TURBULENT CLUSTERS UNDER THE MUSE LENS: THE CASE OF A-1367

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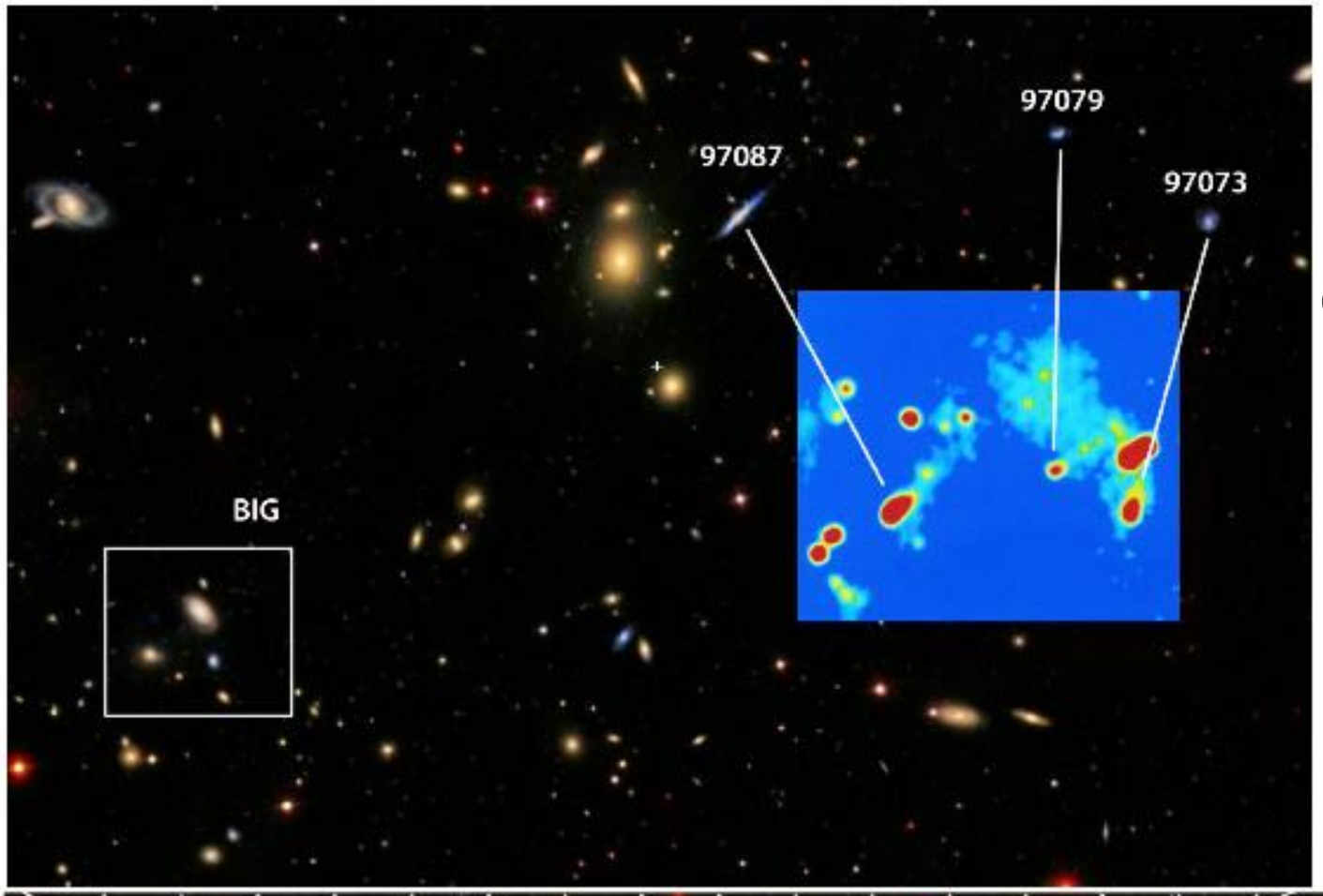
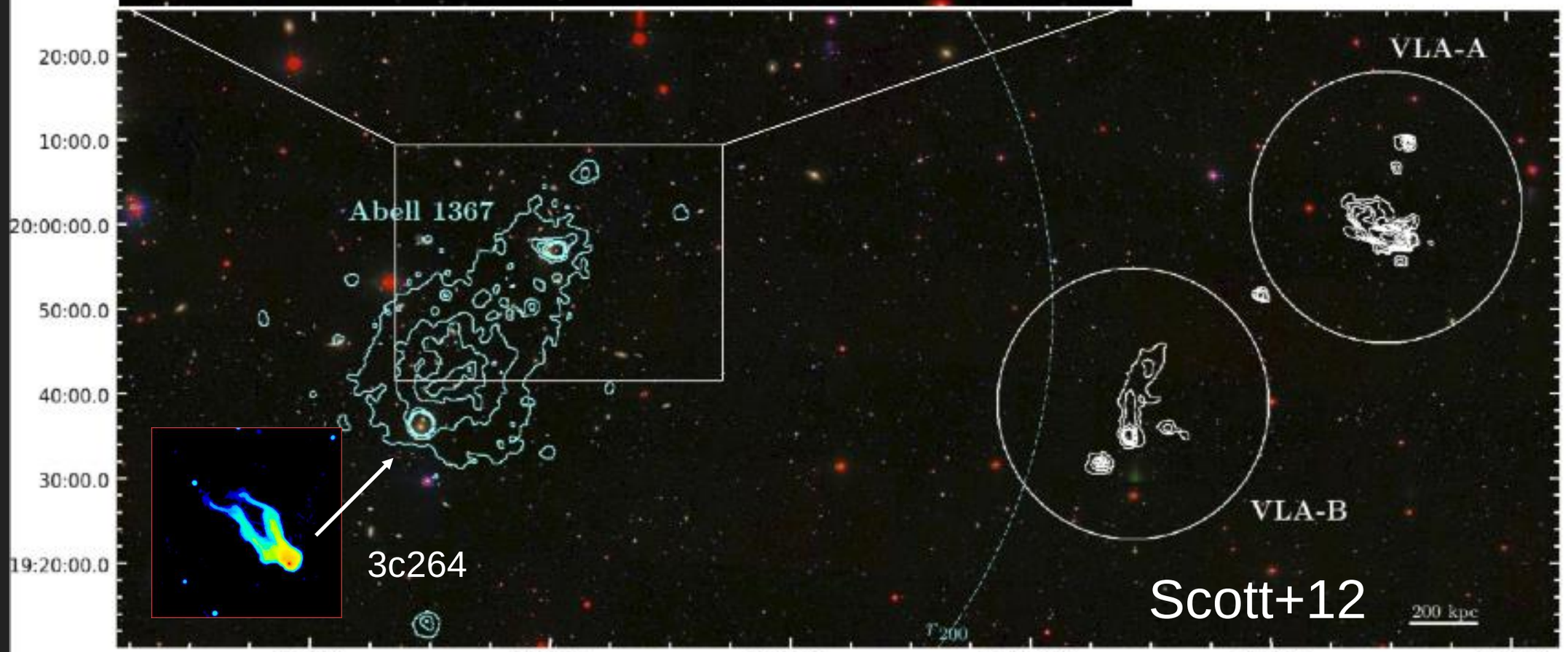
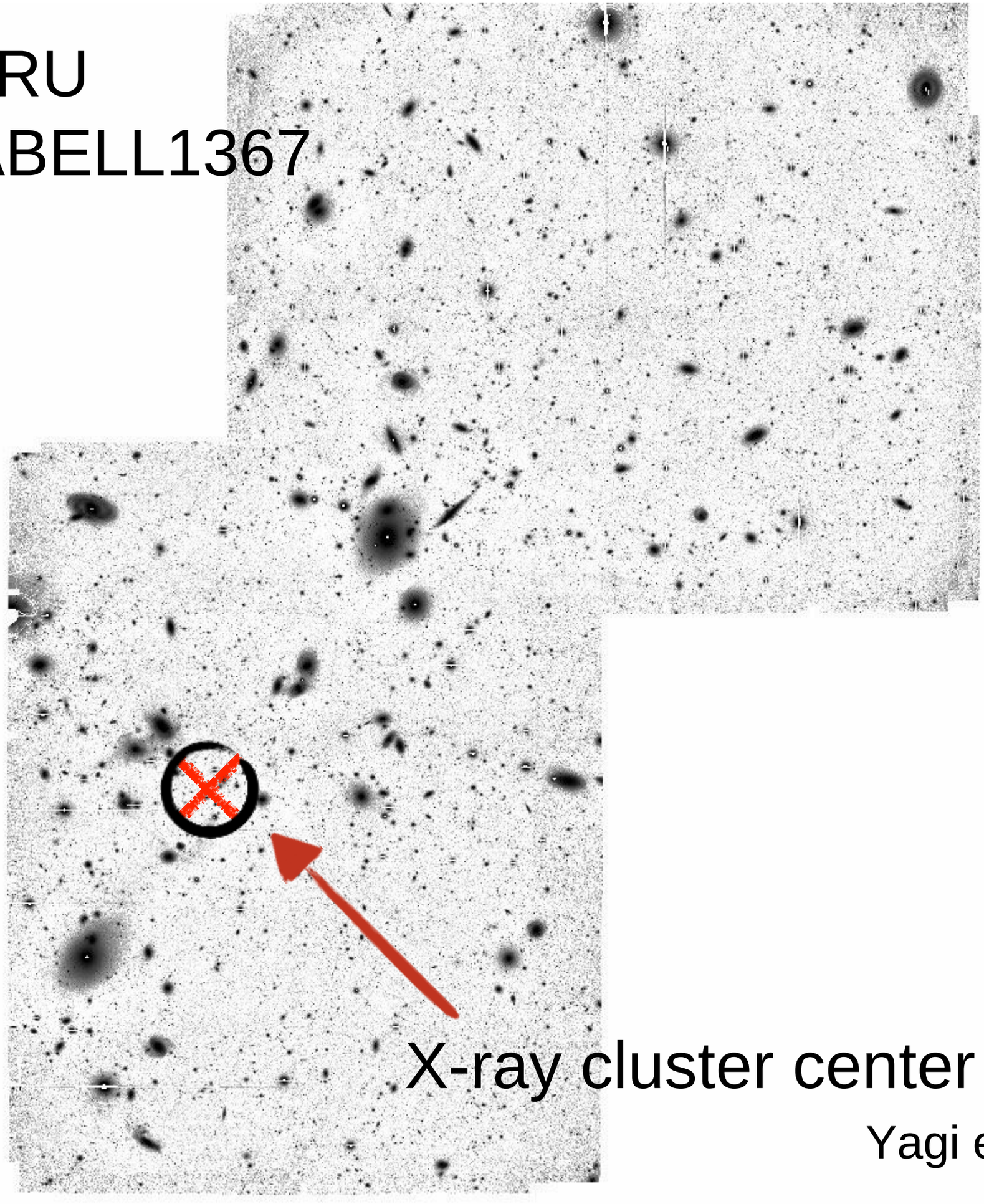
EWASS -2017



Gavazzi&Jaffe+85
reported extended
radio tails
in LTGs infalling
into A1367

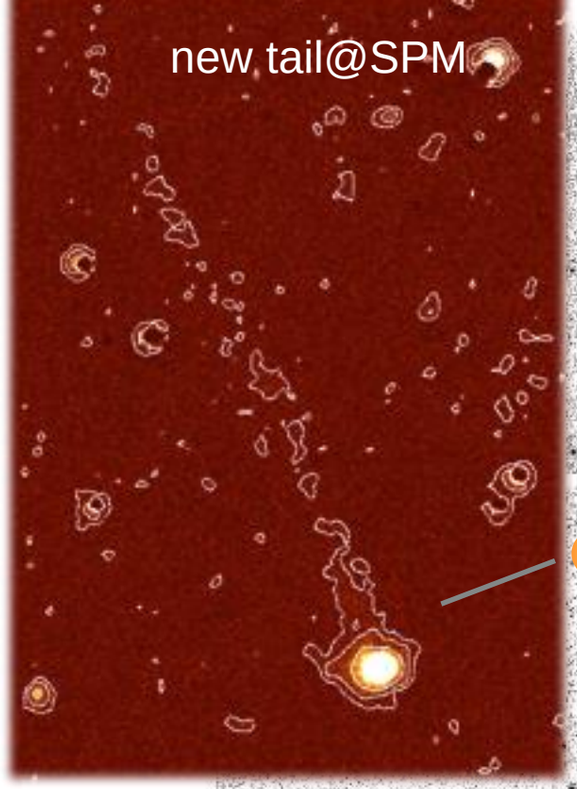


THE SUBARU VIEW OF ABELL1367



2 fields
3h exptime
1 sq deg

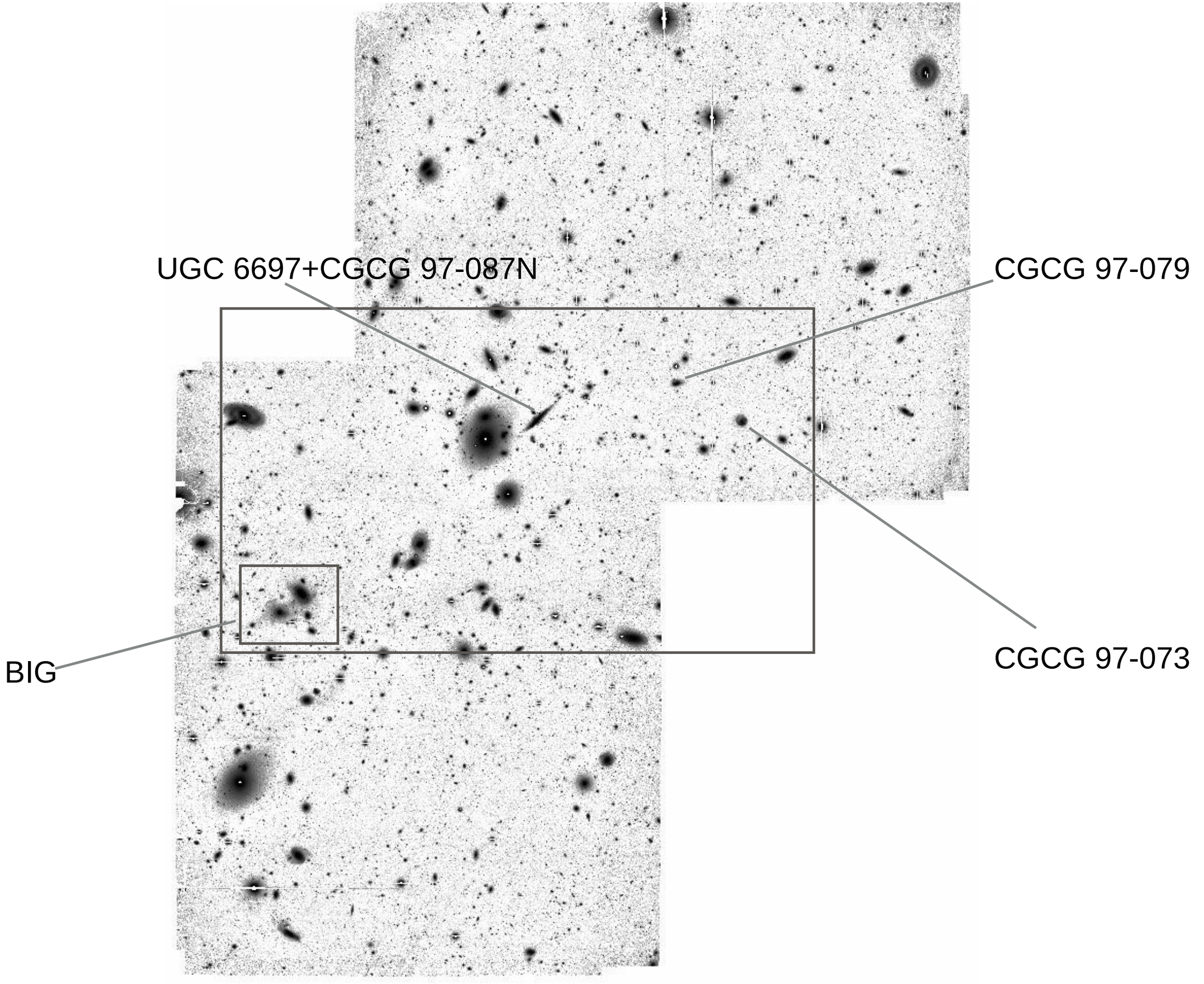
Yagi et al. (2017)

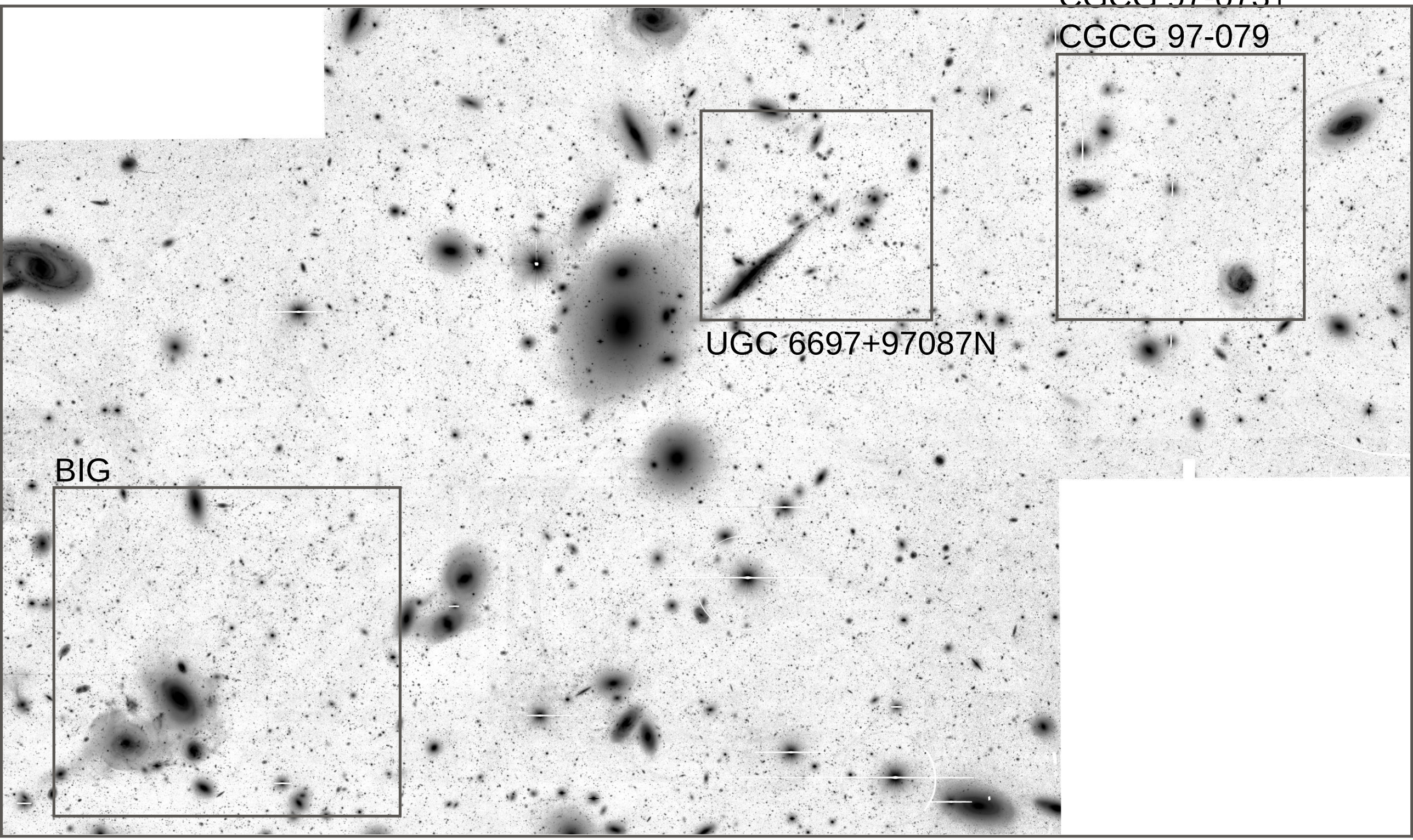


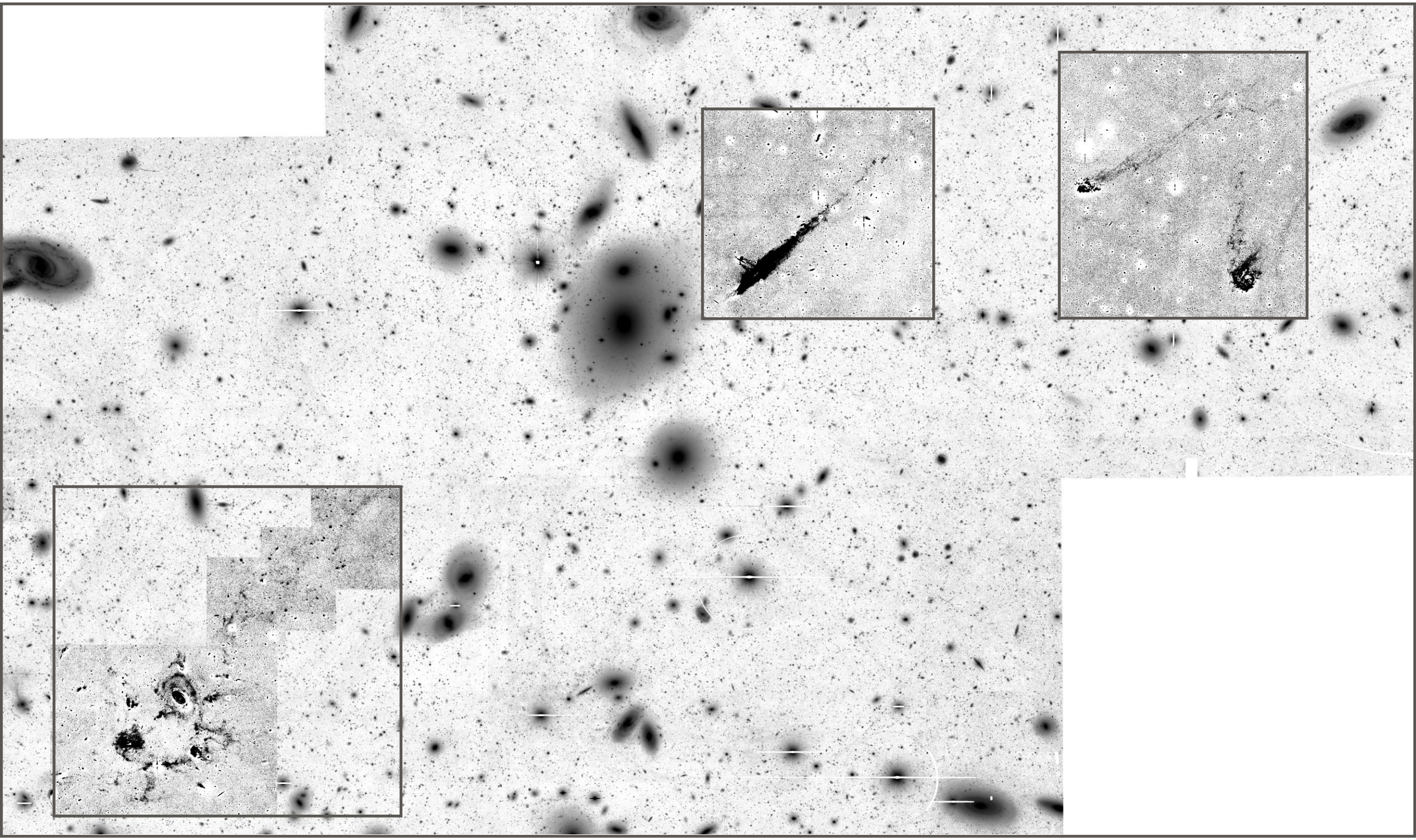
27/64 (~40%) of LTGs observed in Coma (Yagi+10) and A1367 (Yagi+17) show extended tails of ionized gas.

cometary

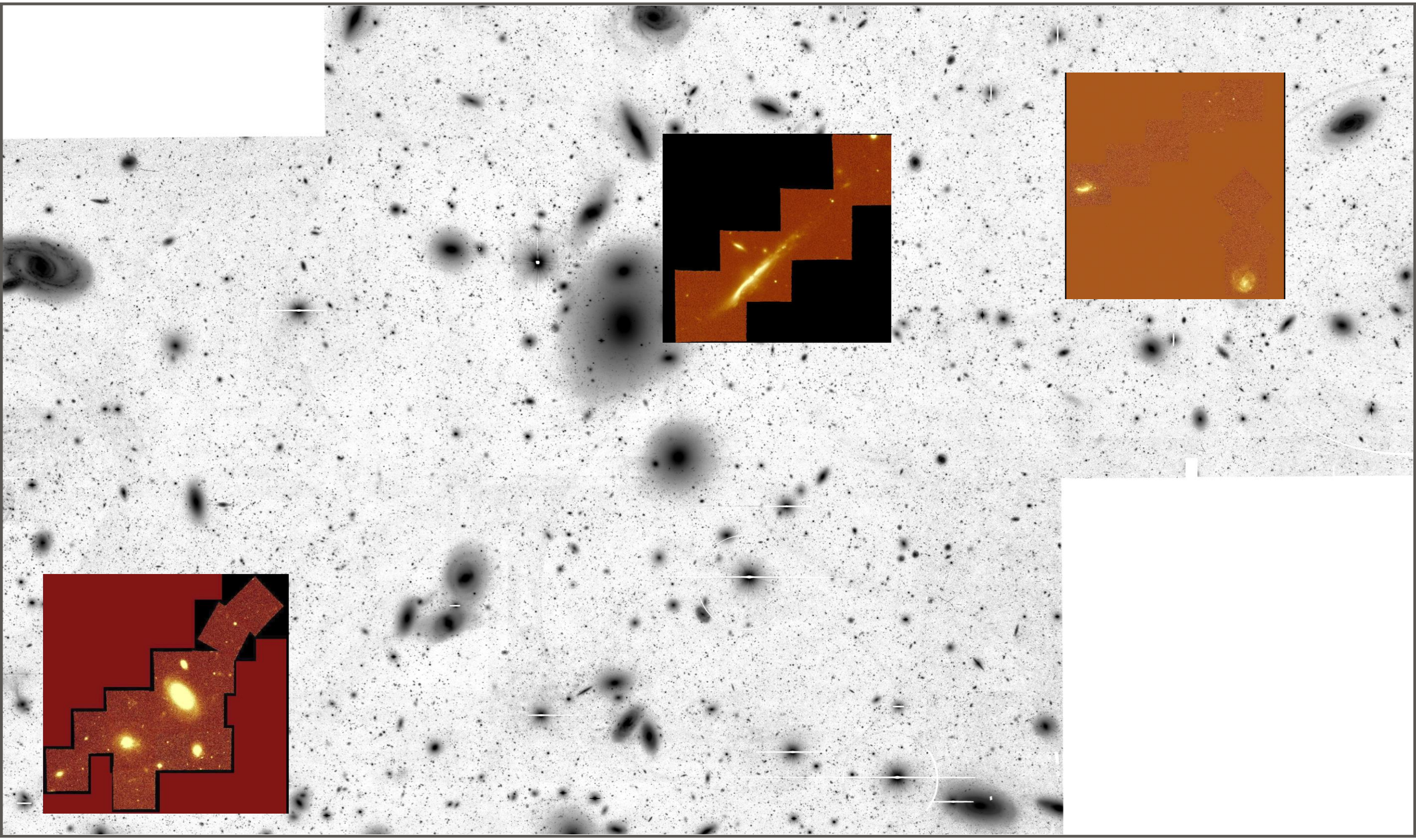
no cometary

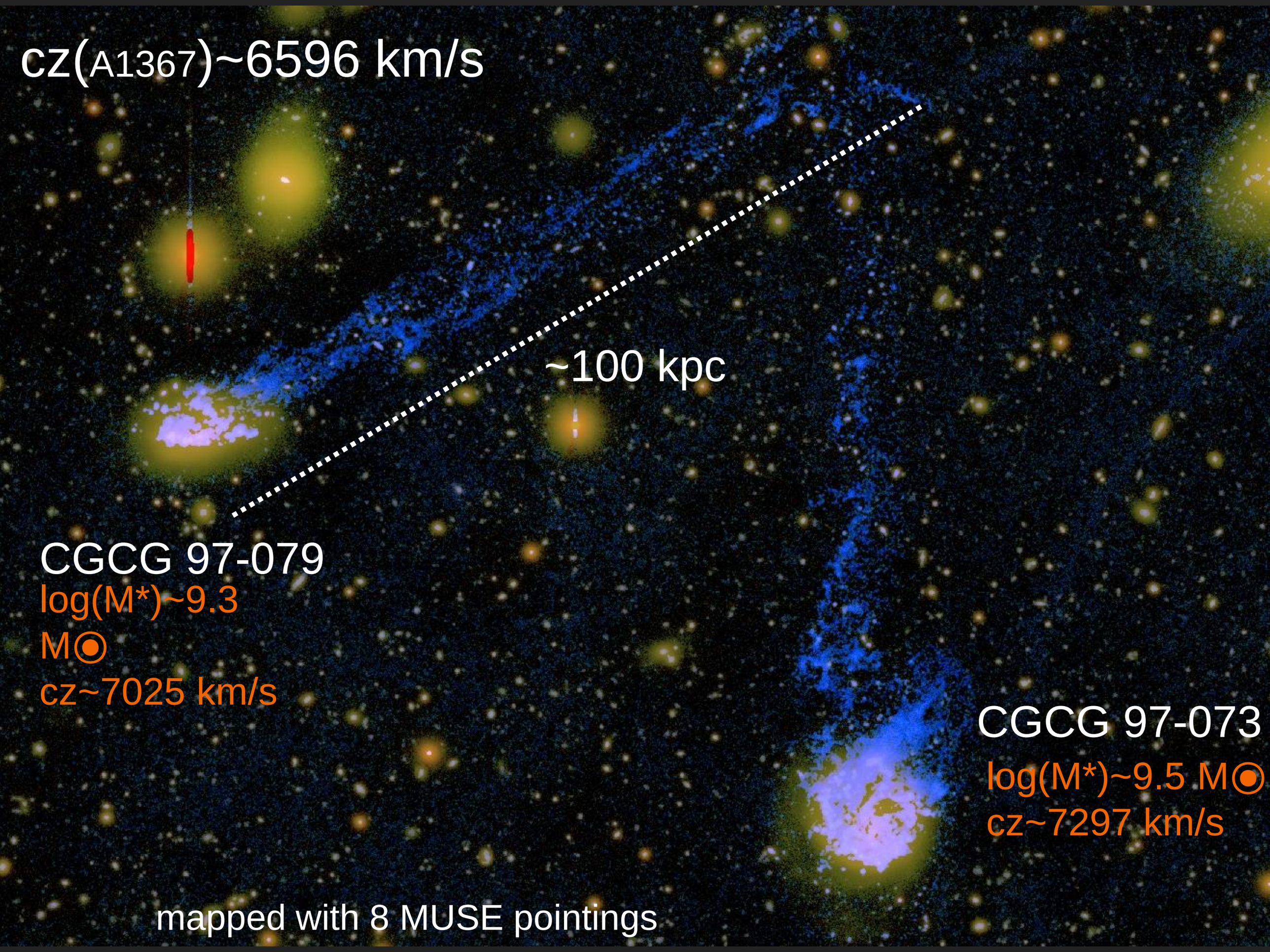

UGC 6697+CGCG 97-087N
CGCG 97-079
BIG
CGCG 97-073

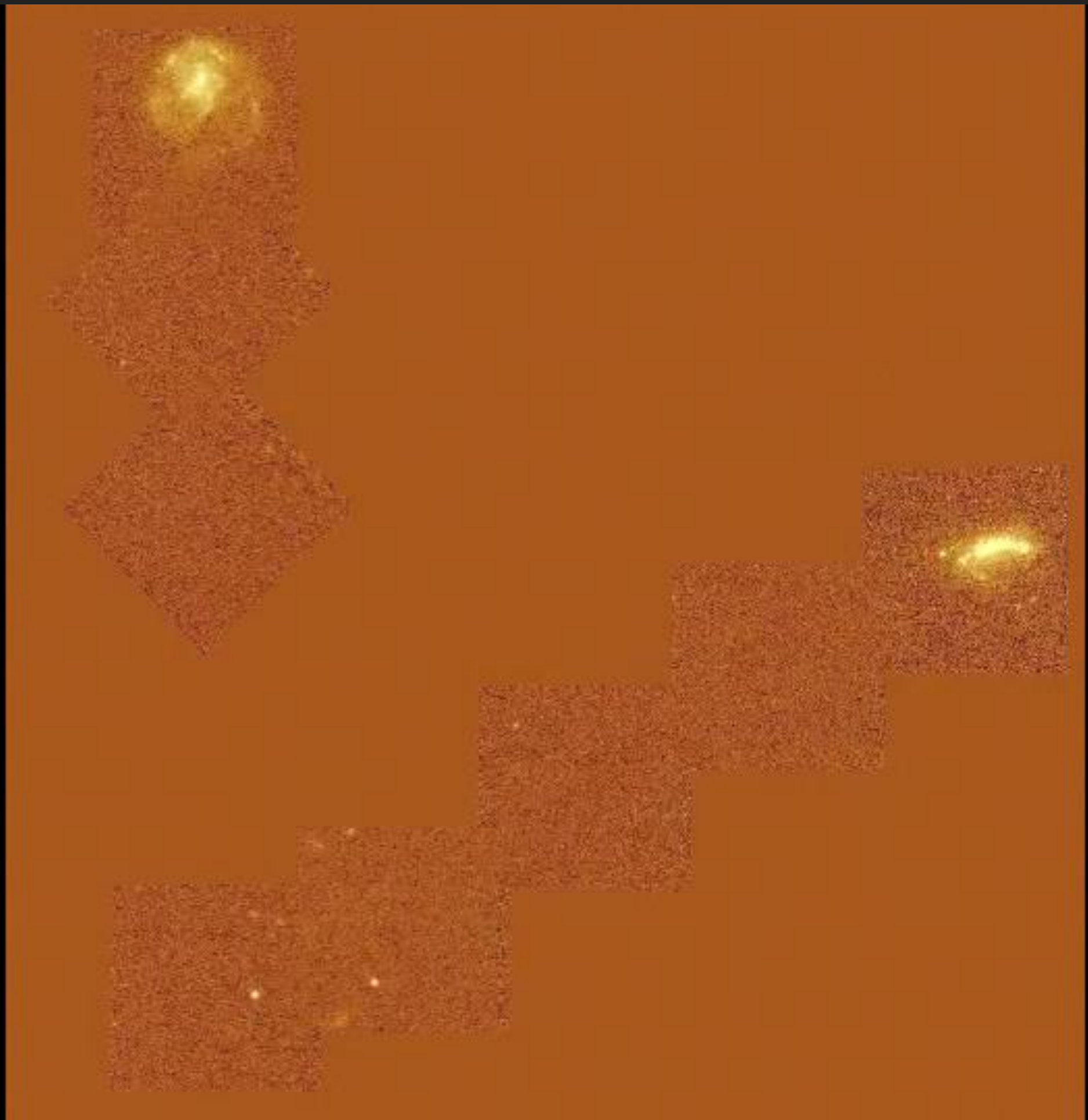

CGCG 97-073+
CGCG 97-079
UGC 6697+97087N
BIG



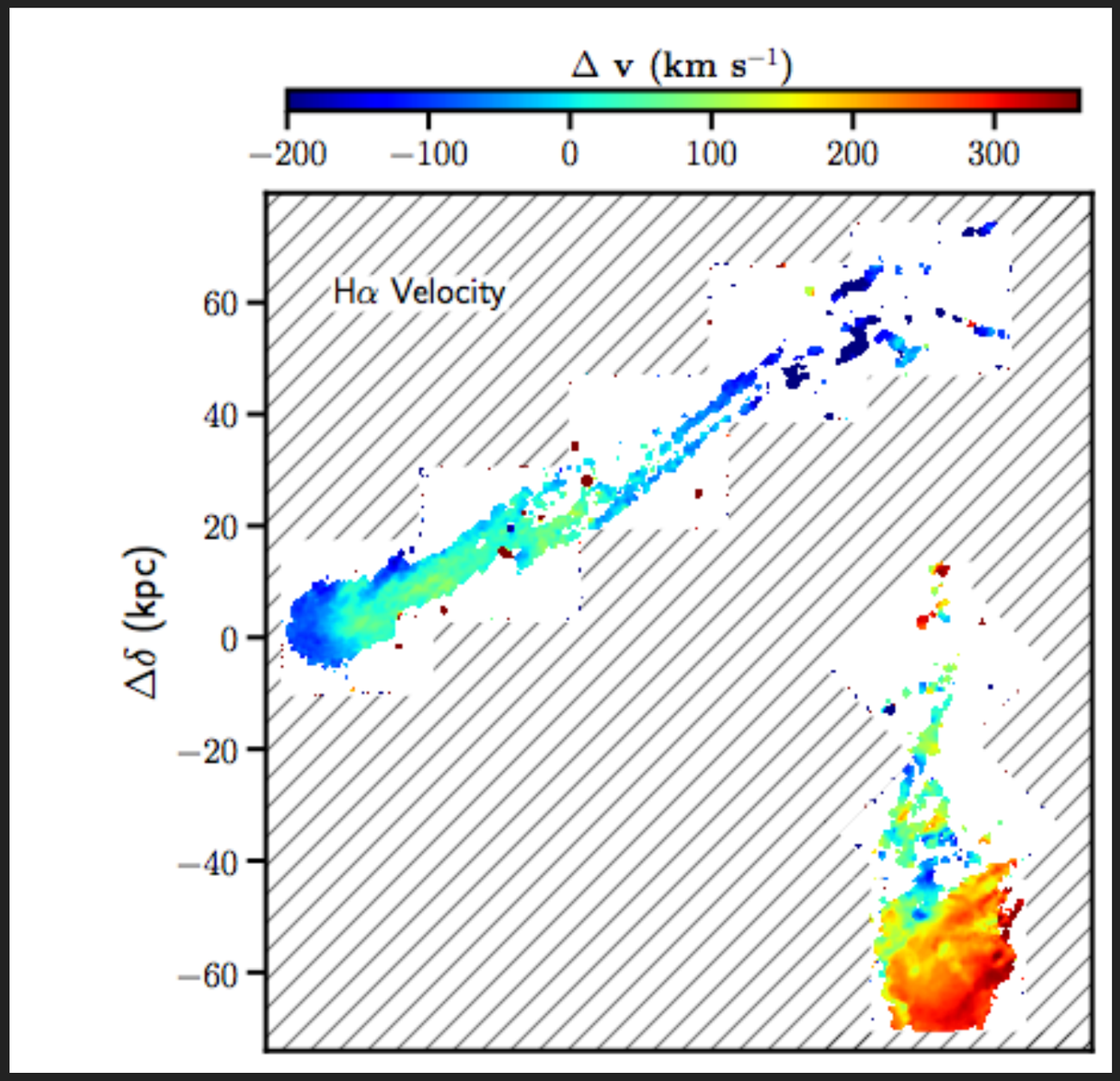
MUSE sneaks a peek at Abell 1367

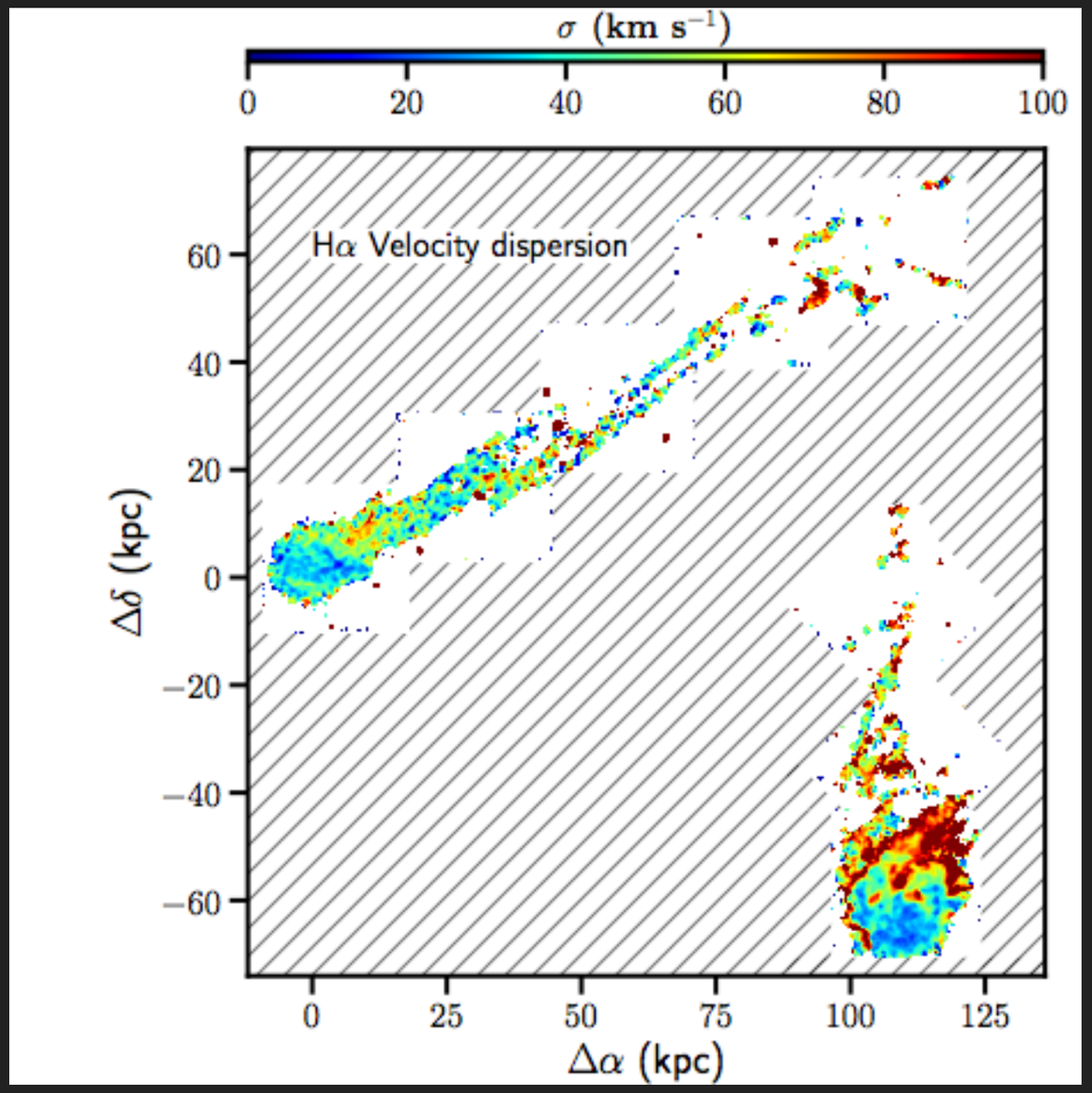


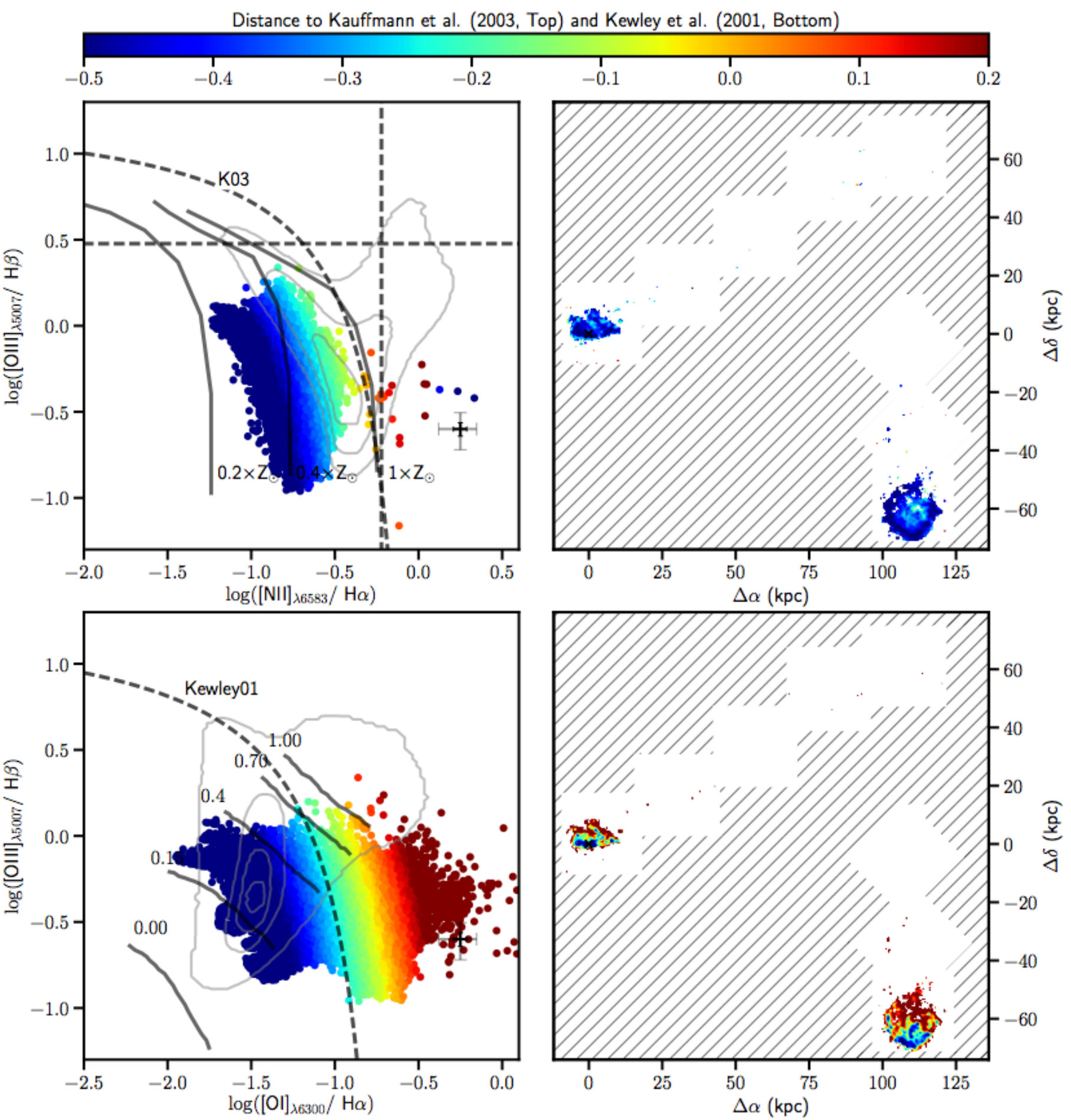

cz(A1367)~6596 km/s
~100 kpc
CGCG 97-079
log(M*)~9.3
M⊙
cz~7025 km/s
CGCG 97-073
log(M*)~9.5 M⊙
cz~7297 km/s
mapped with 8 MUSE pointings



0~7025 km/s

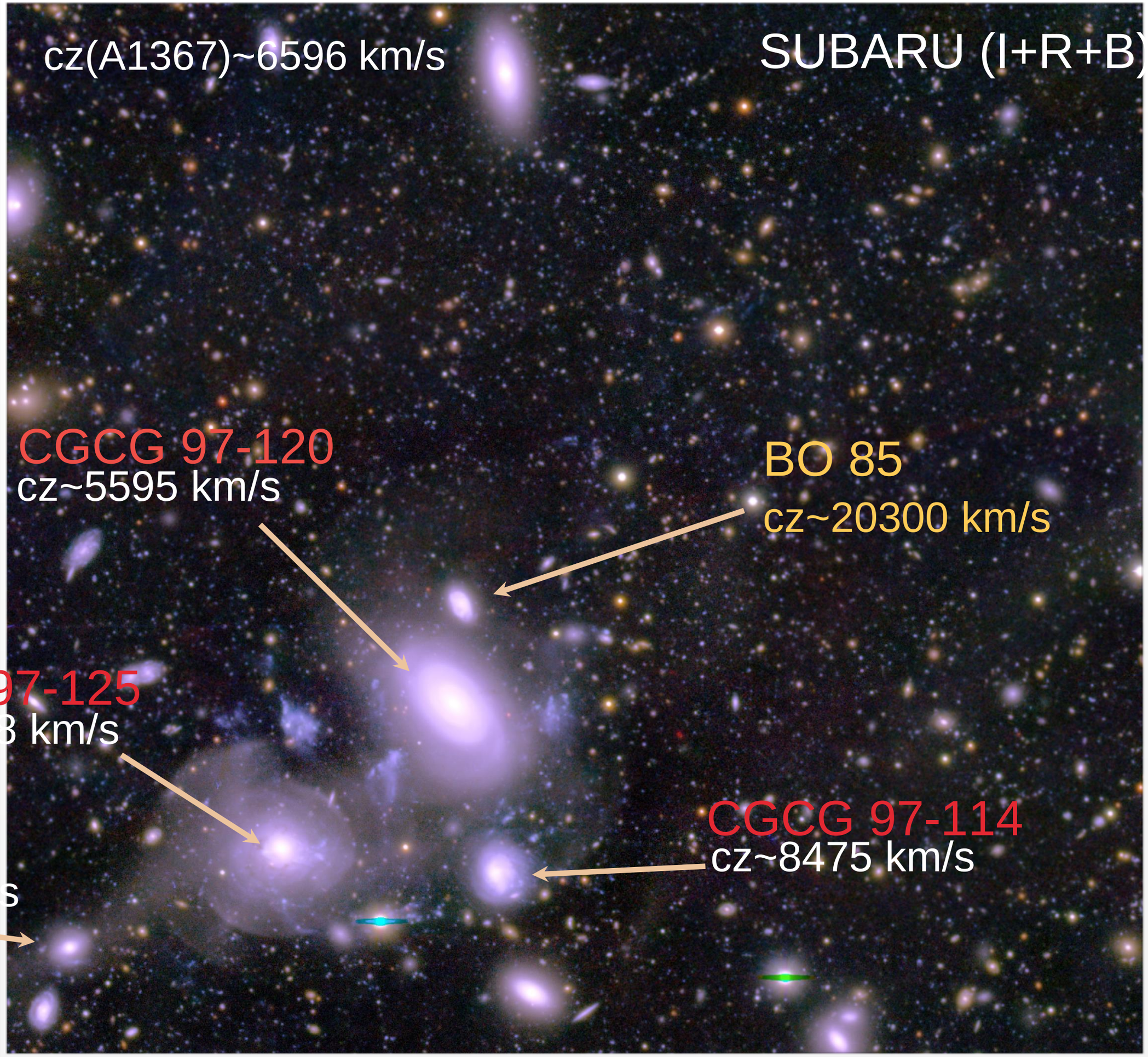

Δ v (km s⁻¹)
−200
−100
0
100
200
300
Hα Velocity
60
40
20
0
−20
−40
−60
Δδ (kpc)


σ (km s⁻¹)
0
20
40
60
80
100
Hα Velocity dispersion
60
40
20
0
−20
−40
−60
Δδ (kpc)
0
25
50
75
100
125
Δα (kpc)

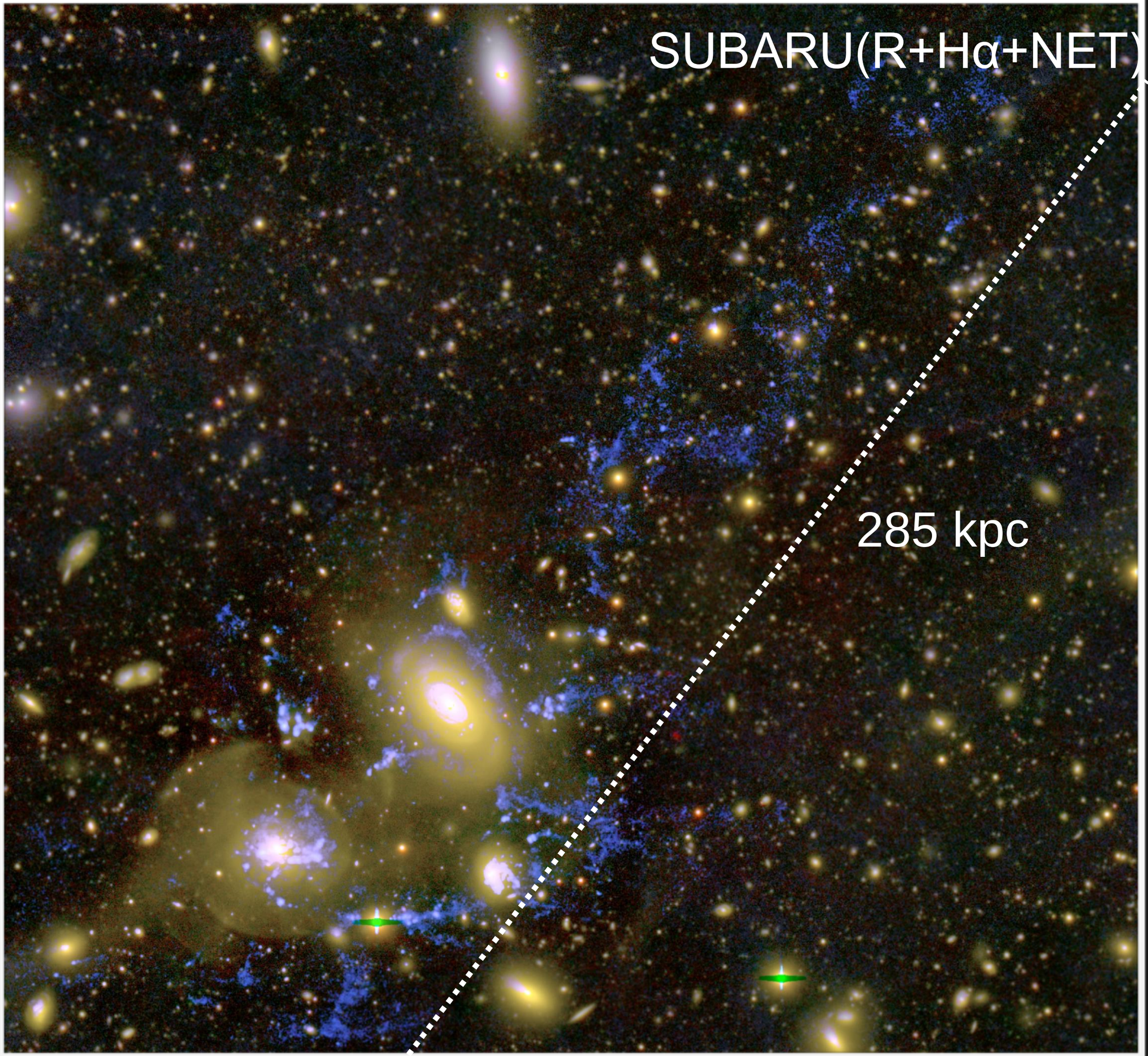

Distance to Kauffmann et al. (2003, Top) and Kewley et al. (2001, Bottom)
−0.5
−0.4
−0.3
−0.2
−0.1
0.0
0.1
0.2
K03
0.2×Z⊙
0.4×Z⊙
1×Z⊙
log([OIII]λ5007/ Hβ)
log([NII]λ6583/ Hα)
Δα (kpc)
Δδ (kpc)
Kewley01
1.00
0.70
0.4
0.1
0.00
log([OI]λ6300/ Hα)

Blue Infalling Group

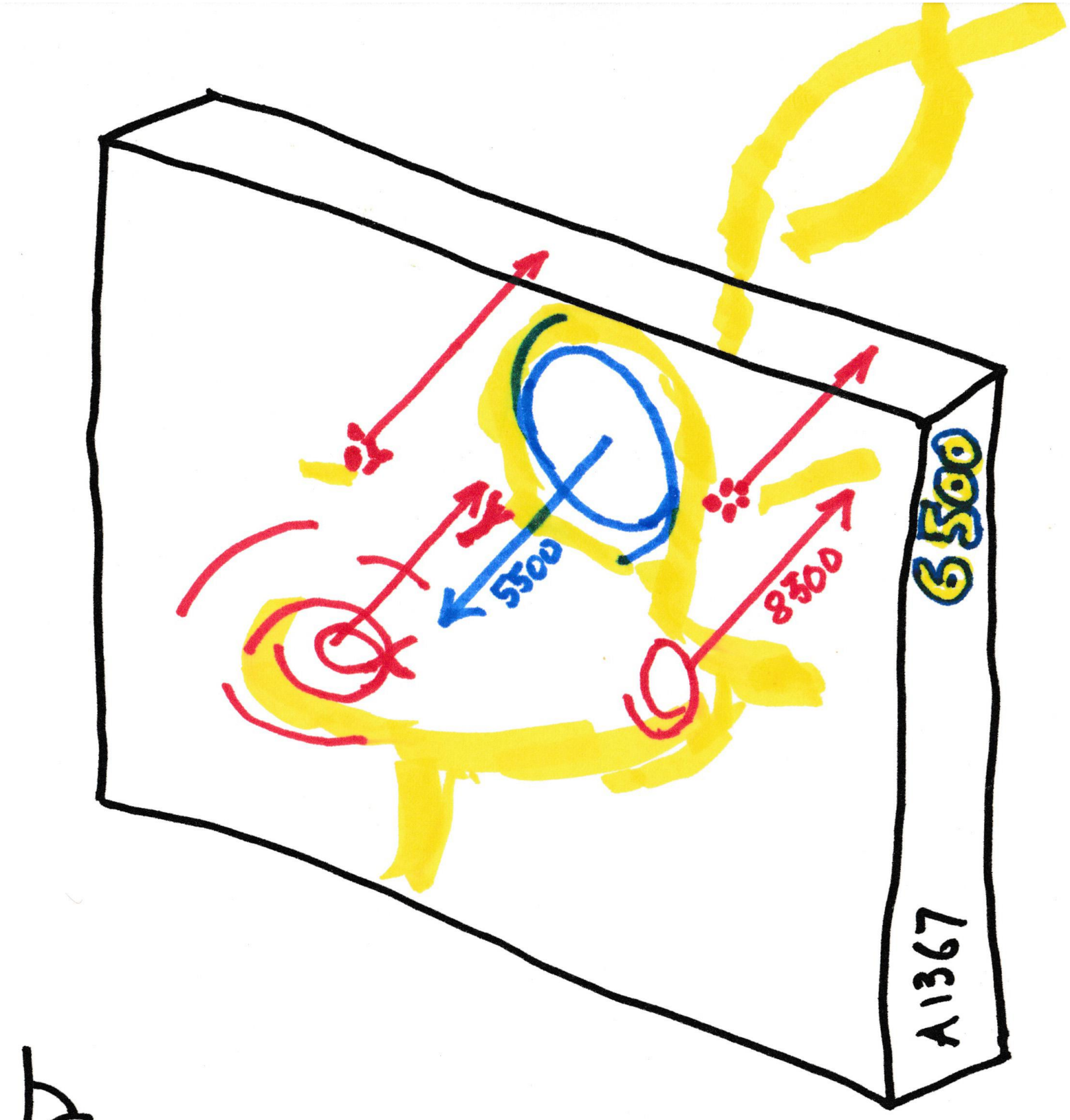
Sakai+02
Cortese+06



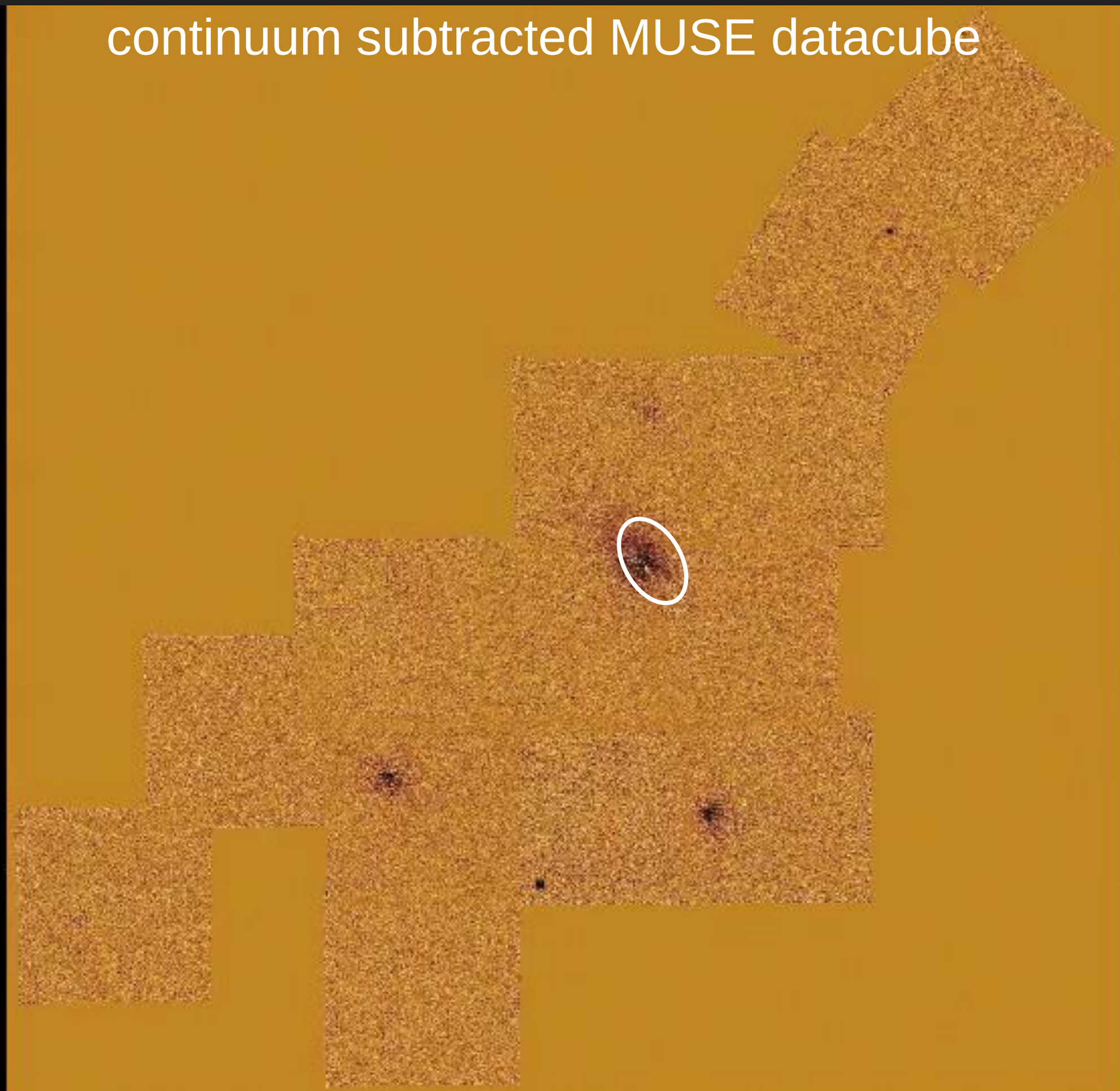
Blue
Infalling
Group



Yagi+17


5500
8500
6500
A1397

continuum subtracted MUSE datacube

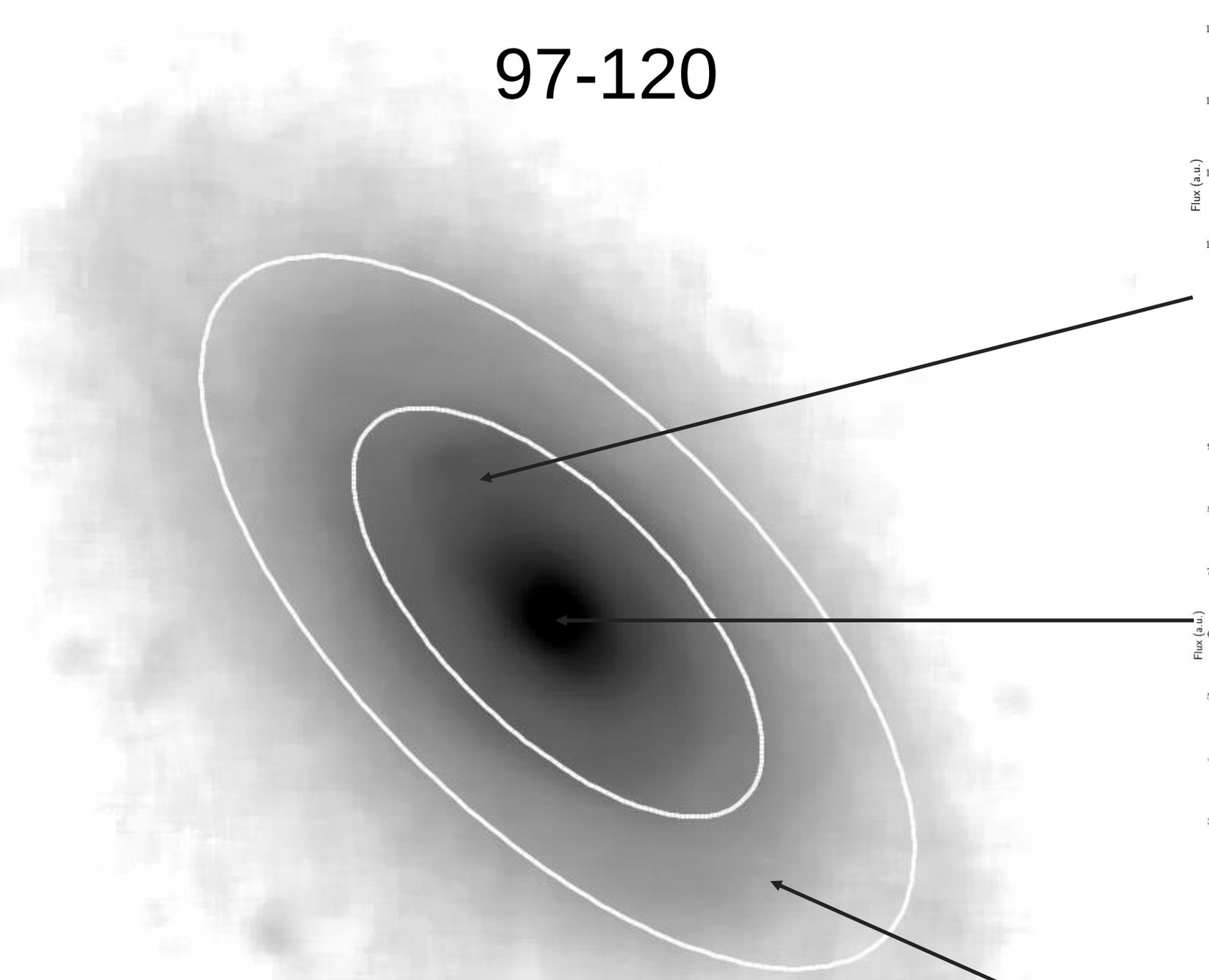


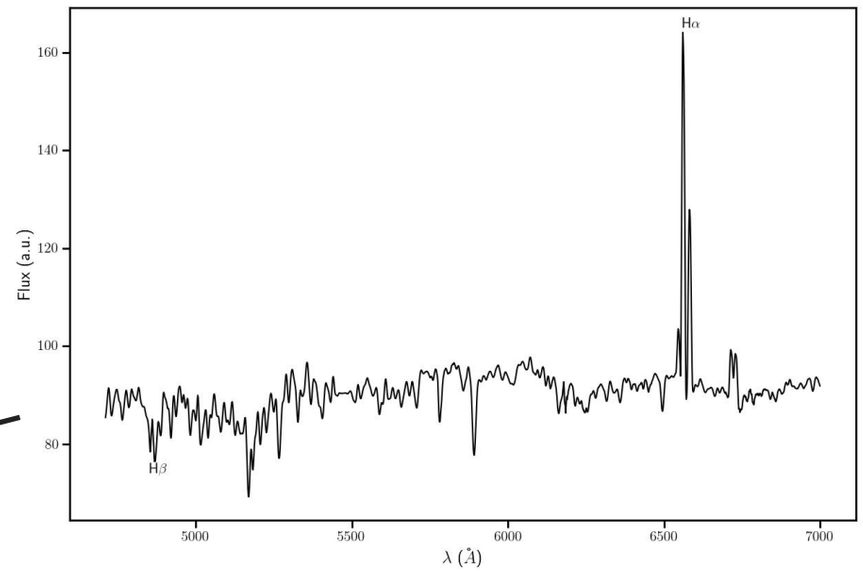
0=7035 km/s

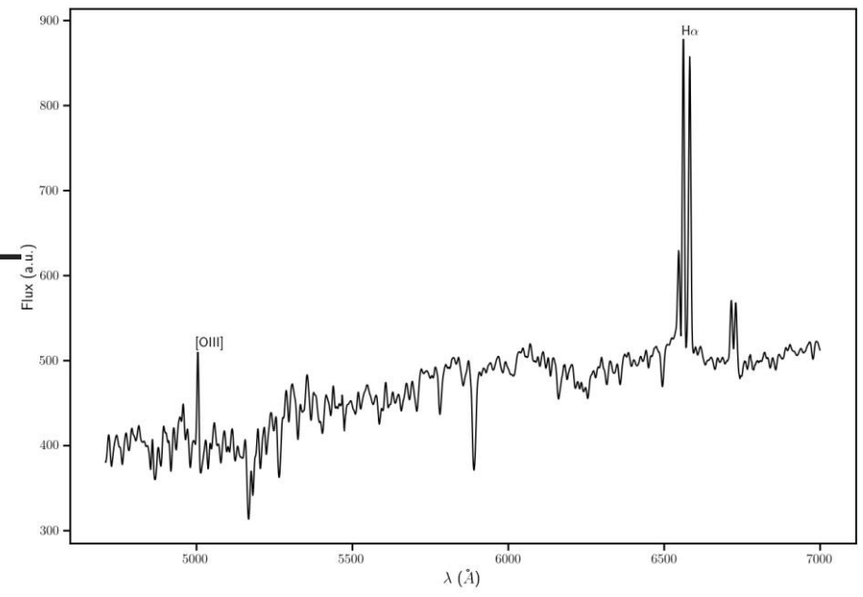
-1000 -500 0 500 1000

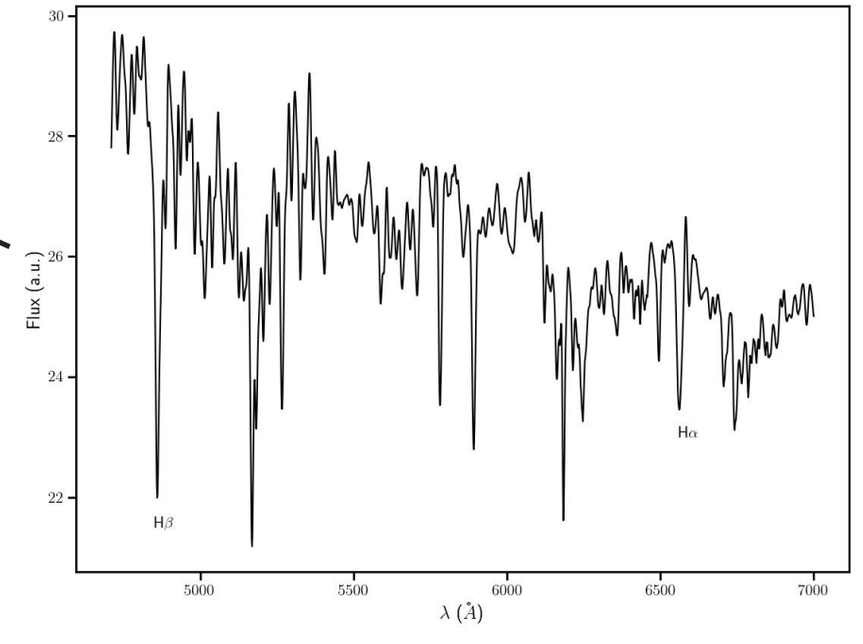
continuum subtracted MUSE datacube

97-120









CLUSTERS UNDER THE MUSE LENS

Take home message:

A mix of environmental processes affects ~50% of LTGs currently infalling in the A1367 cluster. MUSE gives us a (preliminary) privileged view of the complex physics at play in the cluster.

Thank you for your attention!