



Reionization Foregrounds

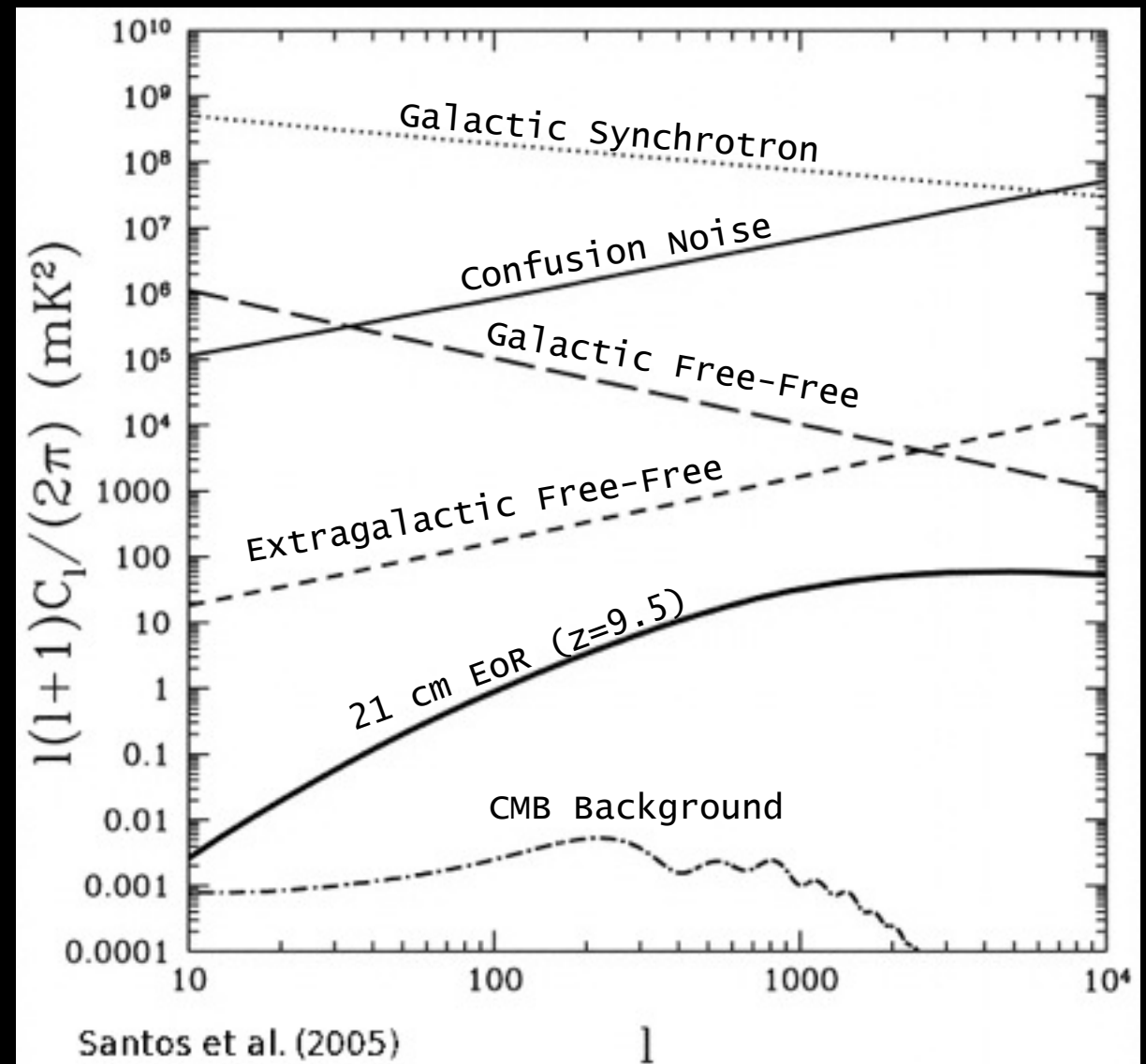
Danny Jacobs

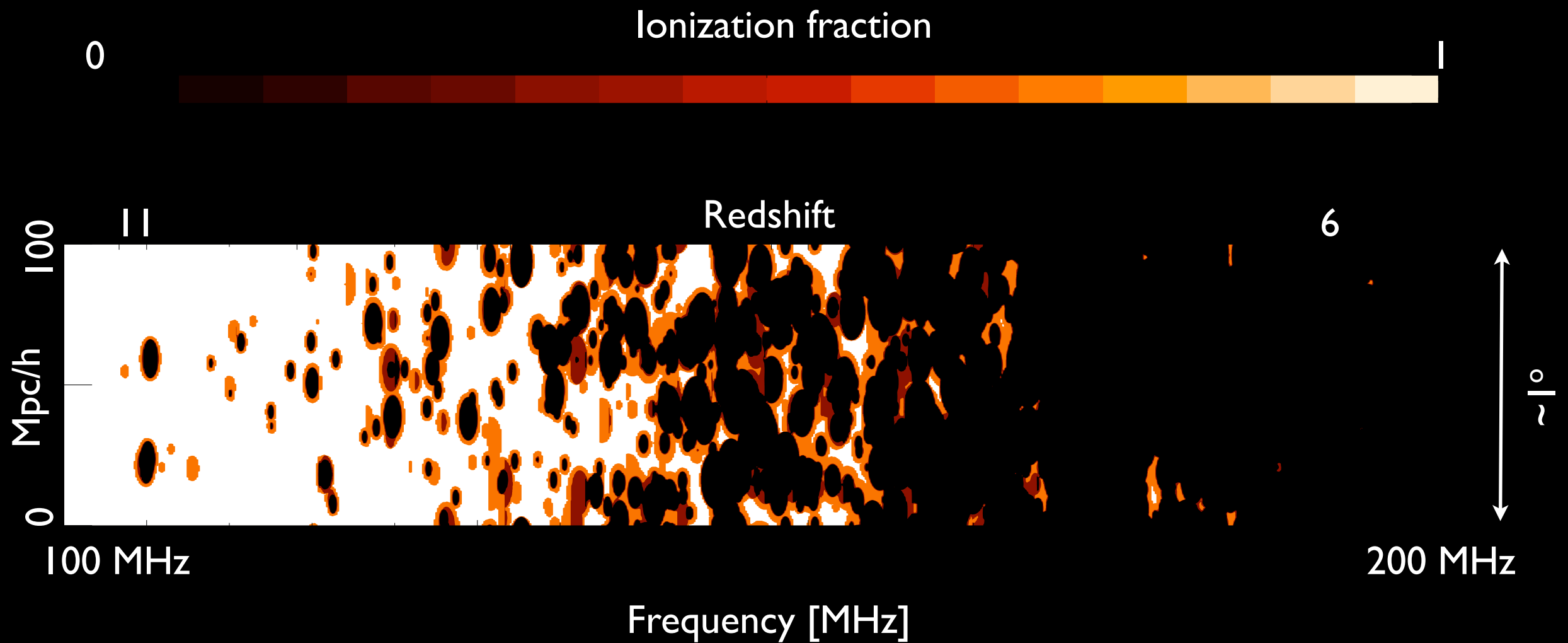


- EoR Requirements
- Historical Observations
- Recent Cataloging
- PAPER/MWA results

EoR Challenges

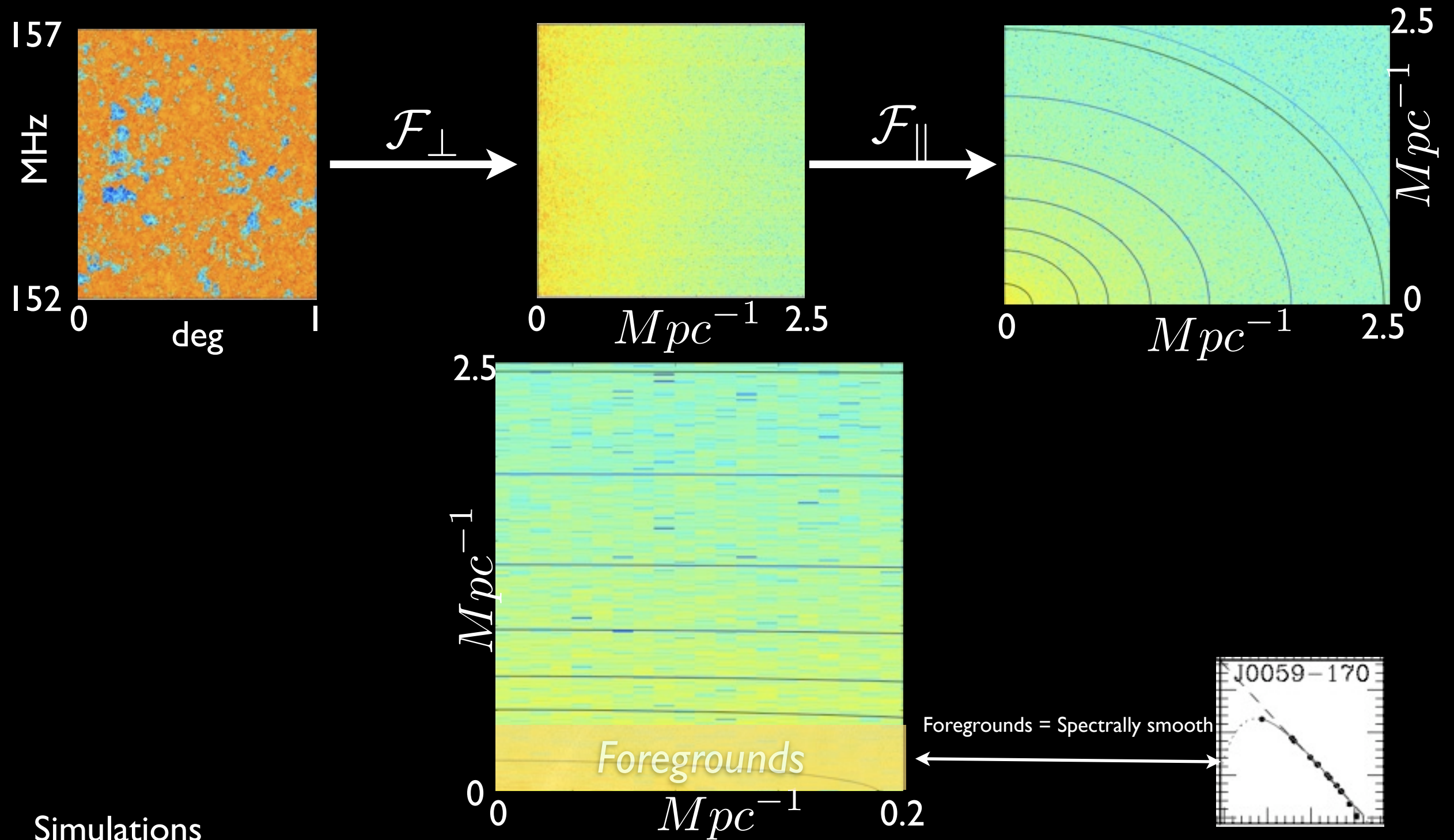
- Foregrounds
 - Galaxy
 - Point sources
- stability/calibration
- ionosphere
- instrumental





Thomas et al 2009

Ideal tomographic imaging

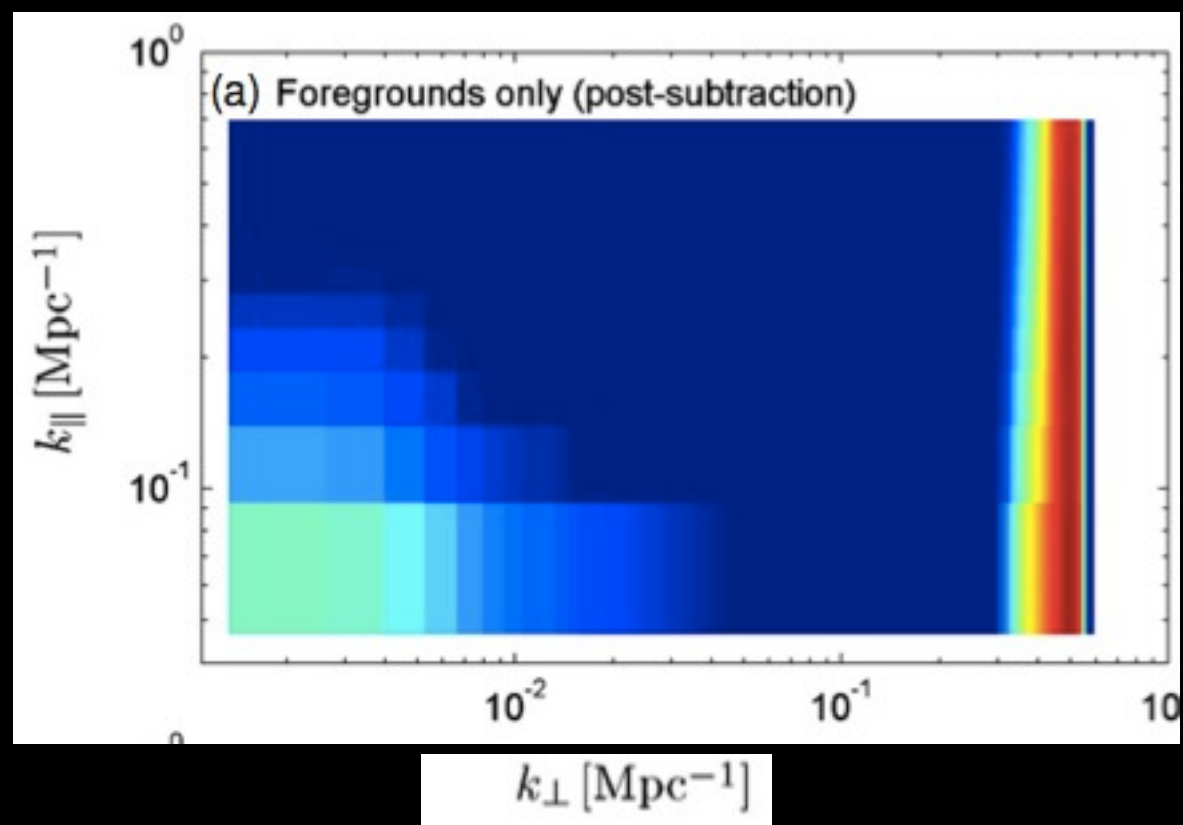
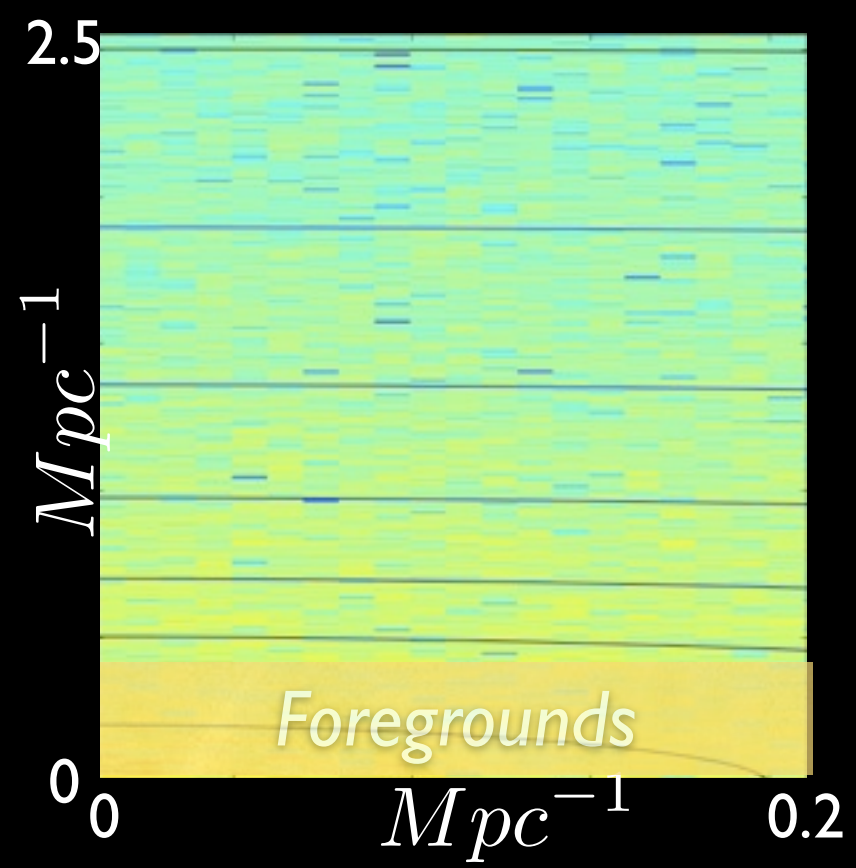


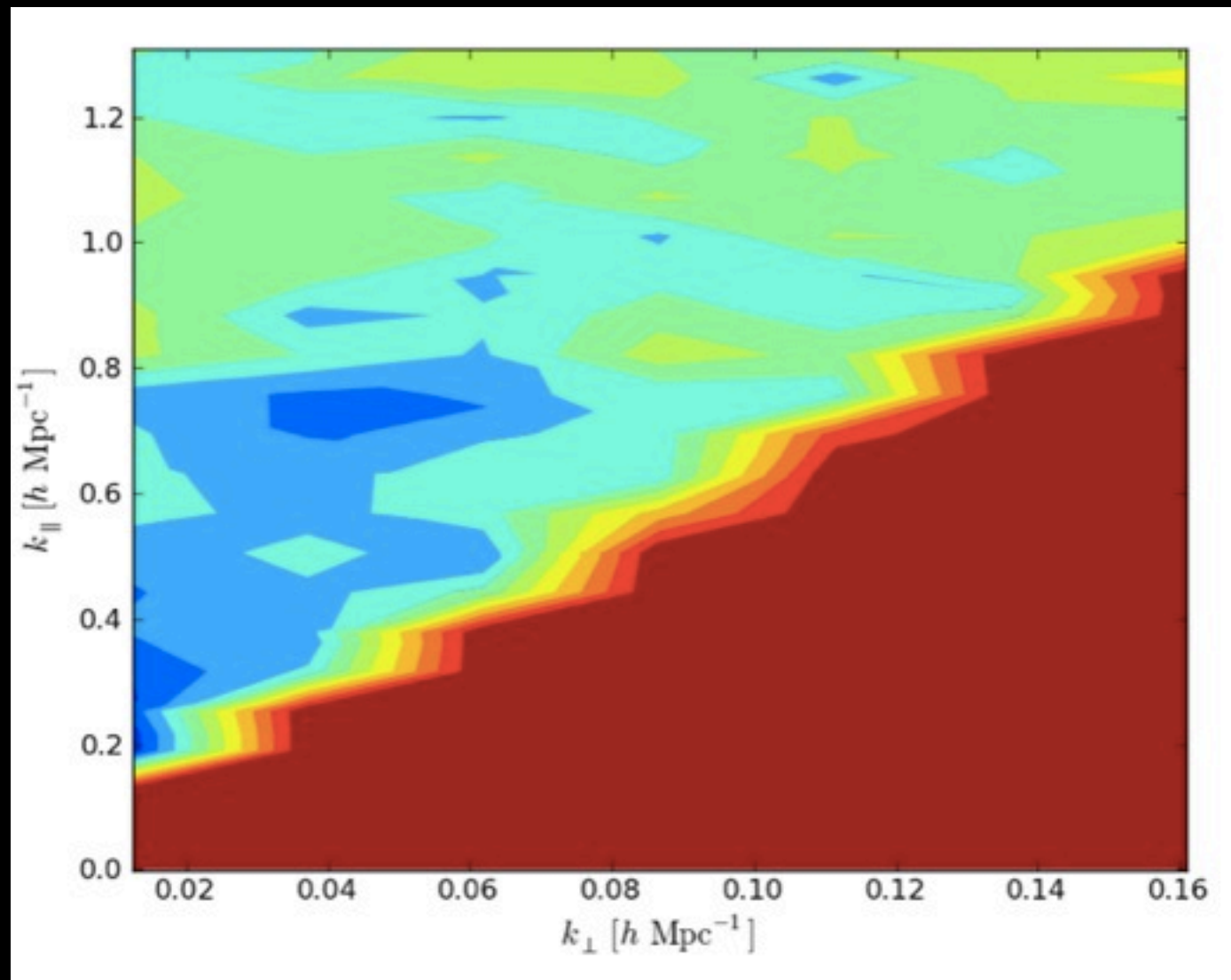
Simulations

- Santos 2005
- Zahn 2007
- Trac and Cen 2008
- Zahn 2010
- Santos 2008,2010
- Mesinger 2010

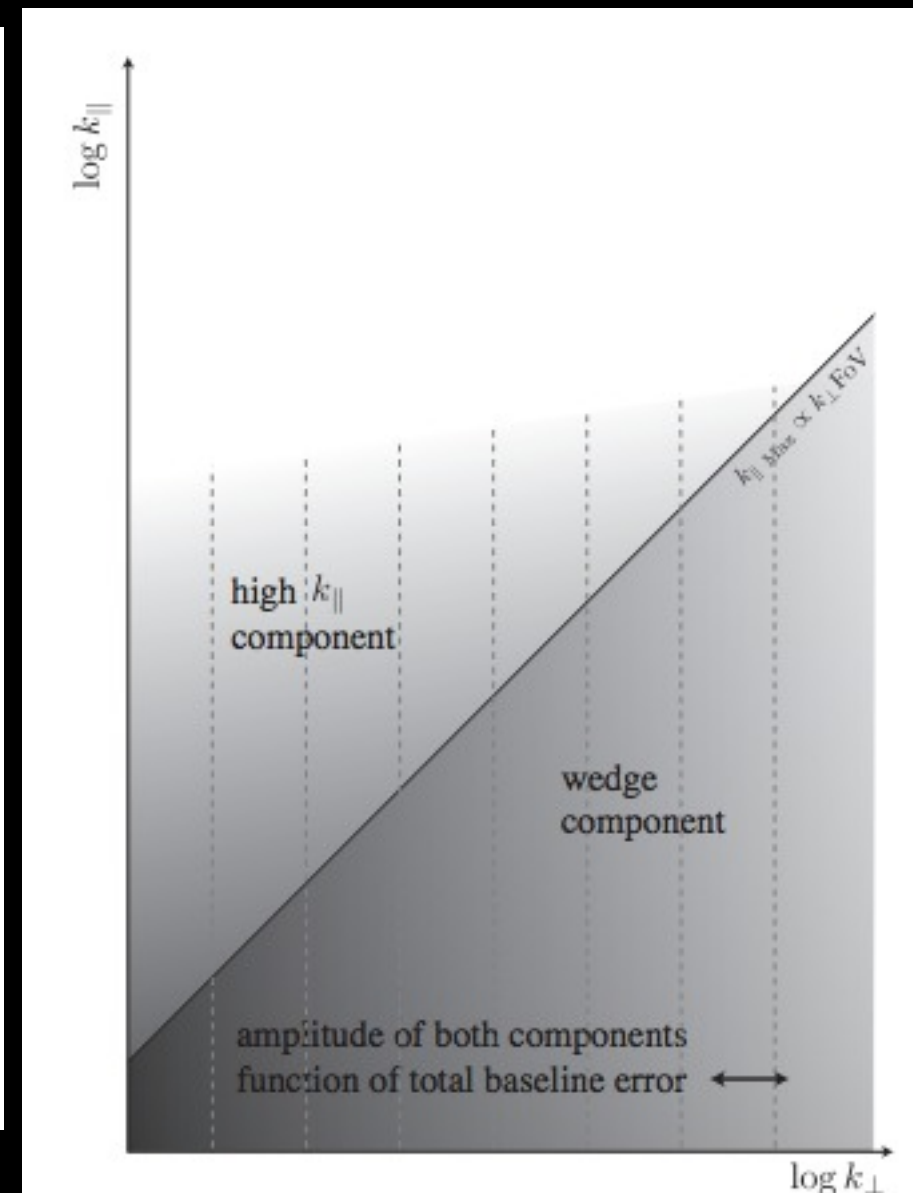
Table 1: Fiducial size scale ($z=8$)

	<i>perpendicular</i>	Mpc^{-1}
size	200λ	0.2
FoV	10°	0.004
	<i>parallel</i>	
depth	4MHz	0.1
resolution	45kHz	4.5





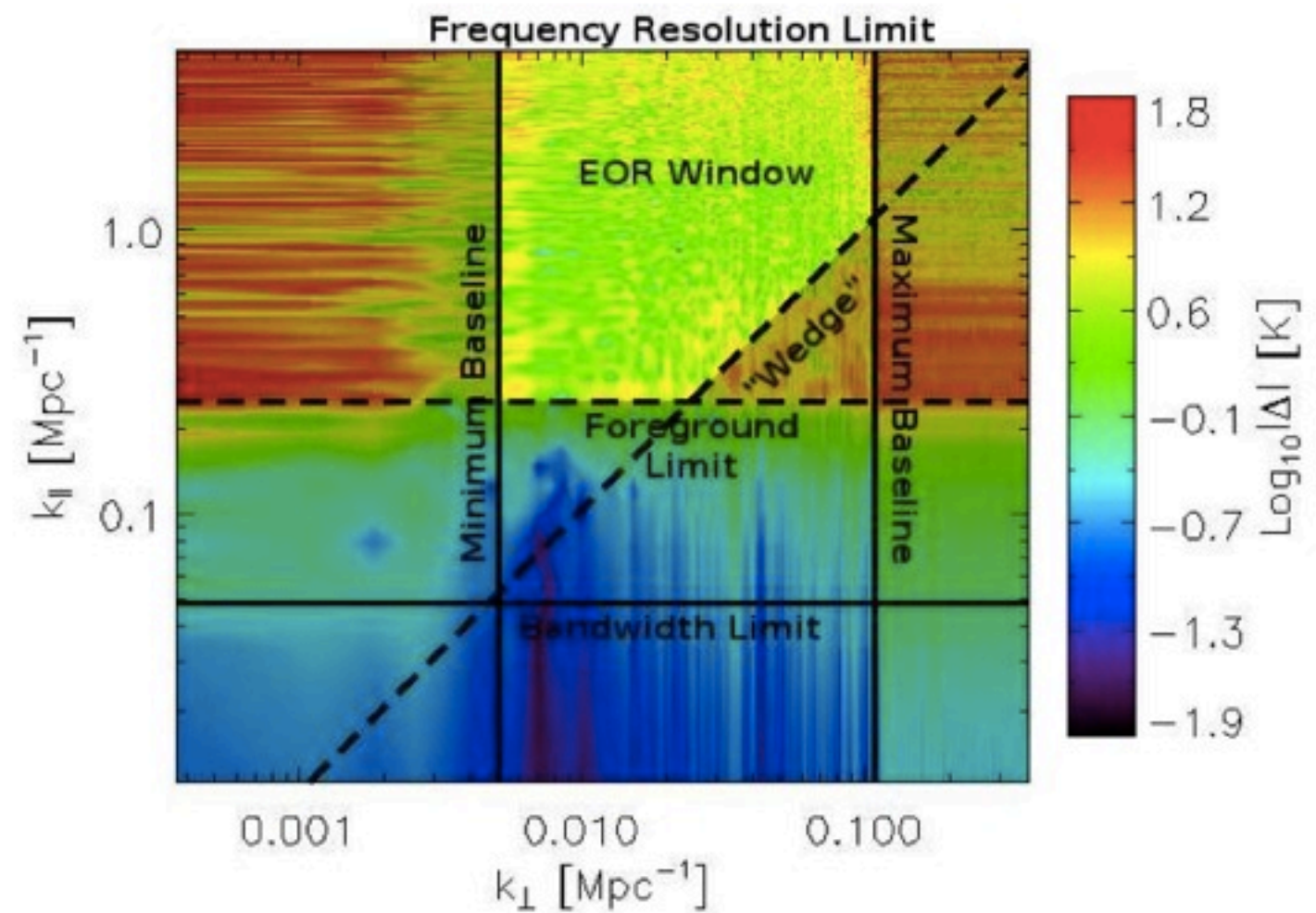
Parsons 2012 (submitted)



Morales 2012 (submitted)



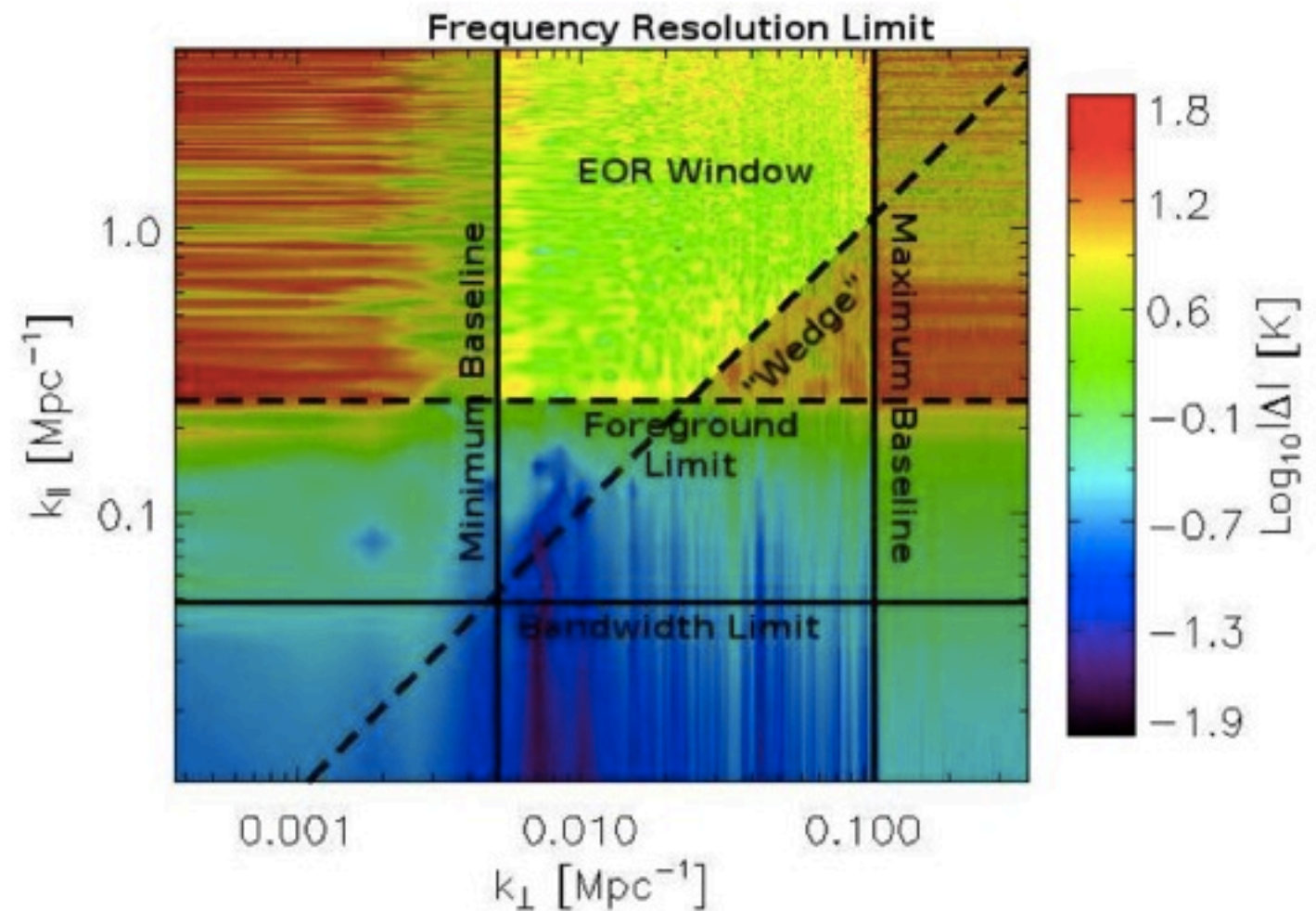
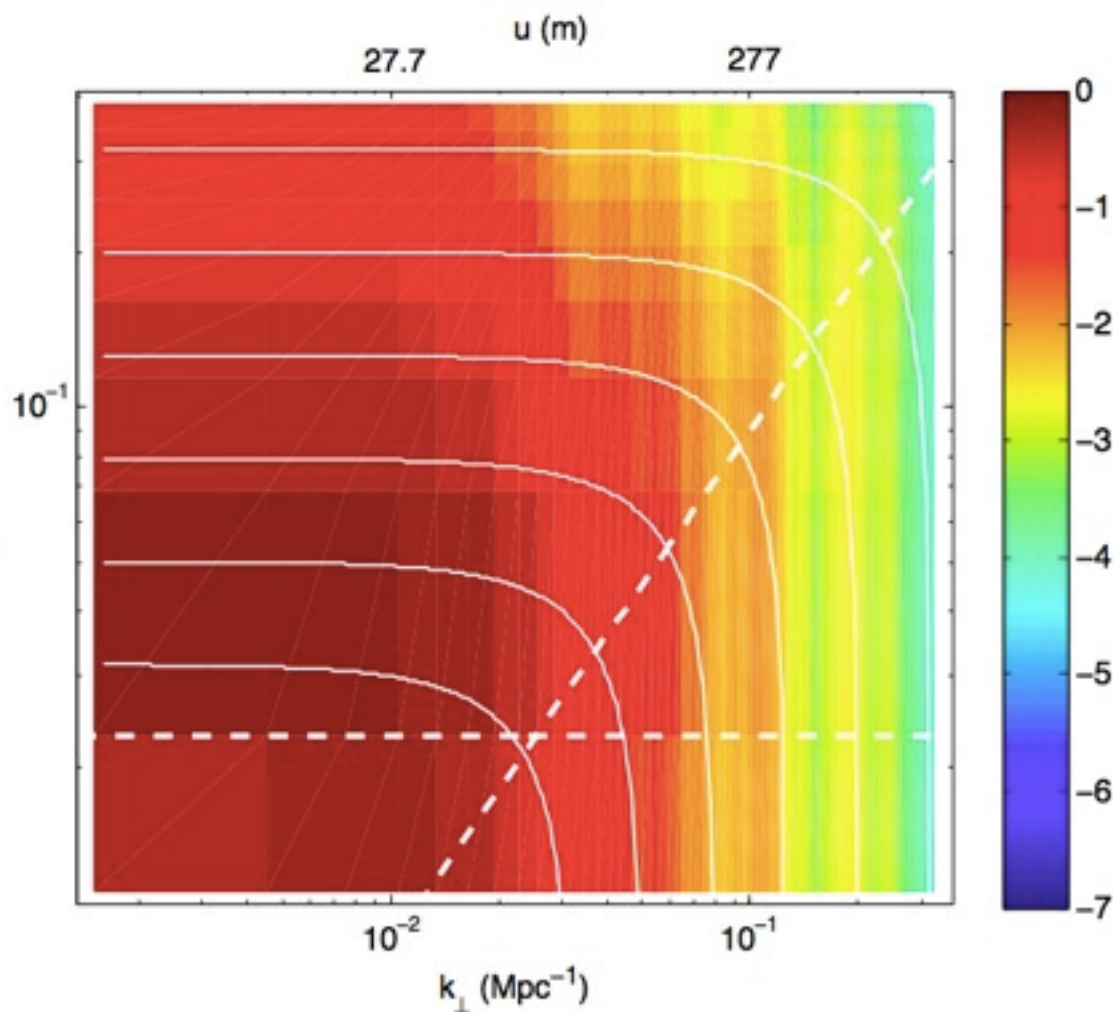
The EoR Window



Williams thesis 2012

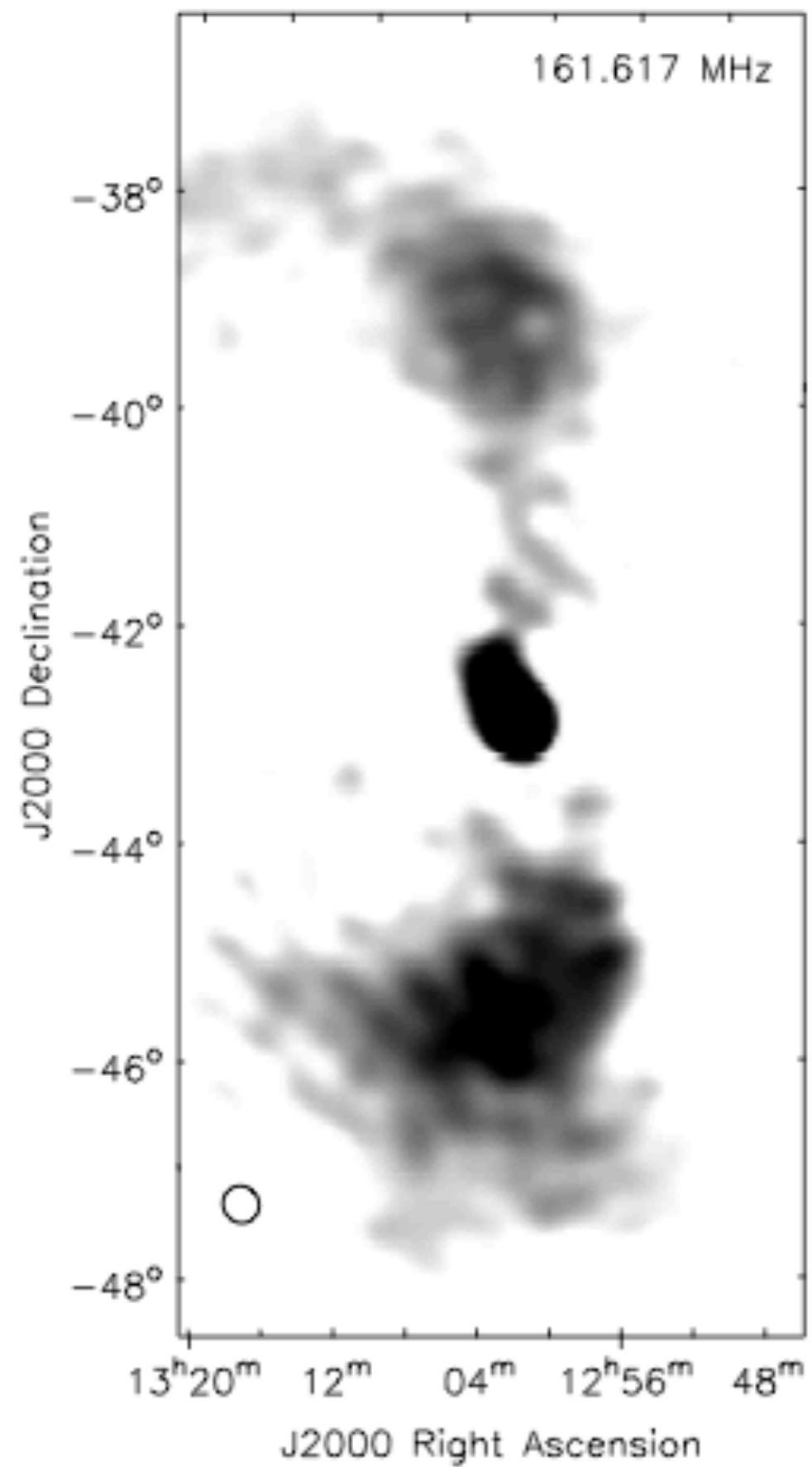
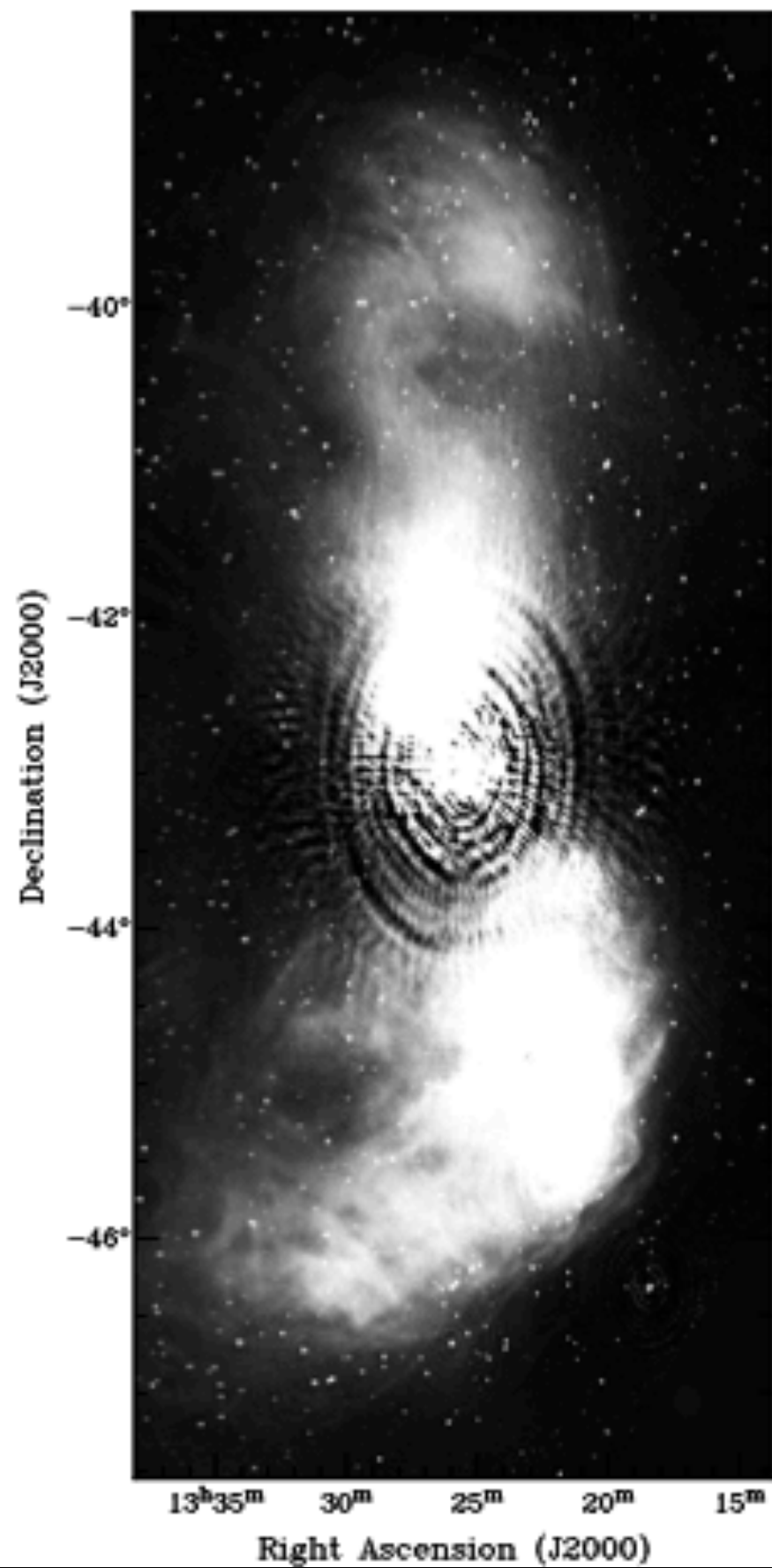


The EoR Window



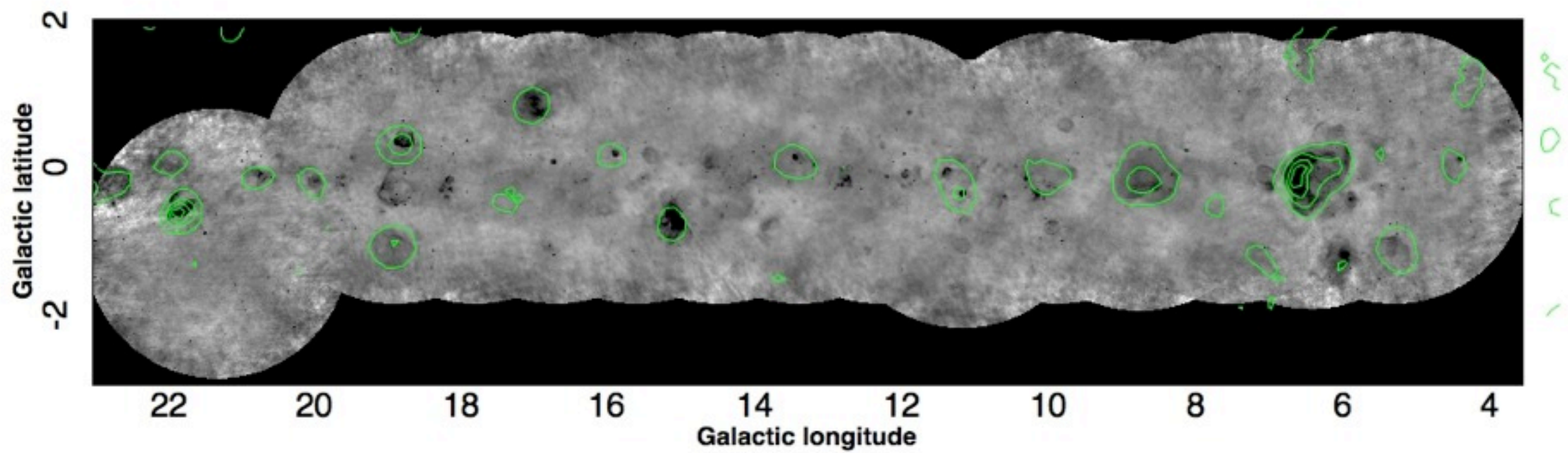
Beardsley, 2012 (submitted)

Williams thesis 2012



PAPER Galactic Center

SgrA*

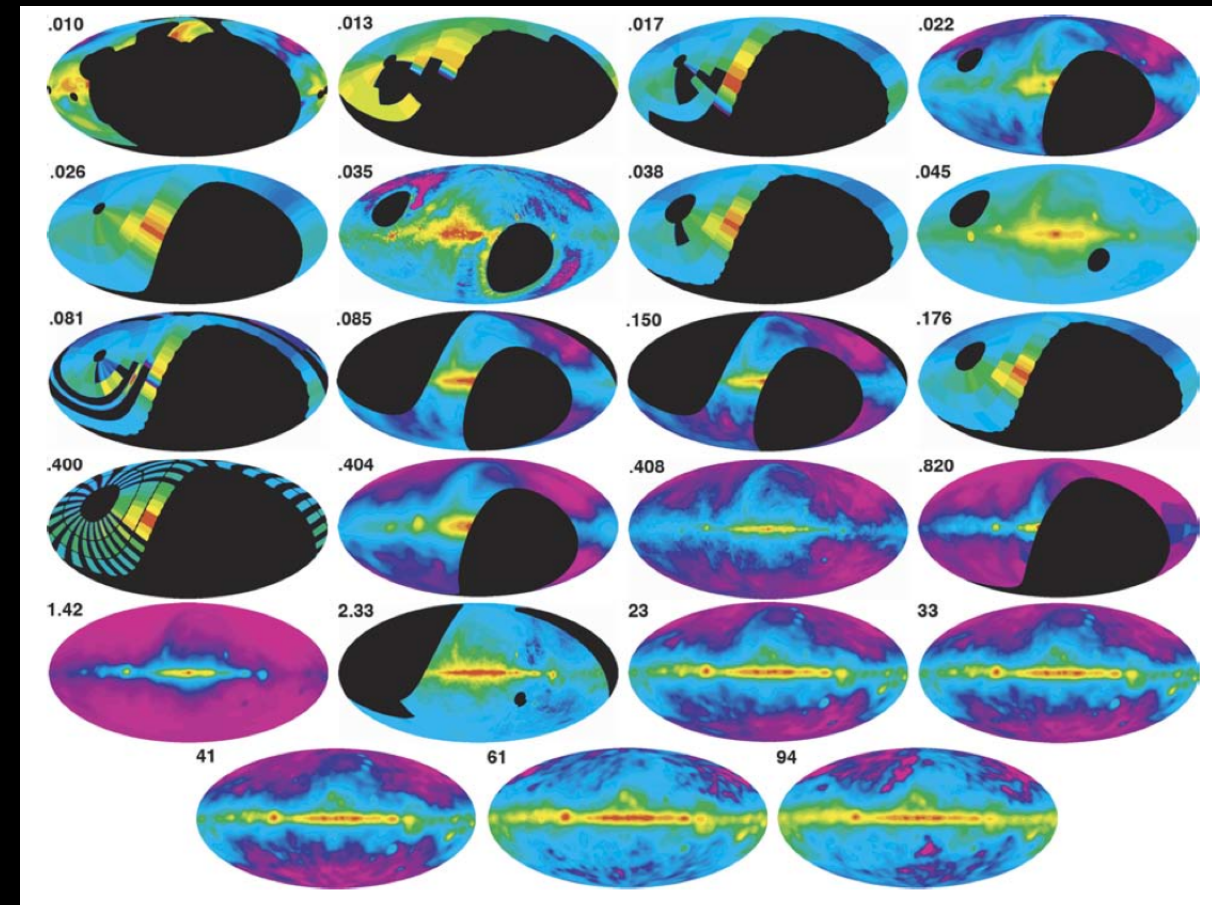
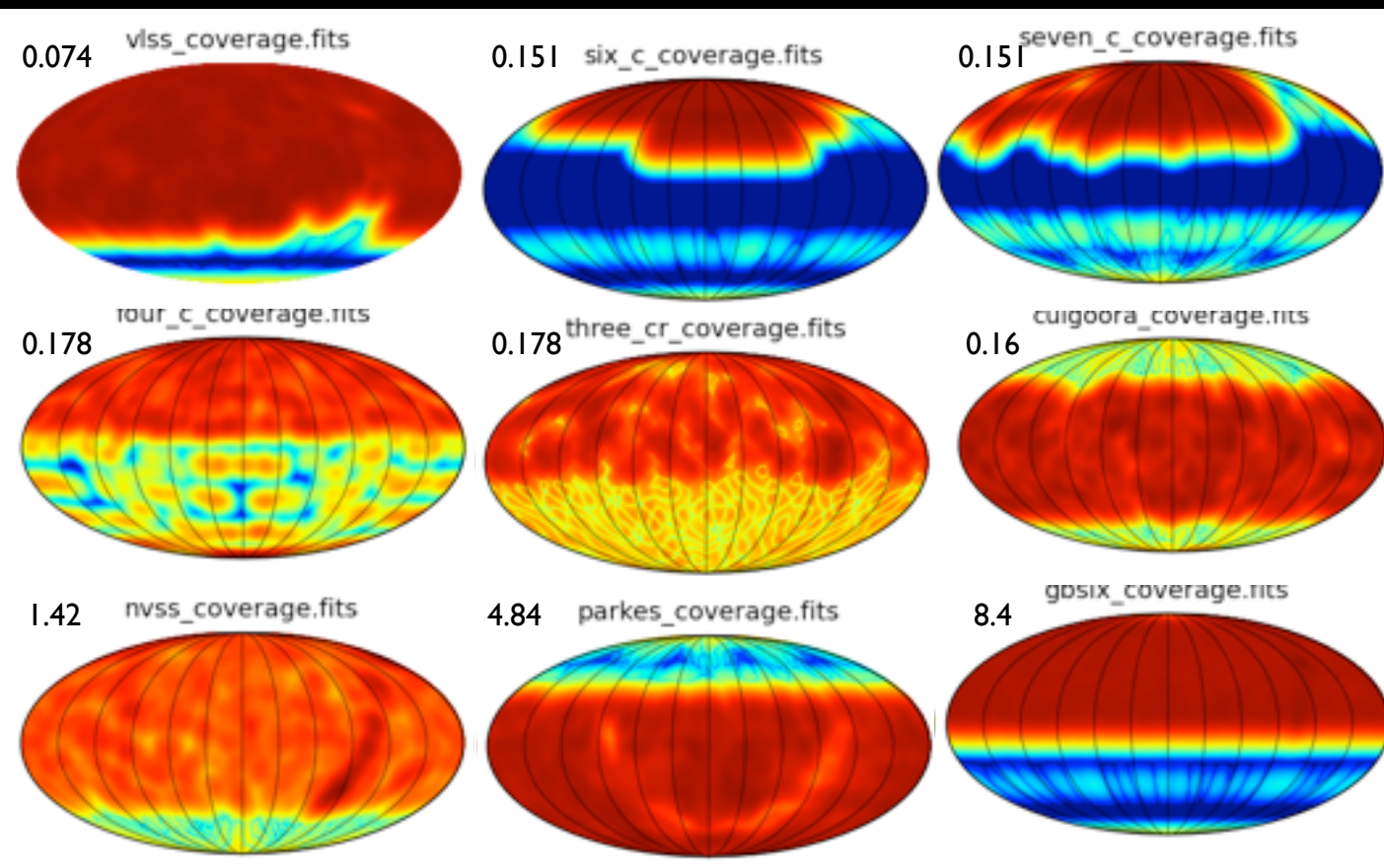


-0.161 -0.154 -0.141 -0.115 -0.0622 0.0419 0.249 0.668 1.49

2m Inventory

Catalogs

large scale



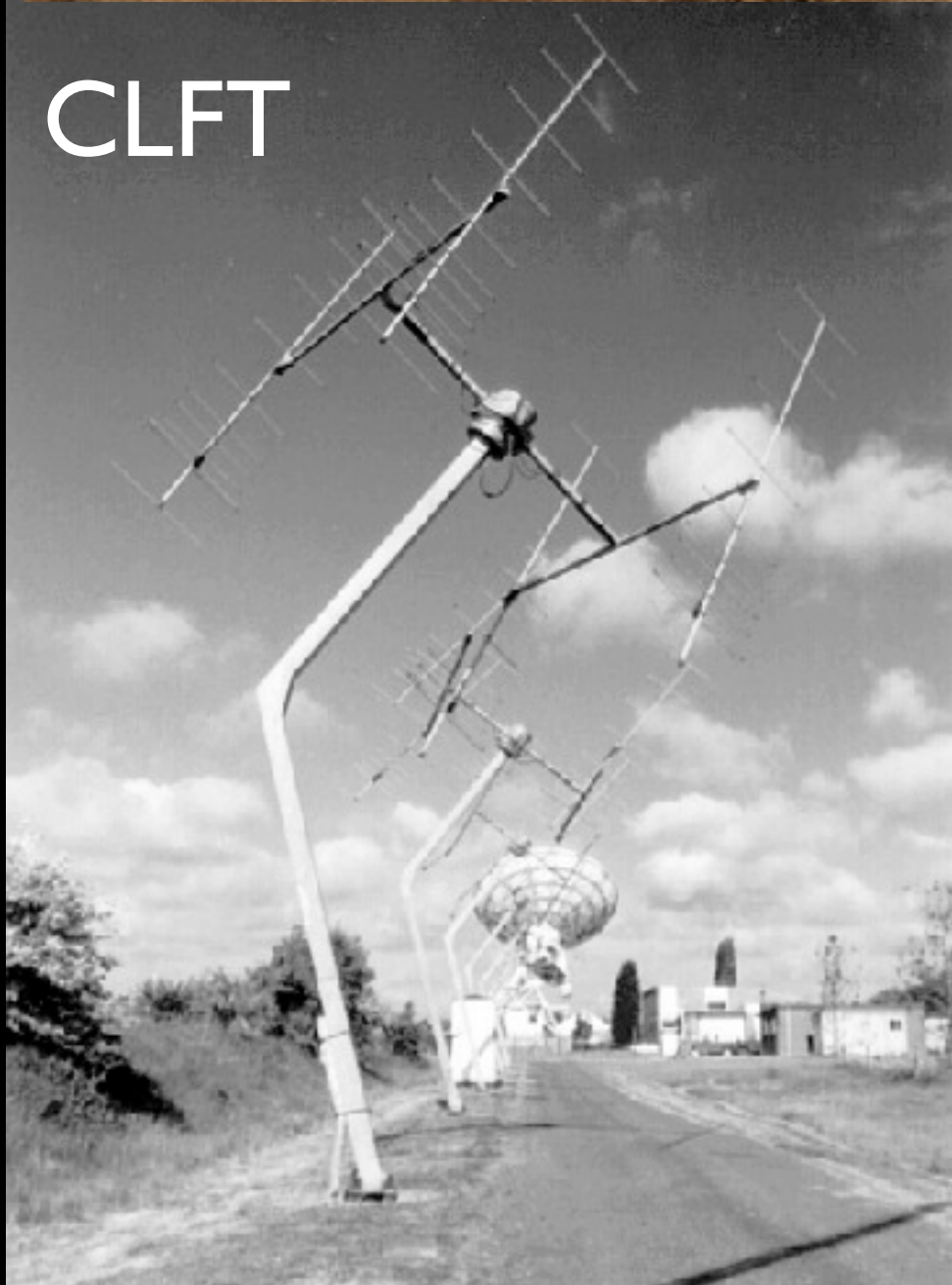
de Oliveira-Costa et-al 2008

VLSS

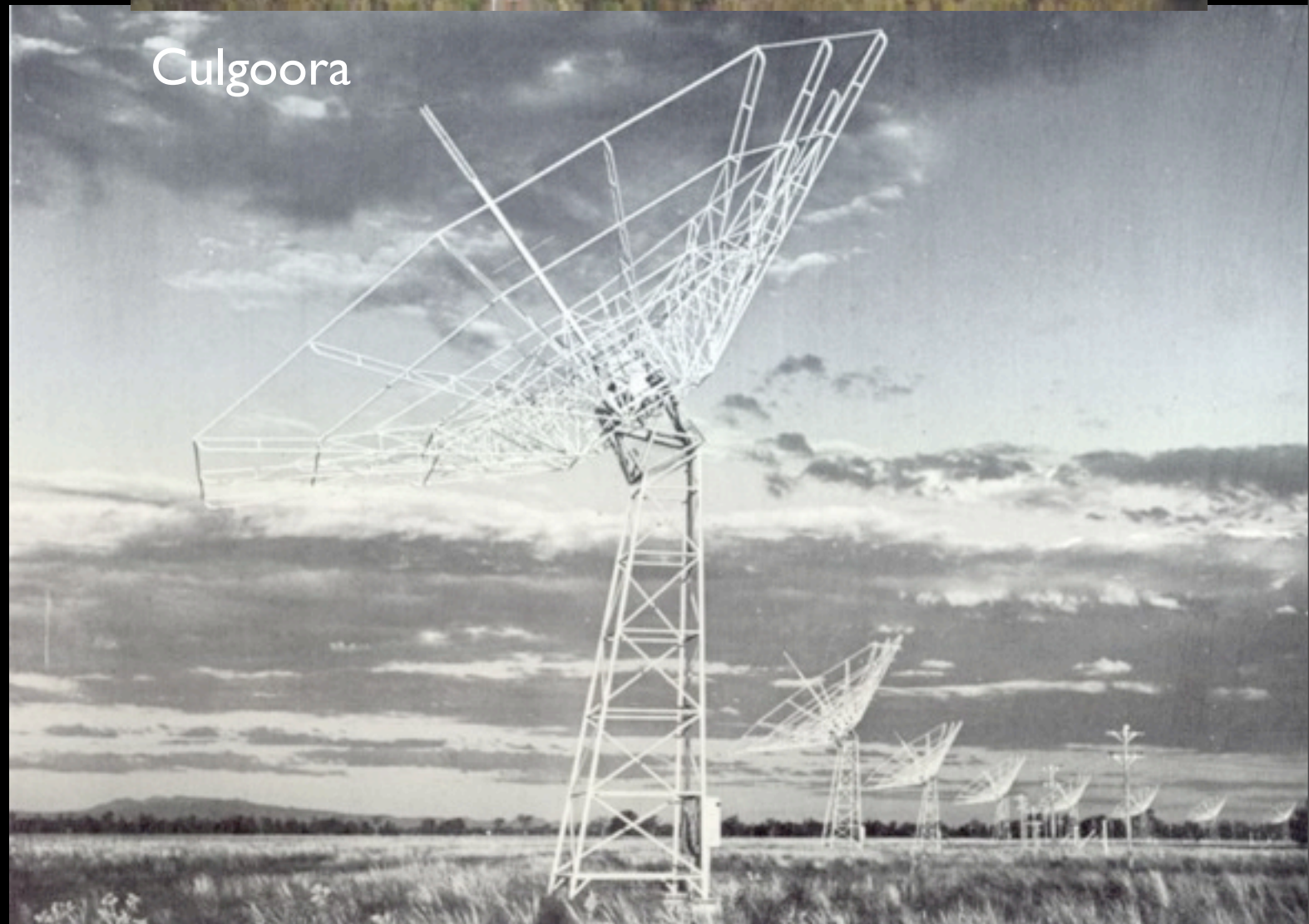


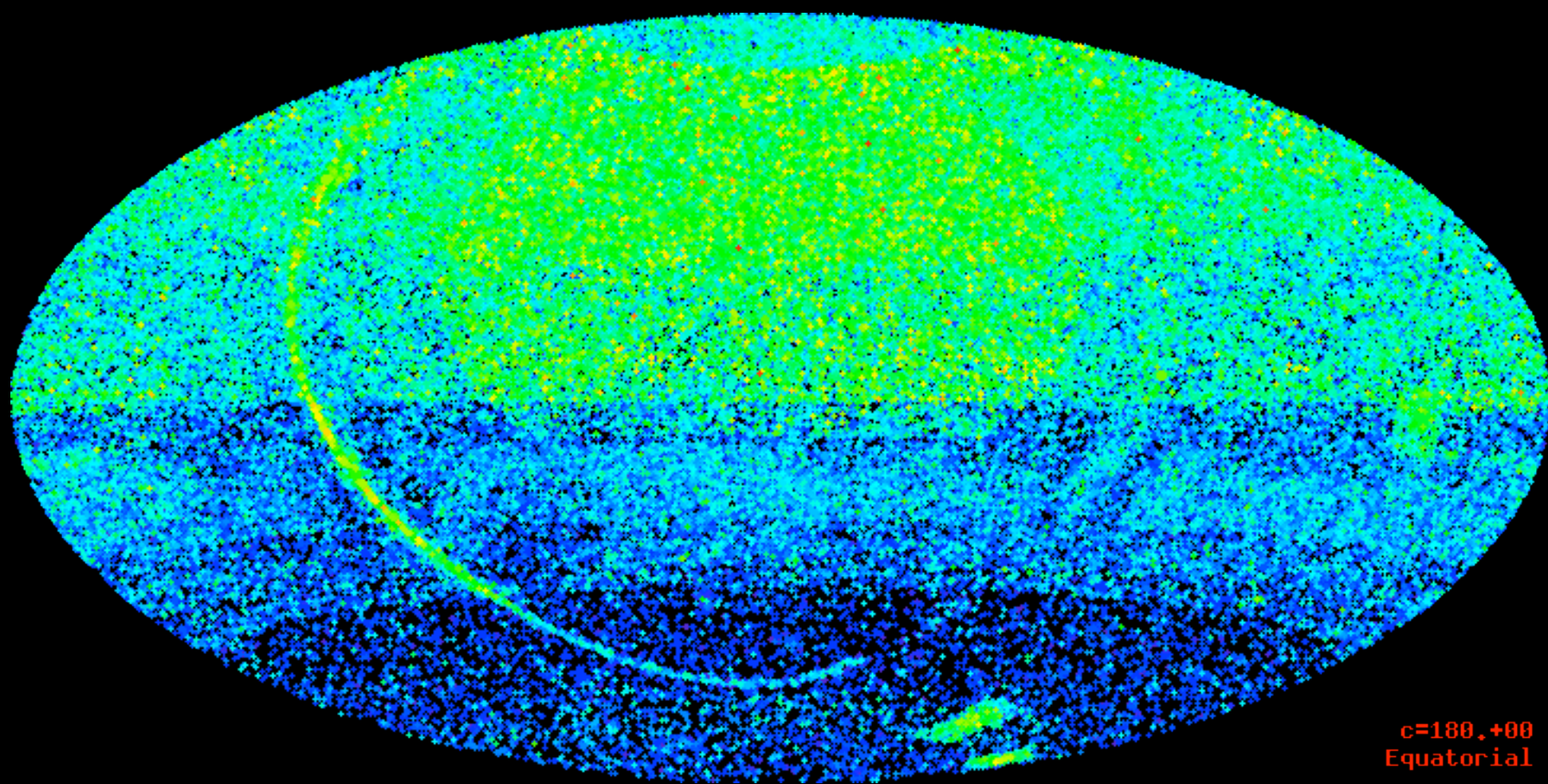
Molonglo

CLFT

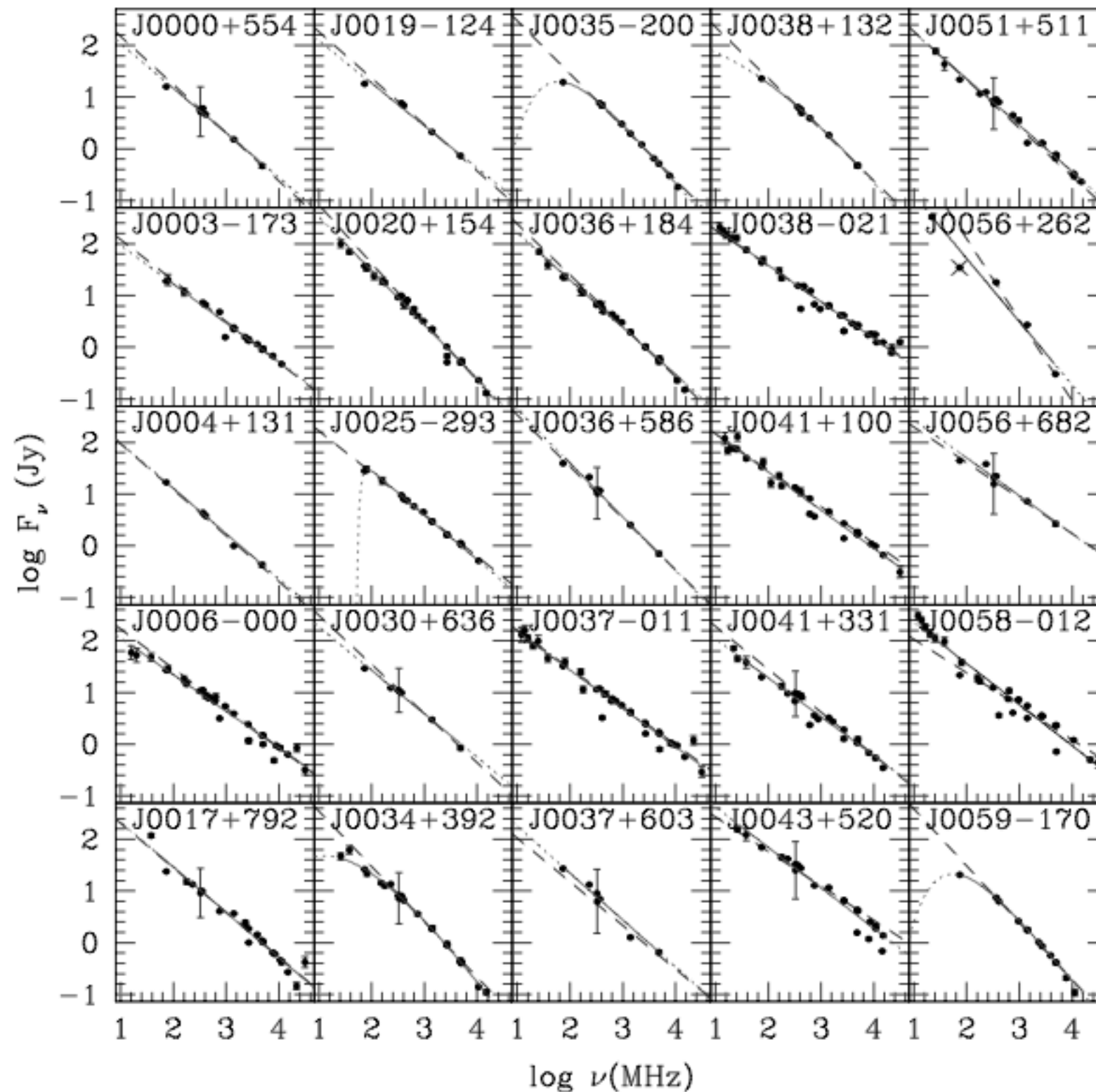


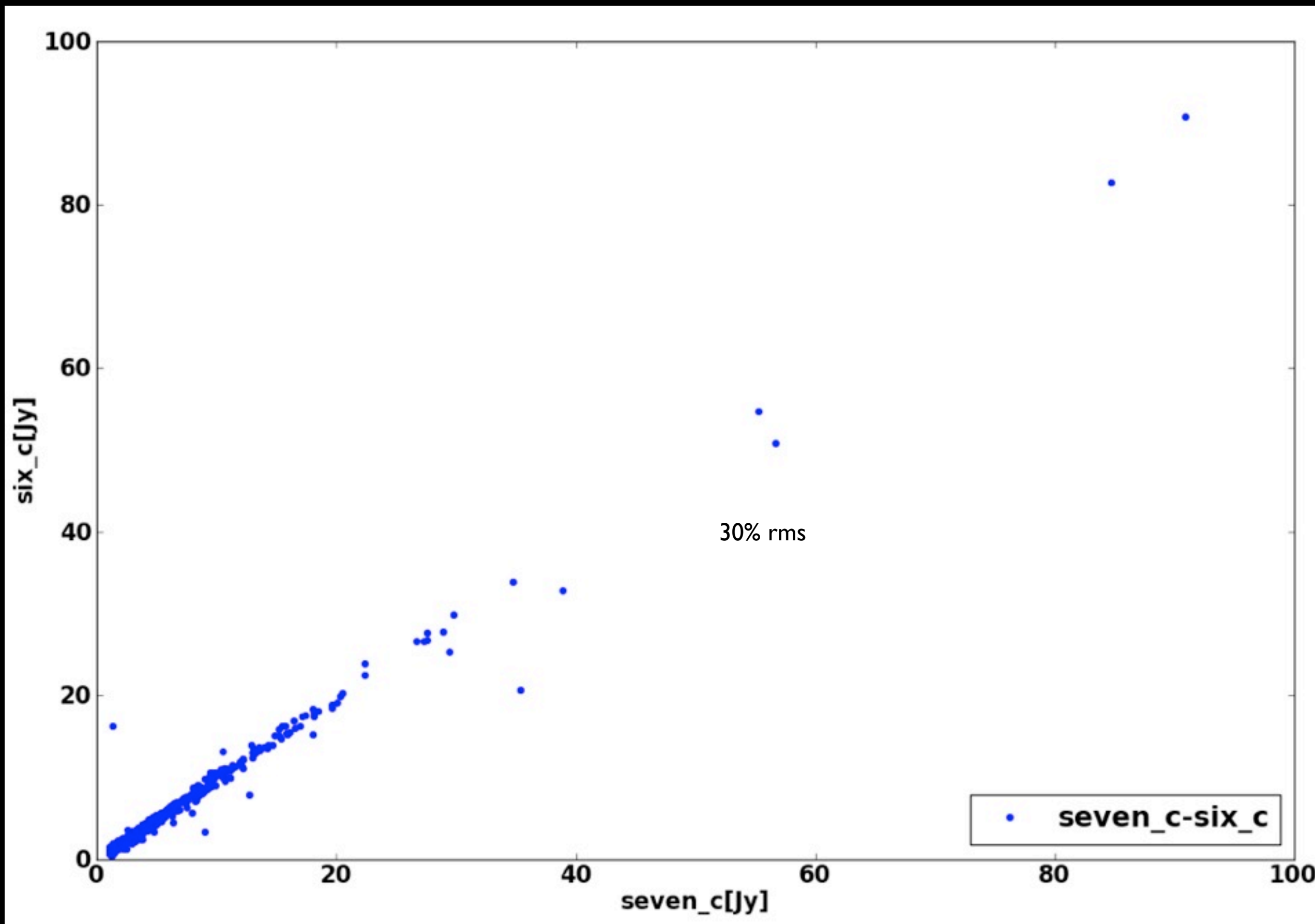
Culgoora



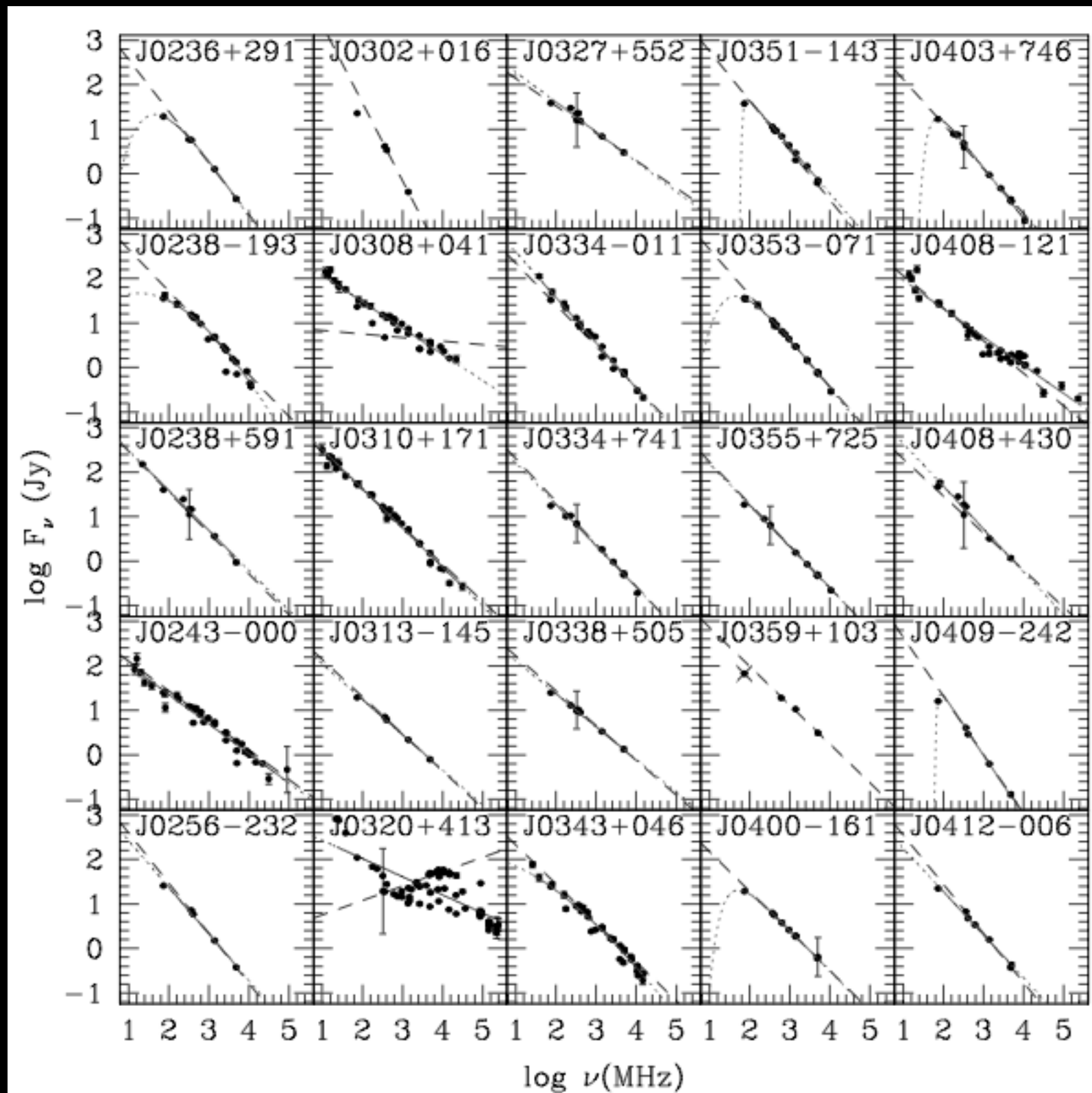


How well do catalogs do?

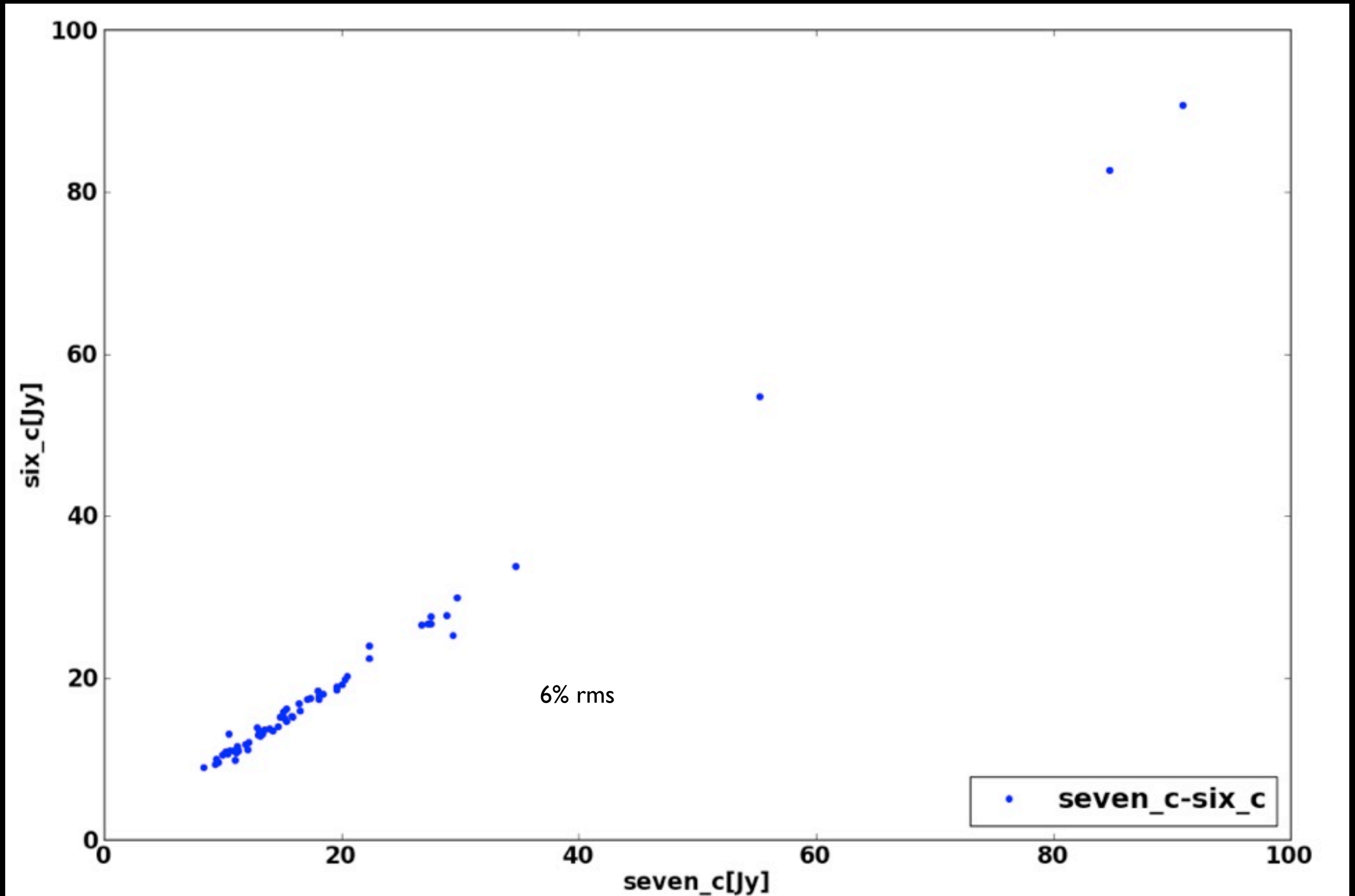


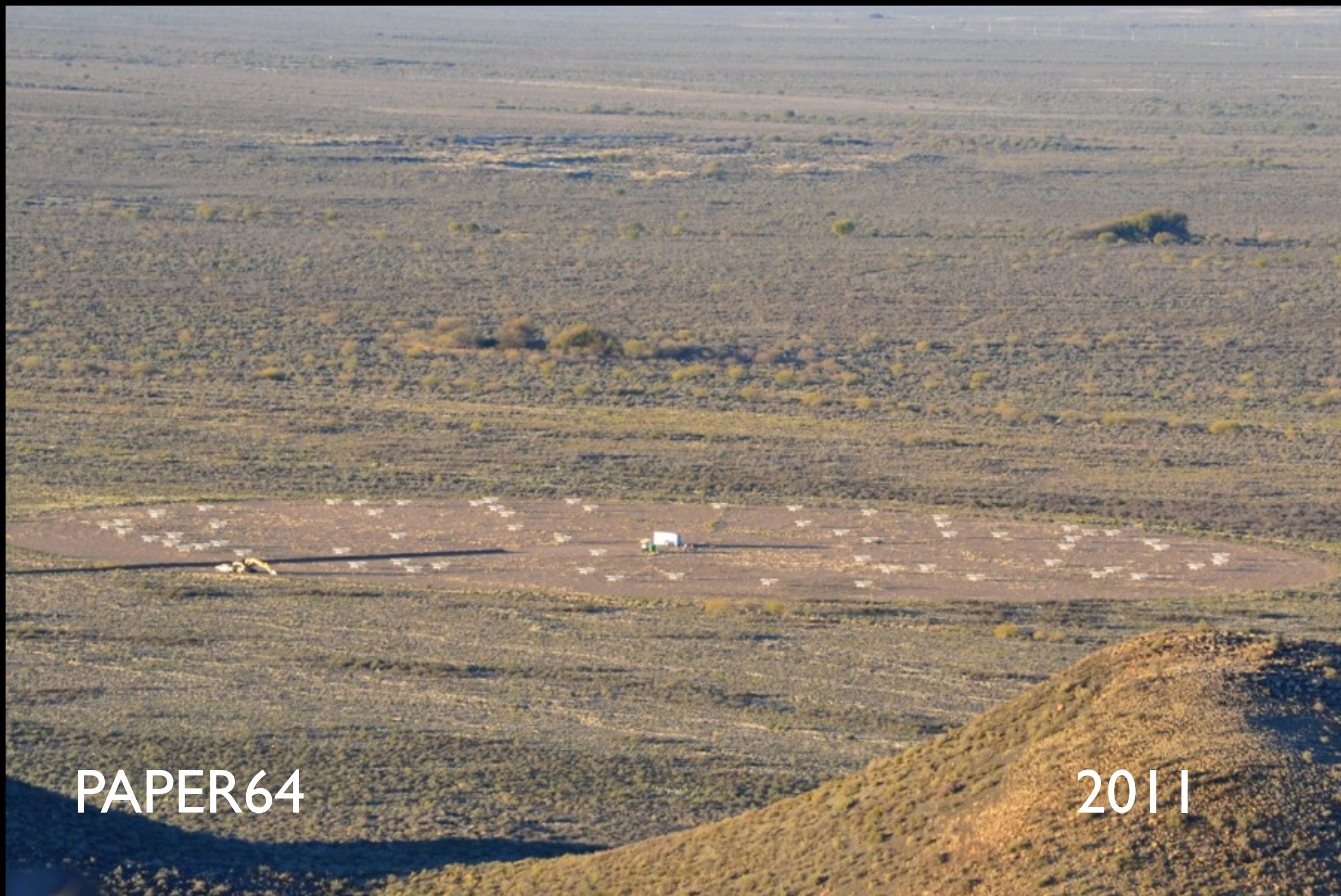


How well do catalogs do?



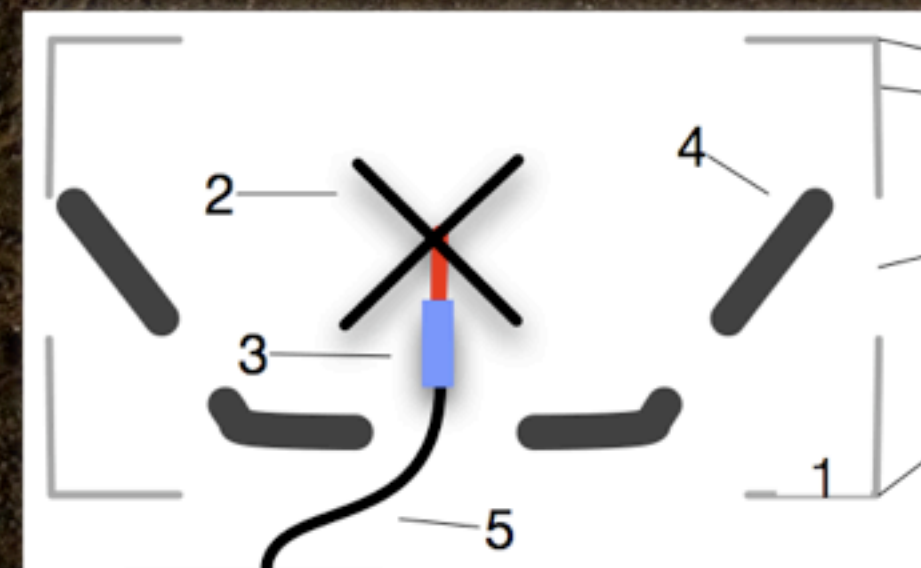
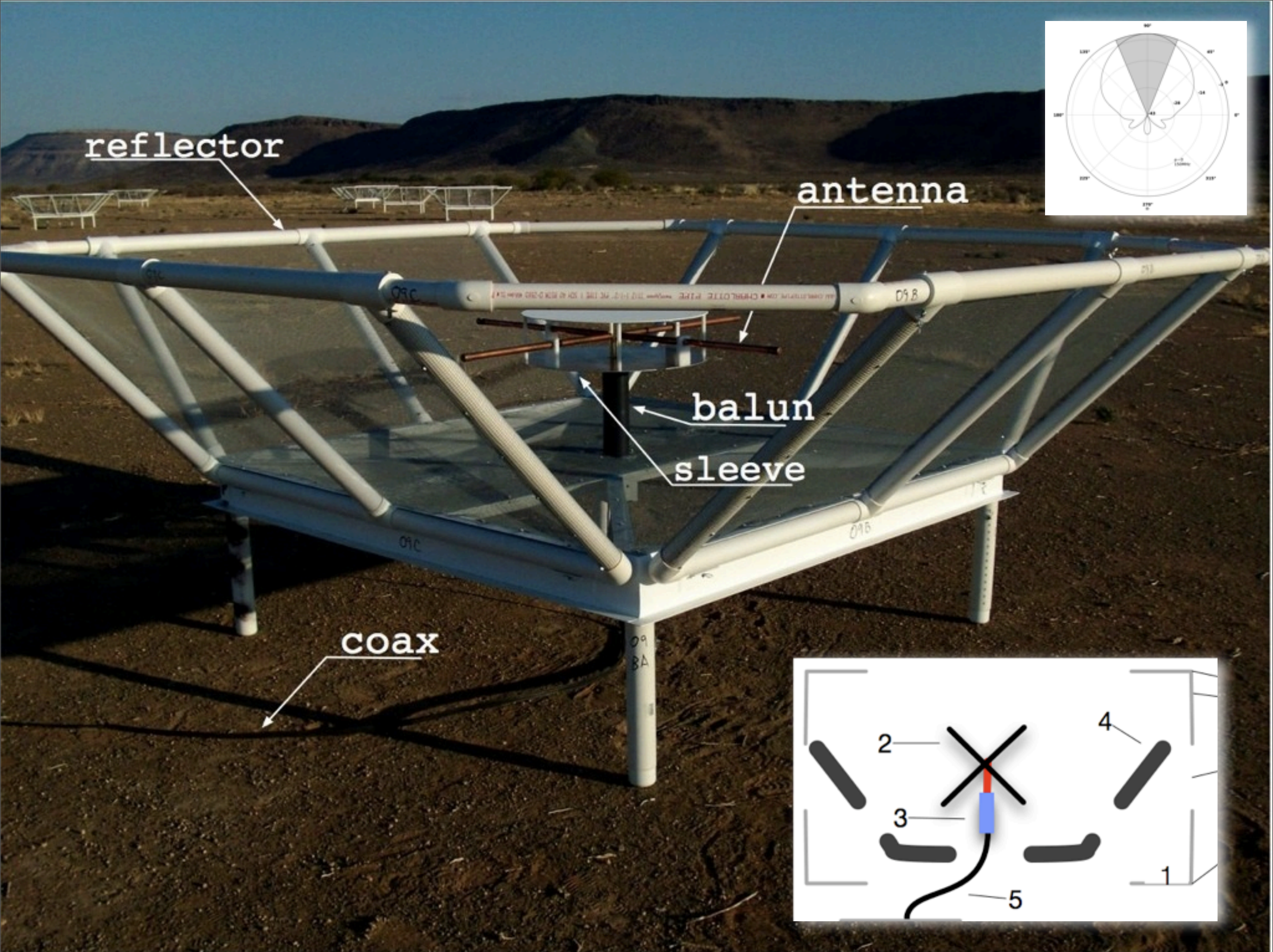
“Gold Standard” Sources





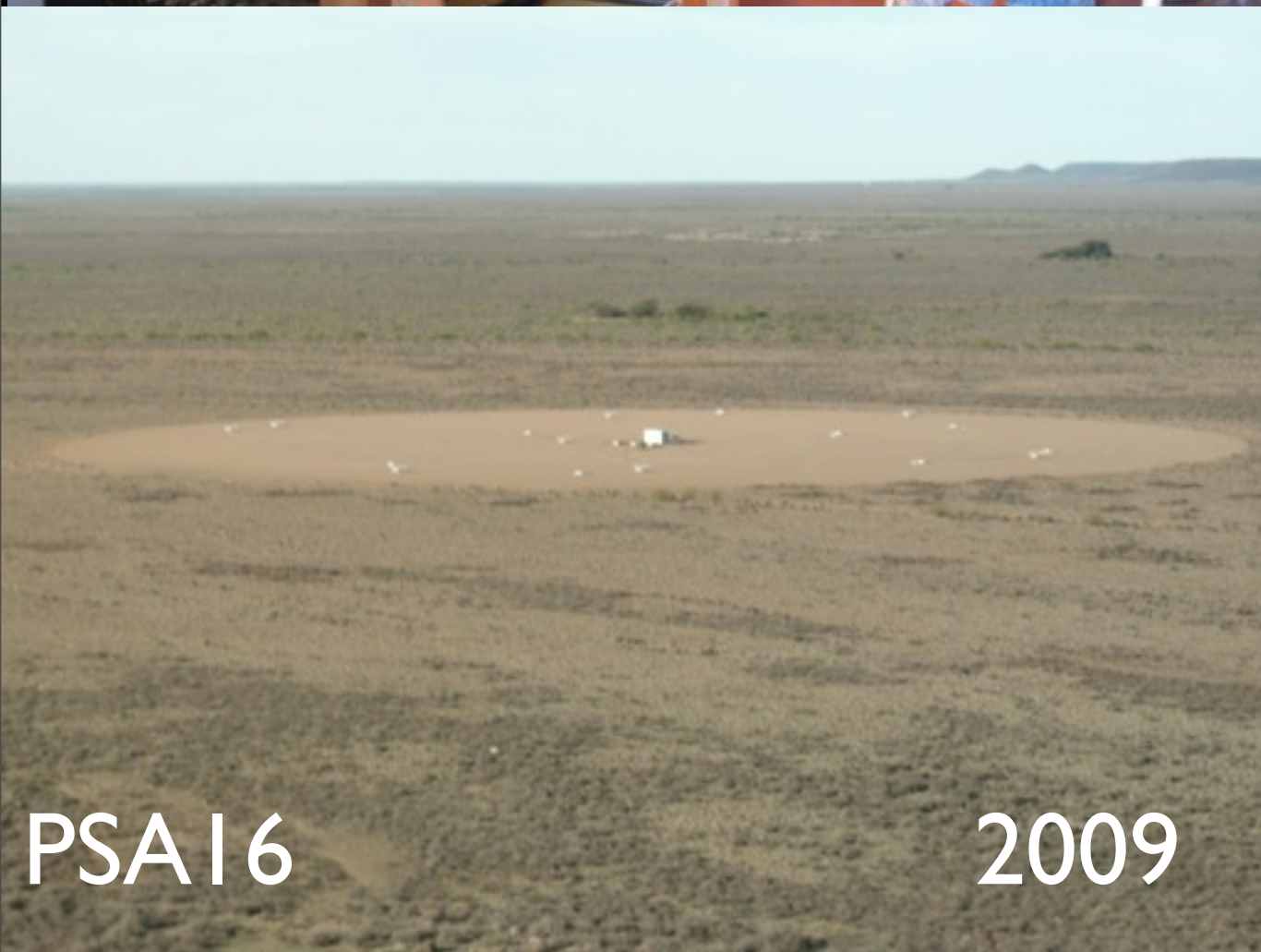
PAPER64

2011





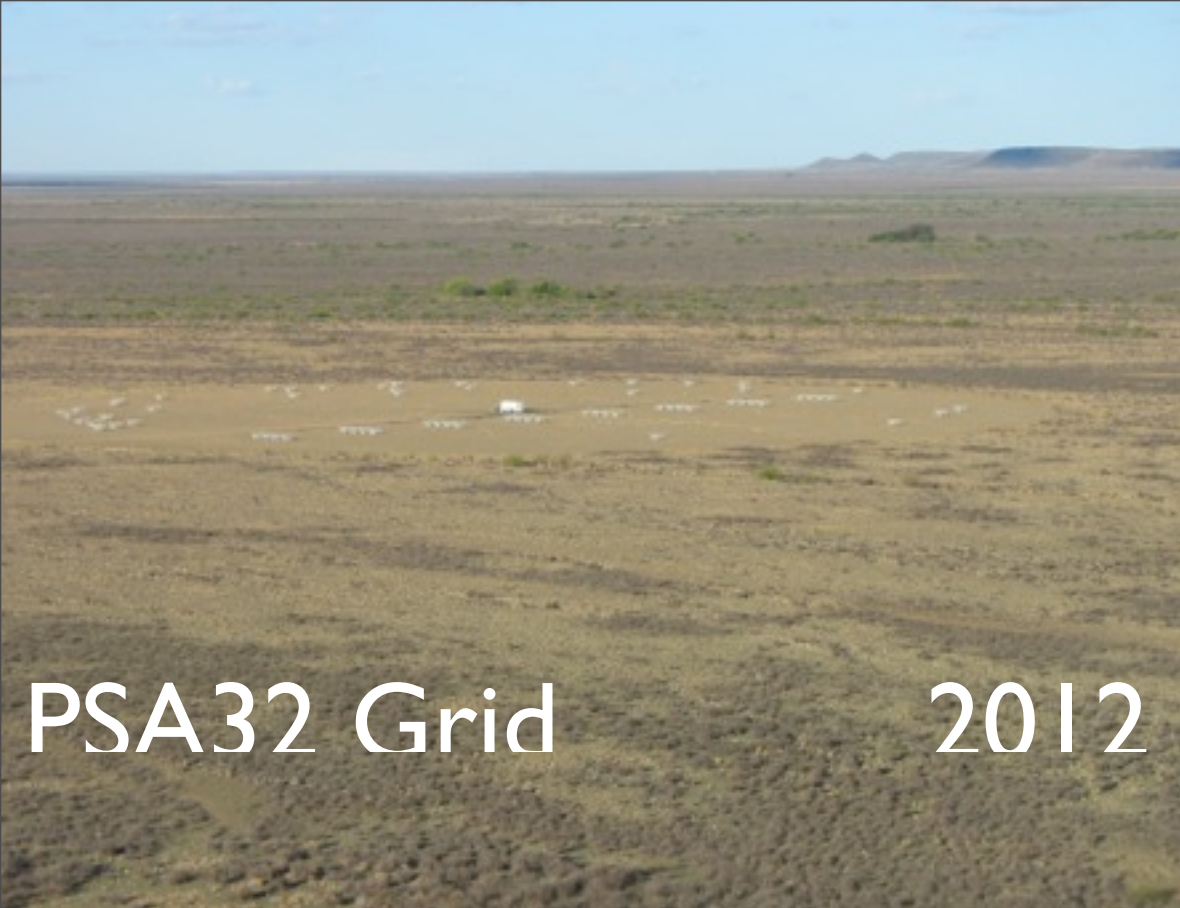




PSA I 6

2009





PSA32 Grid

2012

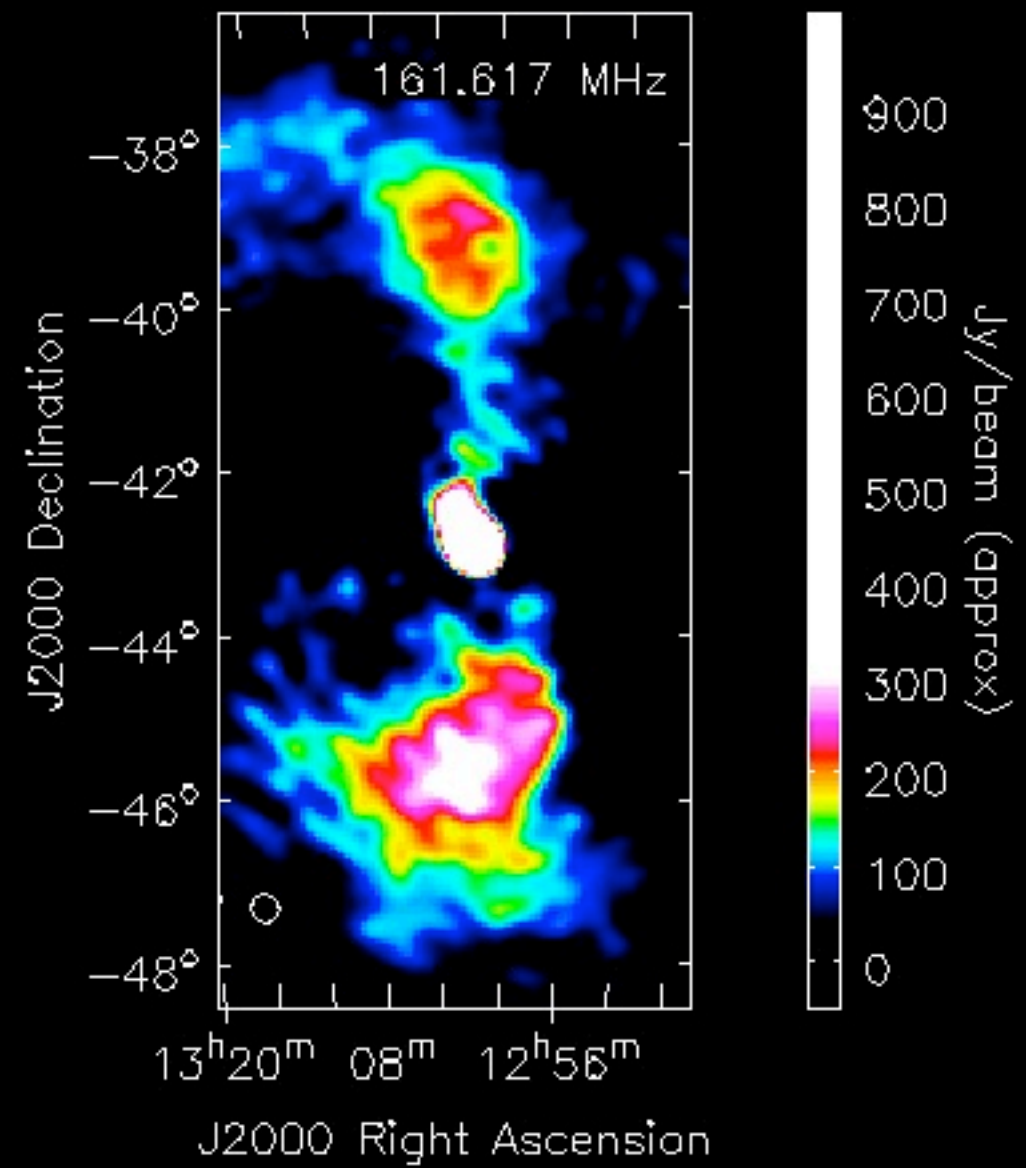


PSA64

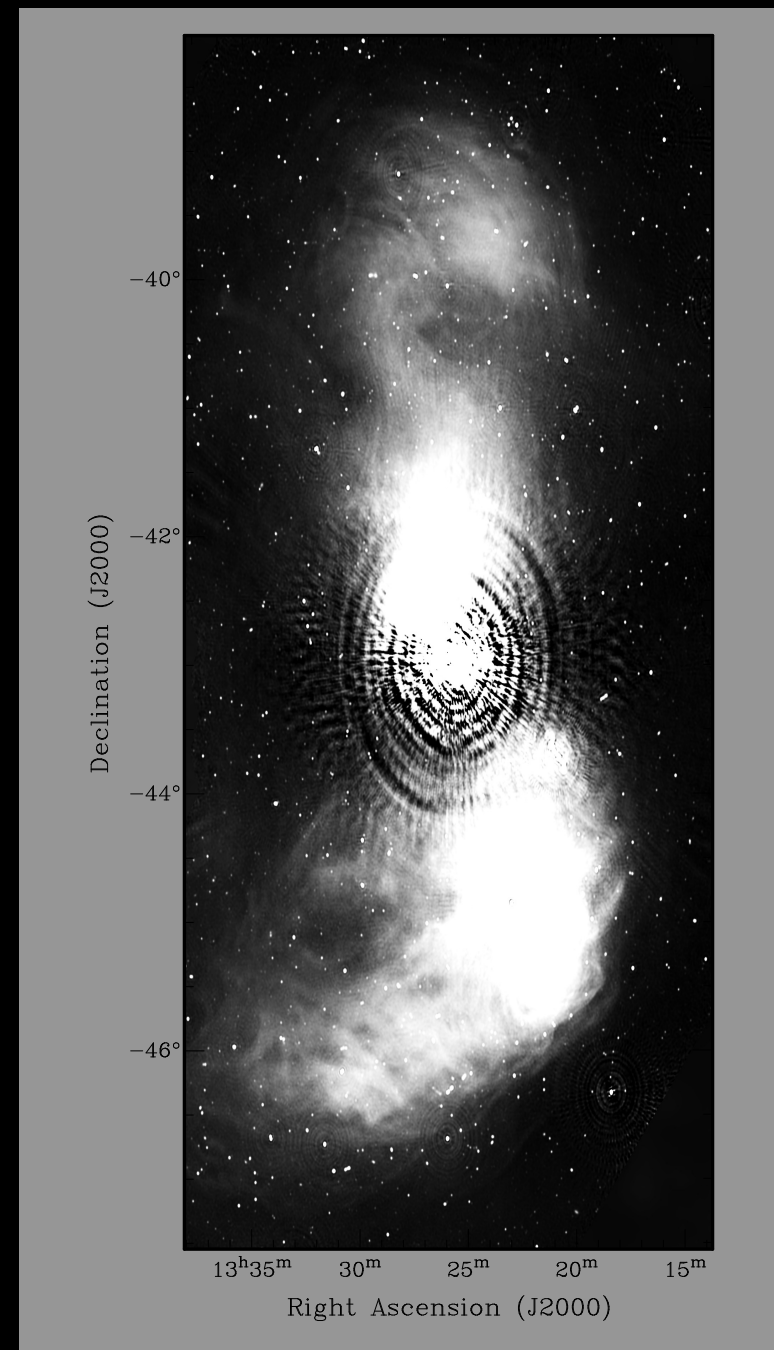
2011

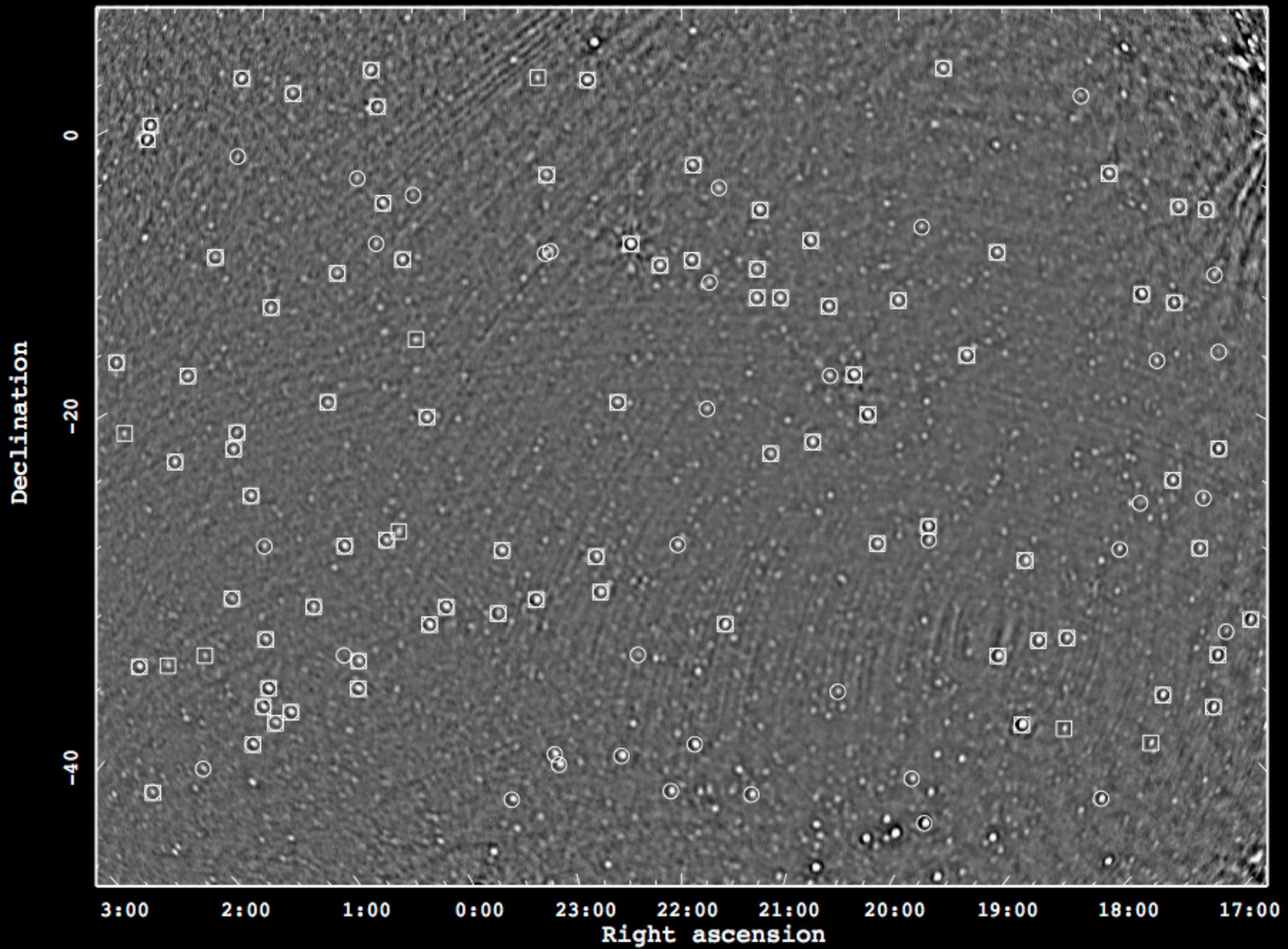


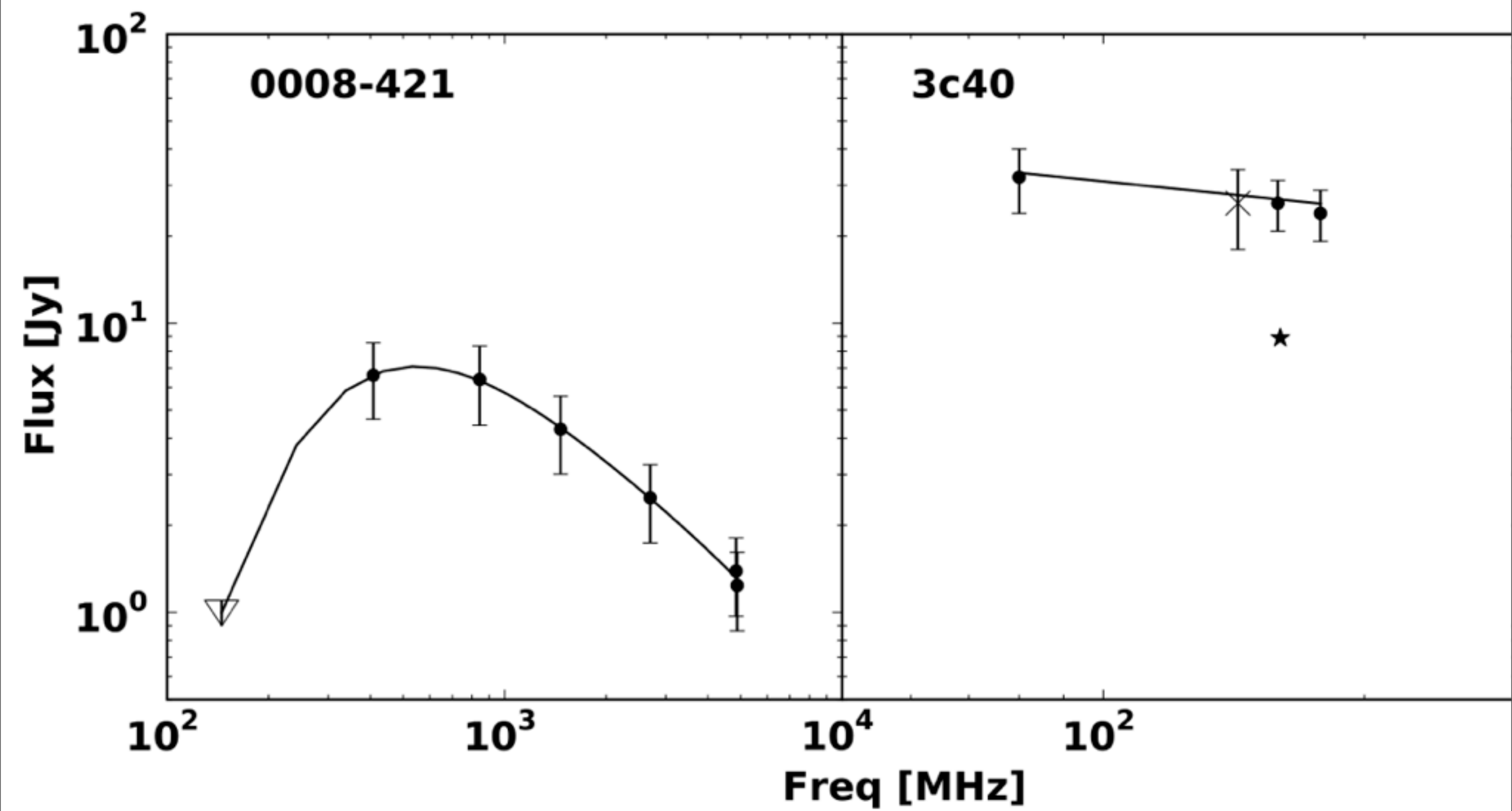
PAPER



Parkes/ ATCA

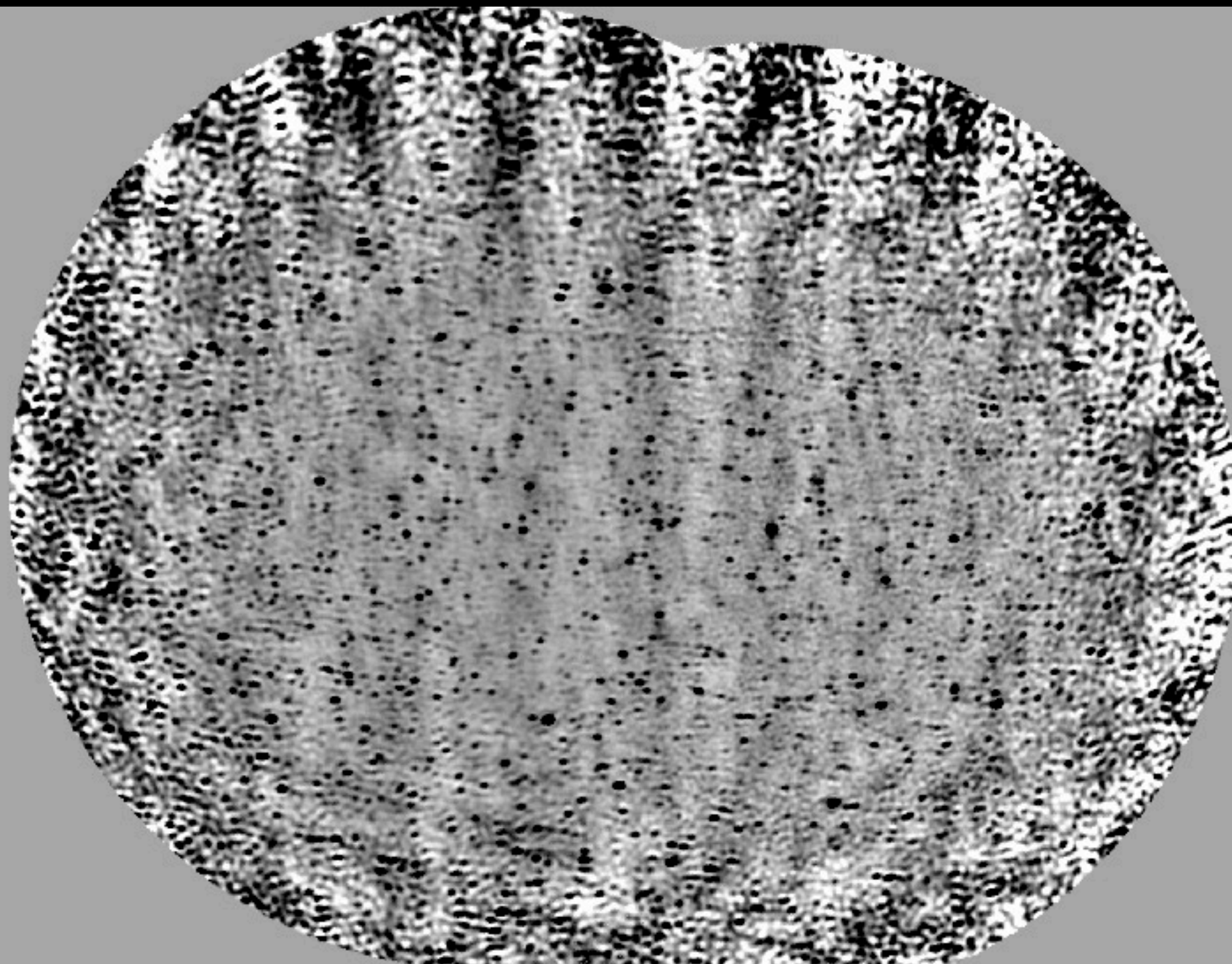




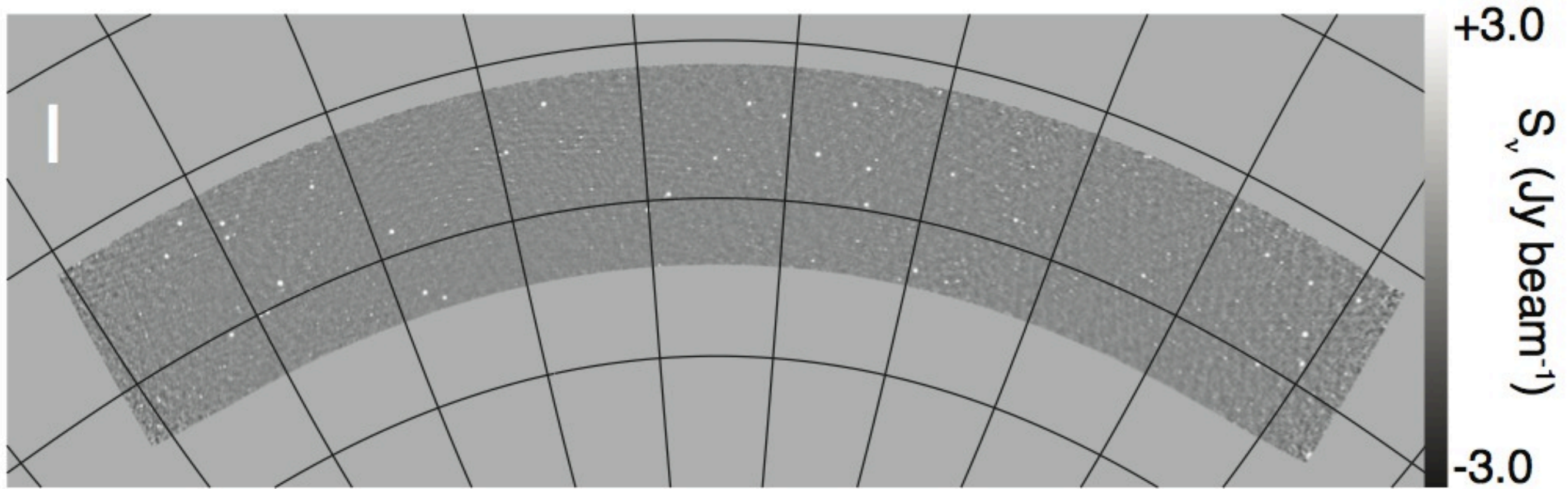




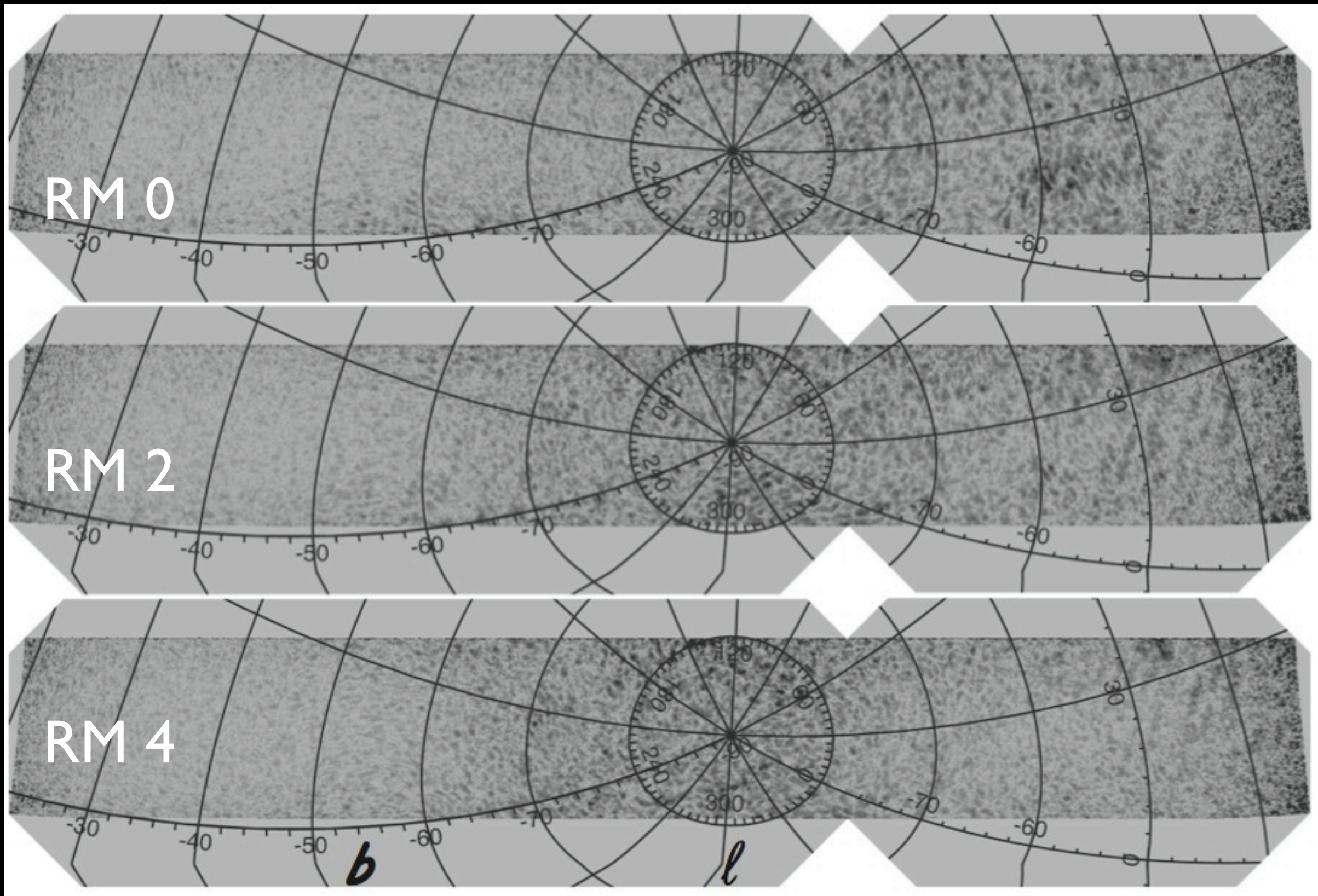
MWA I28
2012



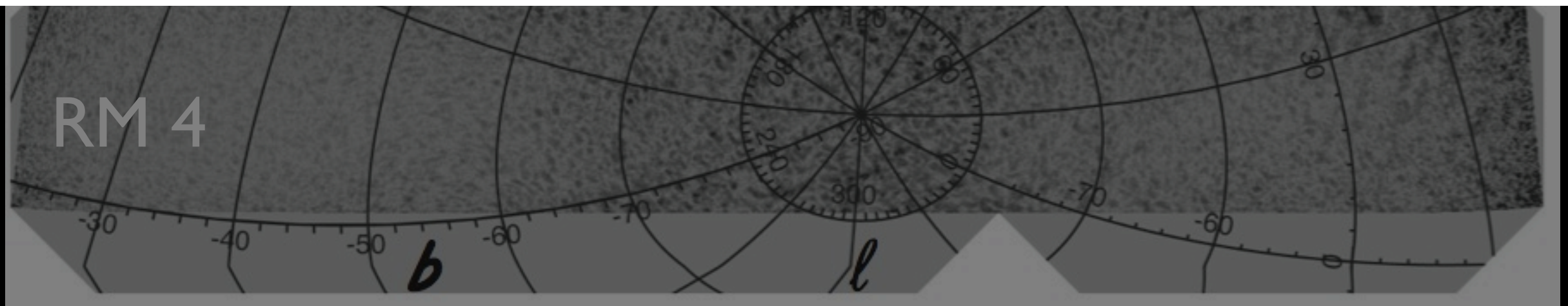
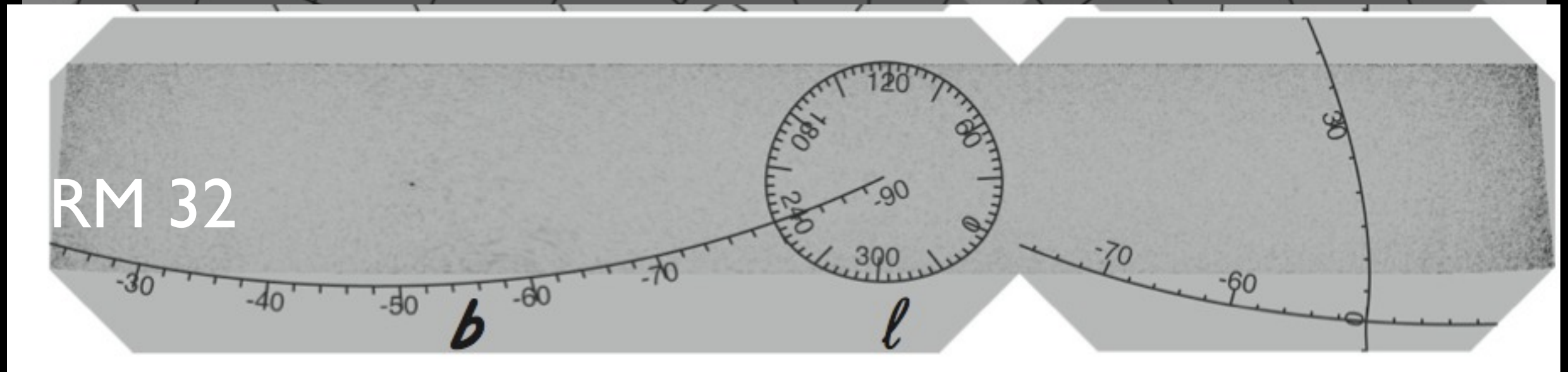
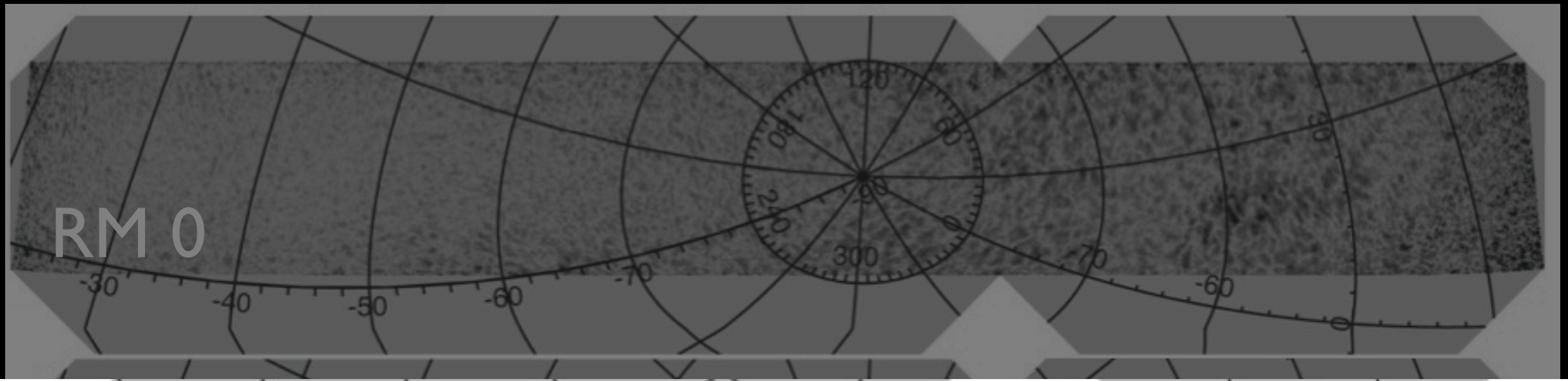
MWA32 2011



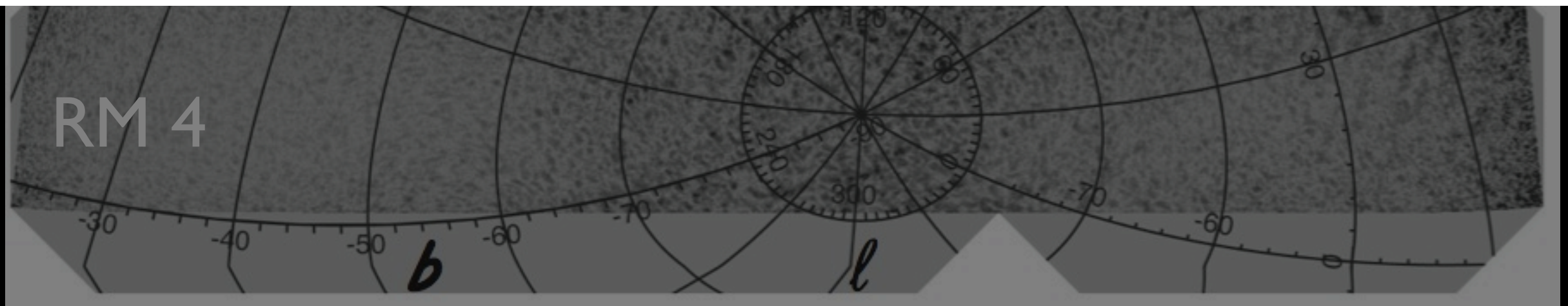
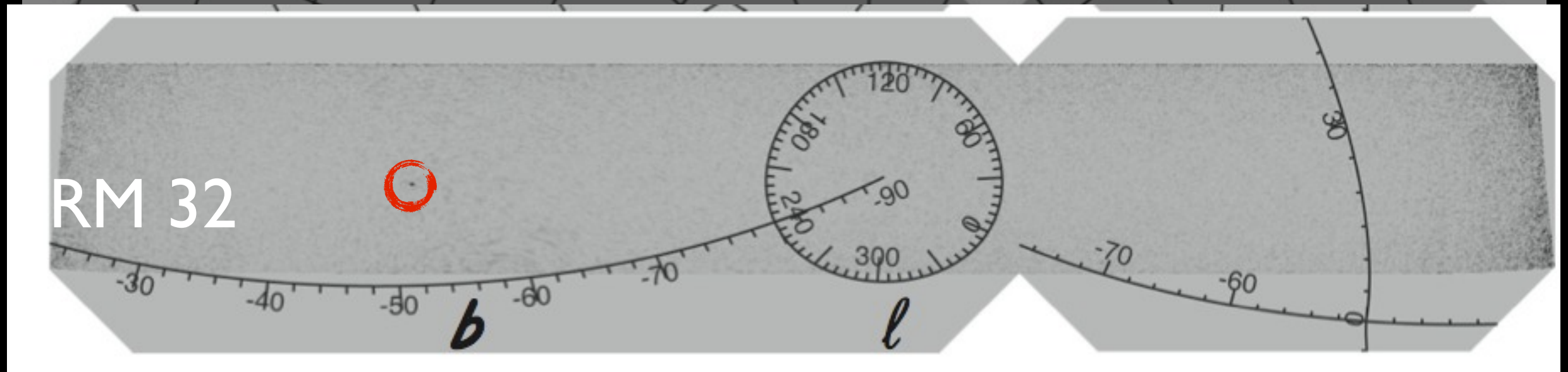
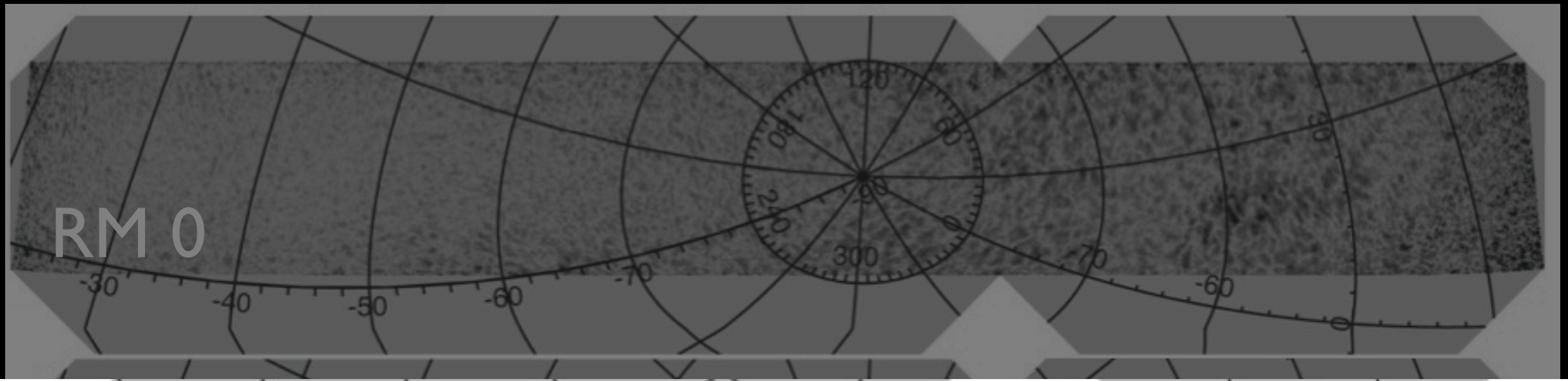
Bernardi in prep 2012



Bernardi in prep 2012



Bernardi in prep 2012



Bernardi in prep 2012



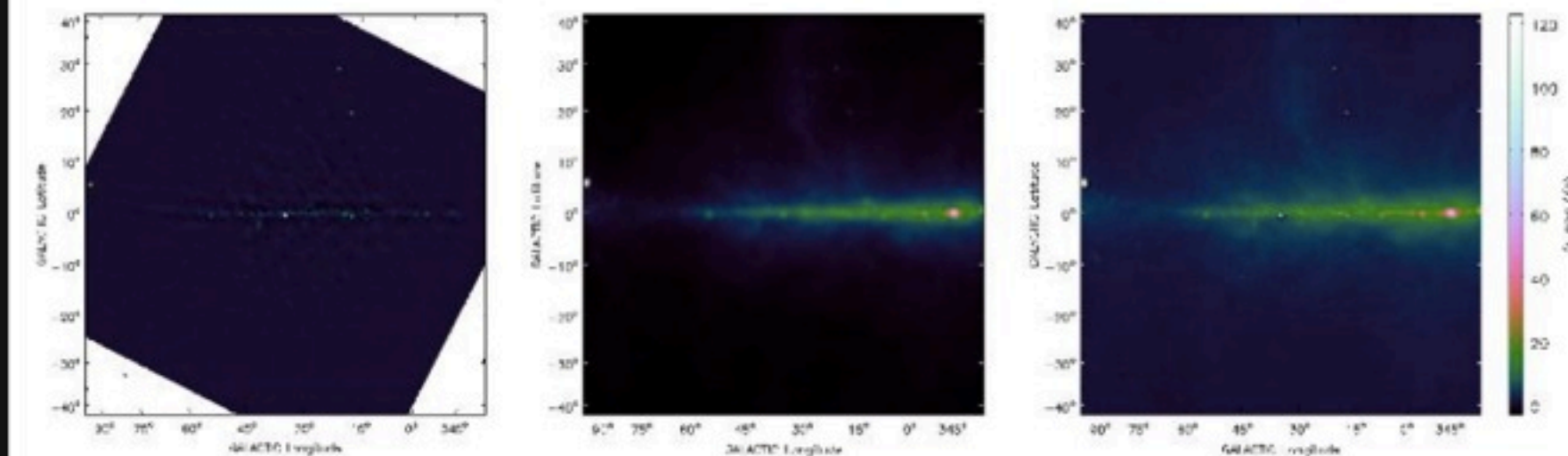
Murchison Widefield Array Timeline Now Highlights

Liked

+ Create A Page

funding cuts

Statement on NRAO's



Murchison Widefield Array

Liked · June 27

And a followup to Natasha's Milky Way MWA image posted yesterday. This one shows, from left to right: the image from only the MWA data; the image from only the zero spacing information (Haslam 408 MHz image); and the image from the combination of MWA and Haslam data. Nice!!

Like · Comment · Share

Emil Lenc and 6 others like this.

2 shares



Paolo de Marchi Very nice
June 27 at 9:03pm · Like



Aurelio Trudu cosa è un meteorite...
[See Translation](#)
June 27 at 9:43pm · Like



Paolo de Marchi E' una immagine del piano della via lattea ricavata dai radio telescopi
[See Translation](#)
June 27 at 9:47pm · Like · 1



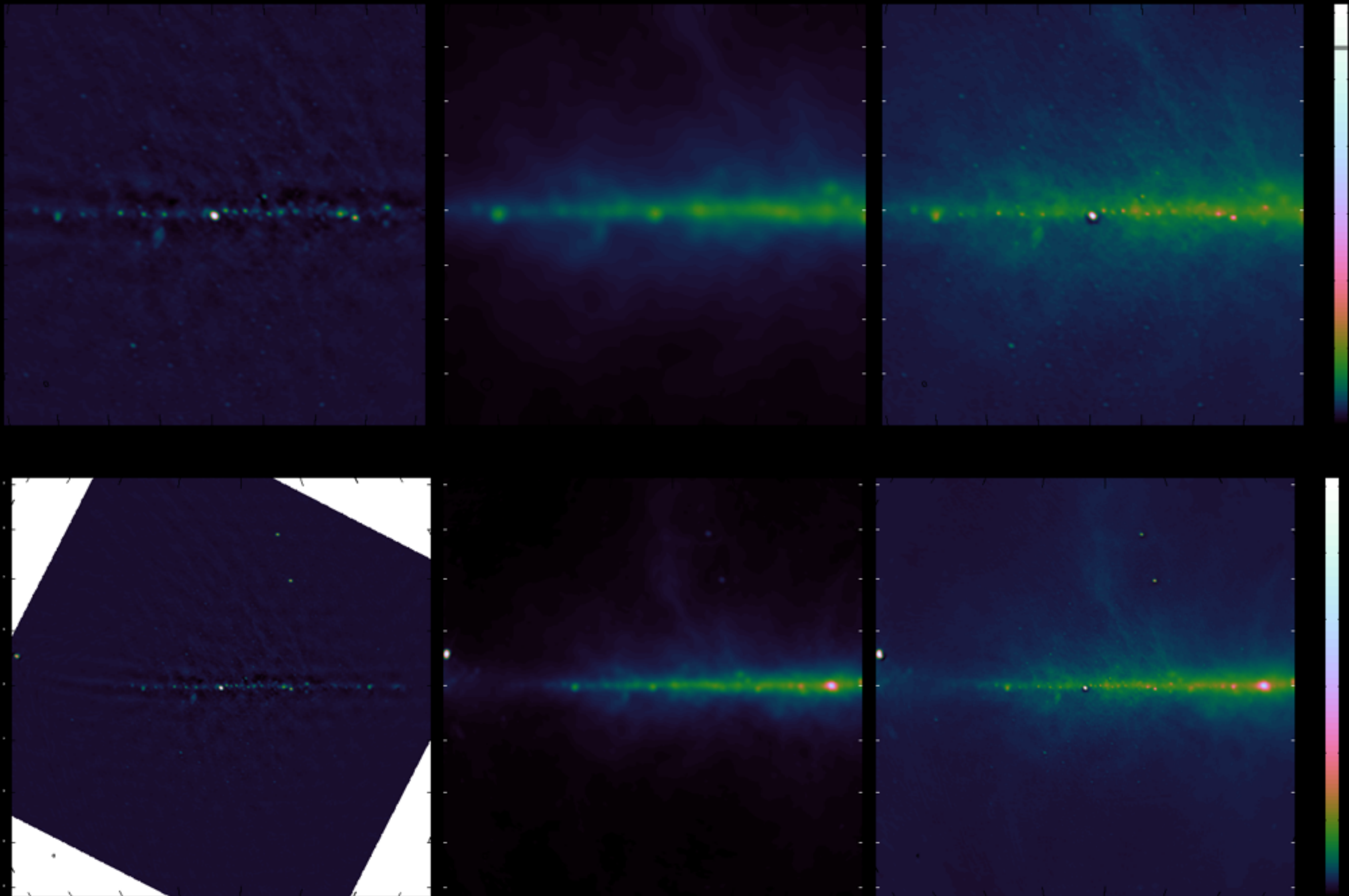
Paolo de Marchi stanno costruendone una



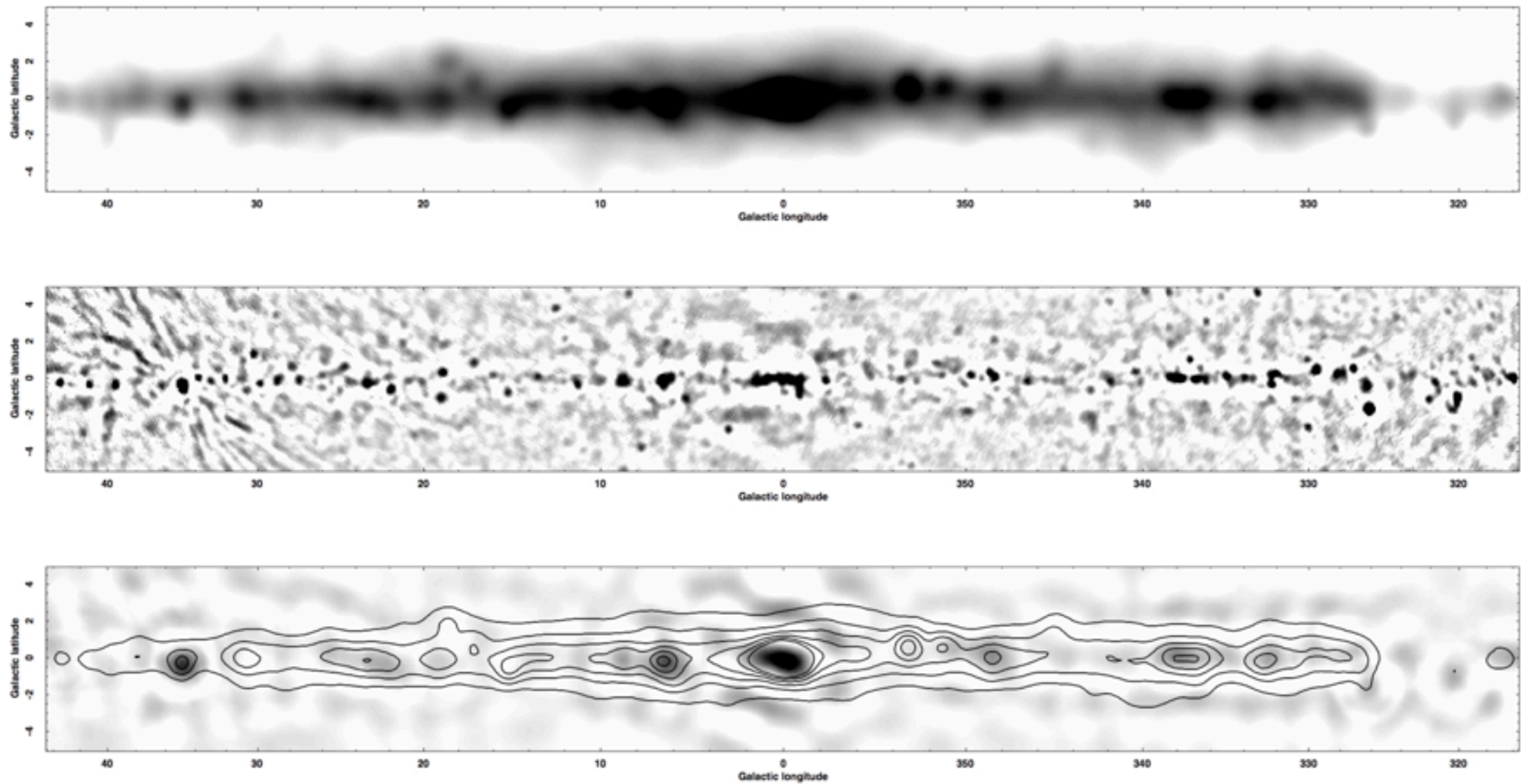
Write a comment...

...of the analog beamformers. Once done we will have 60/128 fully functional MWA tiles completed. Good luck army!

Go online to see who's to that



N. Hurley Walker 2012 MWA32

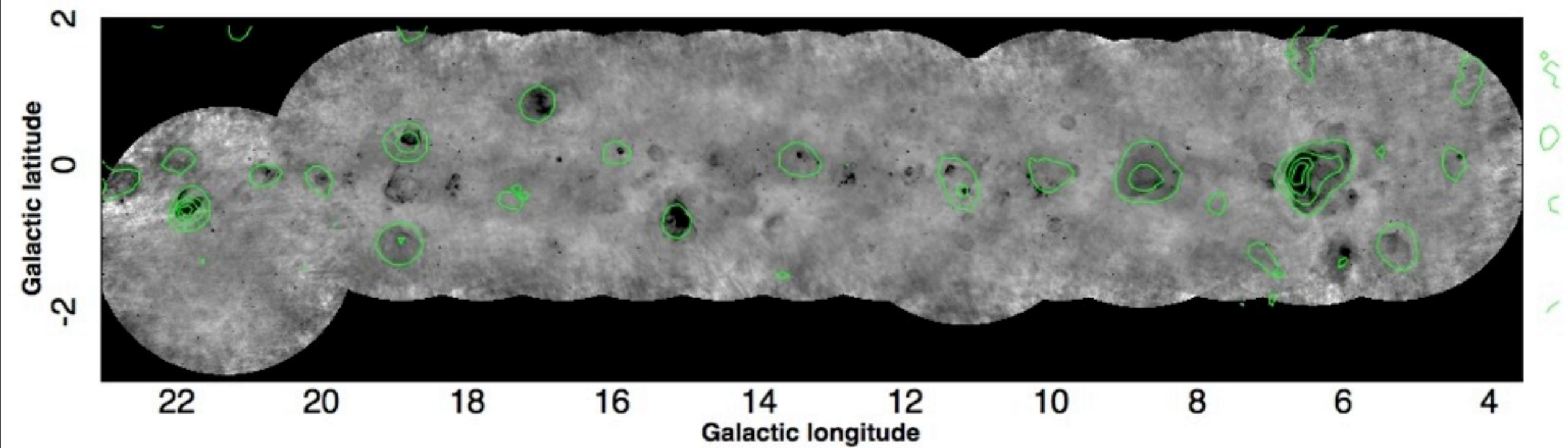


PAPER32 2011

PAPER Galactic Center

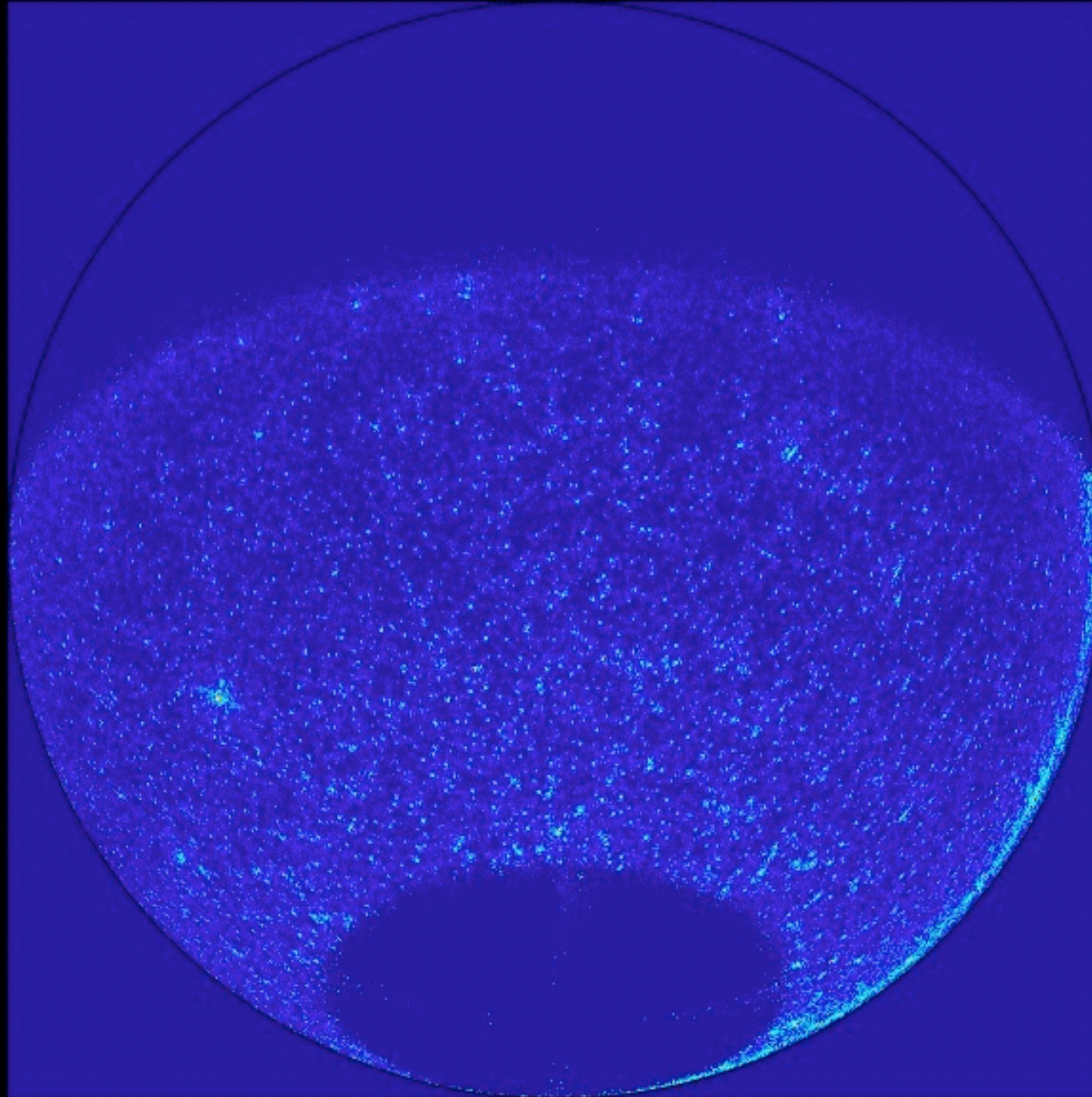
SgA*

PAPER32 2011

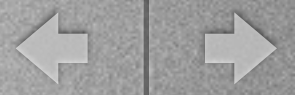


VLA 90cm Brogan 2006 +
PAPER32

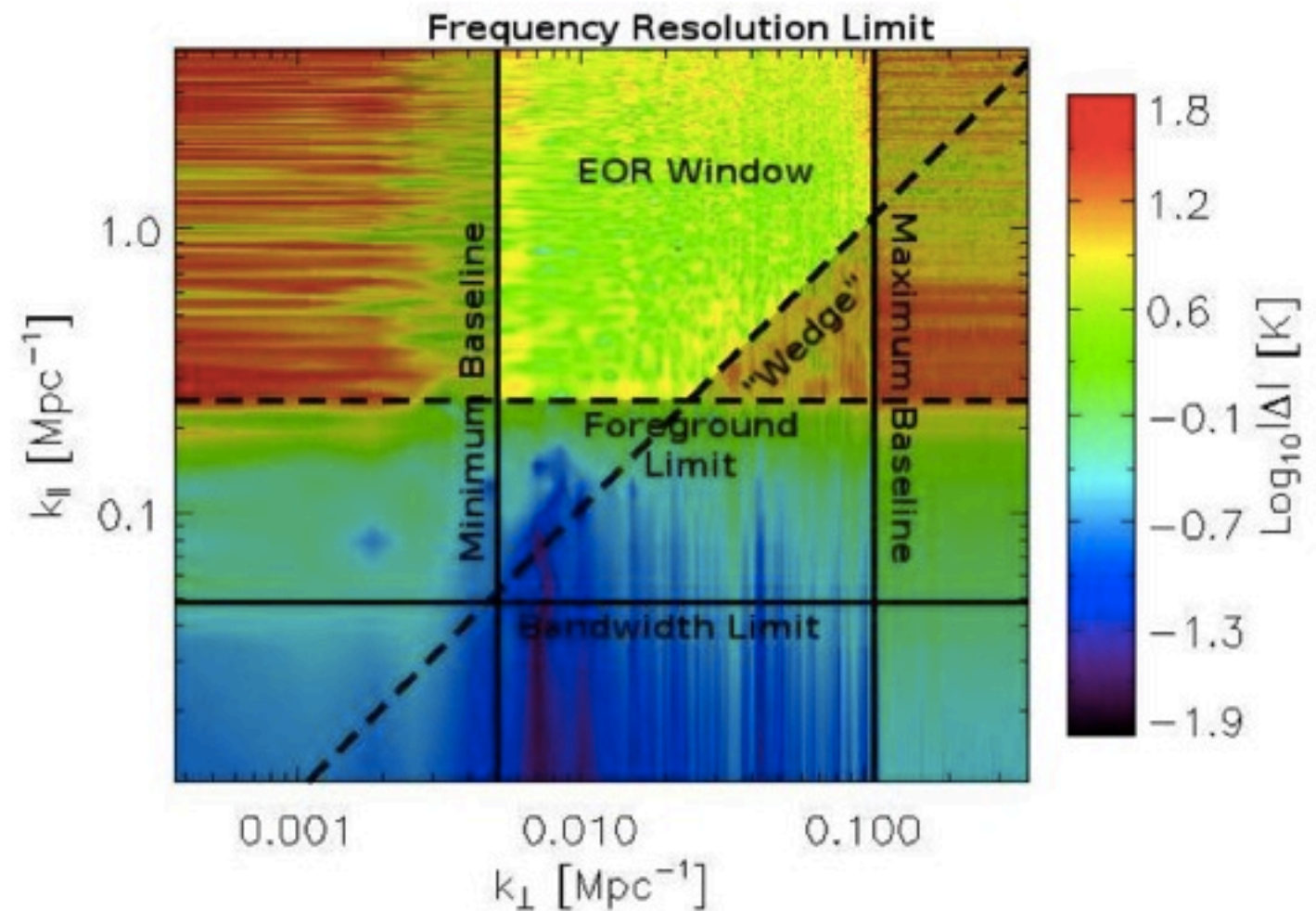
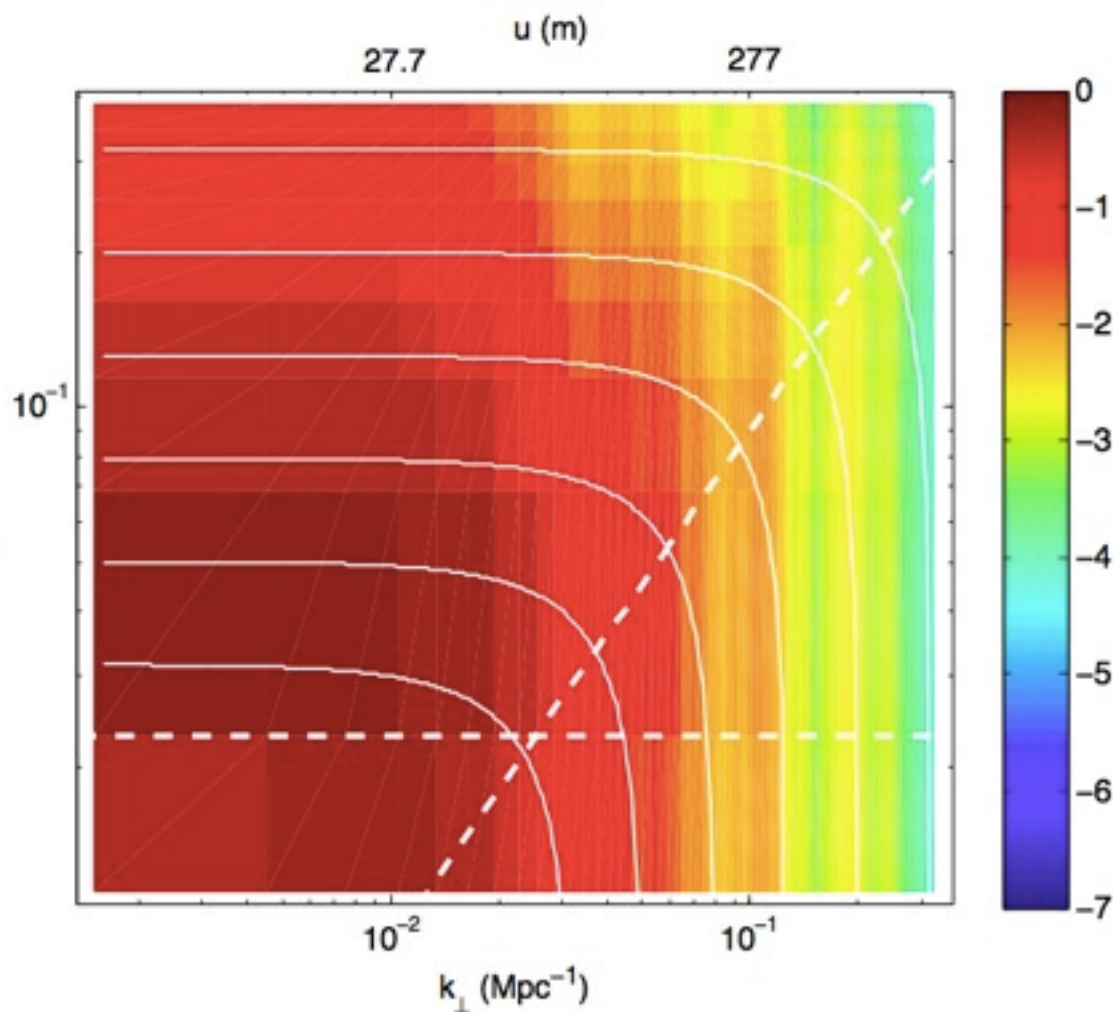
PAPER South Africa



0h-30d

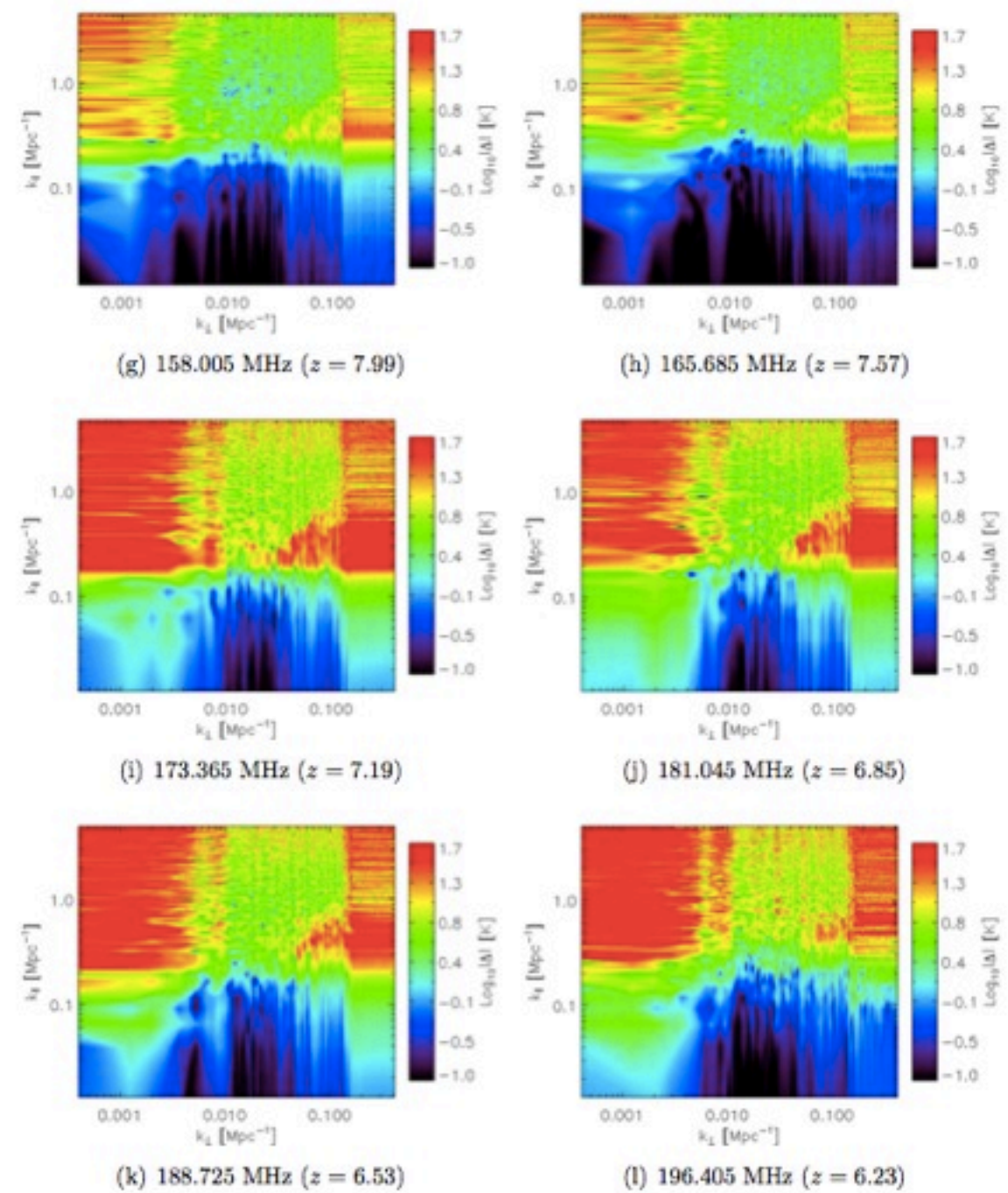


The EoR Window



Beardsley, 2012 (submitted)

Williams thesis 2012



Williams thesis 2012

Table 1. PAPER fluxes for 480 MRC sources and matching Culgoora fluxes (where available)

Ra	Dec	Name	S145	rms	MRC_sep	Cul	S(160)	S(80)
0.60	-83.14	0003-833	18.9	4.7	0.17			
0.88	-17.50	0000-177	11.6	1.2	0.11	0000-177	11.8	22
1.37	-56.54	0003-567	12.0	2.2	0.17			
1.52	-42.61	0003-428	9.6	1.3	0.16	0003-428	11.9	11
1.58	-0.07	0003-003	25.5	2.6	0.12	0003-003	16.8	27
2.11	-6.05	0005-062	11.2	1.8	0.23	0005-062	6.9	10
2.51	-44.50	0007-446	14.3	1.2	0.16	0007-446	17.0	26
3.27	-42.11	0008-421	1.5	1.4	0.41			

normalized number count

