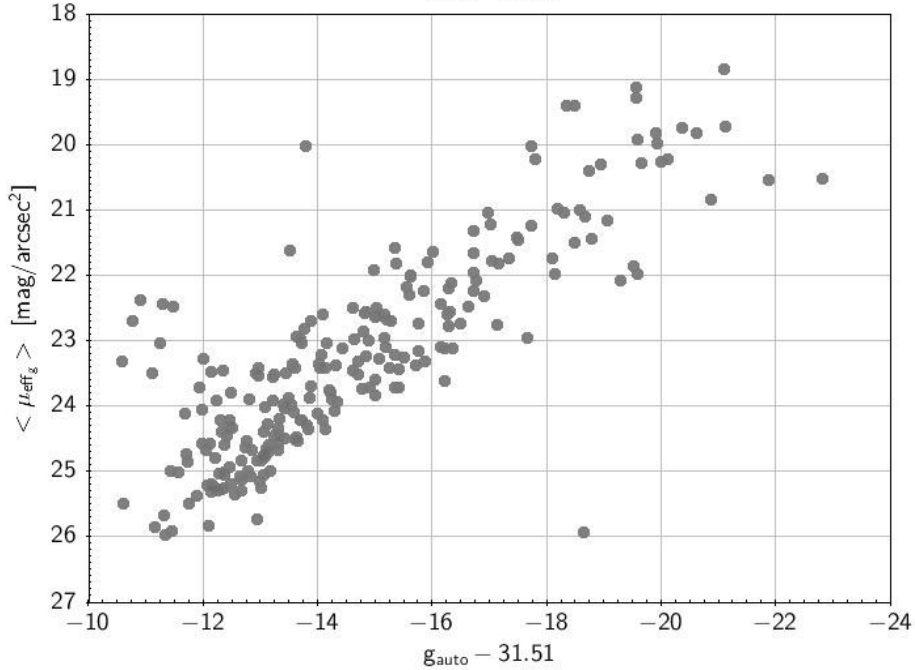

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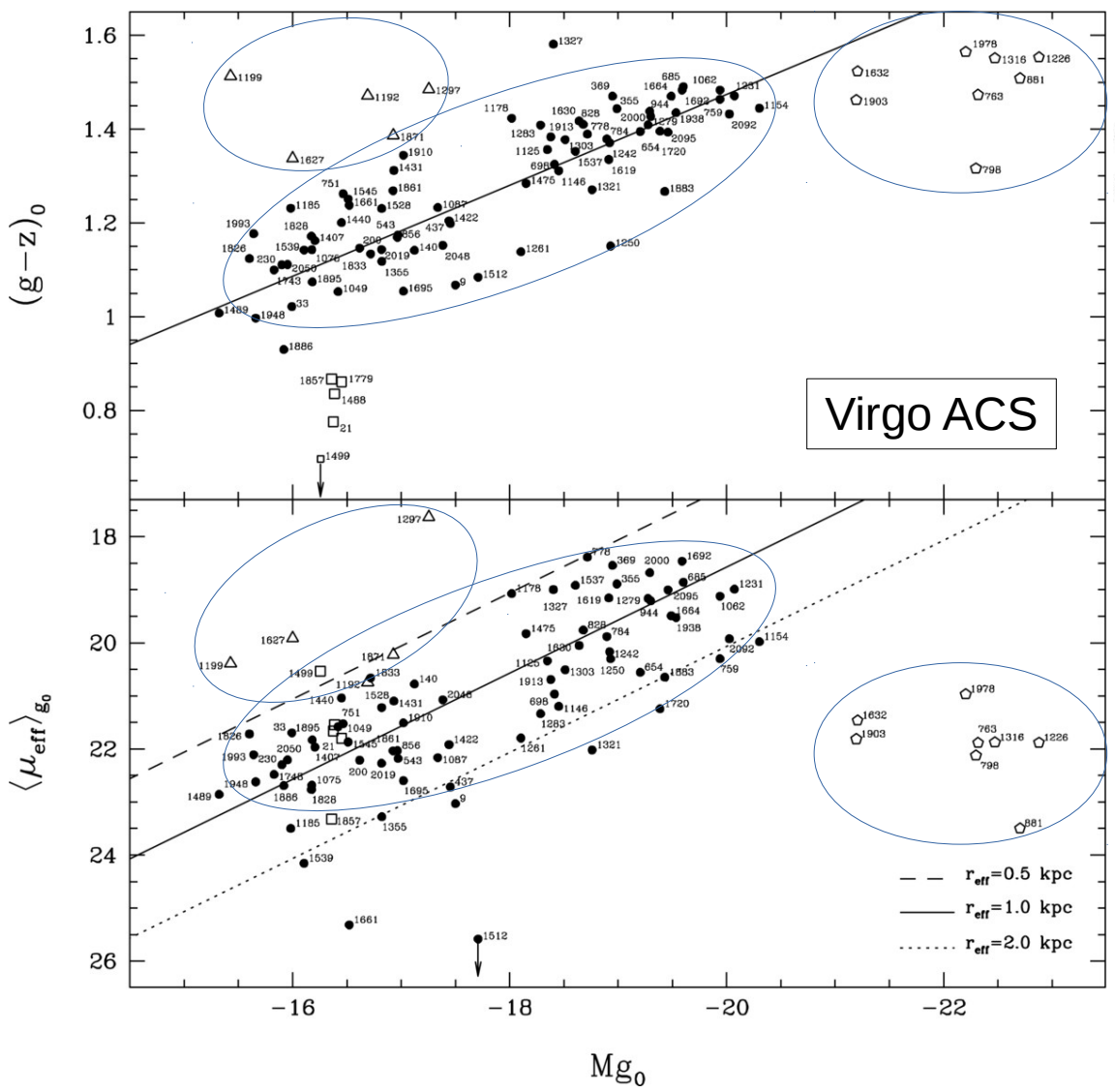

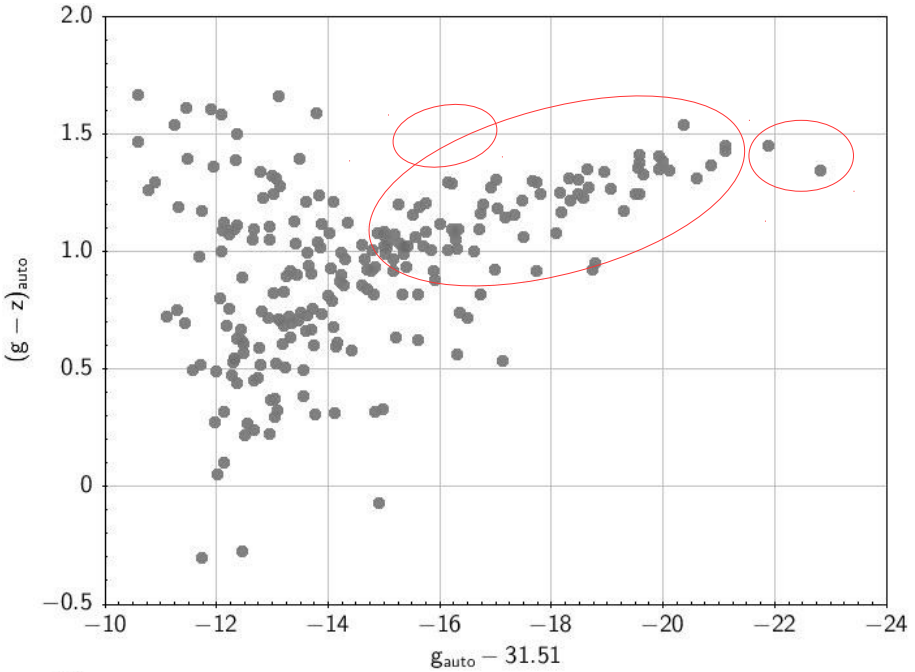

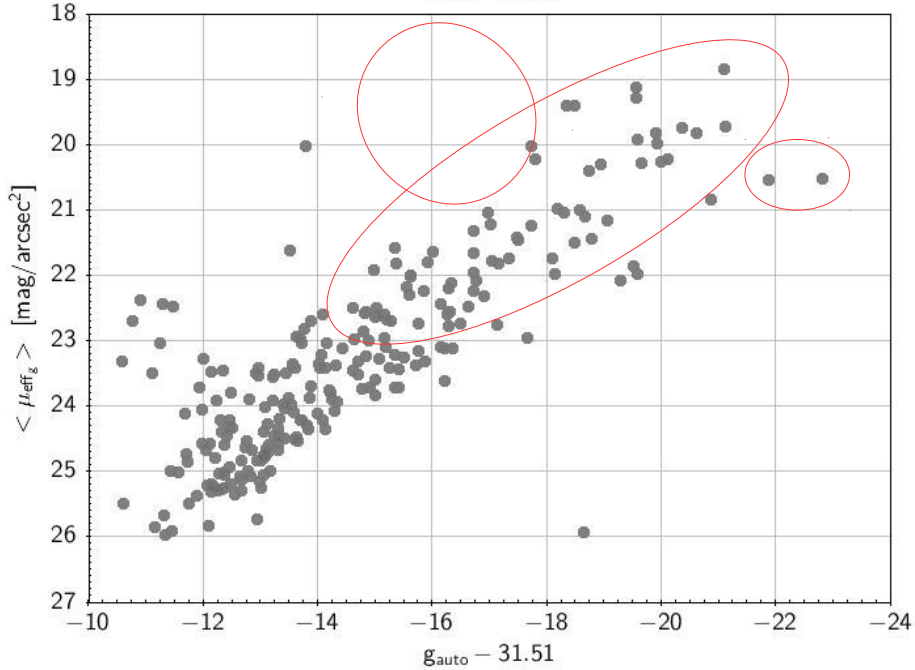

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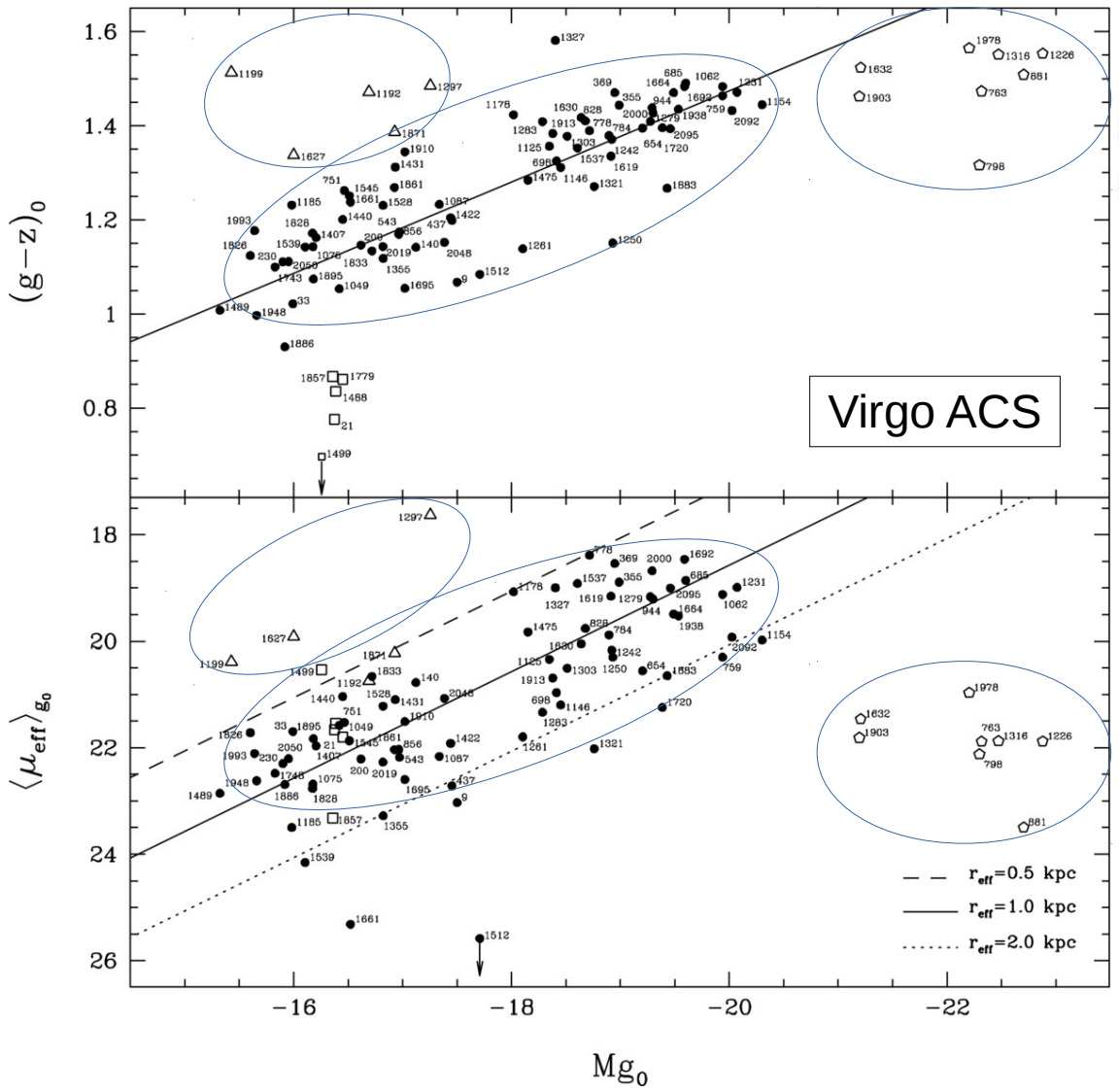

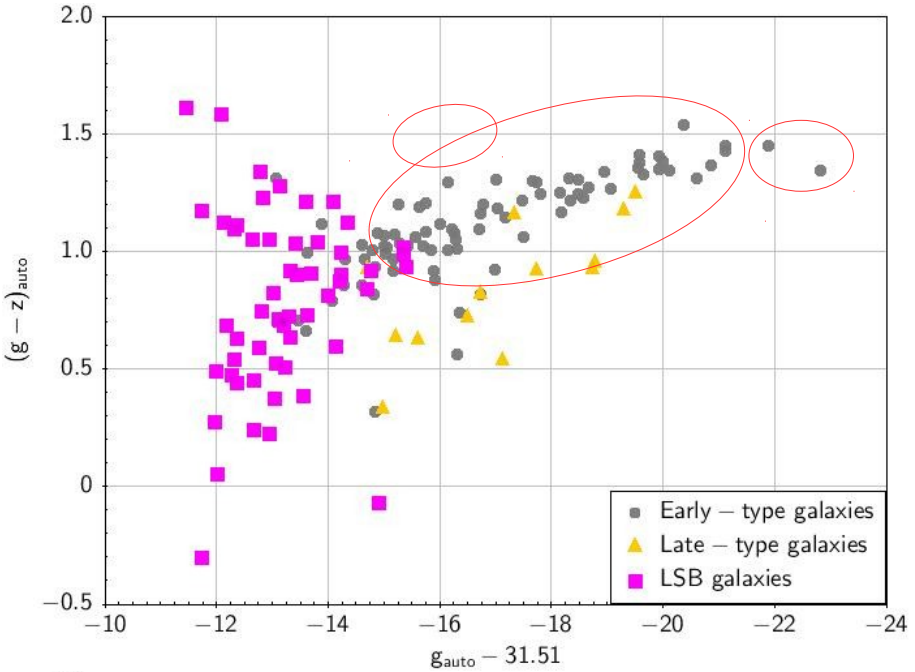

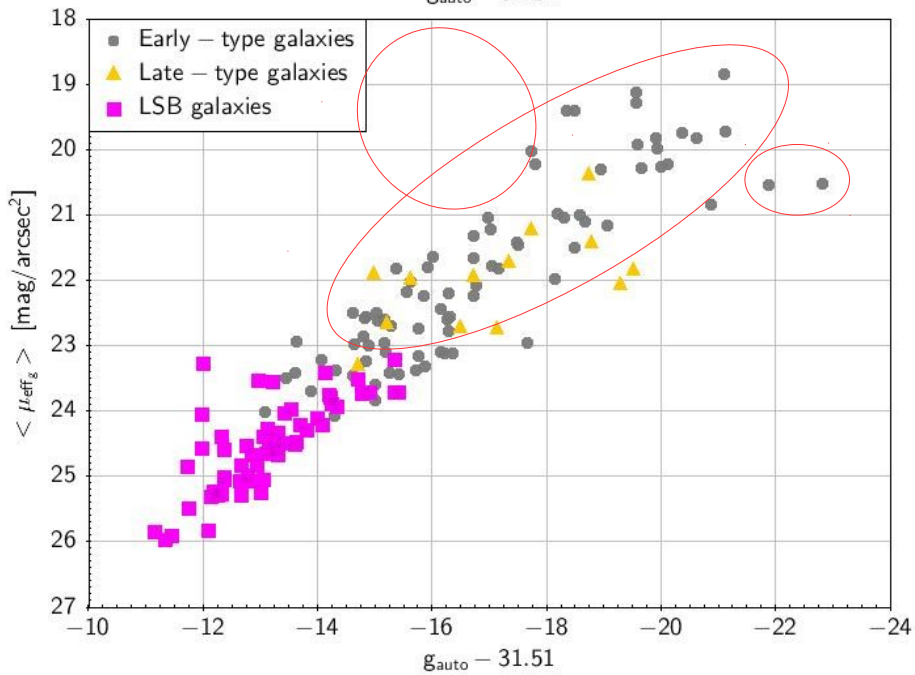

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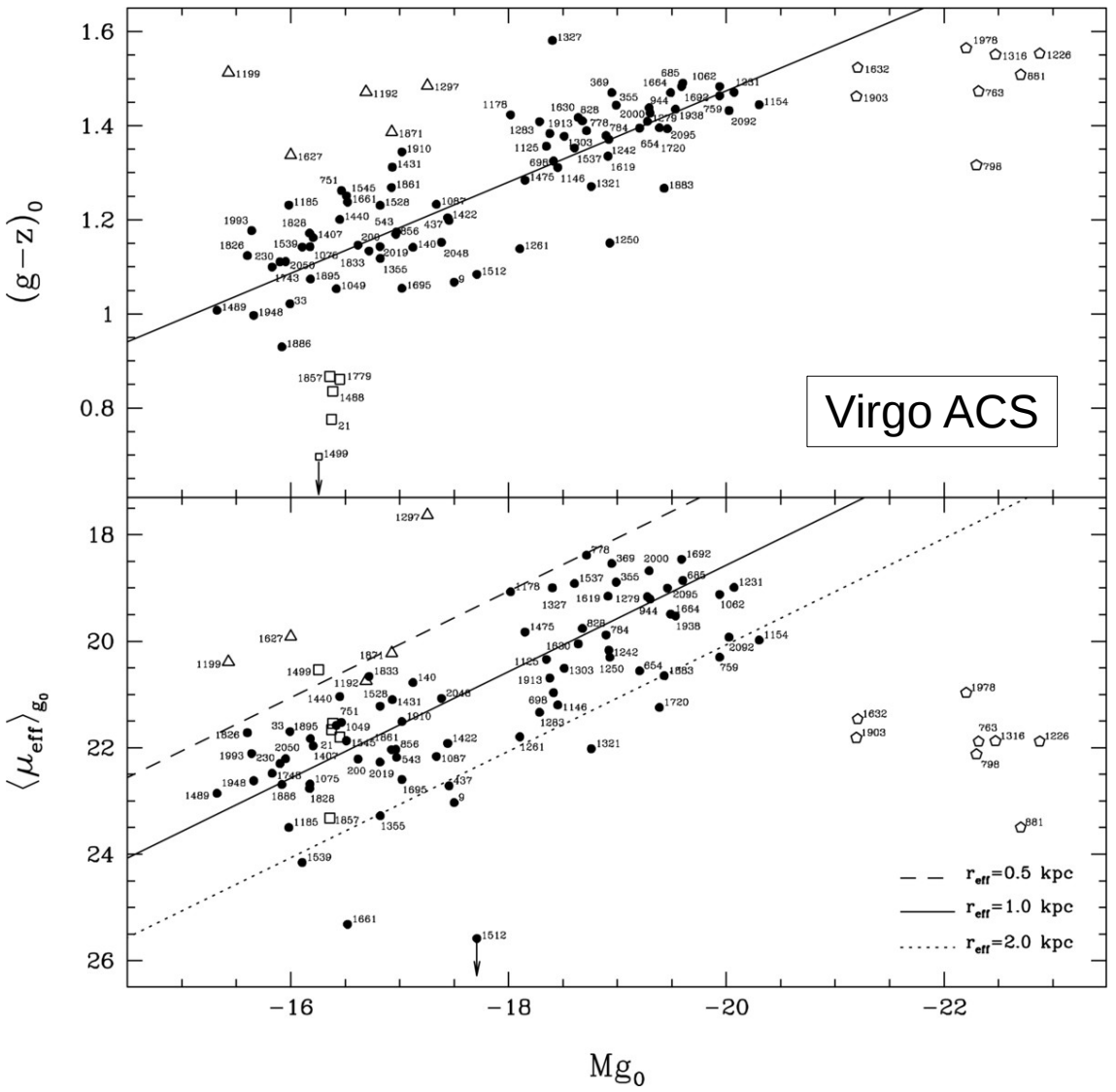

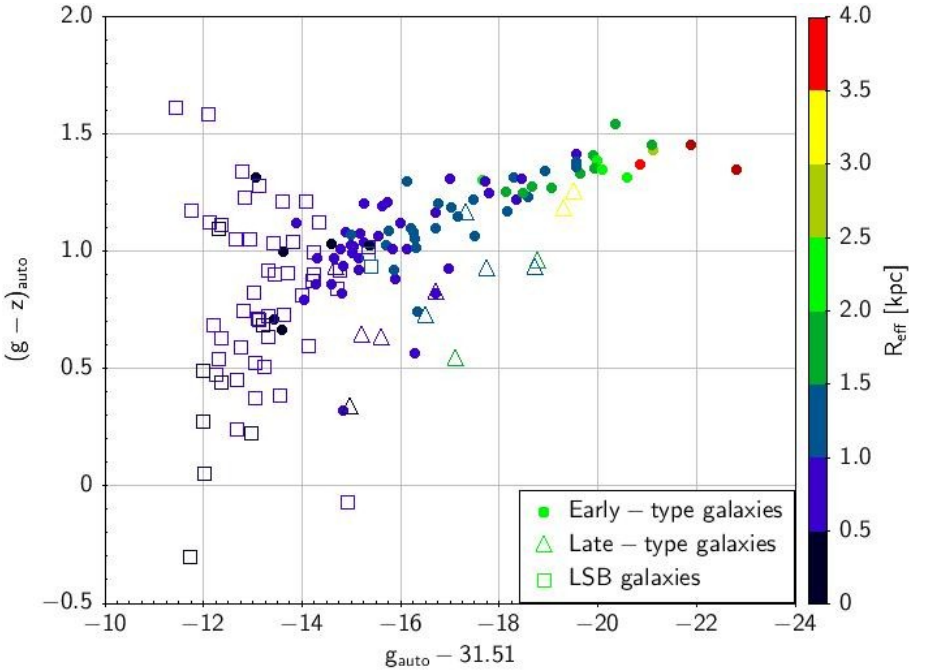

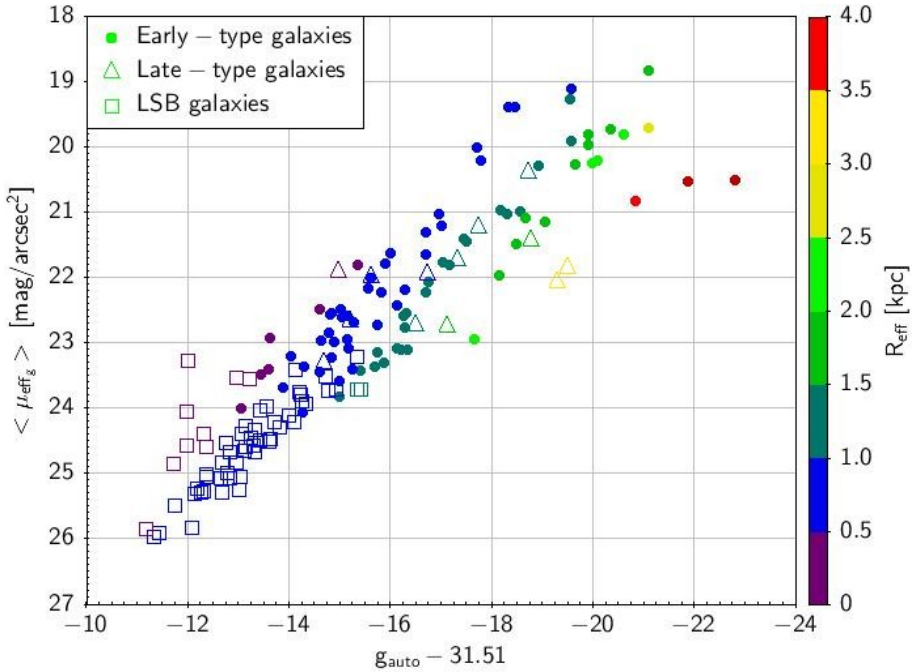

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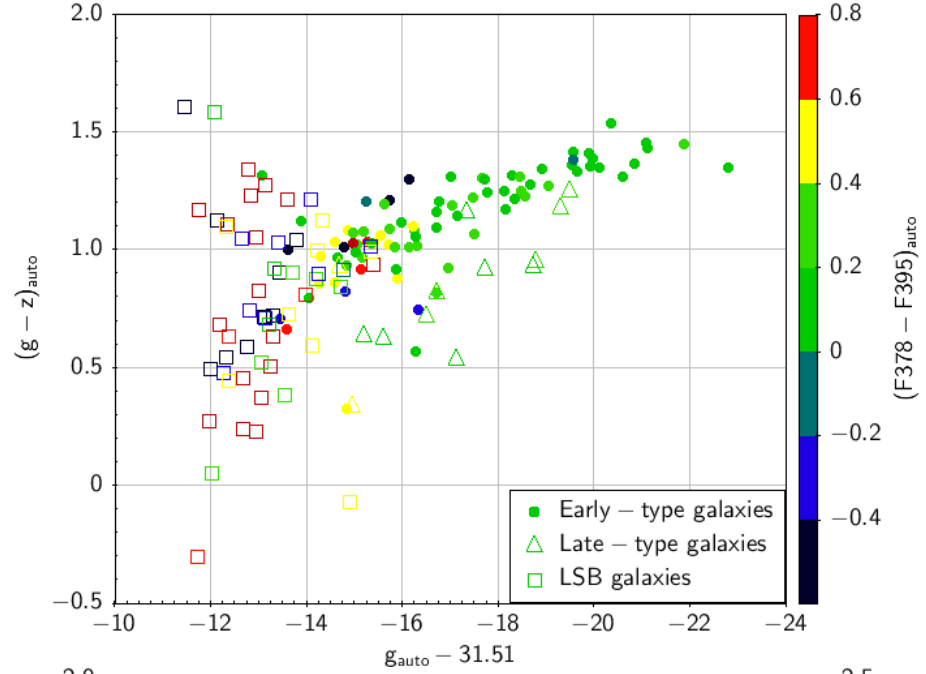

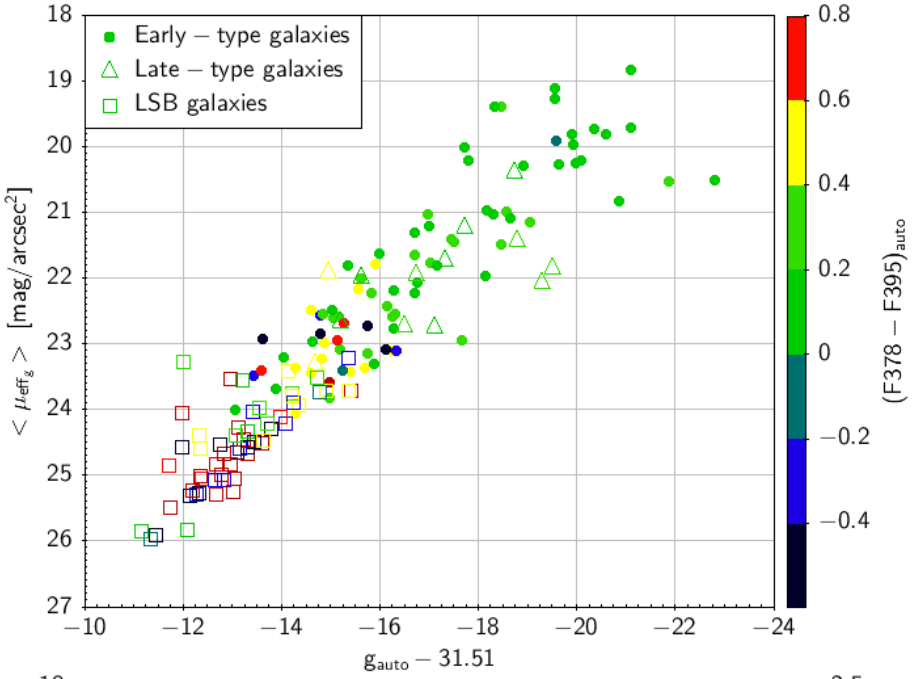

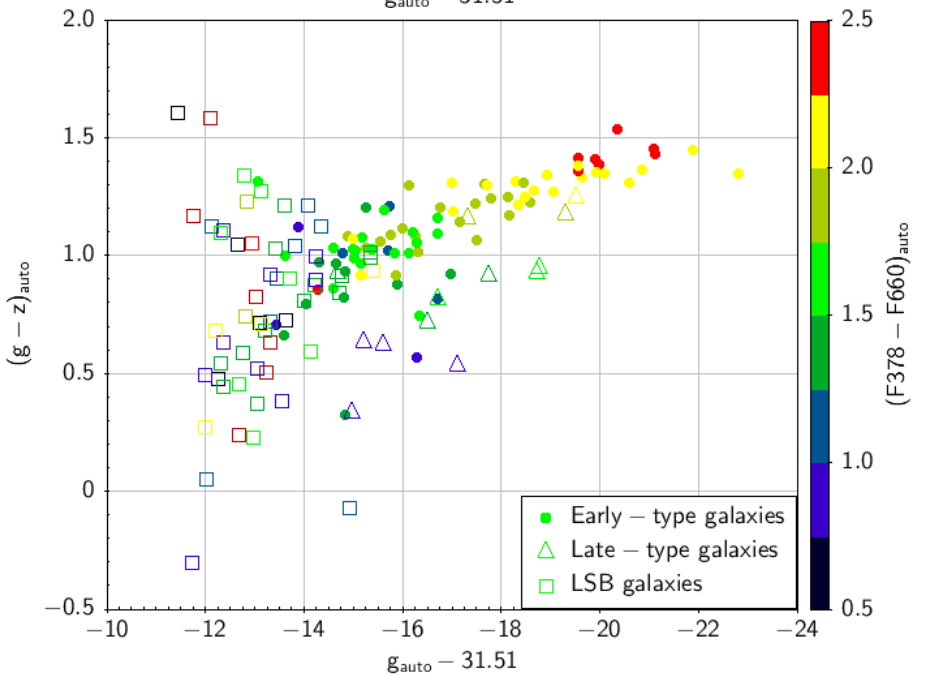

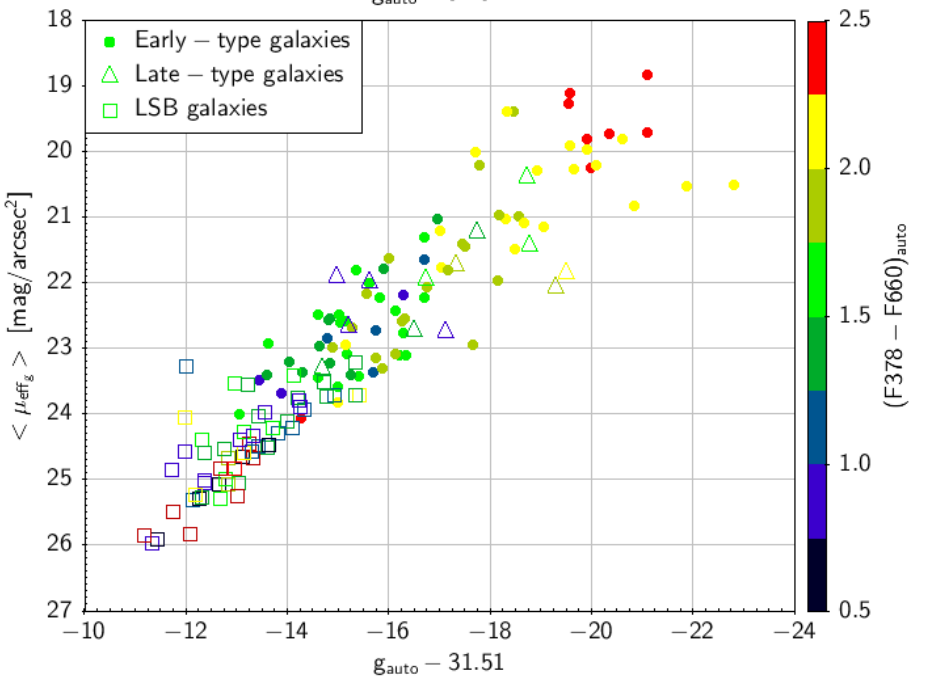

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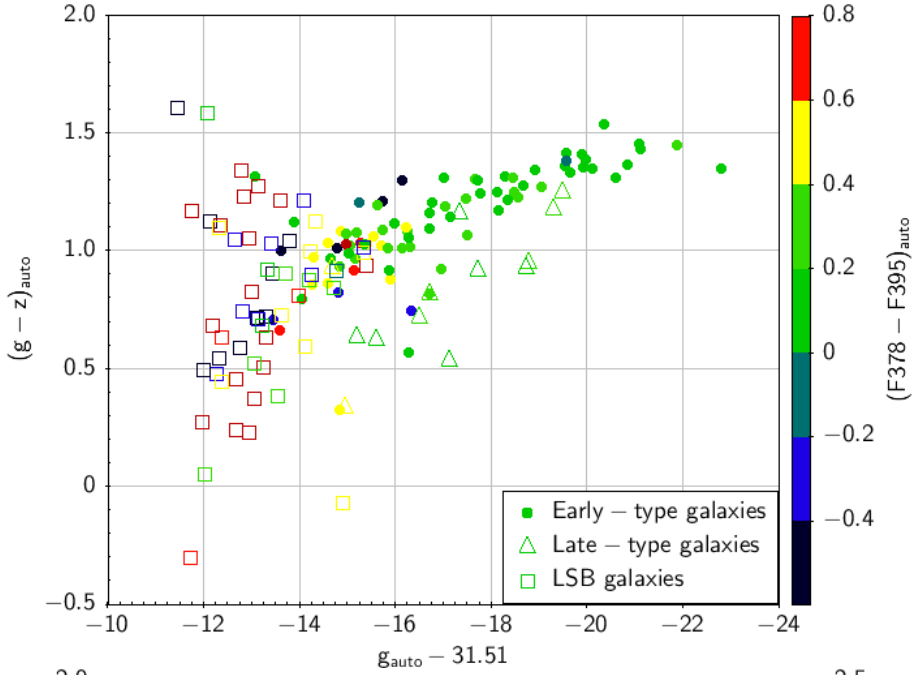

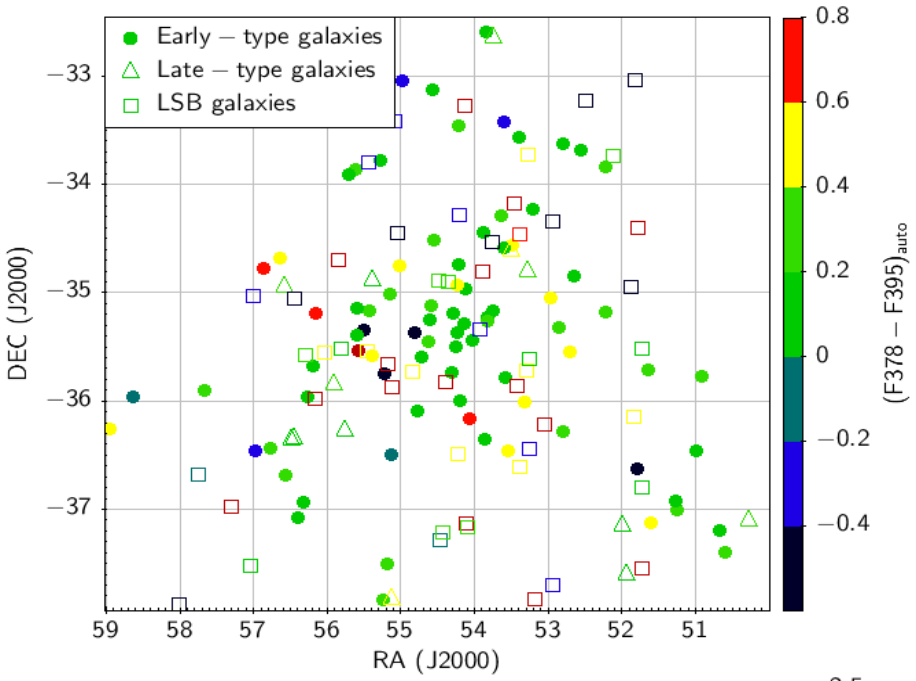

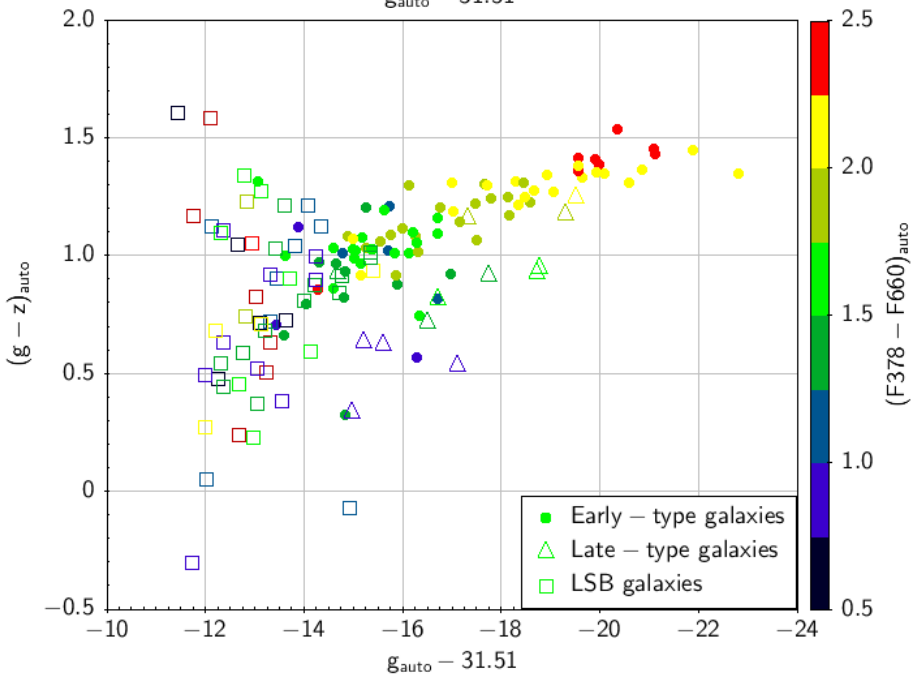

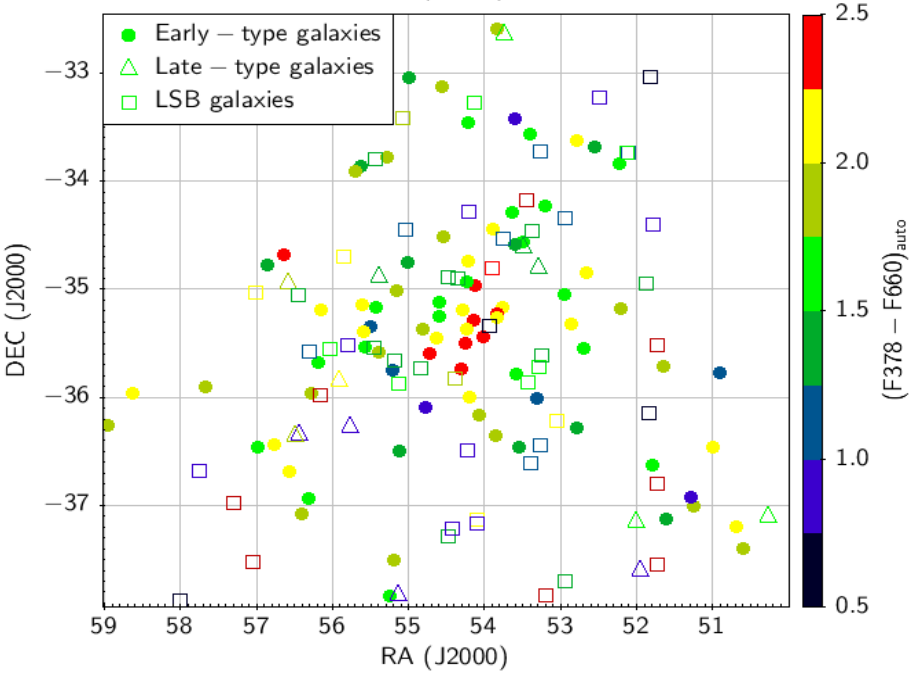

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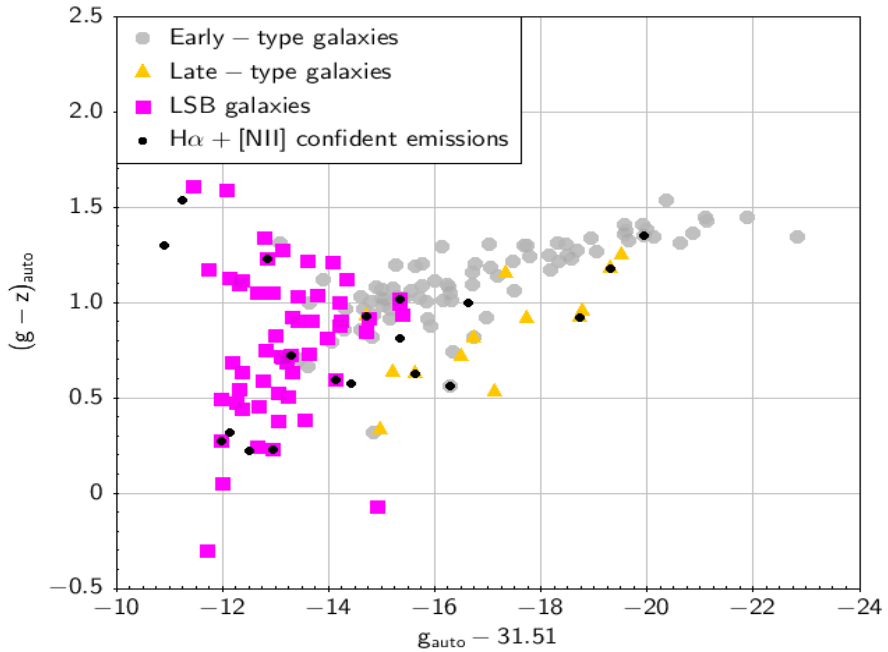

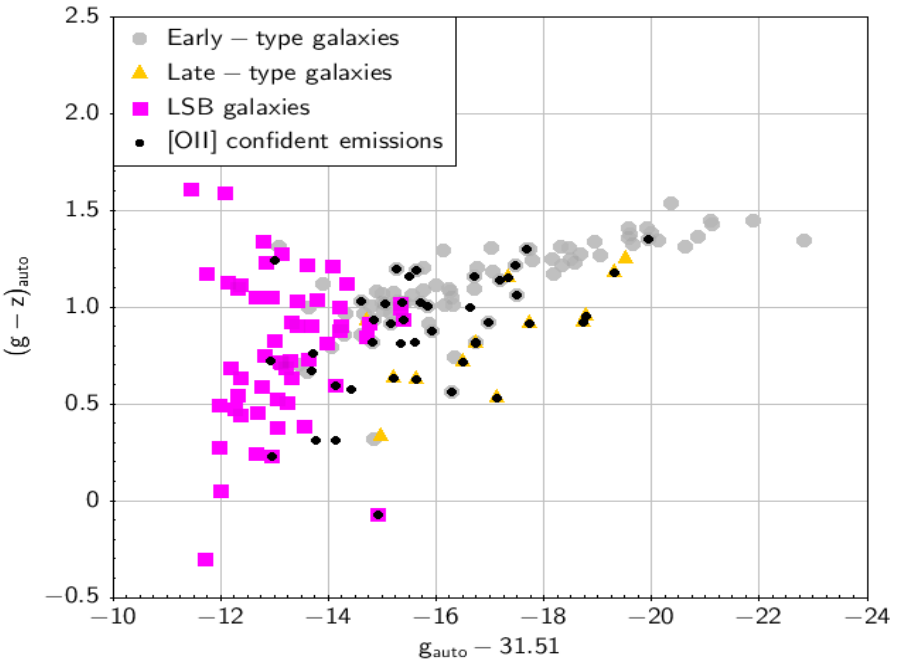

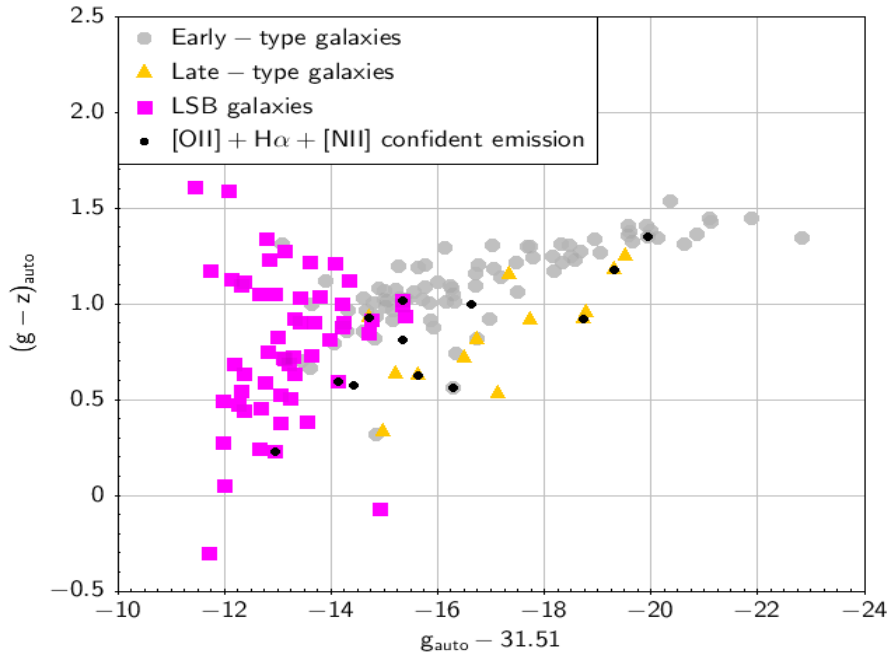

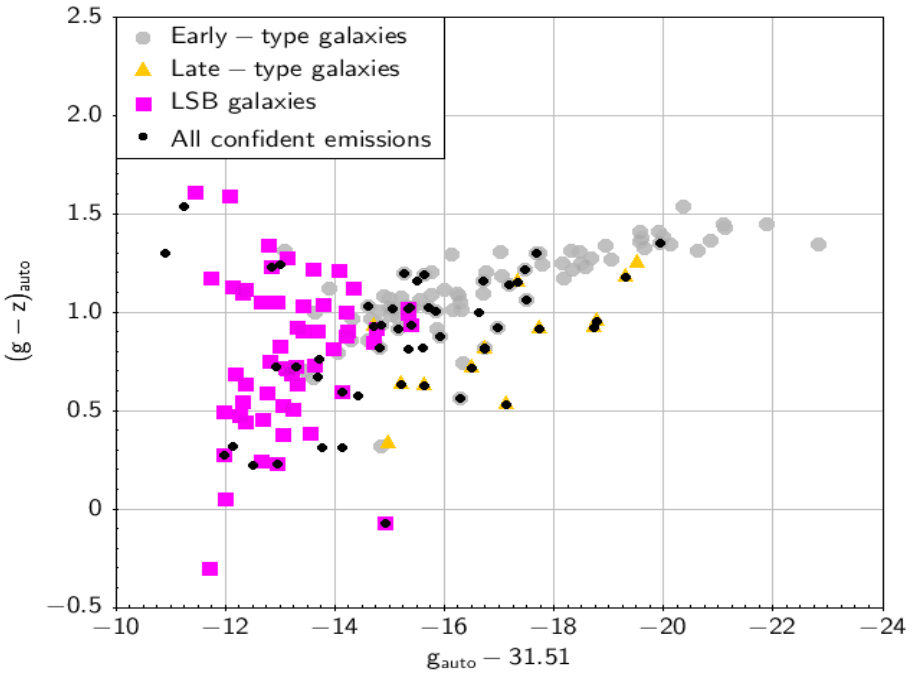

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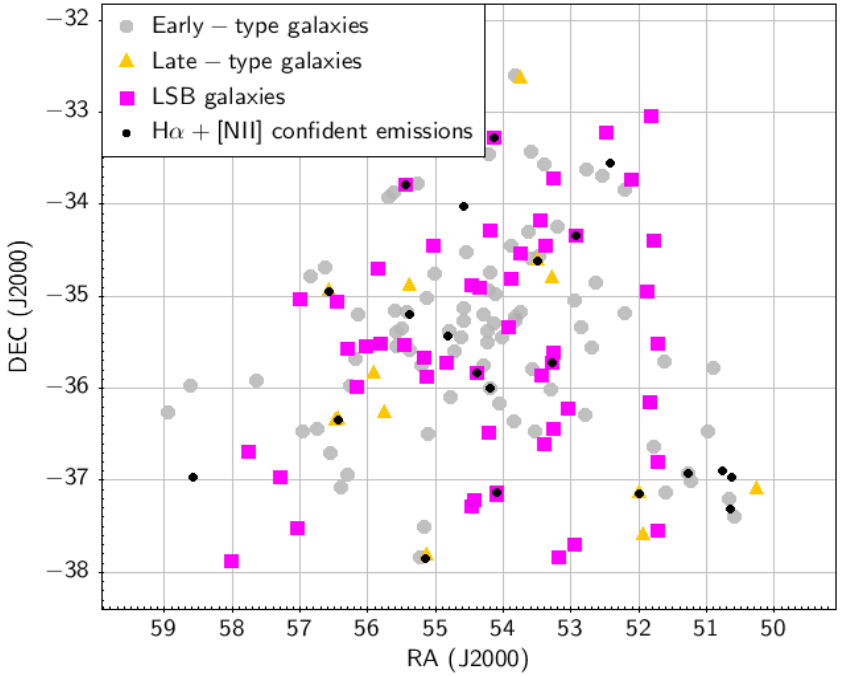

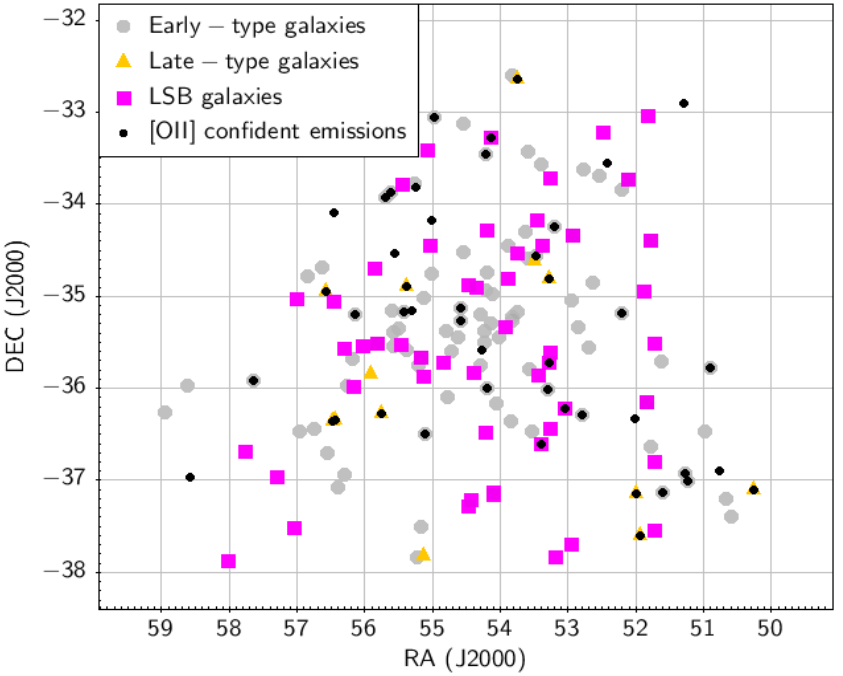

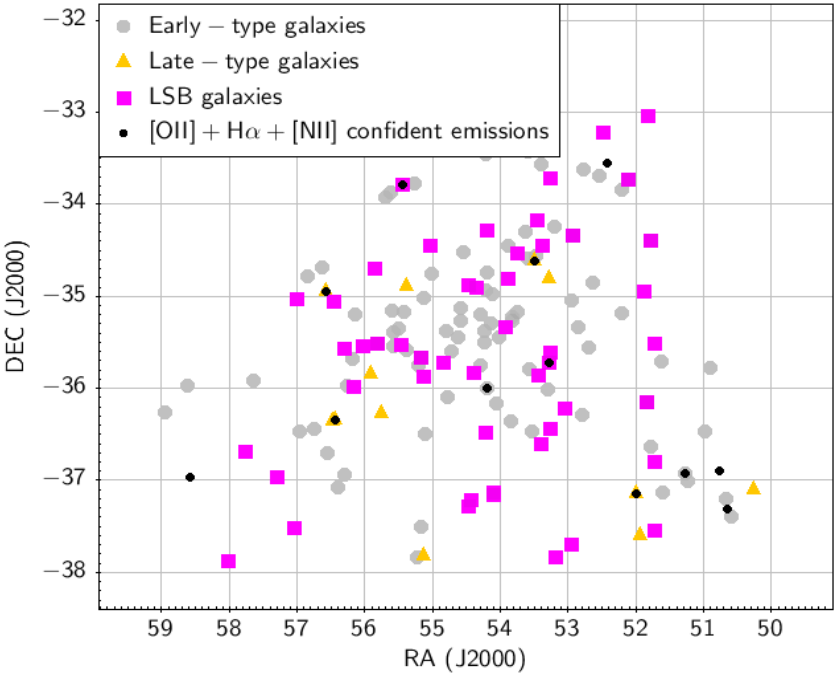

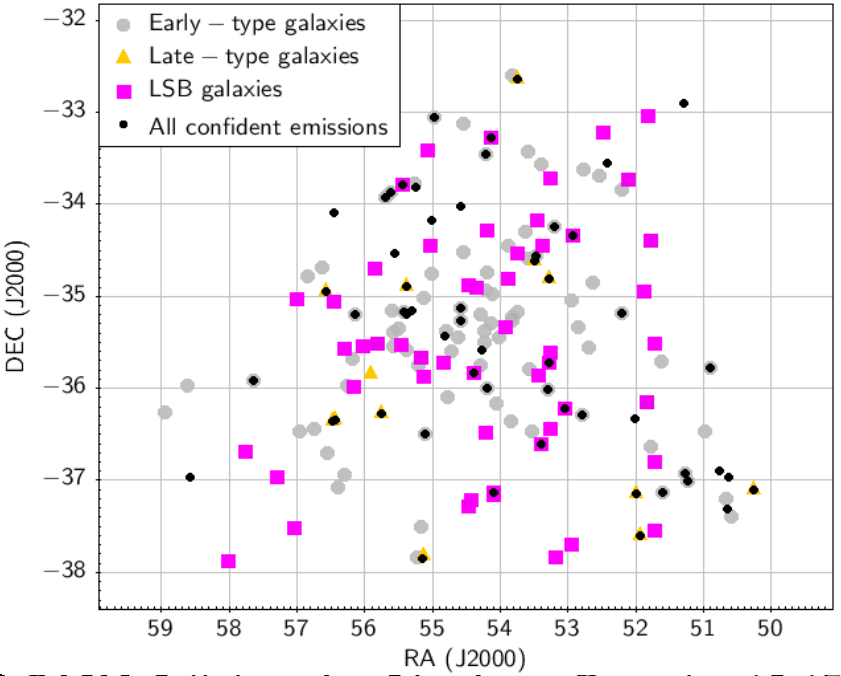

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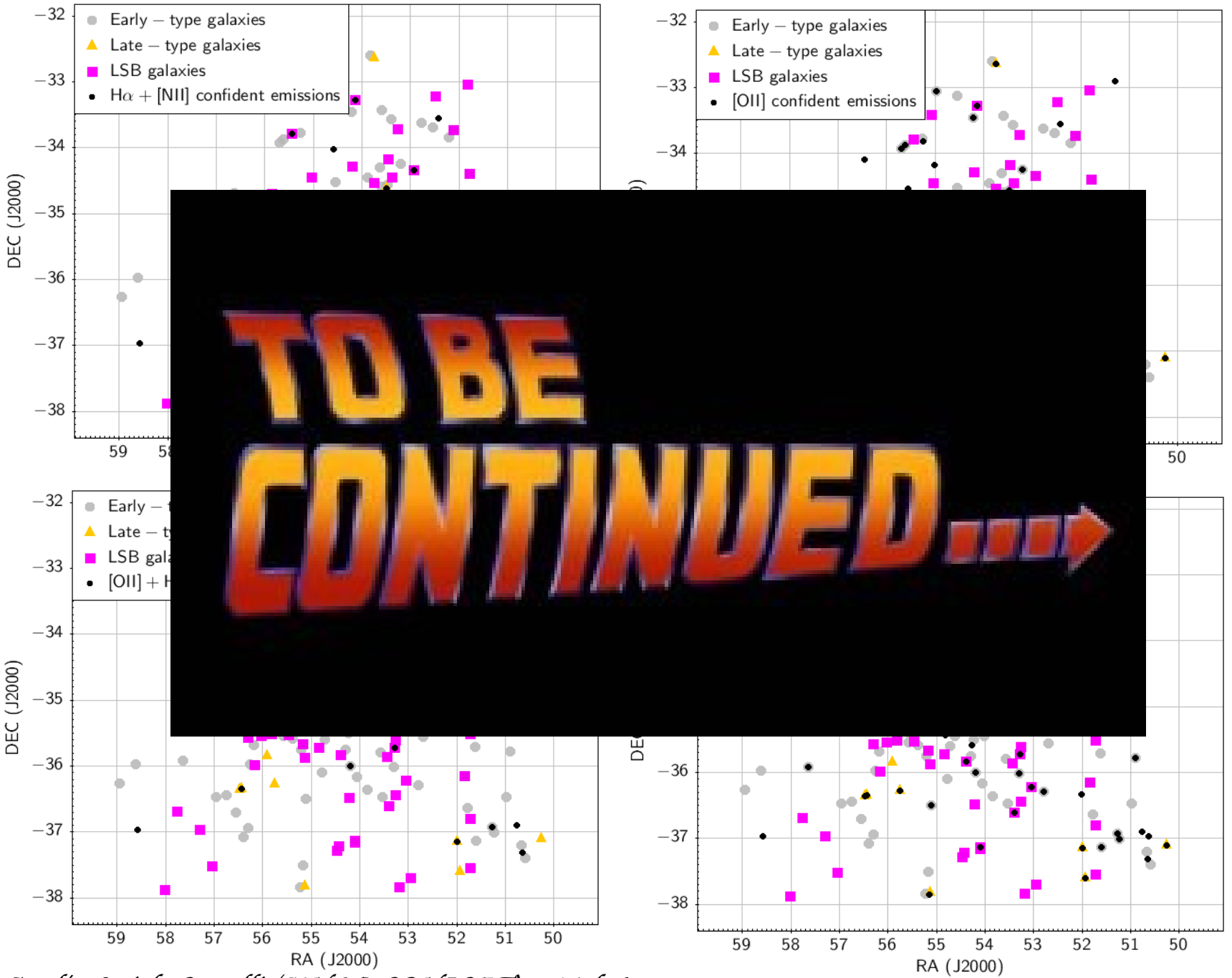

You are all welcome to join us today
in the afternoon session of
discussion about Fornax

2:00 PM at
https://meet.google.com/fiv-hfti-ake

Or contact me:

asmith@fcaglp.unlp.edu.ar