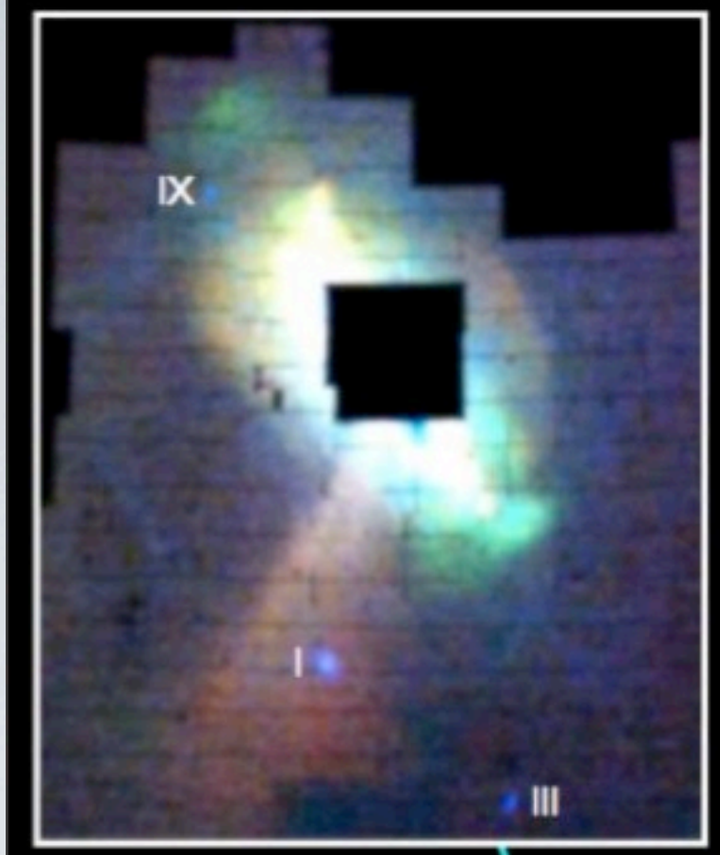
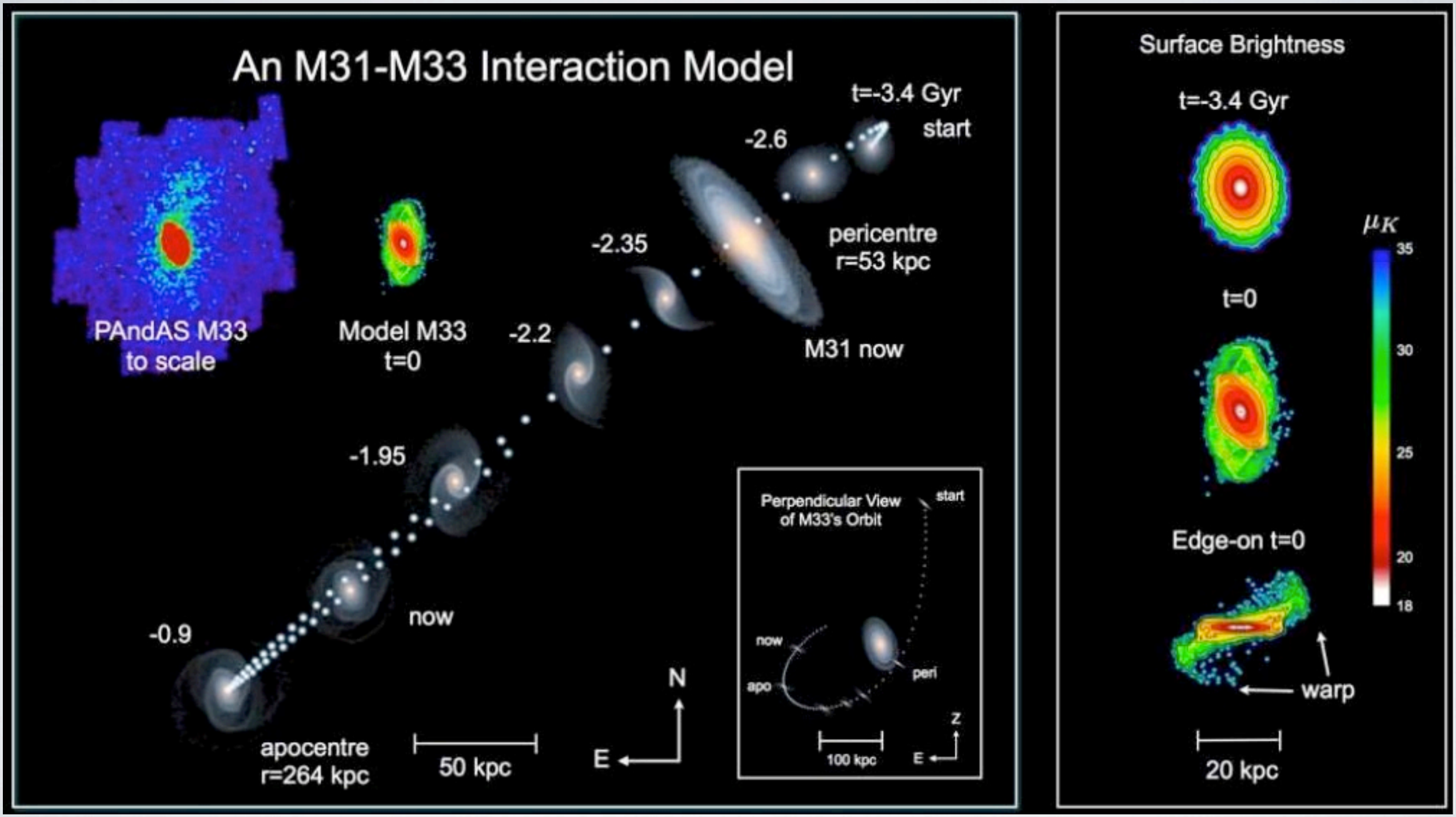
SKA PRECURSORS

Galactic accretions...

CFHT: PANDAS

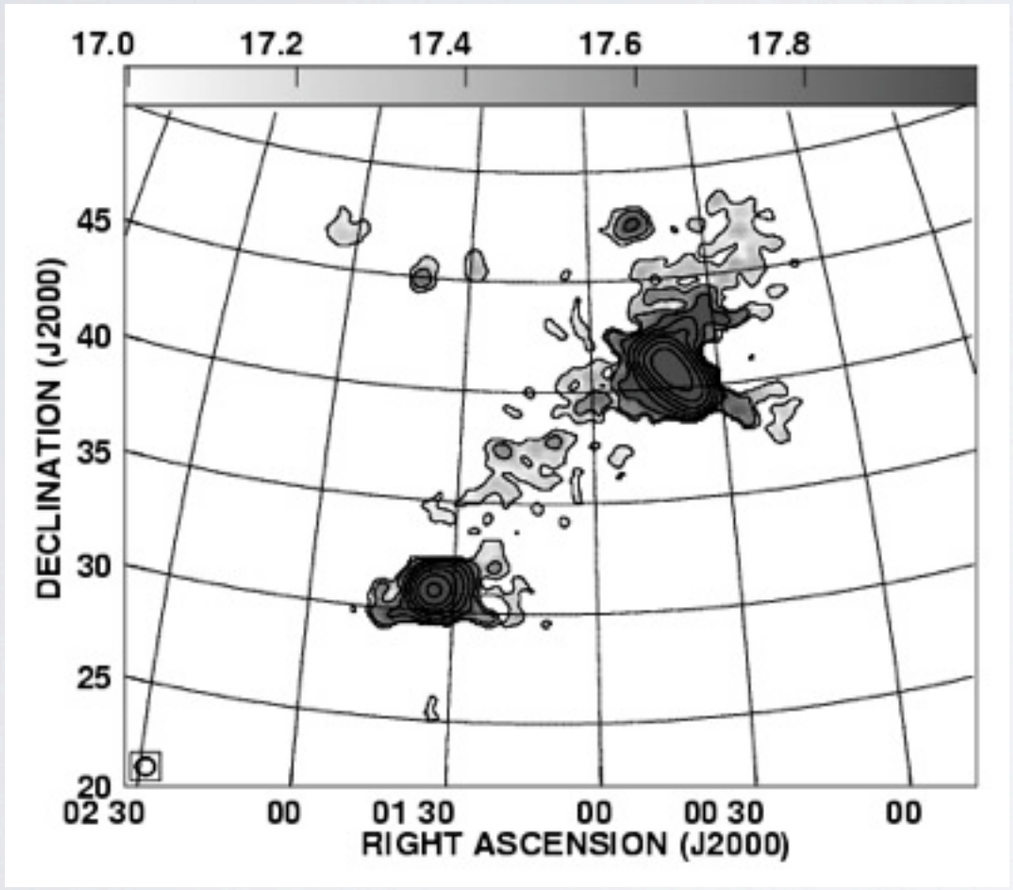




McConnachie et al 2009

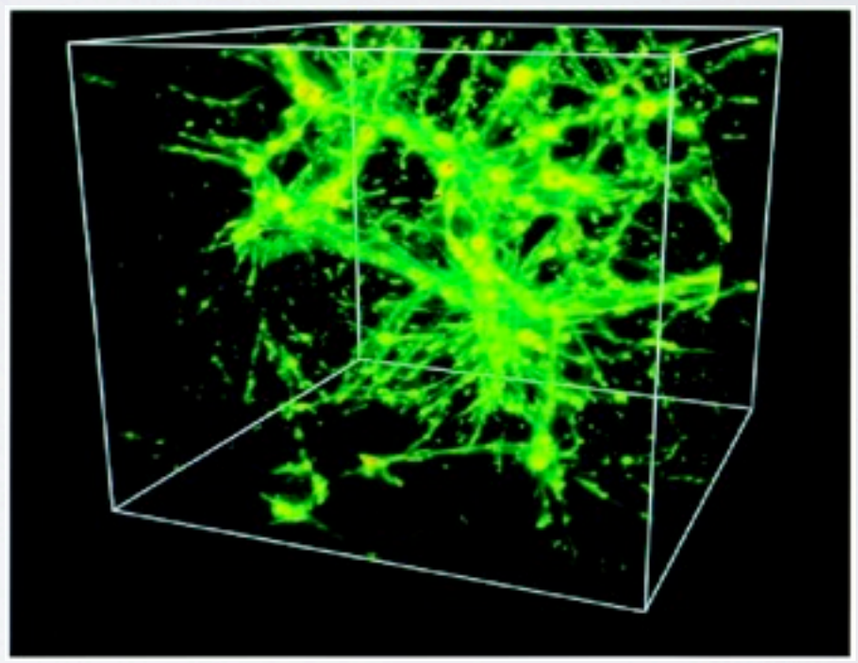
M33/M31 HI STREAM

gaseous tidal stream?



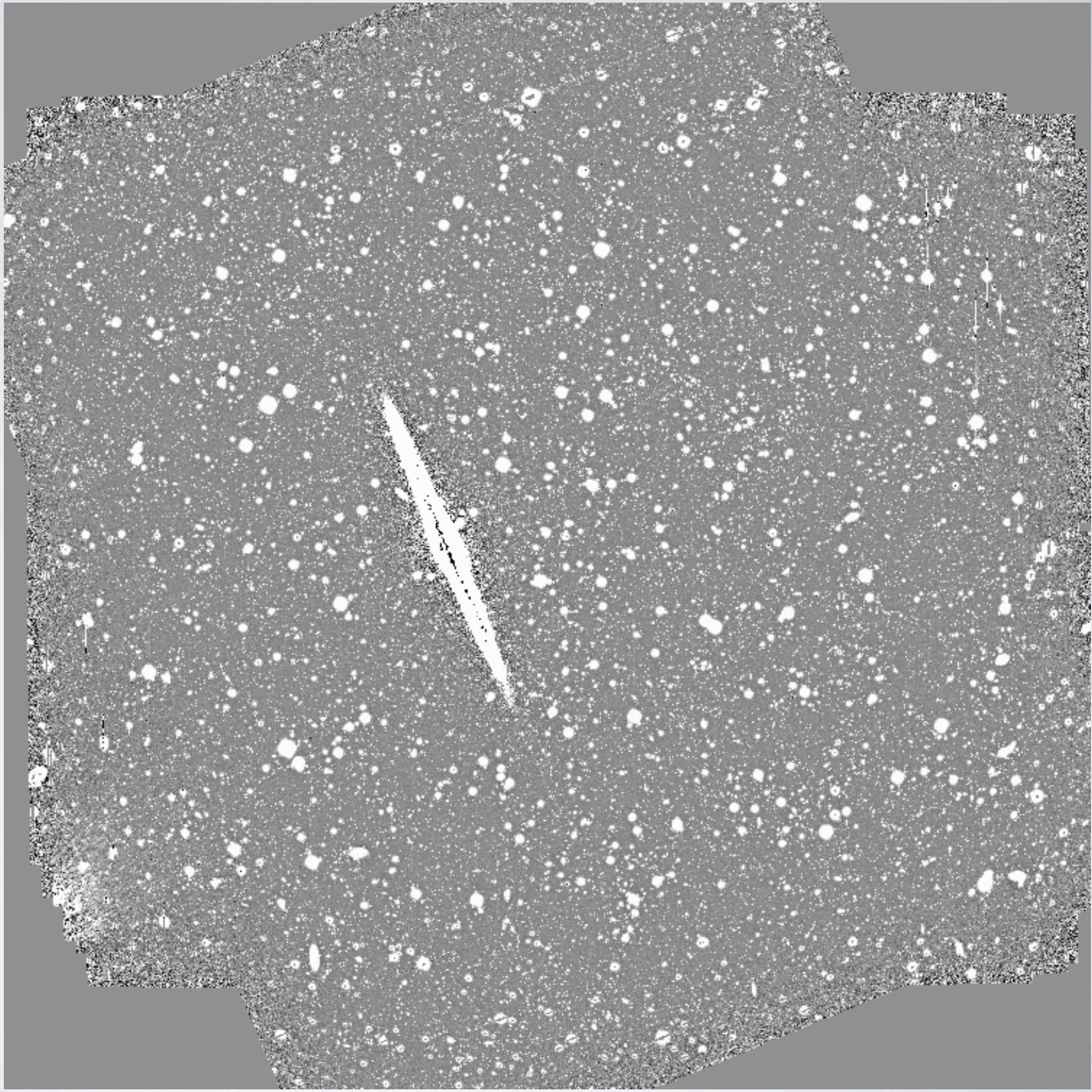
Braun & Thilker (2004)

or cosmic infall?

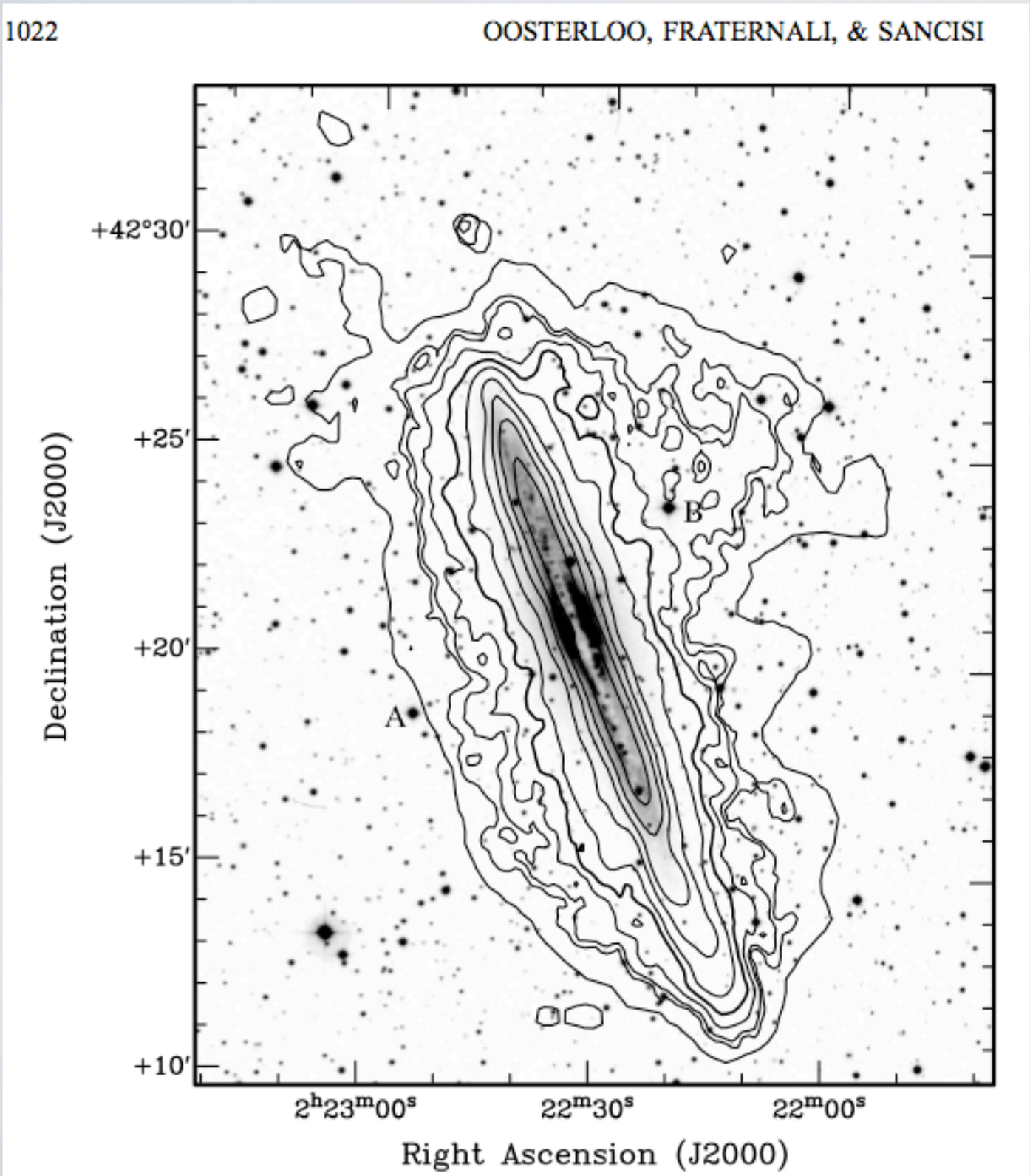


N891

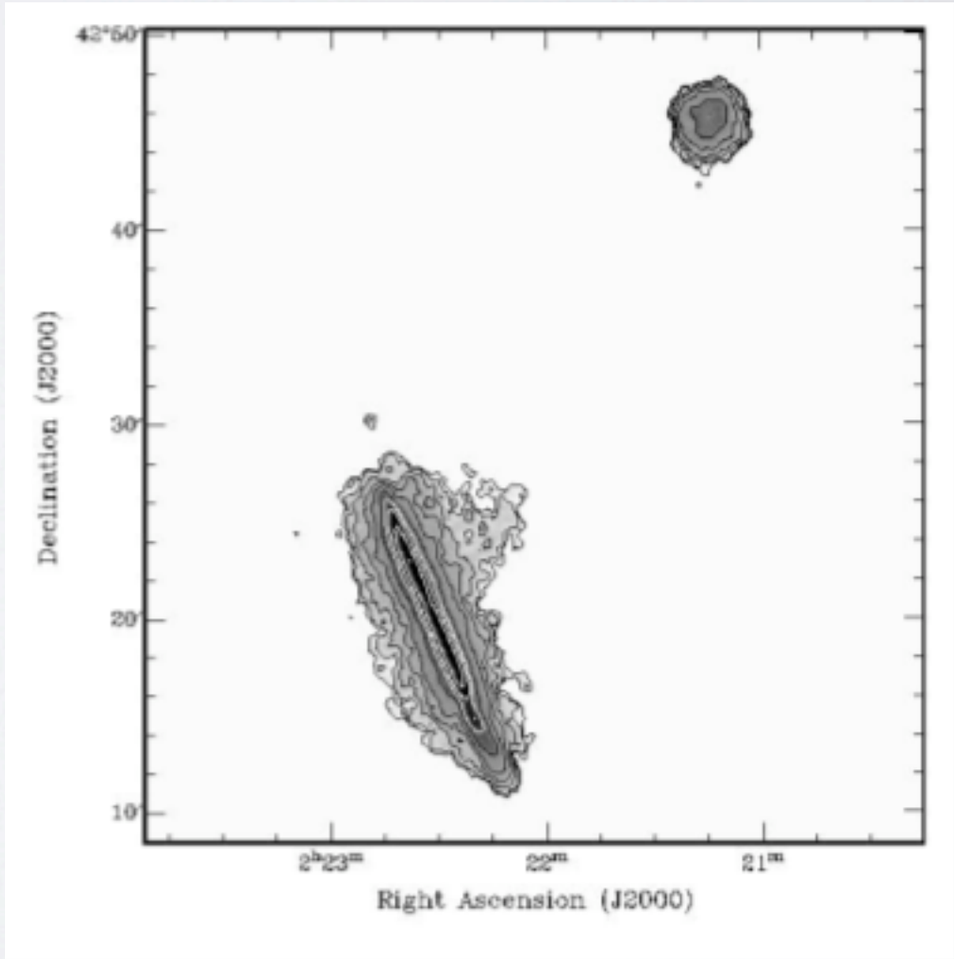
- 4 nights Nov 2008
- 0.4” to 0.8” seeing!

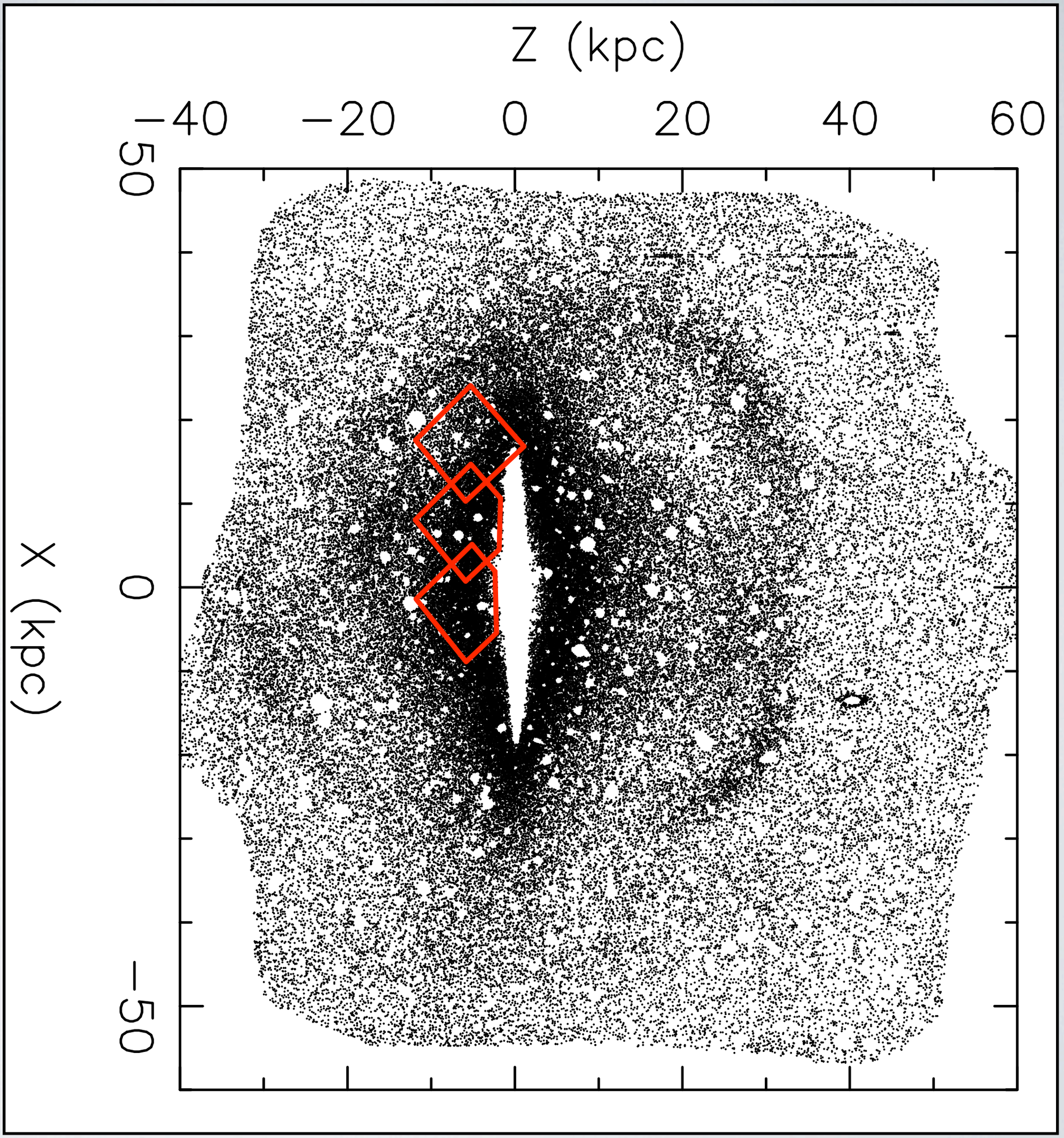


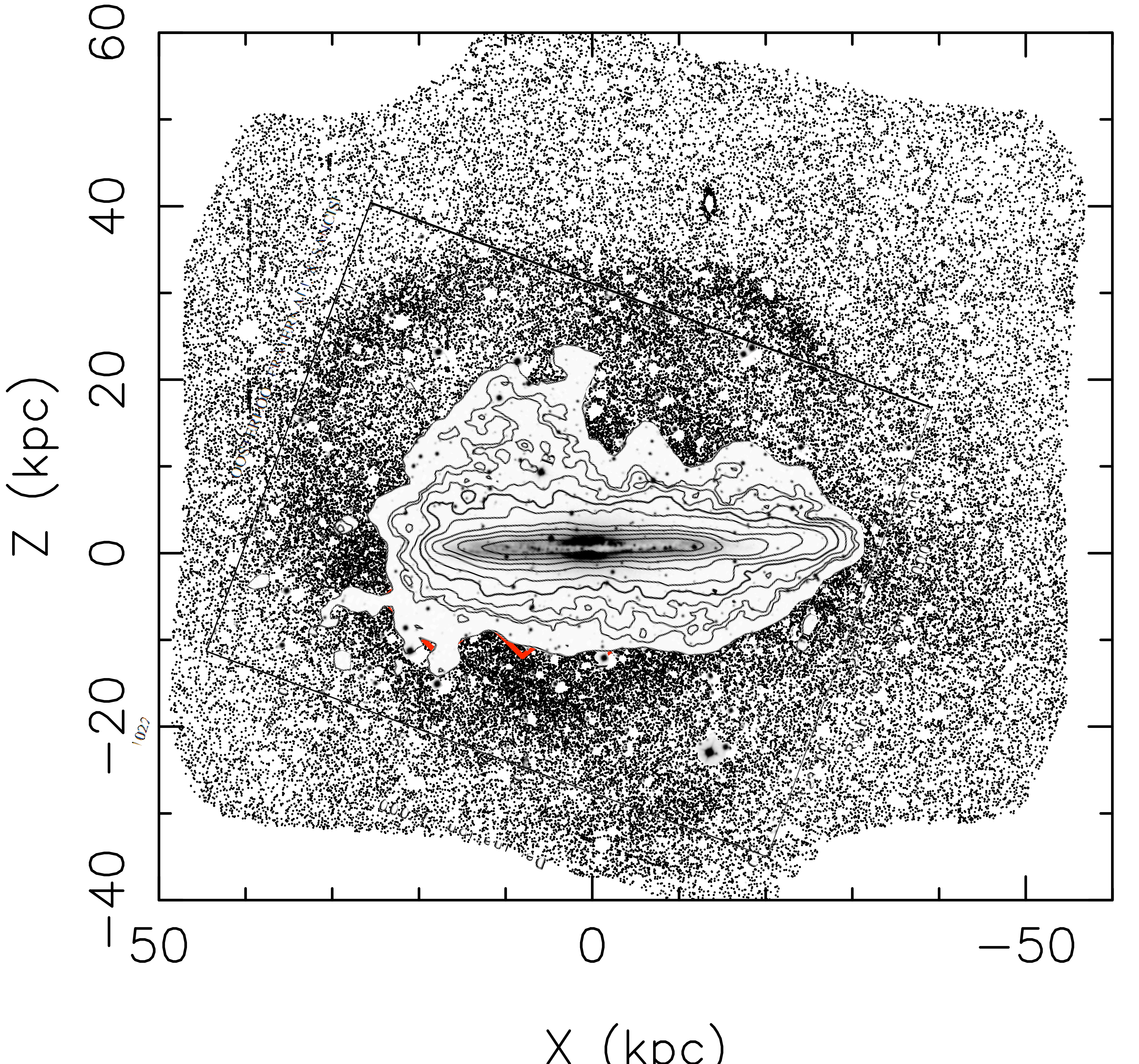
BEYOND M31...



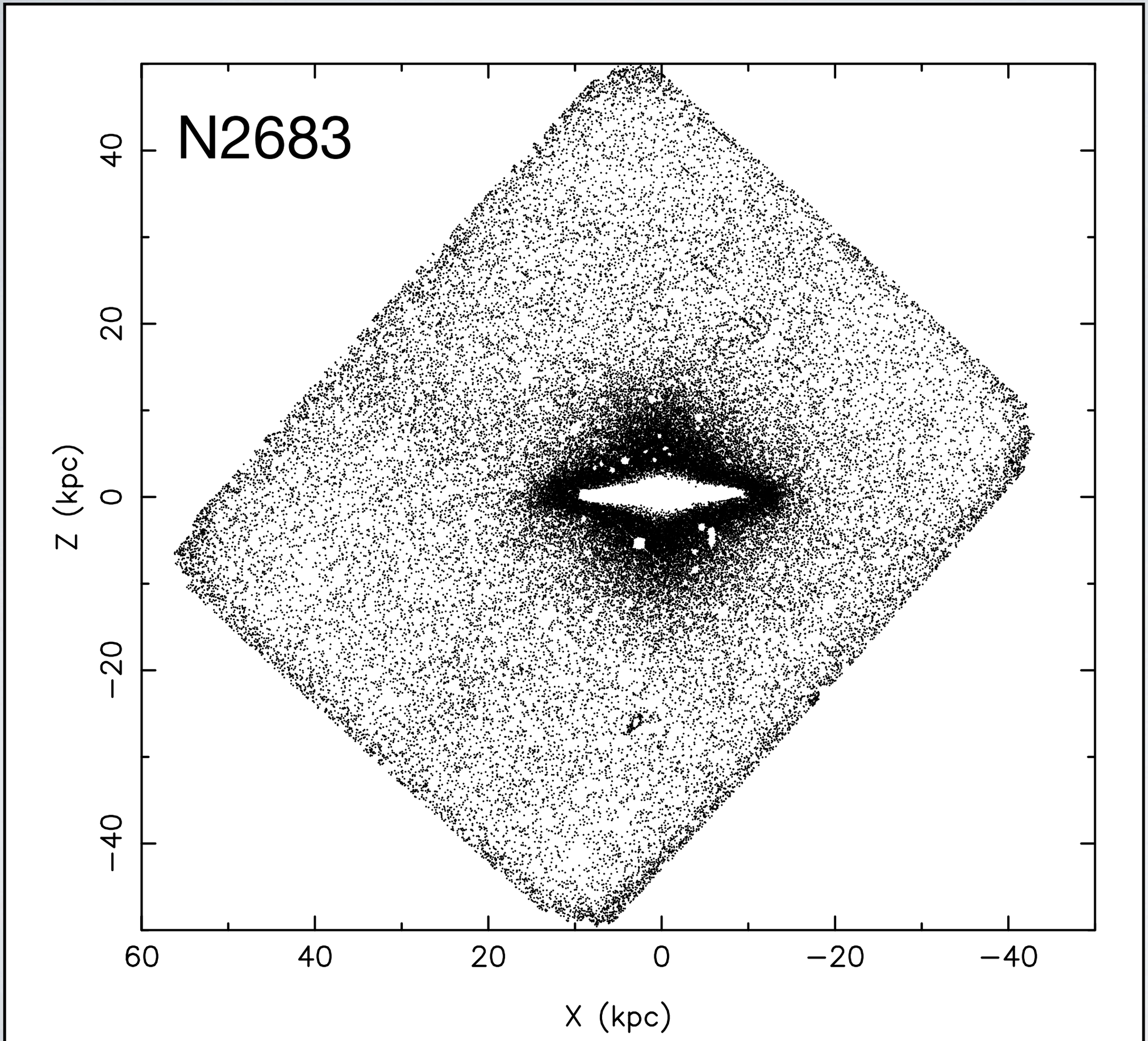
NGC 891




Z (kpc)
−40
−20
0
20
40
60
50
0
−50
X (kpc)



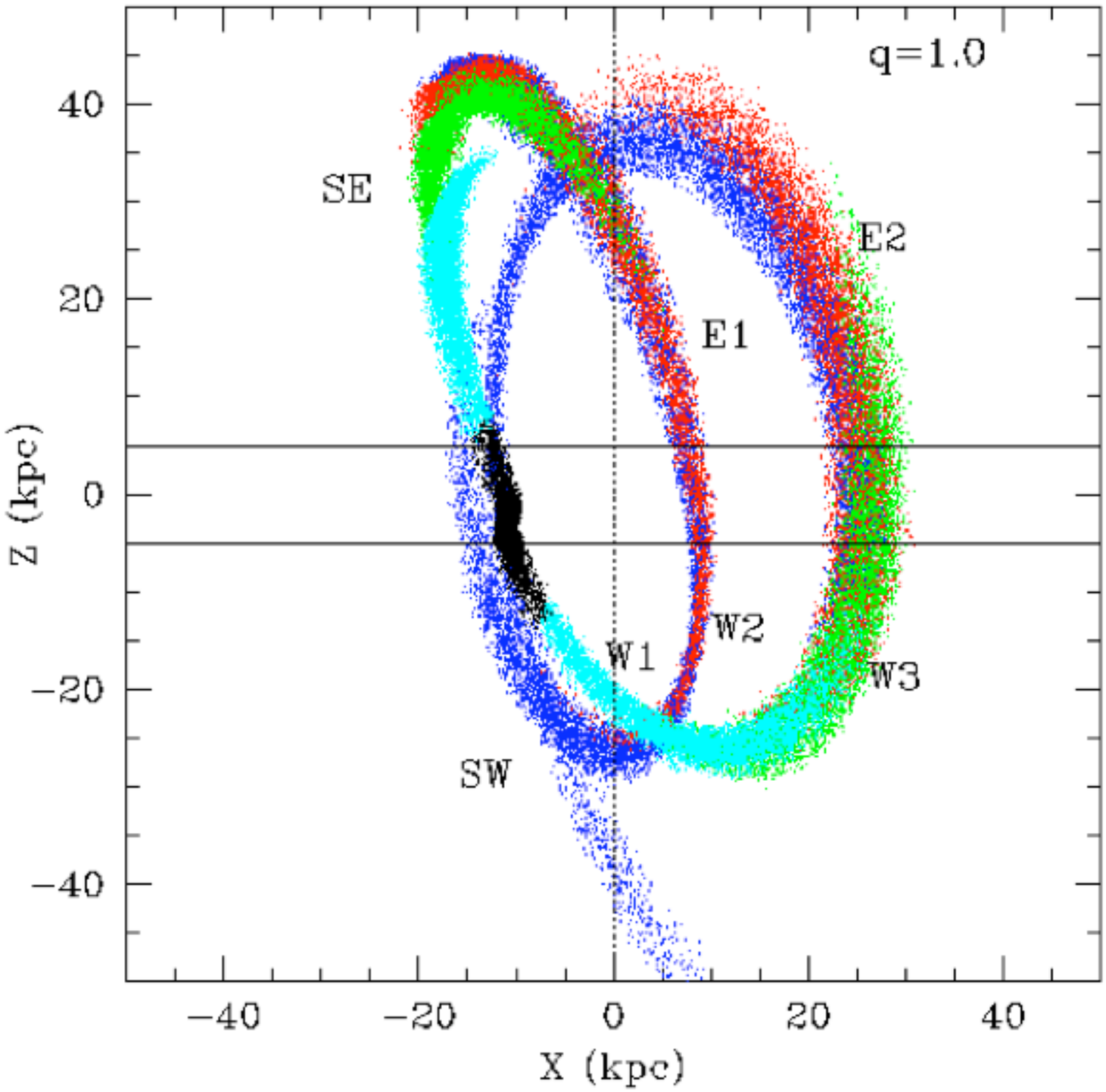
Z (kpc)
60
40
20
0
−20
−40
50
0
−50
X (kpc)



Current sample:

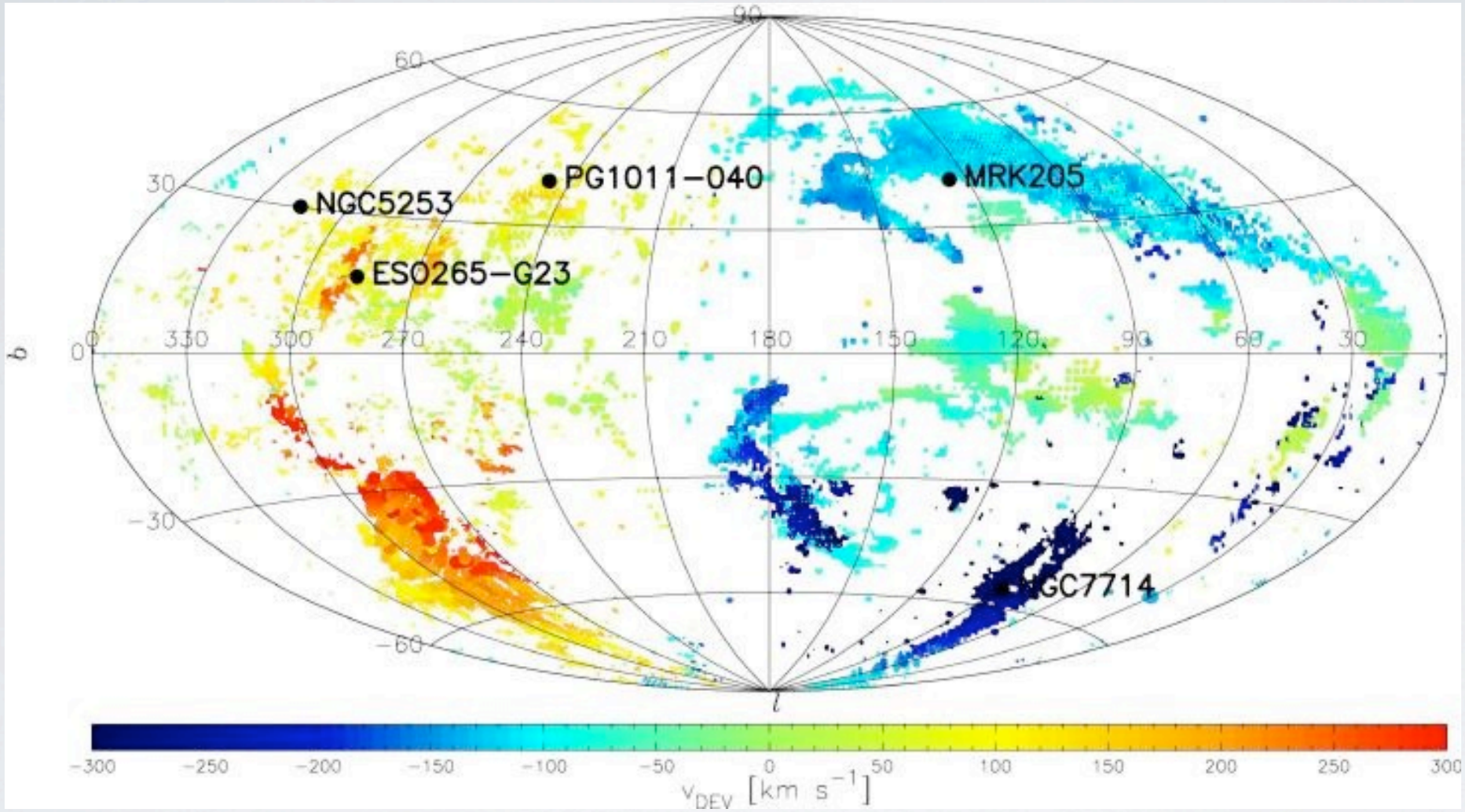
M31
M33
N253
N300
N55
M81
N5128
N4945
N2683
N891

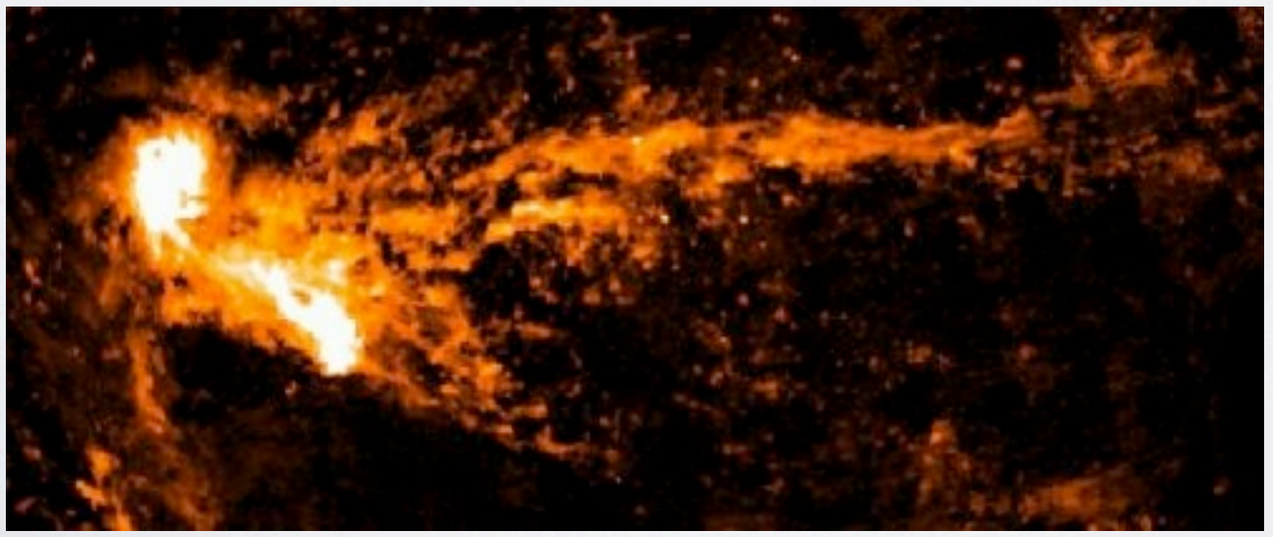
NGC 5907



Martinez-Delgado, Peñarrubia et al. 2008

GALACTIC HI SUBSTRUCTURES





SMALLEST SATELLITES

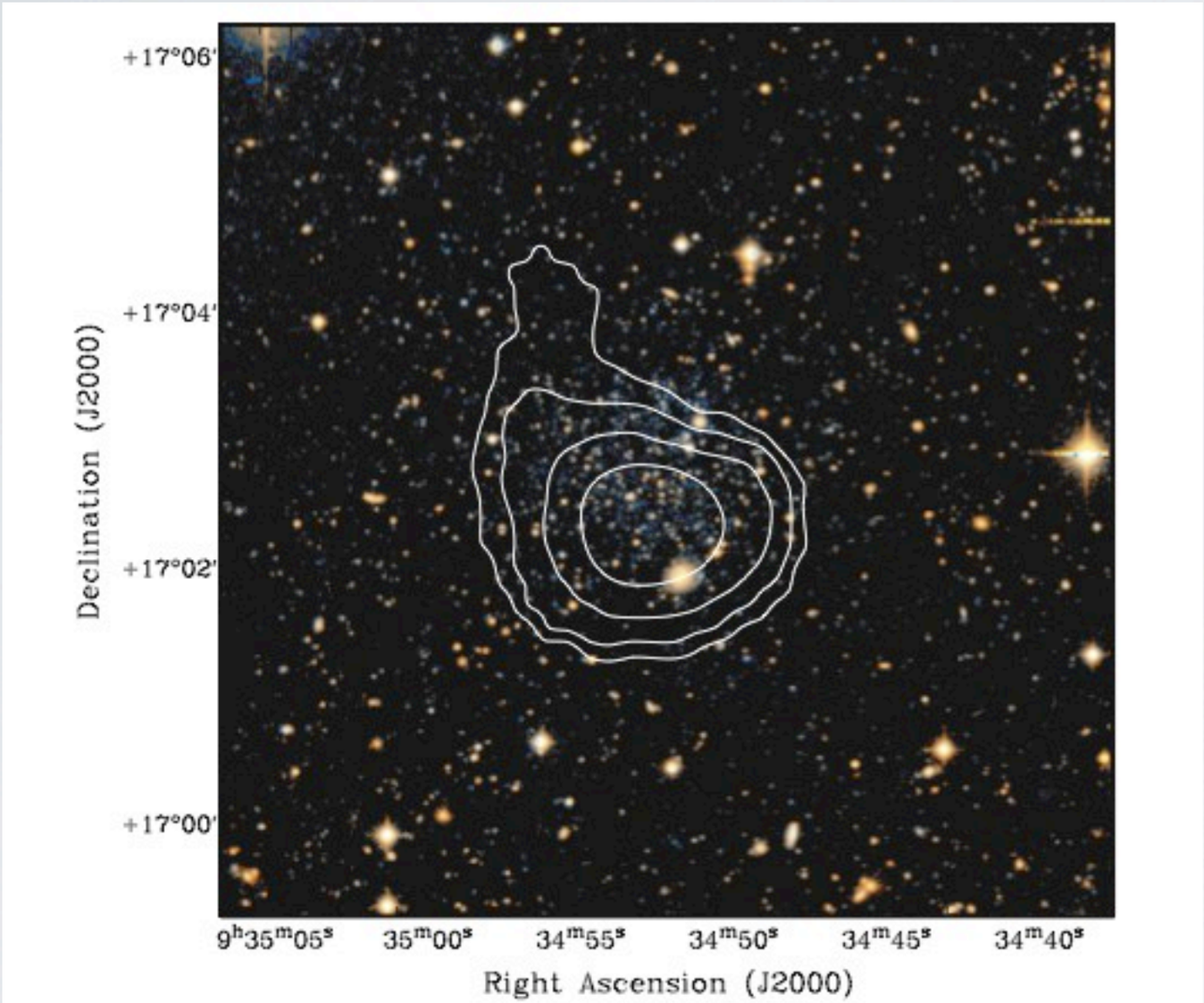


Figure 1. Colour image of Leo T from the Isaac Newton Telescope Wide Field Camera *g*- and *r*-band data with GMRT H I contours overlaid. The column density contours at 2, 5, 10 and 20×10^{19} cm^{-2}, and the beam size is 39×47 arcsec^2.

Leo T & sisters...?

Irwin et al. (2007)
Ryan-Weber et al. (2008)

420kpc
3×10^5 $M_\odot$ HI gas

SOME (OBVIOUS!) PROJECTS...
WITH SKA PRECURSORS

- Survey of gaseous accretions onto disks (preparatory optical studies?)
- Survey of minor interactions (a la M31 vs. M33; NGC 891)
- Use gas-rich satellites as statistical dark matter tracers?
- Correlations between direction of accreting gas and L_z of disk
- Put Sancisi's Rule on firm statistical footing
- Detection of smallest gas-rich galaxies in Local Group (in conjunction with Skymapper/LSST). Tie-in to cosmic web?
- Detection of older gaseous streams orbiting Milky Way (Sagittarius? Fornax? ...currently may not be looking in the right place...)