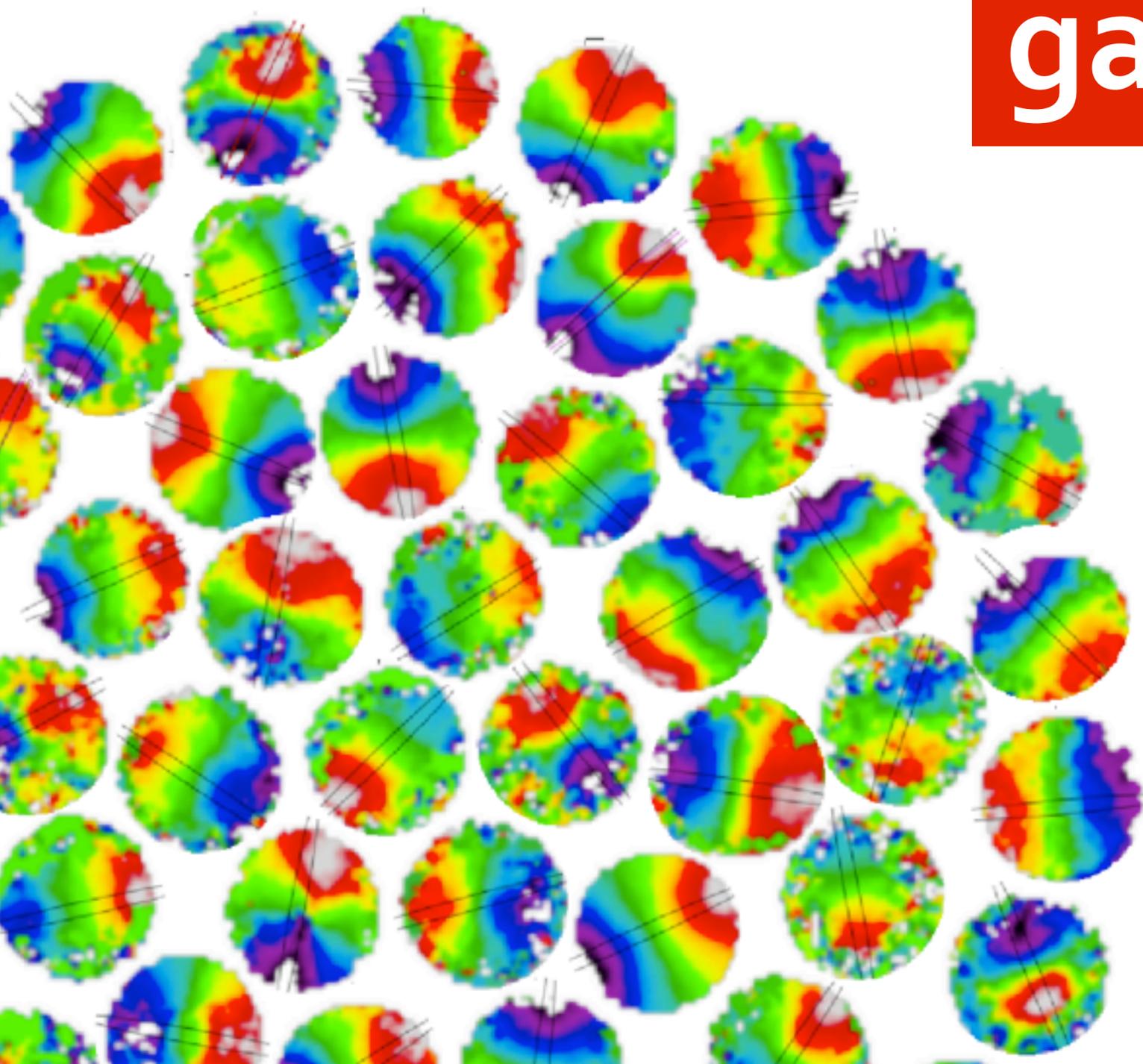


# star formation and galactic environment



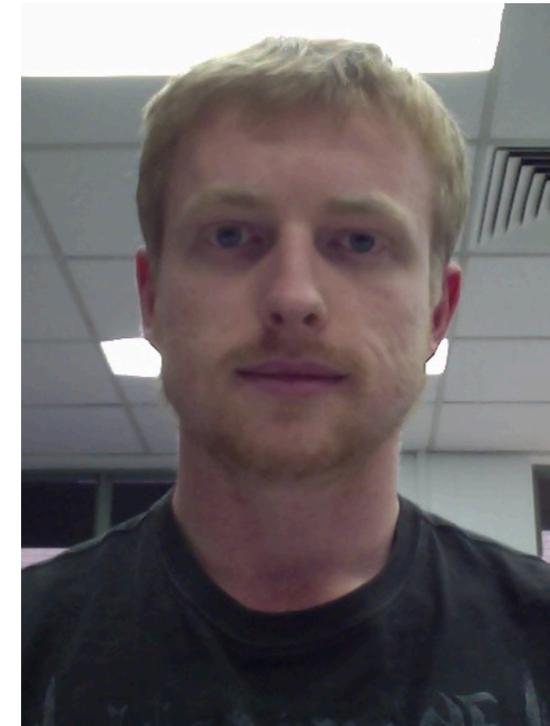
**Iraklis Konstantopoulos**  
John Stocker Research Fellow, AAO

**3D2014, Garching, 2014.03.11**

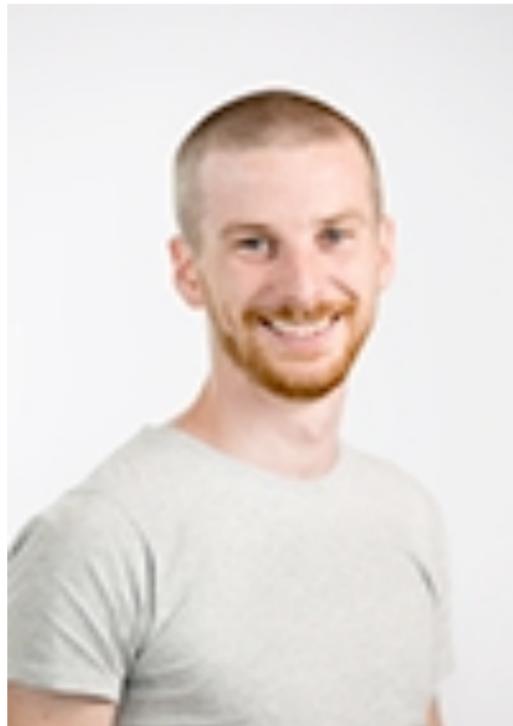


Scott Croom (SAMI PI)

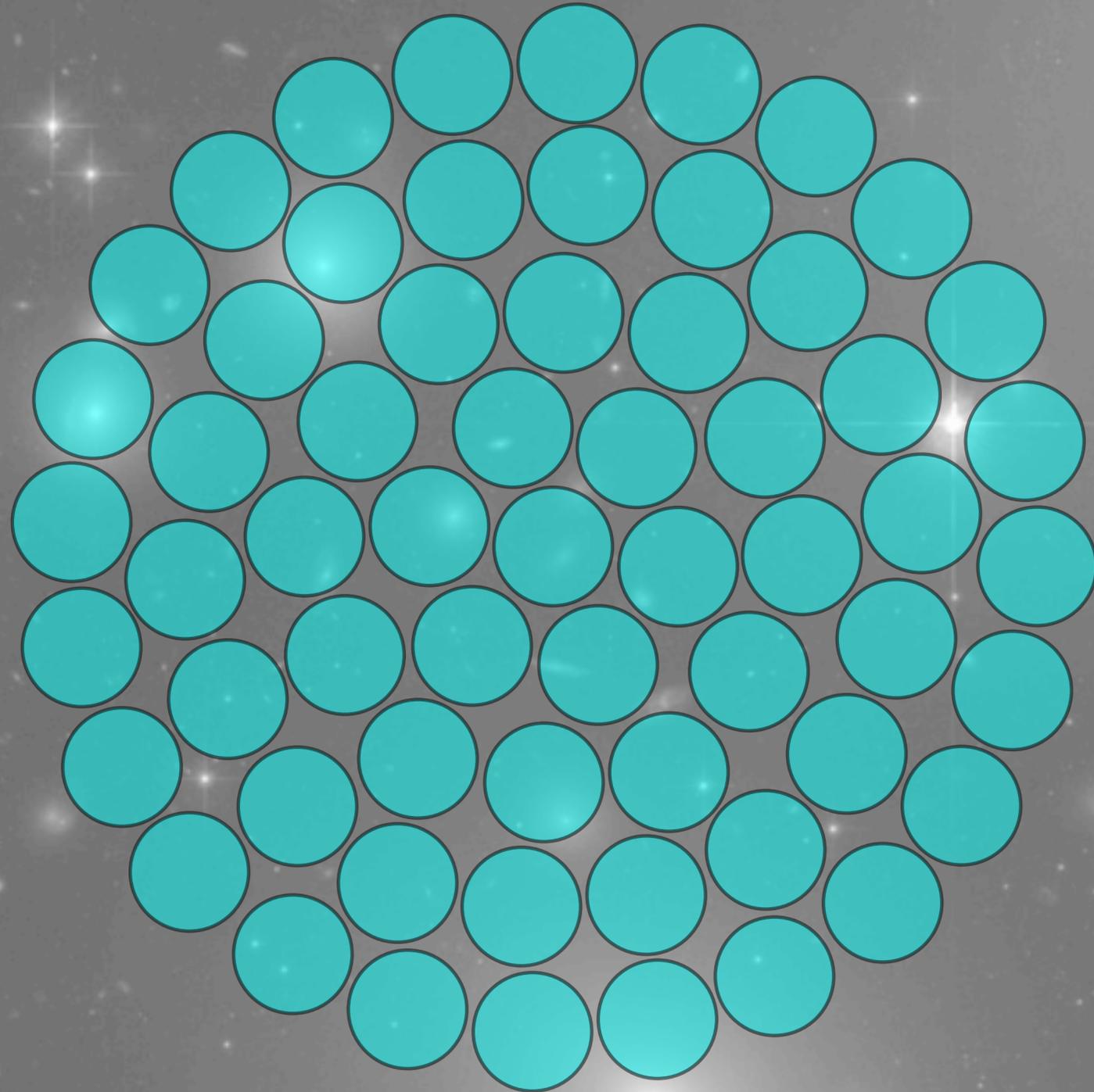
Adam Schaeffer



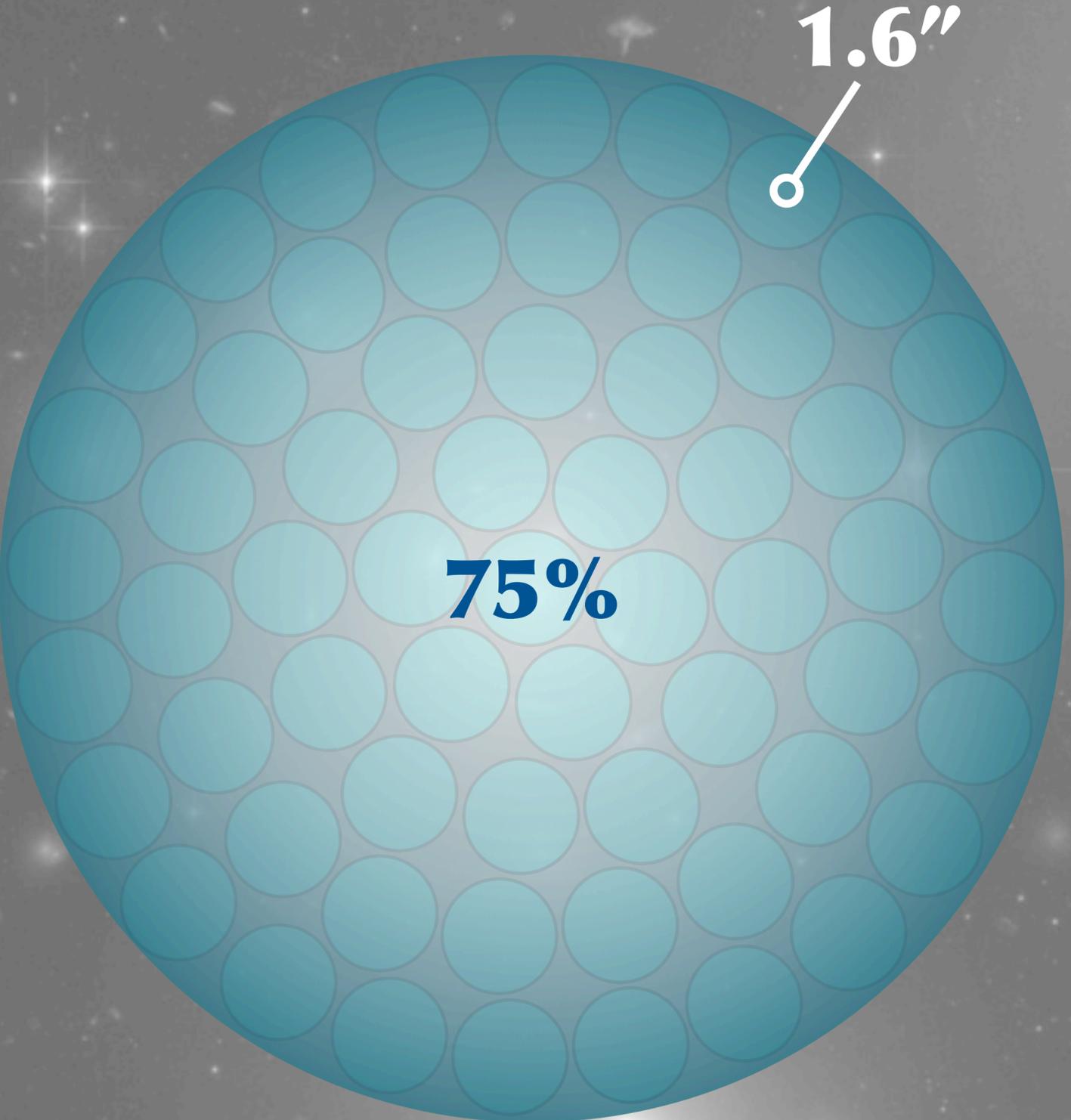
Sam Richards



**SAMI 'hexabundle'**  
**= 61 fibres**



**SAMI 'hexabundle'**  
**= 61 fibres**

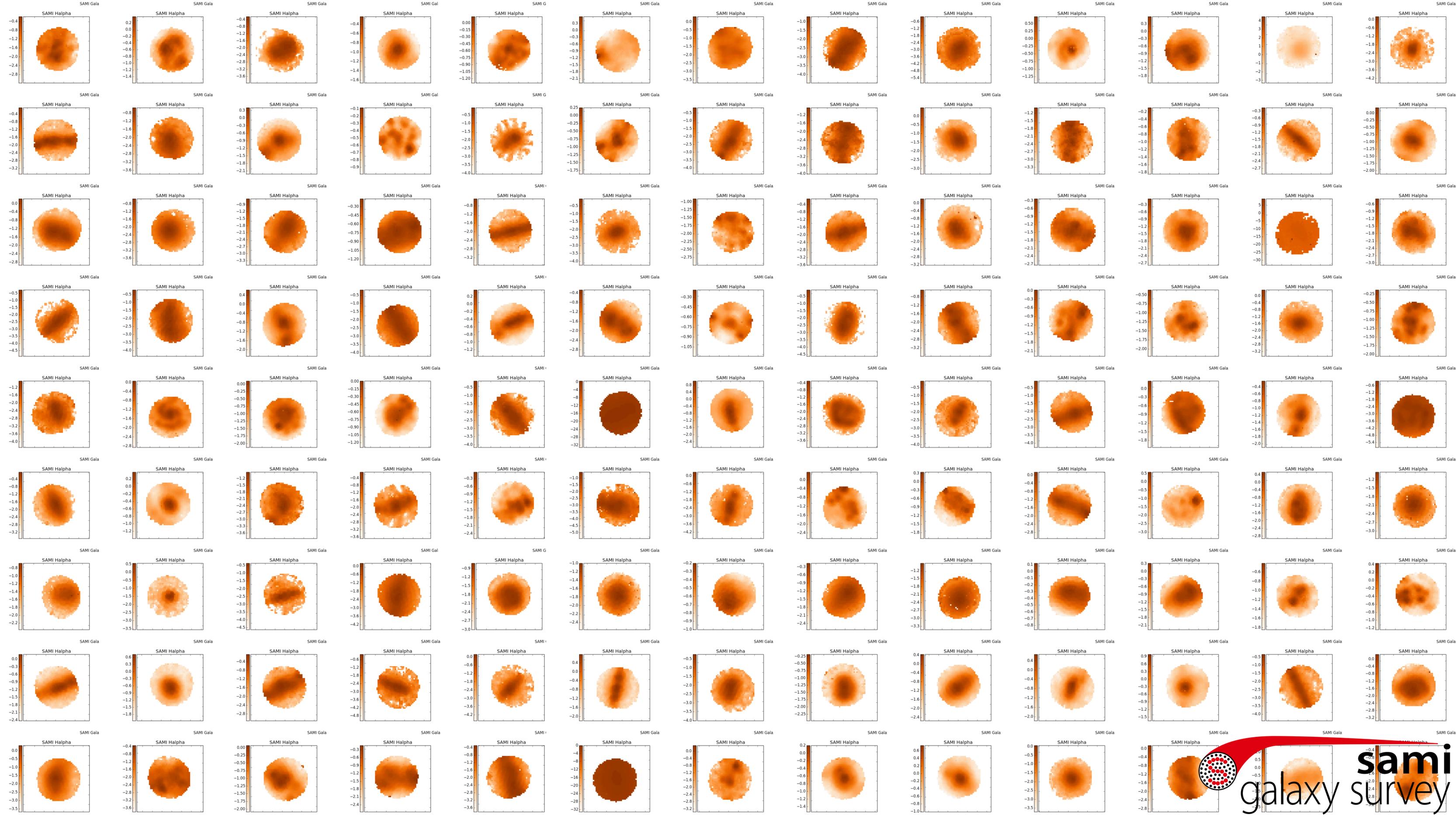


**75%**



**15"**

**x13**



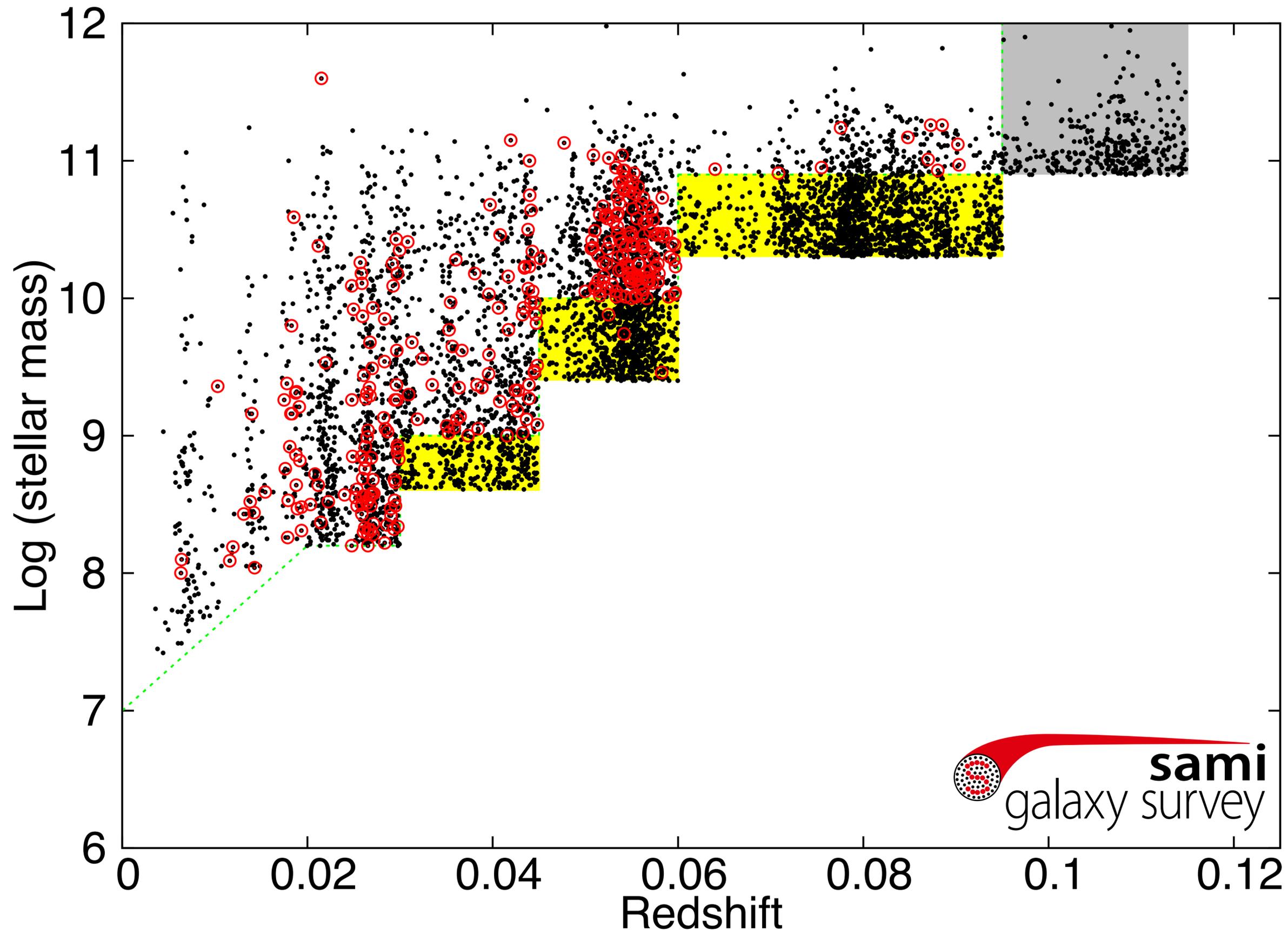
# SAMI star formation

multi-component H $\alpha$  maps

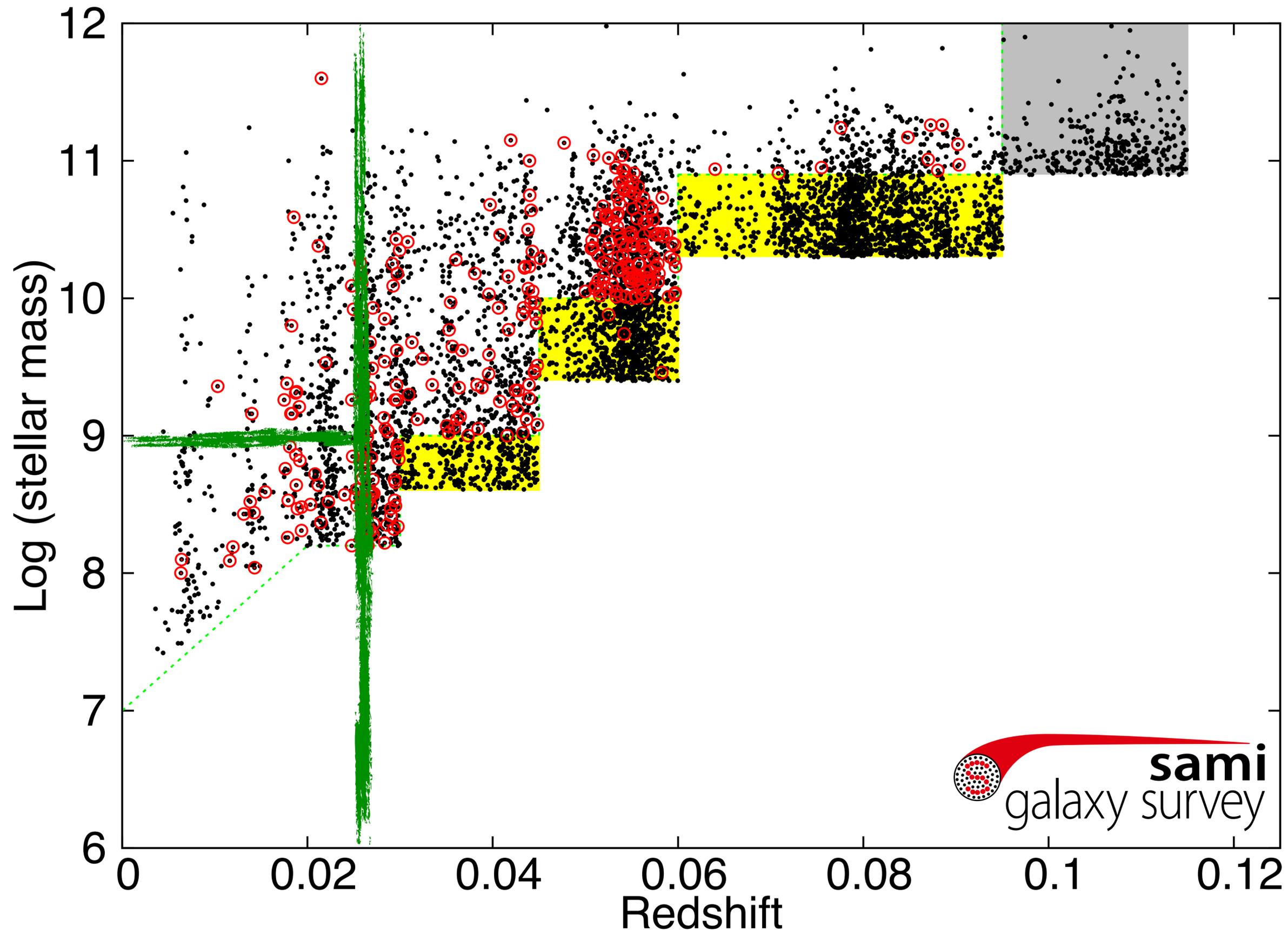
associated kinematics

1" resolution = 500 pc @100 Mpc

15 ~independent samples across



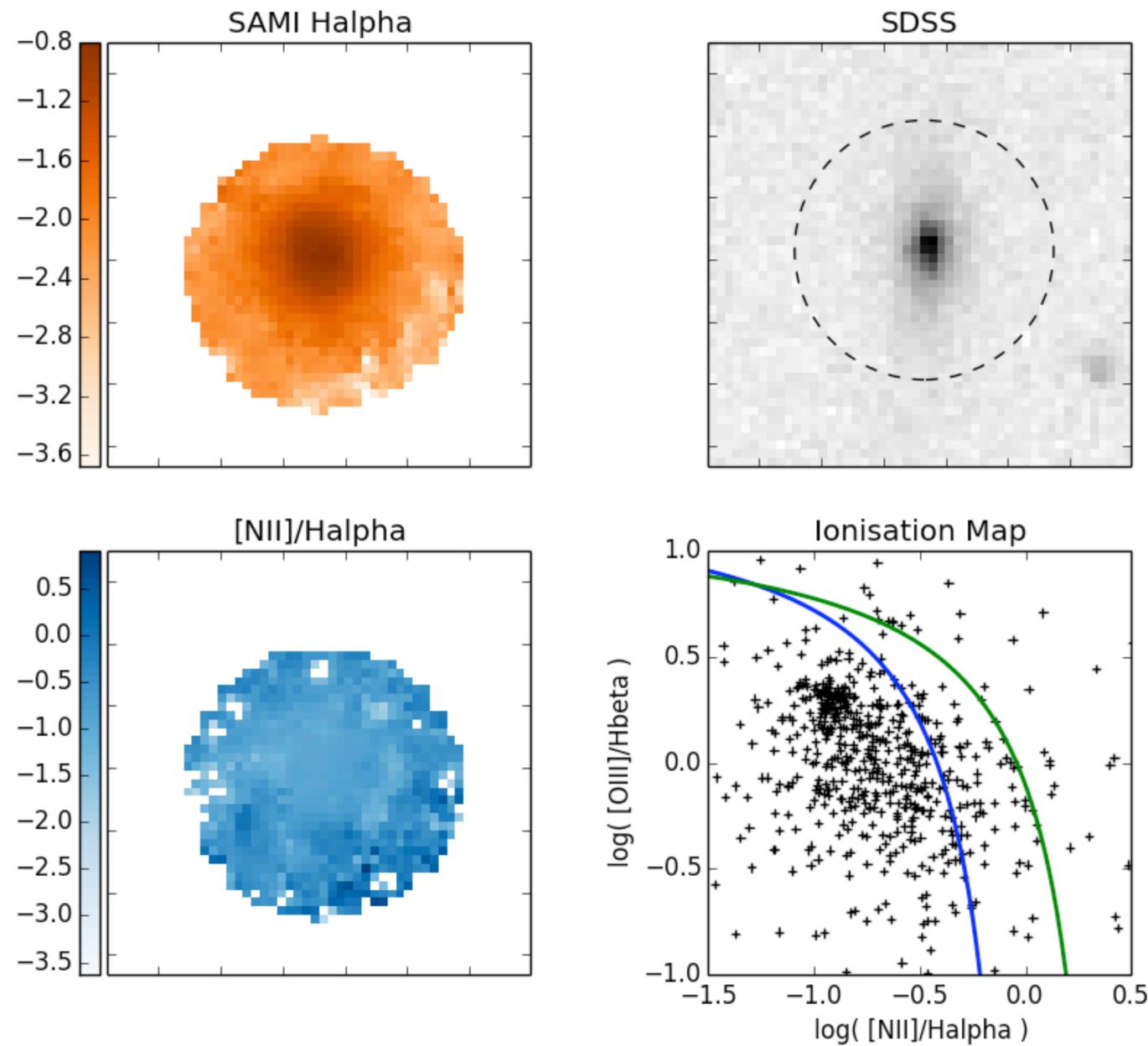
*plot by  
Julia Bryant*



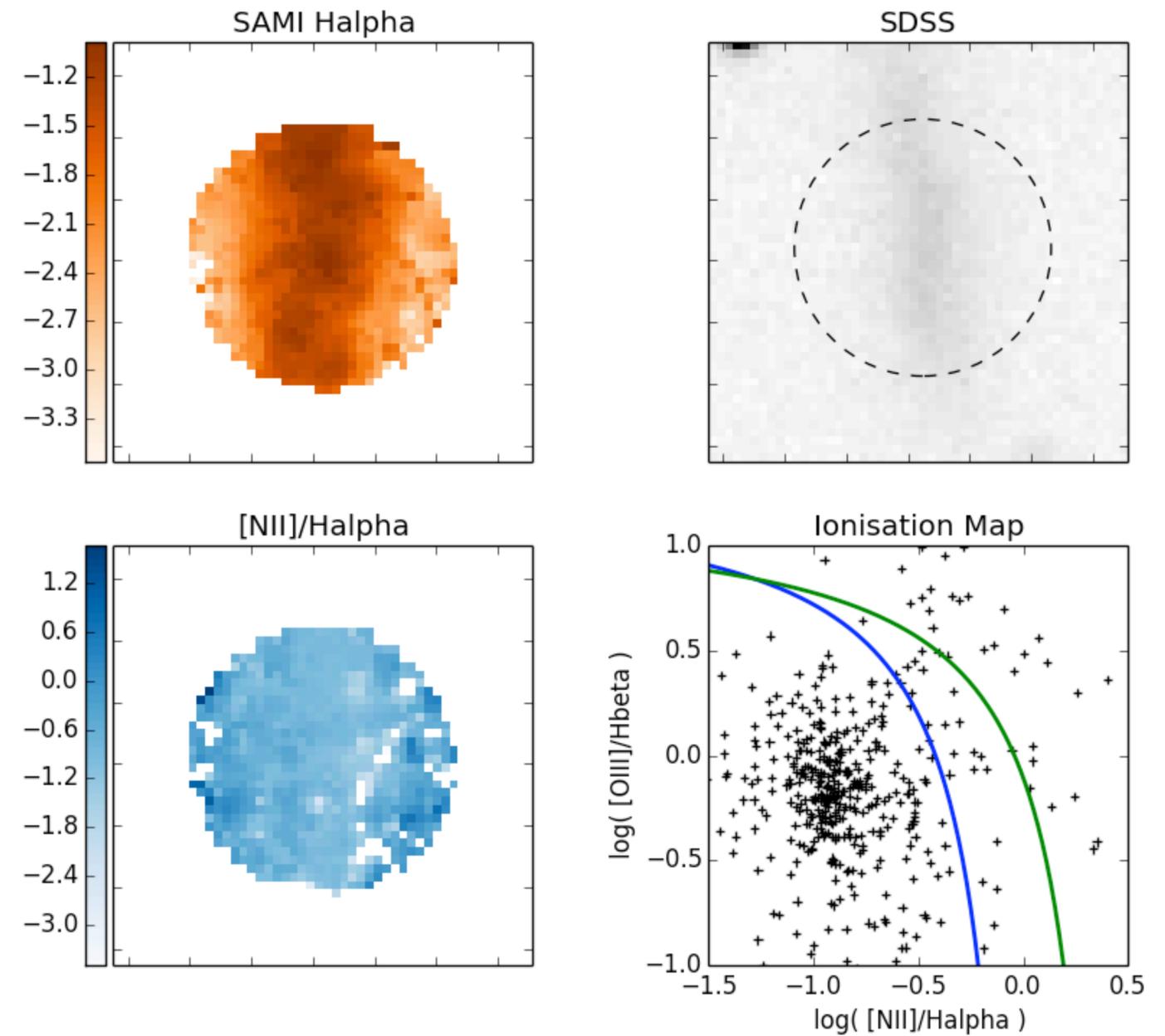
*plot by  
Julia Bryant*

# dwarf galaxies

SAMI Galaxy 215698

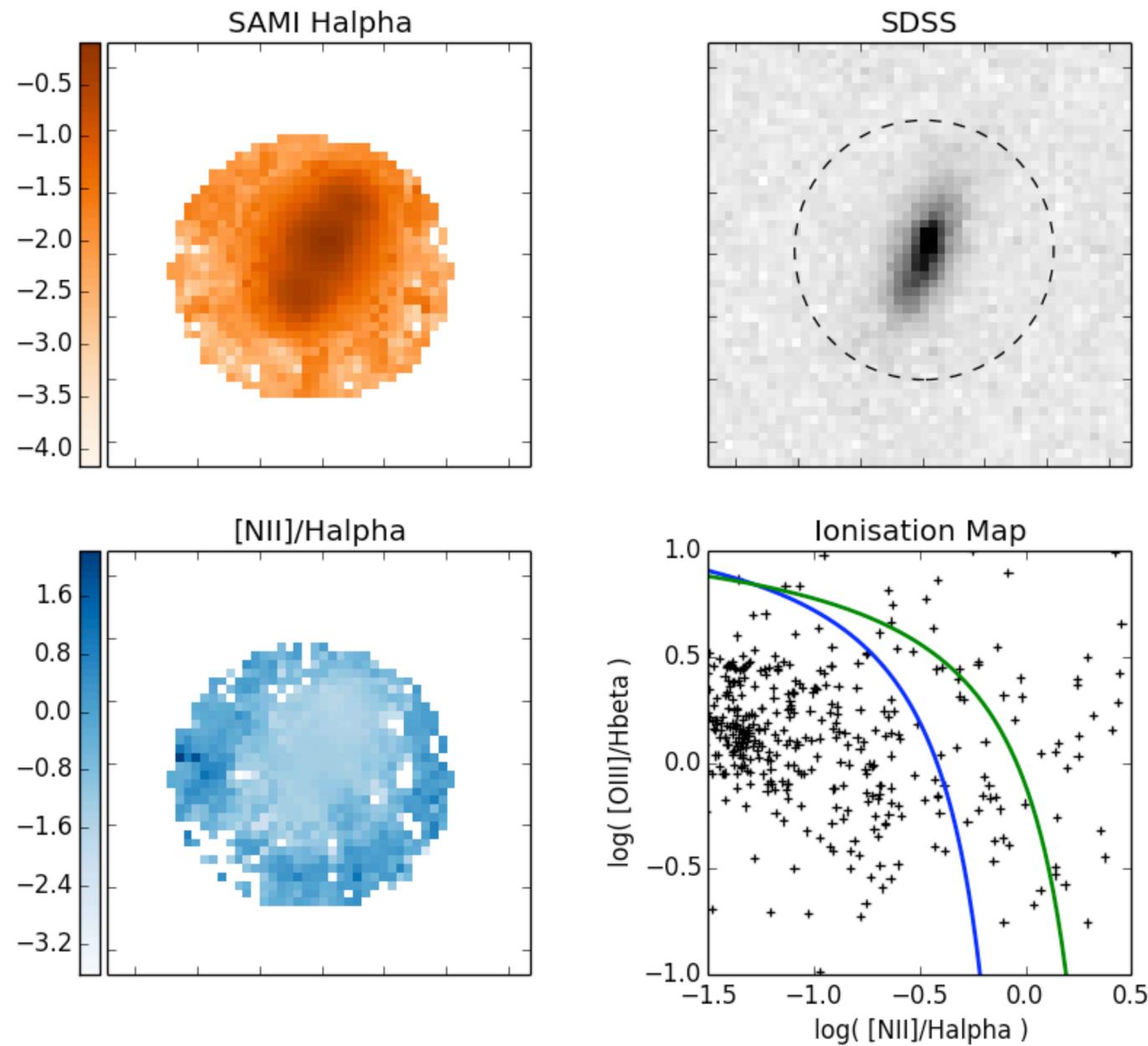


SAMI Galaxy 301098

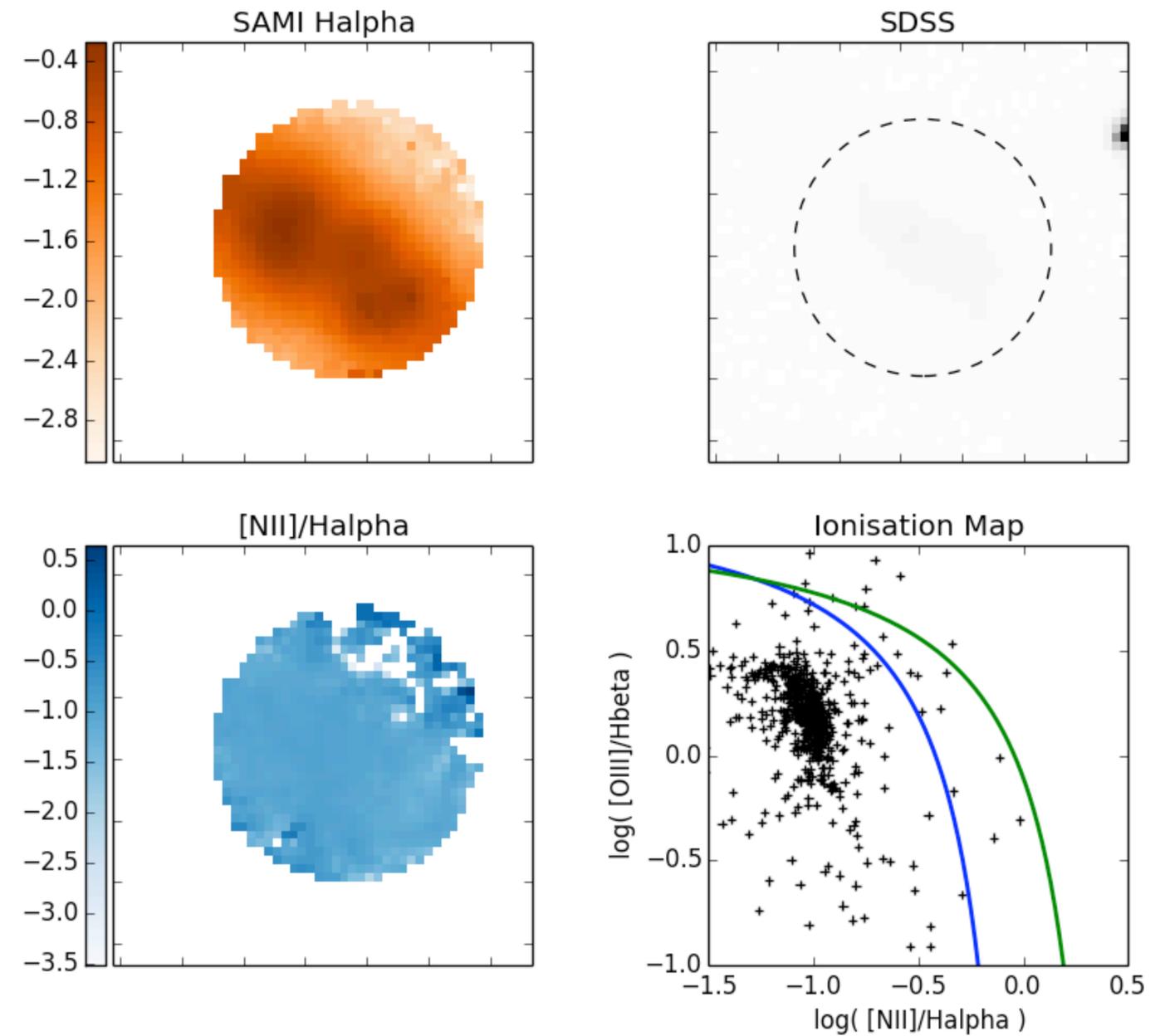


# dwarf galaxies (2)

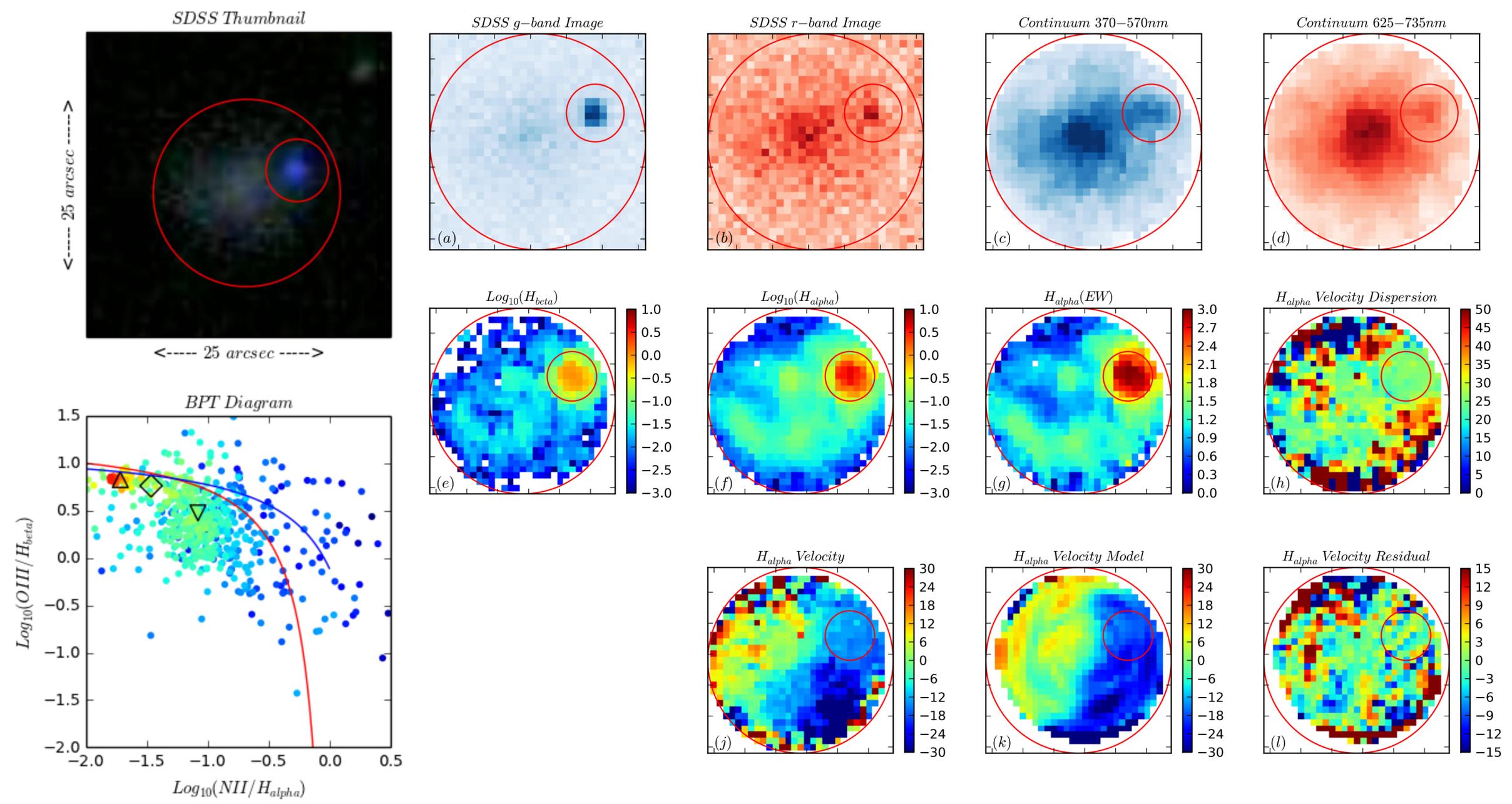
SAMI Galaxy 508682



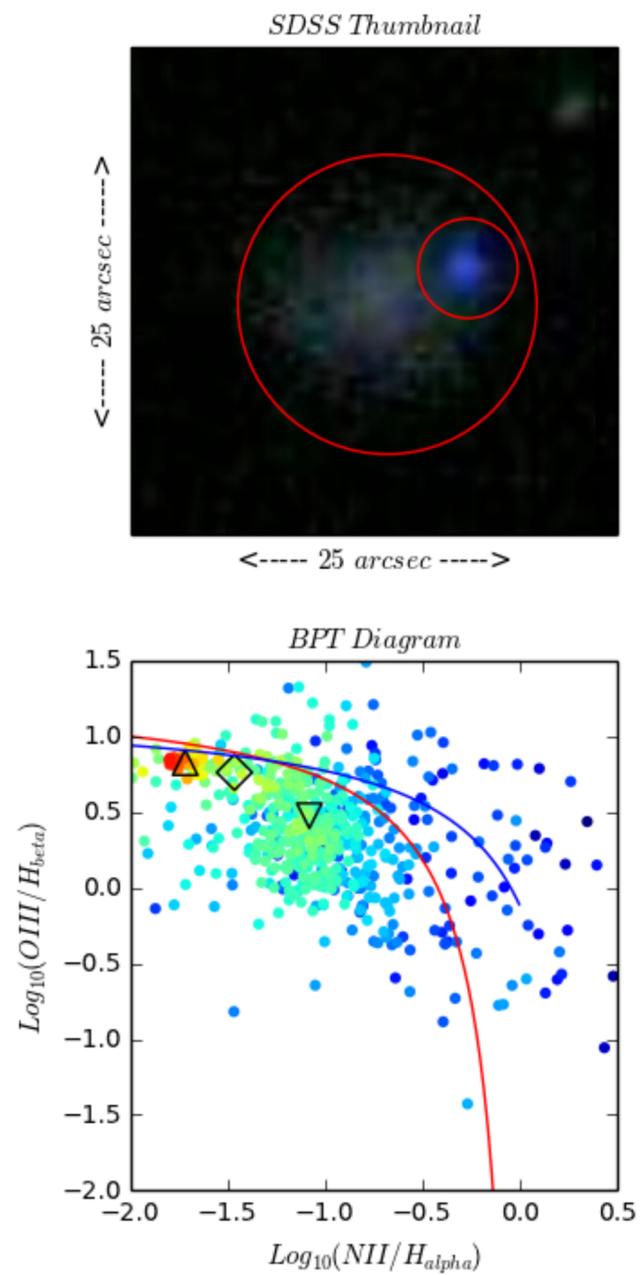
SAMI Galaxy 388451



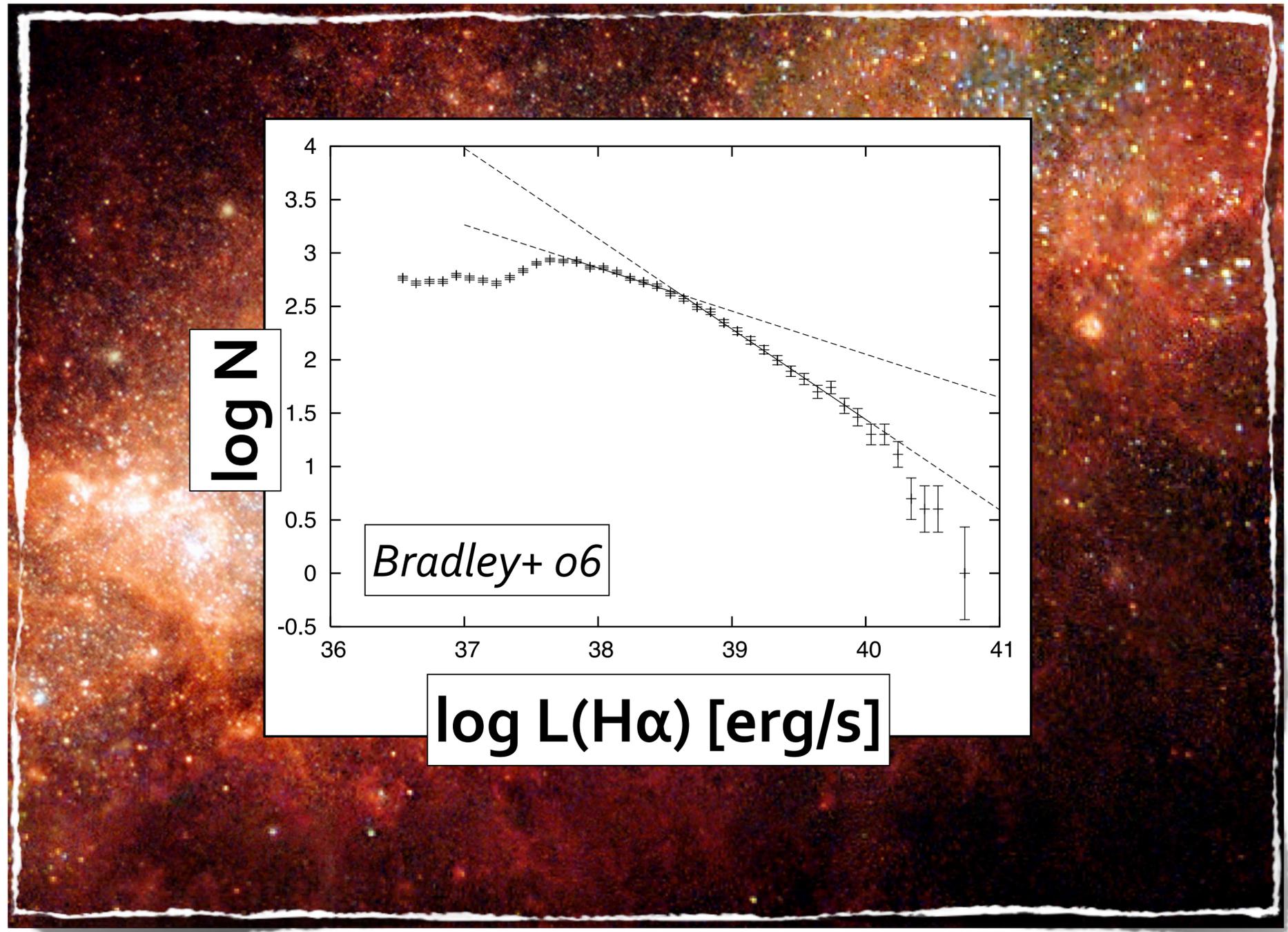
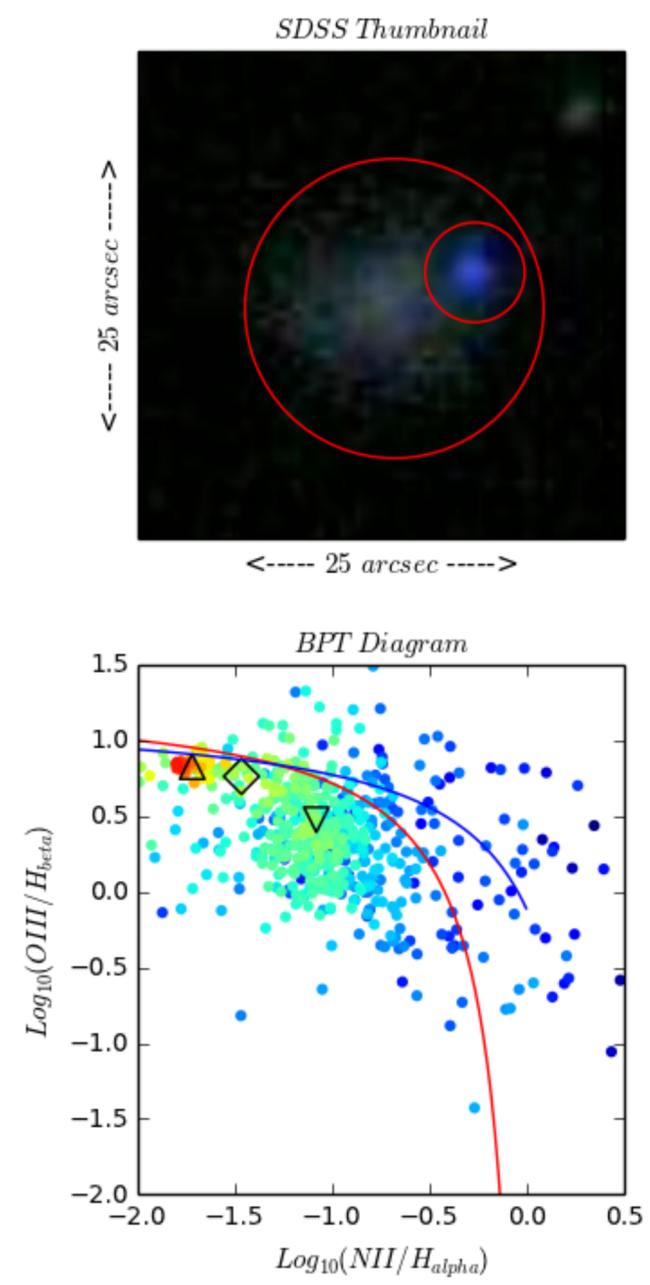
# Richards+ stochastic SF in dwarfs



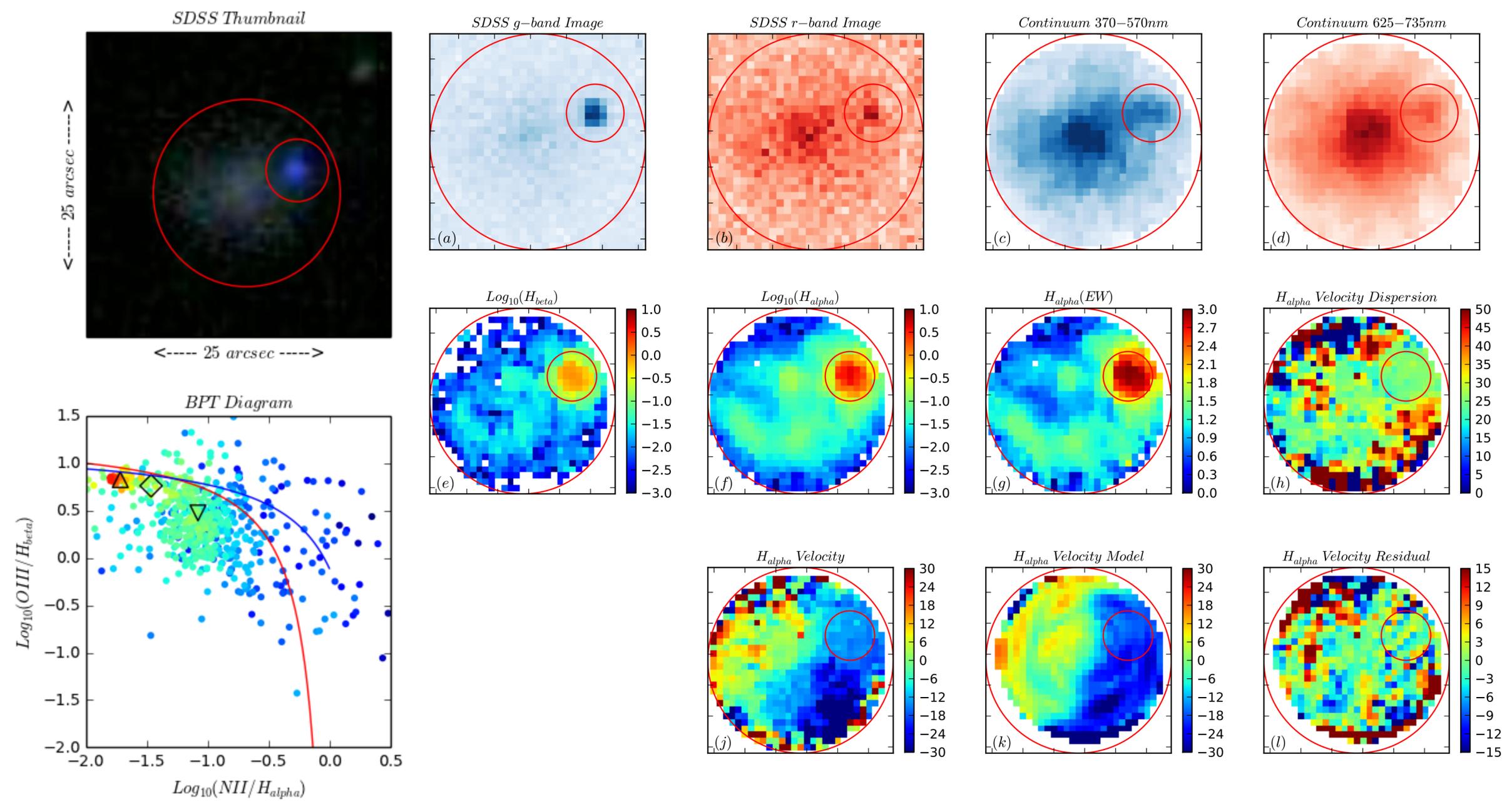
# Richards+ stochastic SF in dwarfs



# Richards+ stochastic SF in dwarfs



# Richards+ stochastic SF in dwarfs



dwarf galaxies

aperture corrections not possible

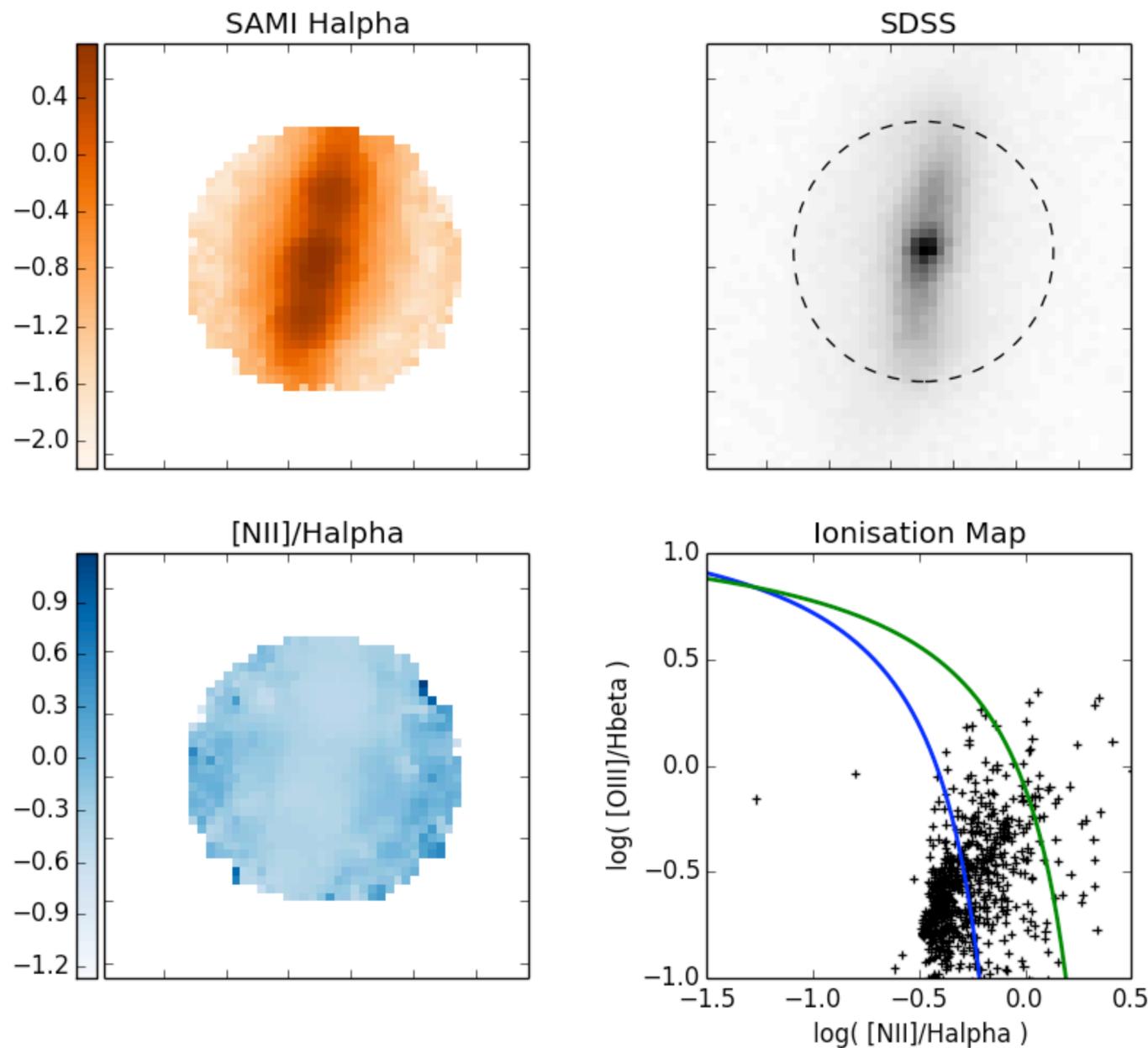
H $\alpha$  morphologies

luminosity function of HII regions

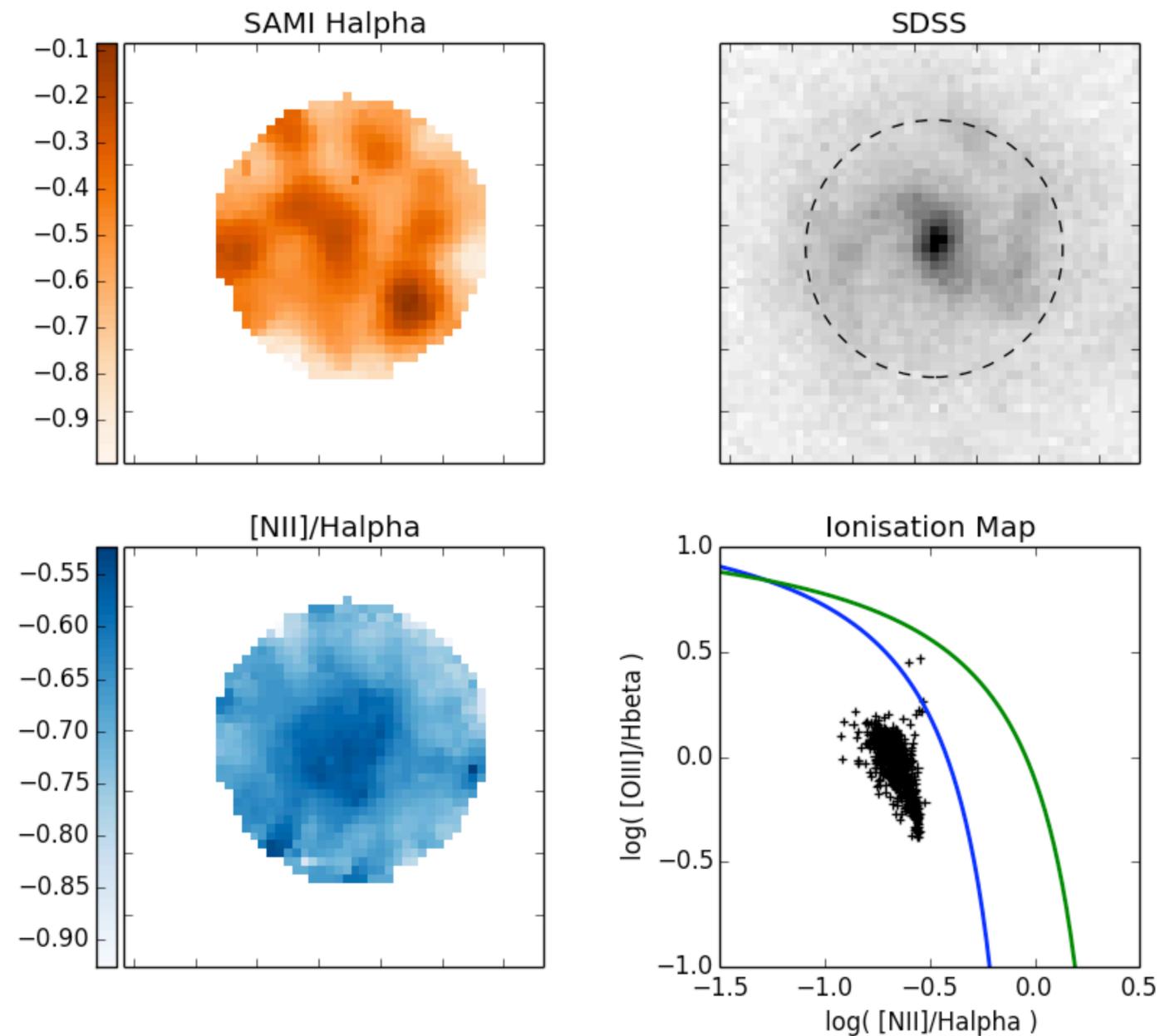
do they complete a giant distro?

# giant galaxies

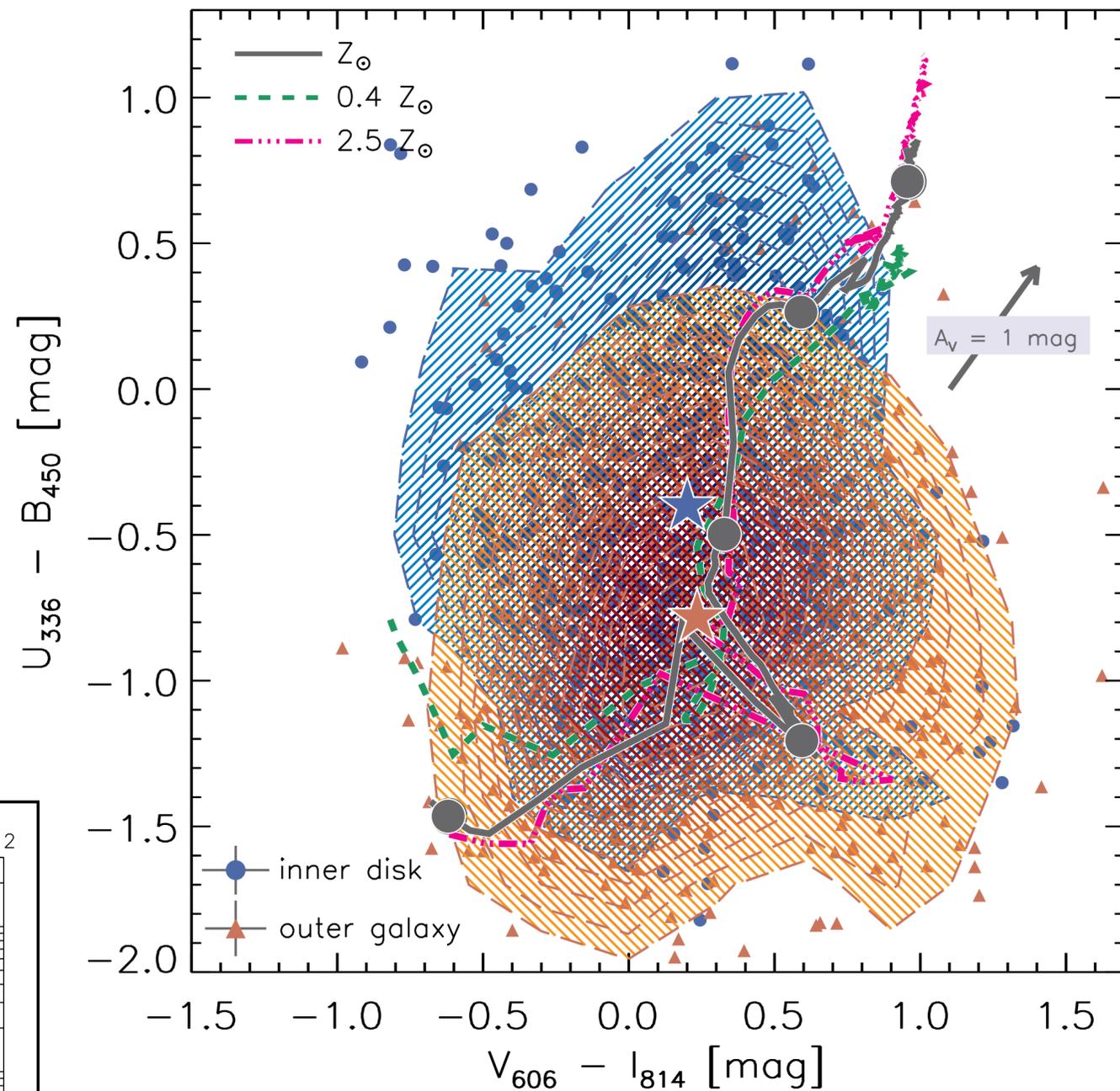
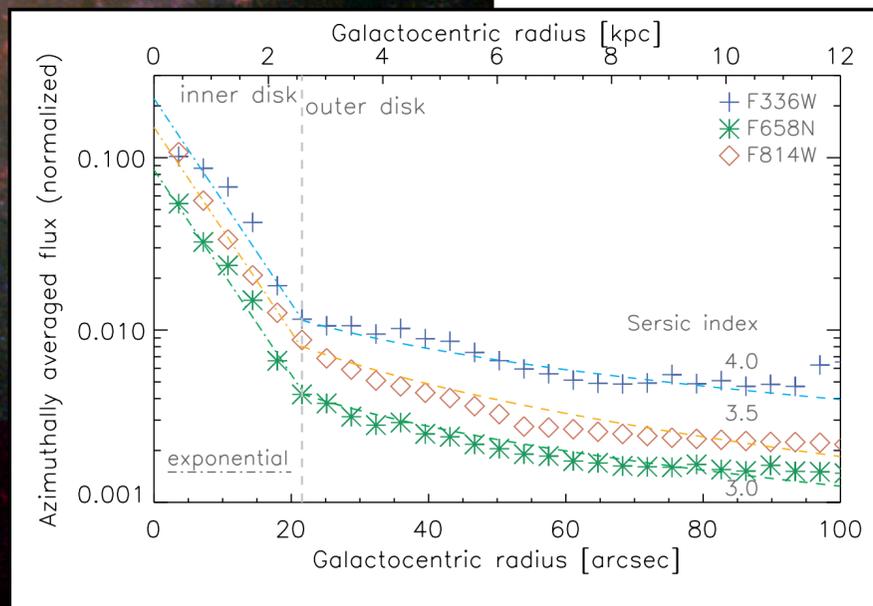
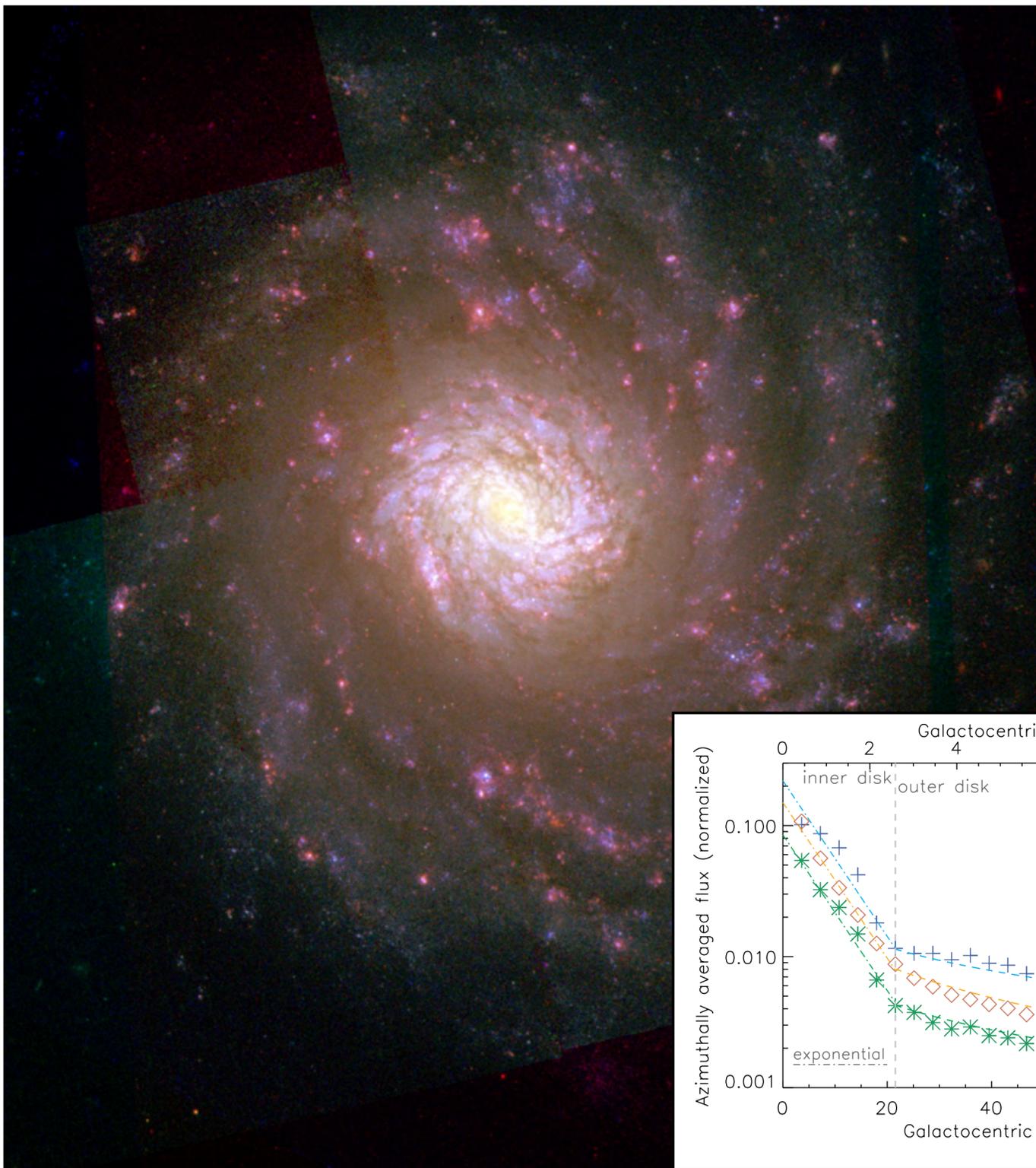
SAMI Galaxy 600030



SAMI Galaxy 279818



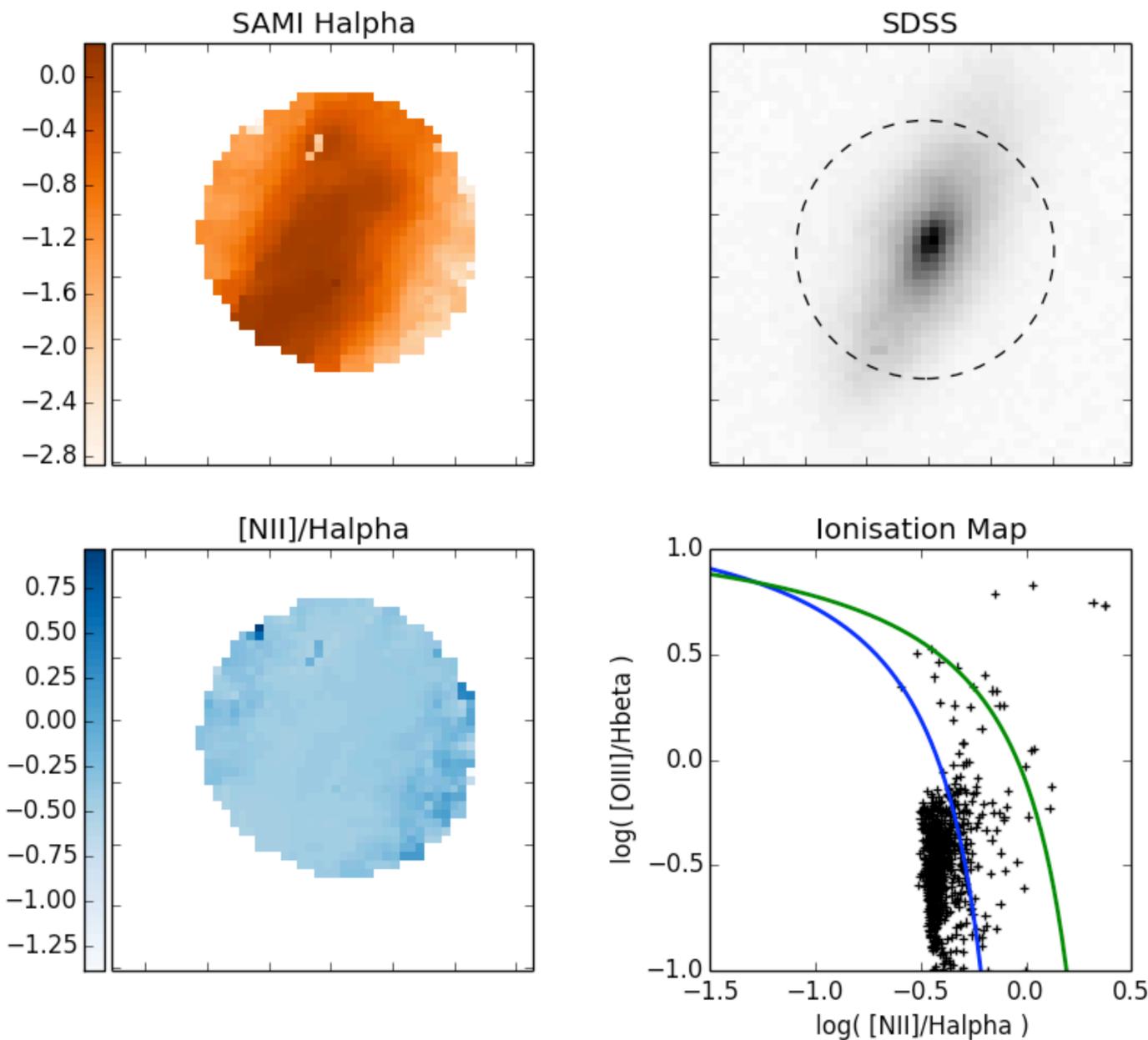
# giant galaxies



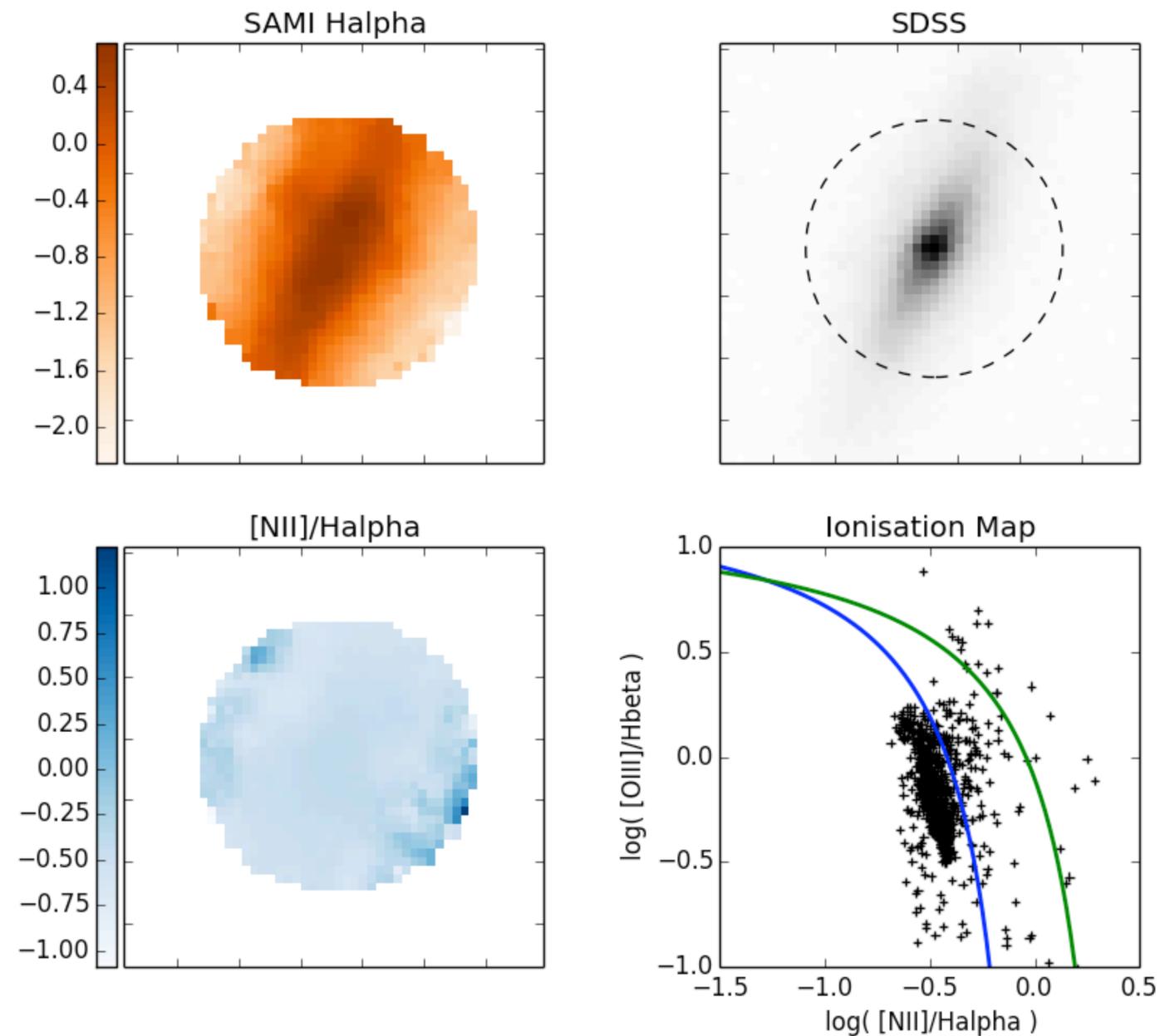
*Konstantopoulos+ 2013a*

# giant galaxies (2)

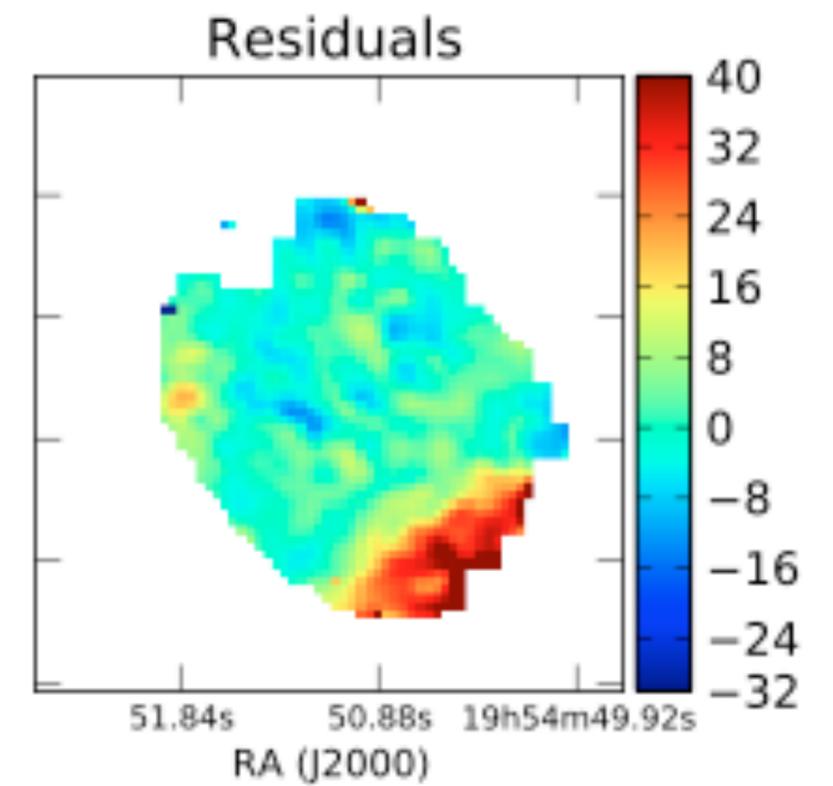
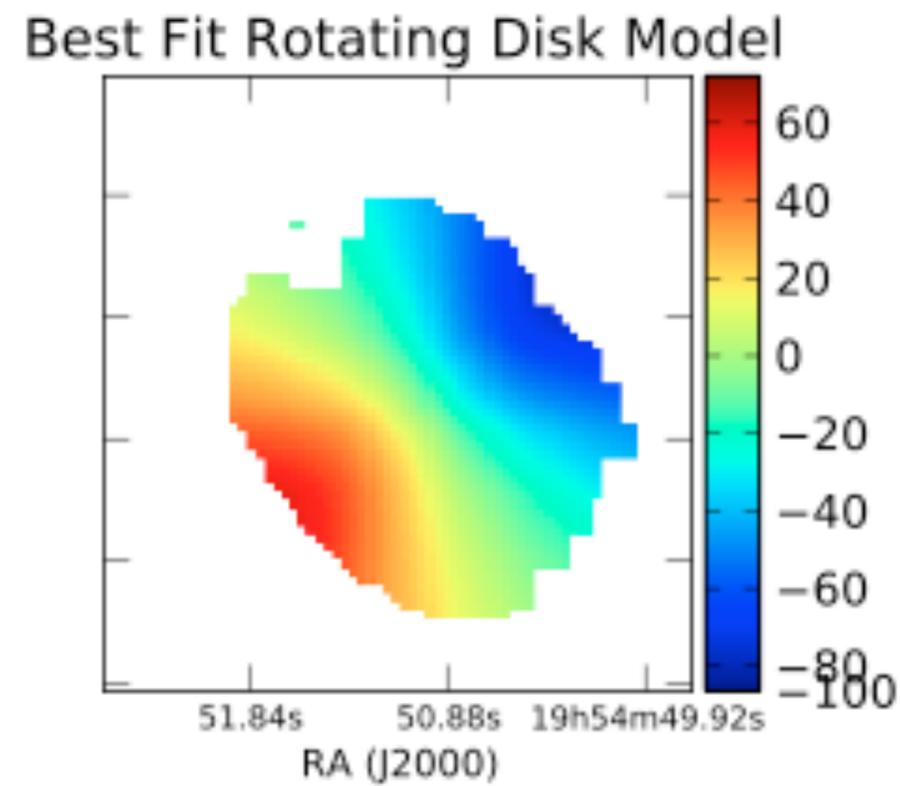
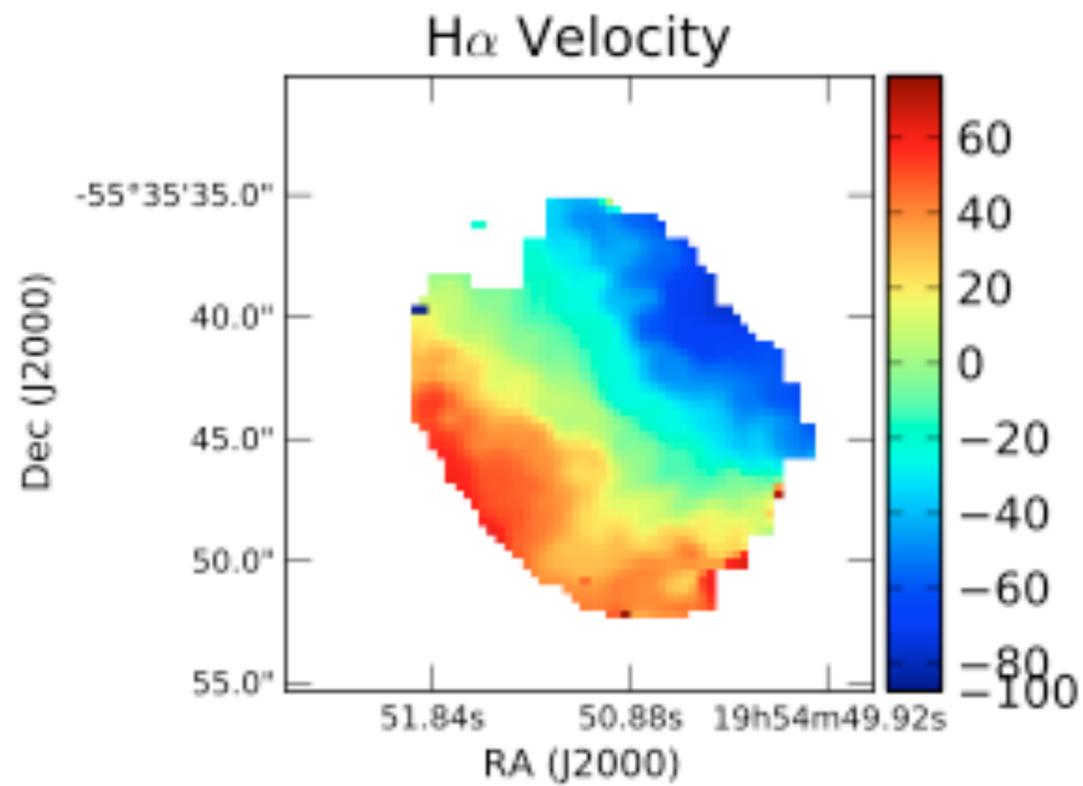
SAMI Galaxy 47342



SAMI Galaxy 215292

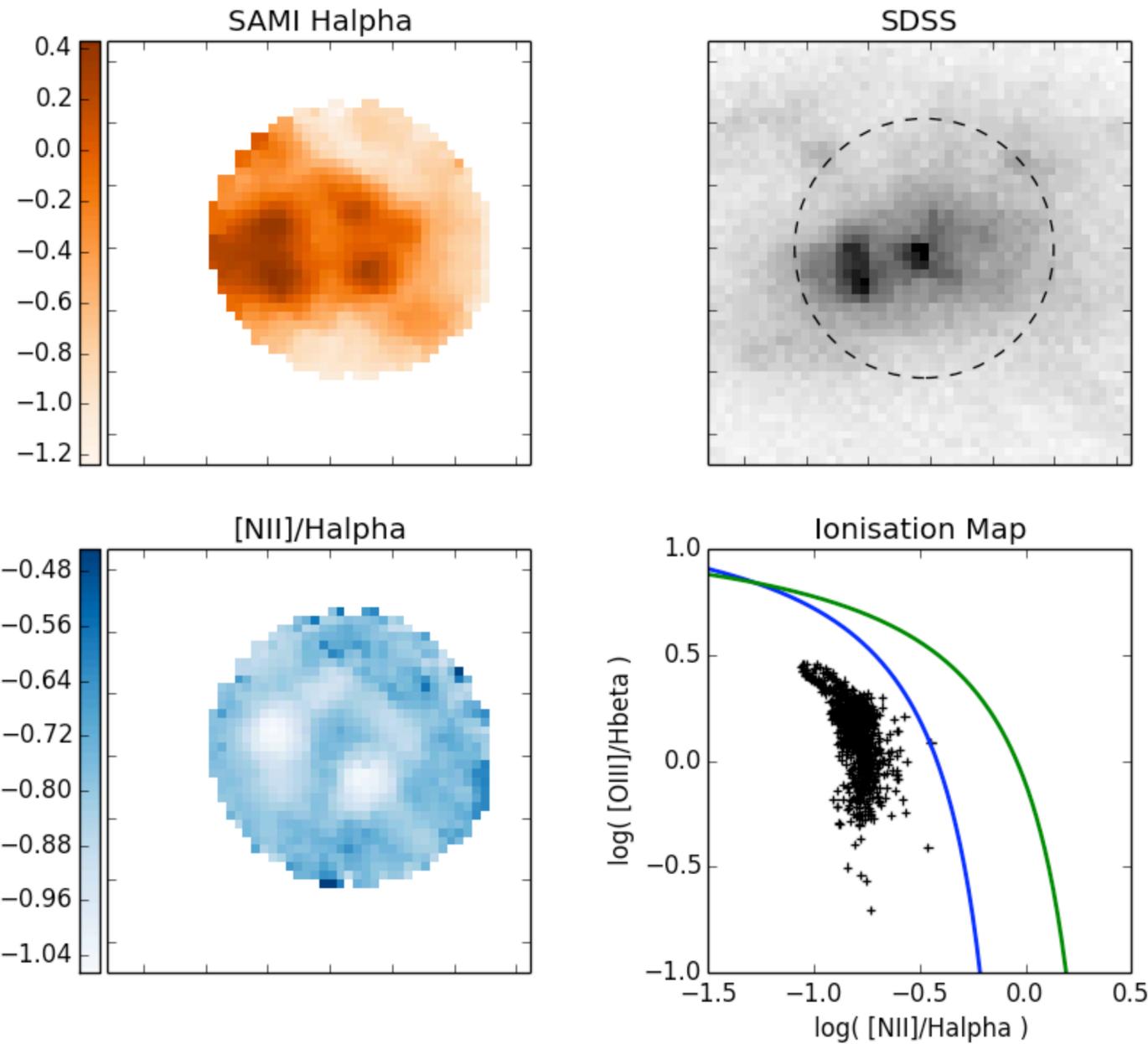


# Fogarty+ 13 serendipitous superwind

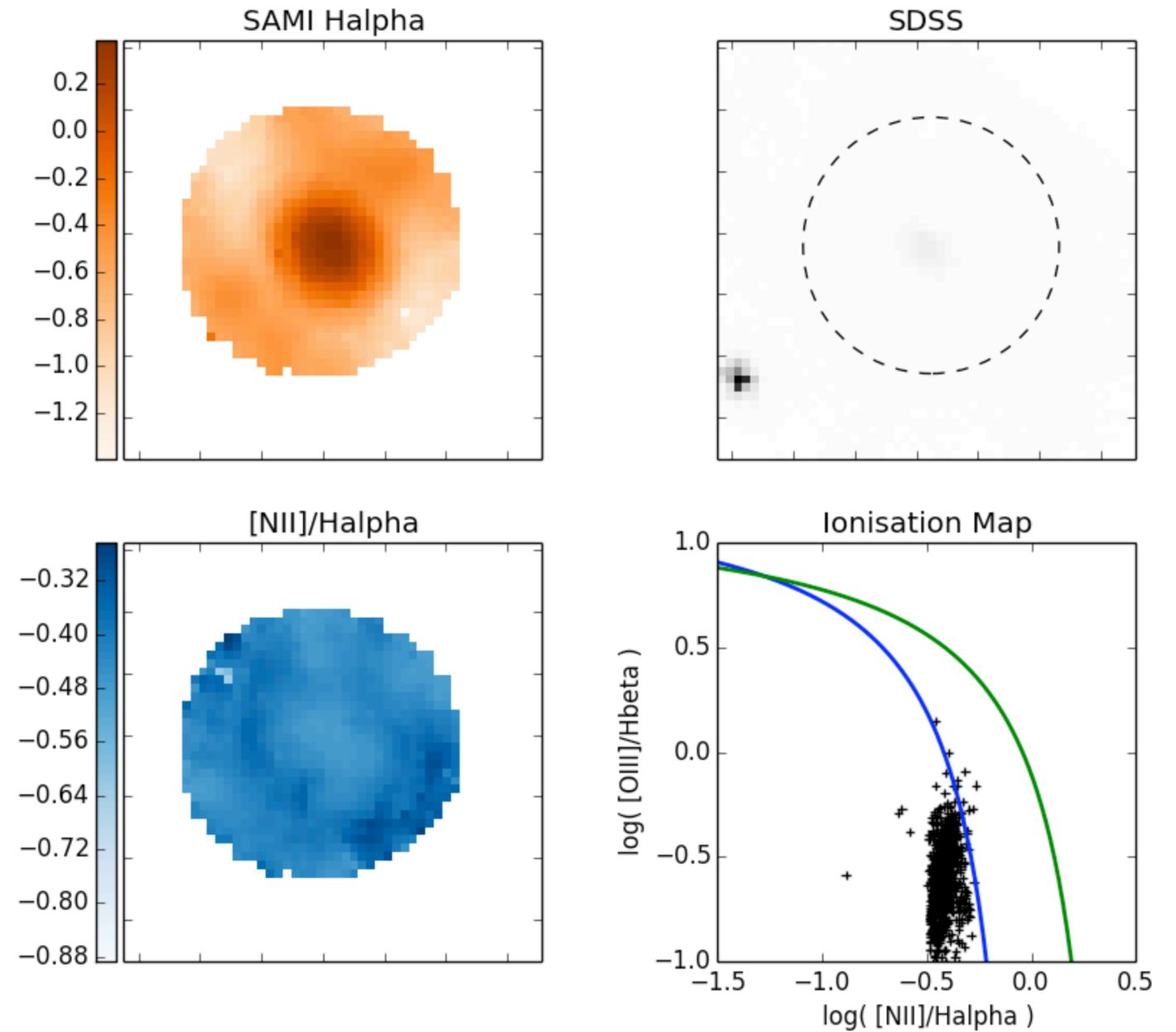


# giant galaxies (3)

SAMI Galaxy 593645



SAMI Galaxy 534753



**giant galaxies**

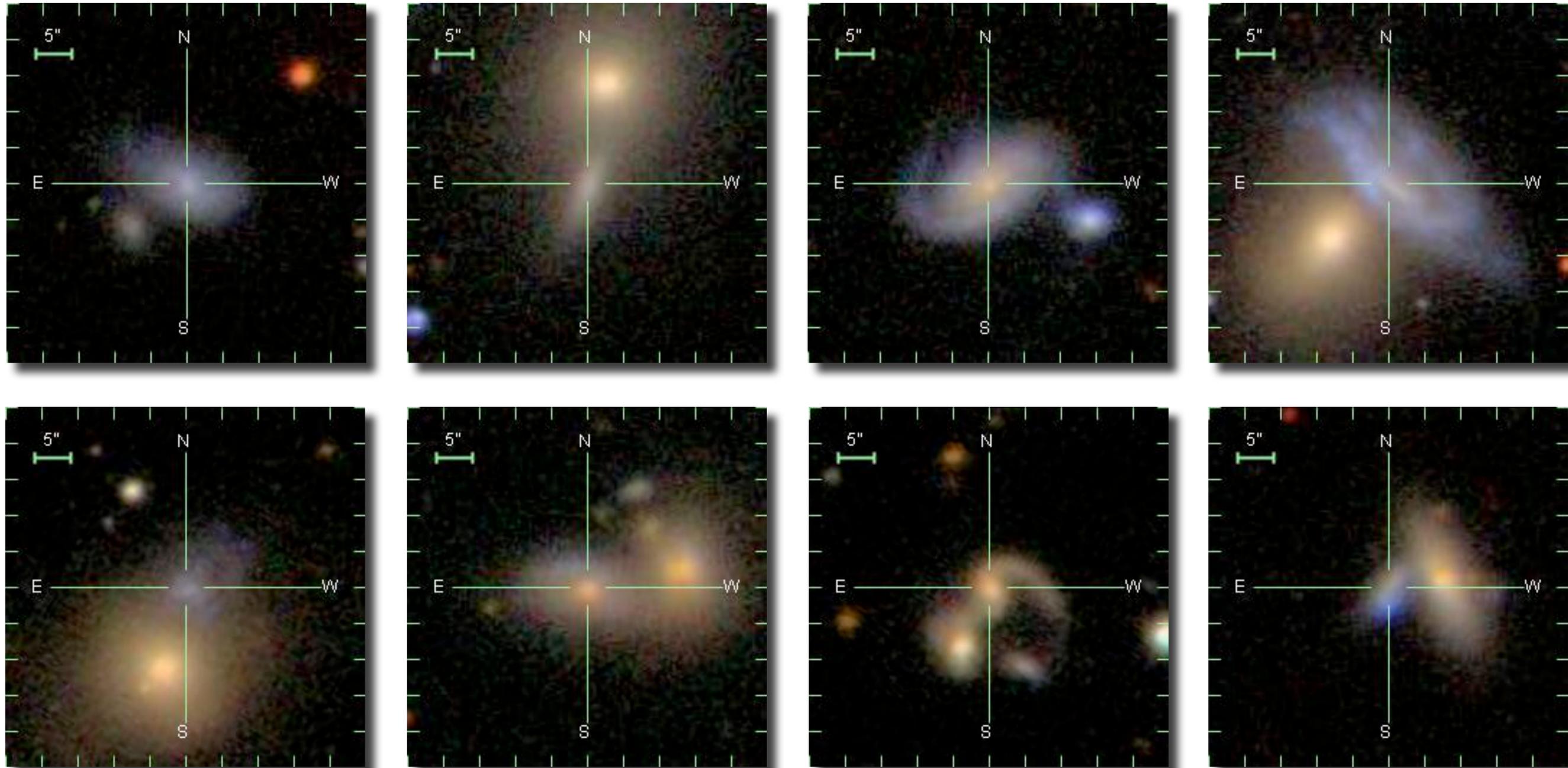
**disentangle AGN/SF in 3D**

**extra-planar star formation**

**time post-starbursts and AGN**

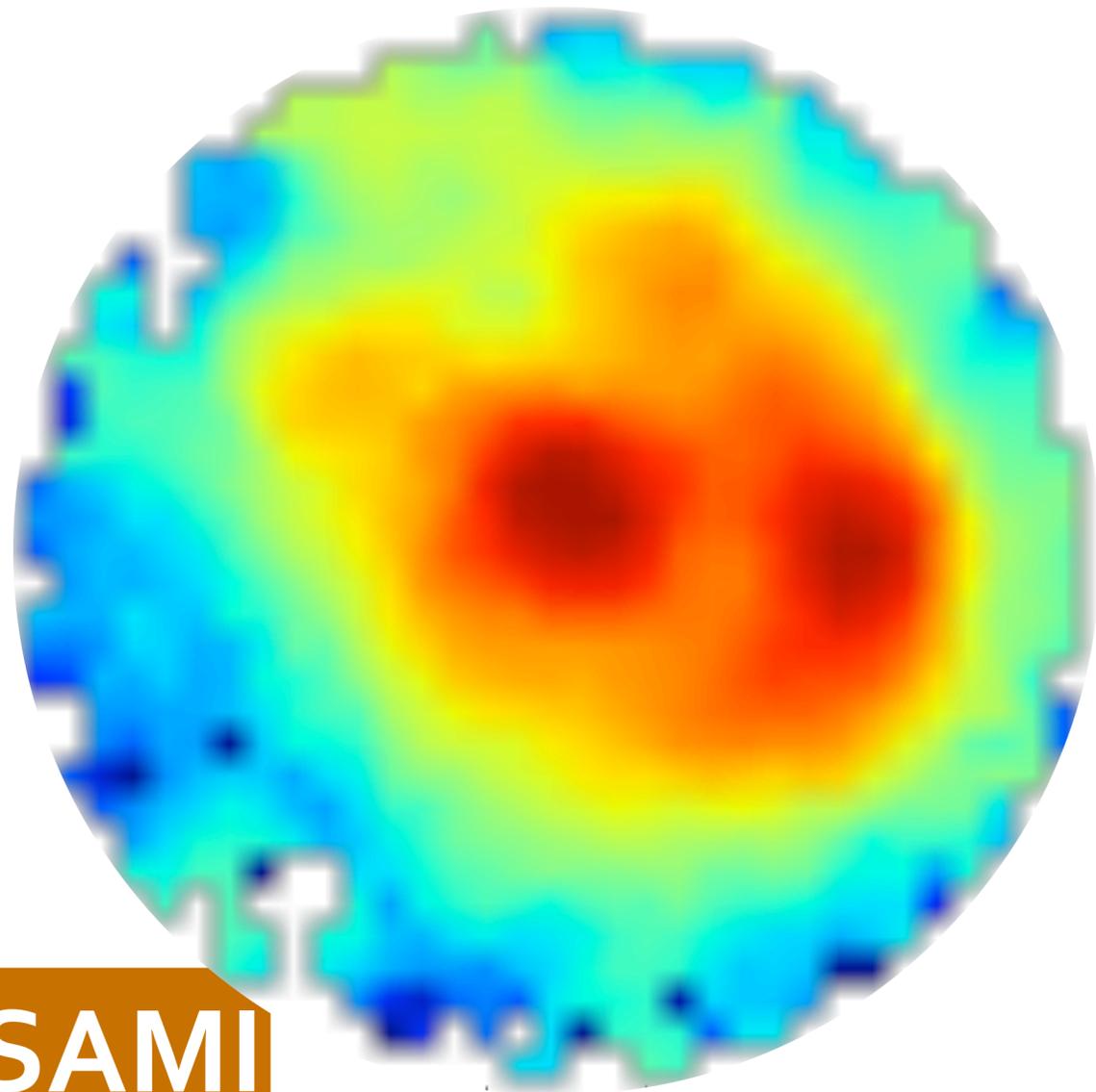
**do we see the predicted cycle?**

# interacting galaxies

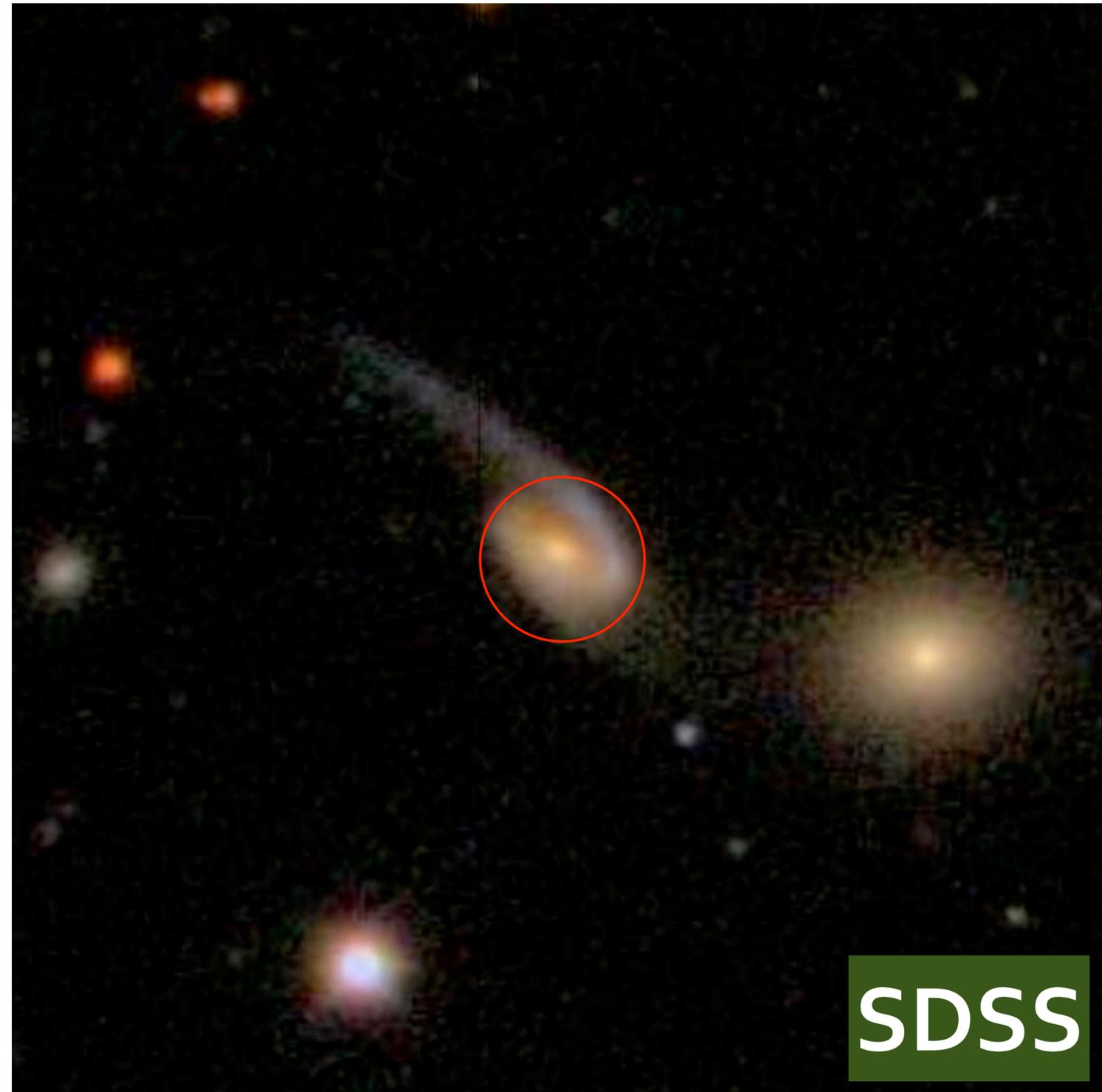


*plots by Scott Croom*

# hinge clumps?



**SAMI**



**SDSS**

# interacting galaxies

175 pairs, 42 close pairs

starburst onset, tides

hinge clumps! maybe

delayed-onset SBs? tidal dwarfs?

# SAMI star formation

plenty of galaxies within 100 Mpc

resolve systems to  $1 R_e$  to  $z \sim 0.1$

final sample  $\sim 3200$  galaxies

300 SF-ing galaxies observed

# SAMI star formation

stochastic dwarfs

extra-planar H $\alpha$

tidal tails, hinge clumps

and hopefully much serendipity

# IsK+, Ho+

# software development



HDFView

Recent Files: /Users/iraklis/Progs/Python/Development/SAMI\_DB/SAMI\_busiweek.hs

SAMI\_busiweek.hs

- SAMI
  - 0.4
    - Calibrator
      - 10000073
      - 10000089
    - Table
      - SAMI\_MASTER
      - SAMI\_MASTER\_2
    - Target
      - 203037
      - 203114
      - 203140
      - 203148
      - 209181
      - 220320
      - 220371

	CATID	name	RA	Dec	r_petro
0	40873	J121345...	183.4397...	-0.83322...	19.491
1	48805	J143429...	218.6215...	-0.79893...	19.507
2	196977	J085421...	133.5904...	-0.70757...	17.149
3	215293	J085408...	133.5369...	0.498455...	19.755
4	323508	J084808...	132.0333...	1.5648639...	19.154
5	387080	J090041...	135.1722...	2.245778...	16.401
6	396895	J114218...	175.5758...	1.609004...	18.603
7	417511	J084615...	131.5633...	2.266030...	16.056
8	535668	J115559...	178.9977...	-0.99979...	17.973
9	622395	J085216...	133.0692...	0.682401...	19.508
10	622487	J085425...	133.6062...	0.744391...	17.921
11	623609	J091839...	139.6629...	0.7620343...	17.831
12	726781	J084756...	131.9869...	1.748162...	19.294
13	548821	J083727...	129.3632...	-0.46175...	19.126
14	91473	J140859...	212.2496...	0.446858...	17.057
15	760733	J121554...	183.9761...	0.085622...	19.867
16	177326	J114519...	176.3302...	-1.87229...	19.612
17	491956	J141615...	214.0650...	-1.46462...	16.893
18	8036	J120125...	180.3552...	0.8094231...	18.283
19	271535	J113840...	174.6679...	1.296848...	19.184
20	619553	J144132...	220.3865...	0.3240292...	18.686
21	319019	J141312...	213.3031...	1.783778...	18.788
22	513065	J144620...	221.5862...	-1.08968...	18.362
23	346376	J085348...	133.4537...	2.123962...	19.576
24	143148	J113658...	174.2437...	-1.39566...	19.651
25	136524	J114132...	175.3846...	-1.64593...	19.449
26	513001	J144528...	221.3691...	-1.16087...	18.095
27	417678	J085057...	132.7382...	2.346172...	16.114
28	957641	J144943...	222.4323...	-0.77755...	19.844
29	346567	J085708...	134.2837...	2.021344...	19.198
30	623790	J092131...	140.3827...	0.747708...	16.957
31	272328	J115512...	178.8017...	1.292226...	17.56
32	508937	J143619...	219.0833...	-1.44215...	17.86
33	561641	J121728...	184.3686...	-0.478232...	19.261

TableView - SAMI\_MASTER - /SAMI/0.4/Table/ - /Users/irakli...

TableView - B\_RSS\_Data\_7 - /SAMI/0.4/Target/203037/ - /...

(96) Group size = 1  
Number of attributes = 0

**new file formats**

Log Info Metadata

Slide3D

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0.2  
0.1  
0

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3900 3920 3940 3960 3980 4000 5200 5300

HALPHA  
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S/N:29.0

HBETA  
8.42e-01  
S/N:11.5

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5.00e-01  
S/N:8.8

[NII]6583  
2.52e+00  
S/N:39.2

40  
20  
0

0 20 40

0 20 40

0 20 40

0 20 40

(25,23)

All  
Comp. 1  
Comp. 2  
Comp. 3

Up  
Left  
Right  
Down

**LZIFU**



**sami**  
galaxy survey

**PI: Scott Croom**

**[sami-survey.org](http://sami-survey.org)**

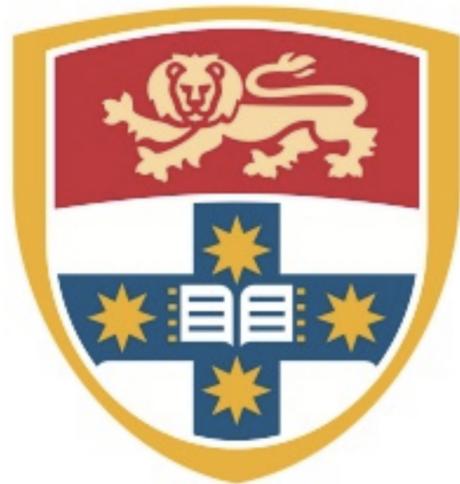
**Ask me about s/w**

**EDR in mid-2014**

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