

Reionization Foregrounds

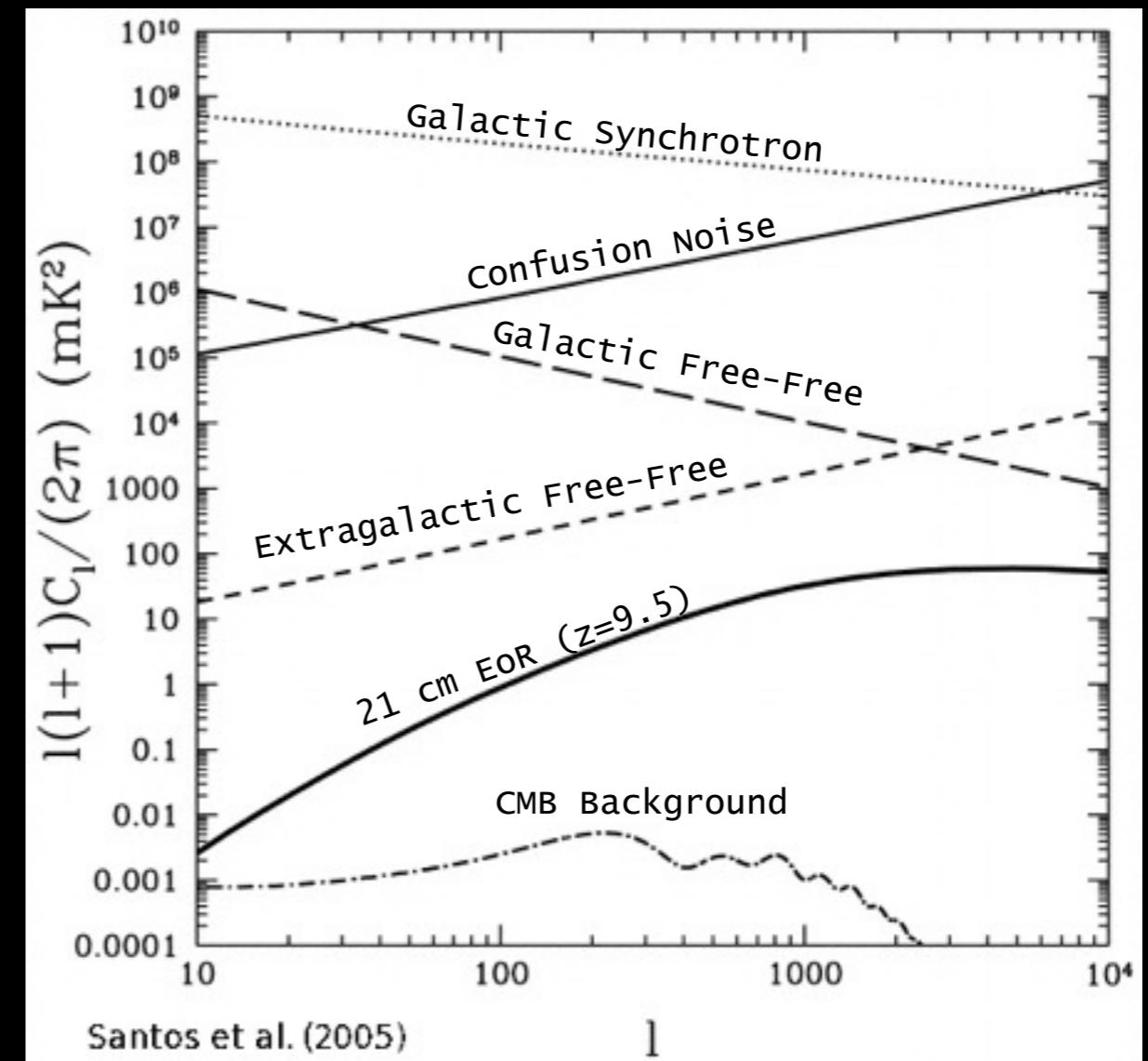
Danny Jacobs

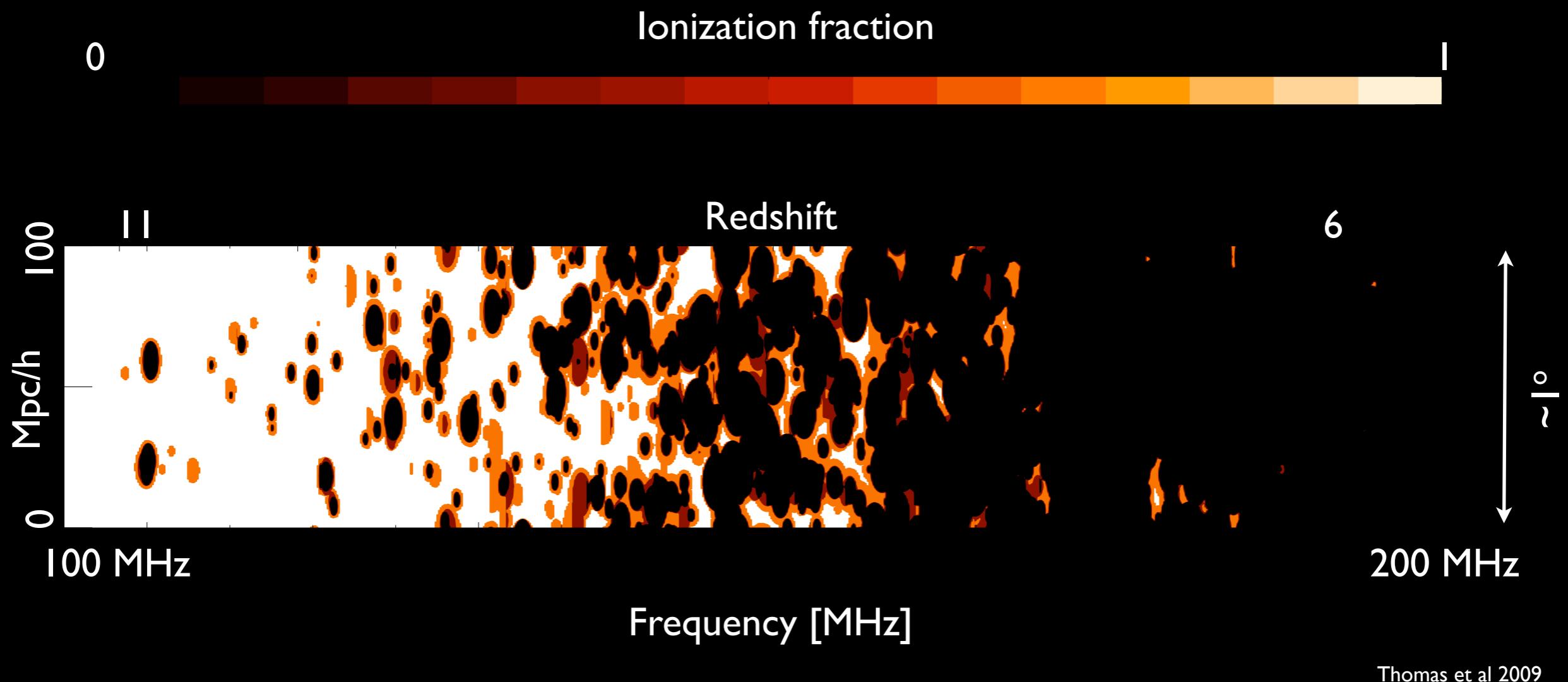


- EoR Requirements
- Historical Observations
- Recent Cataloging
- PAPER/MWA results

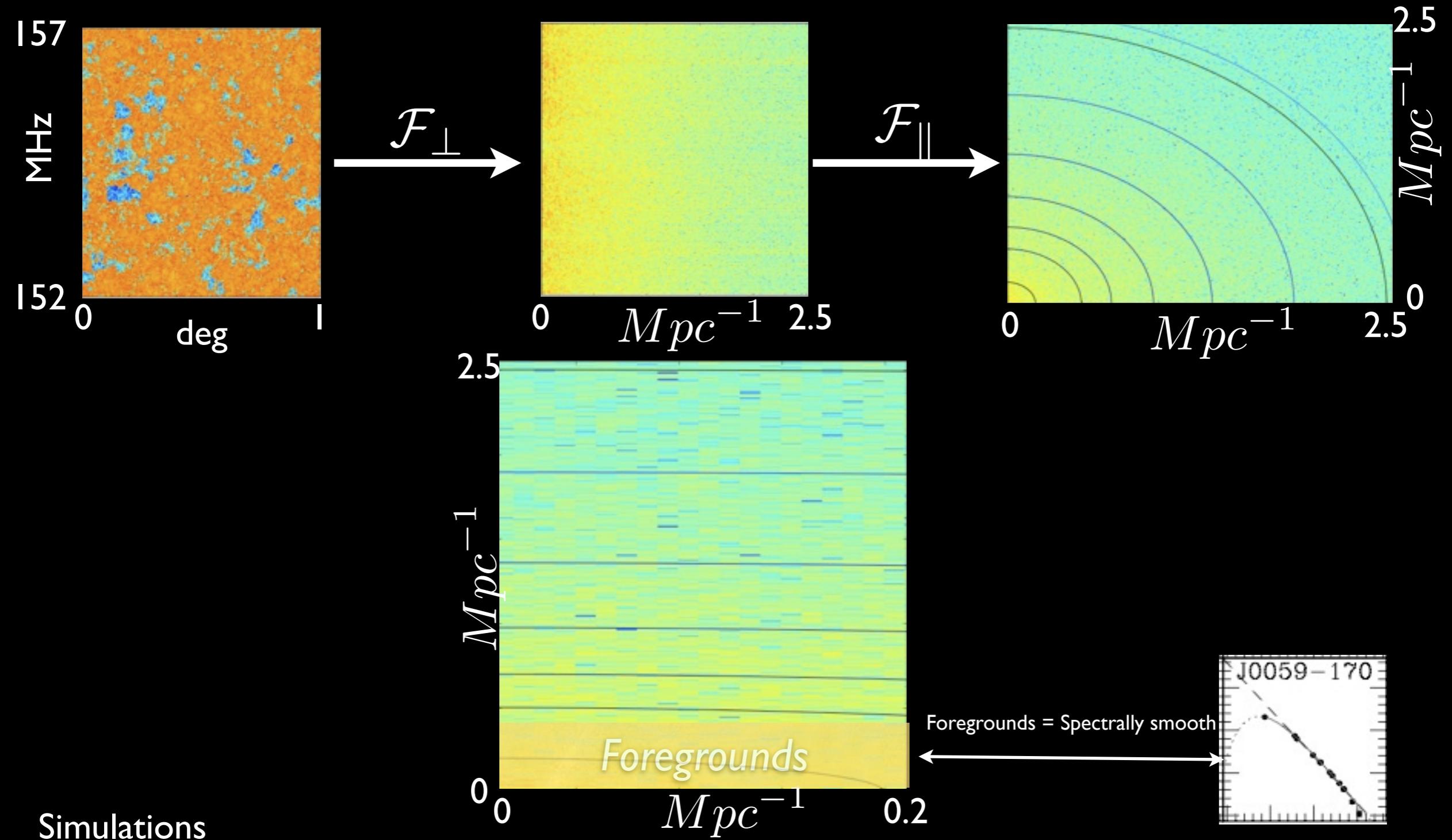
EoR Challenges

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





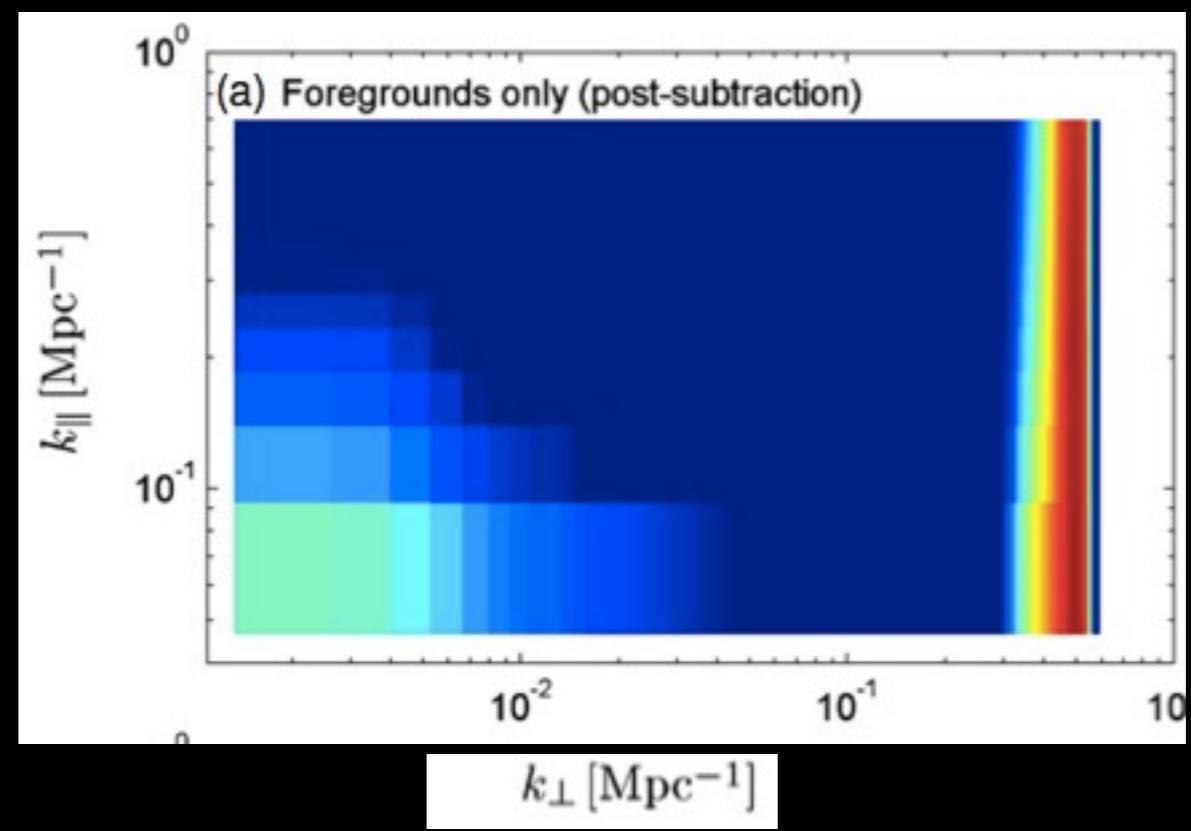
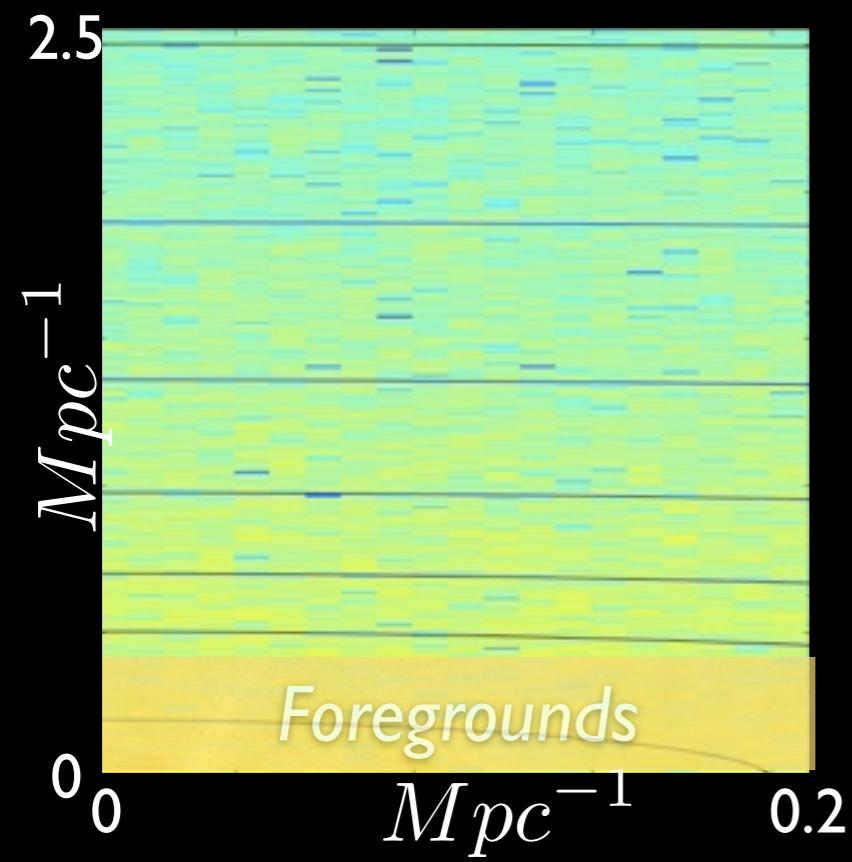
Ideal tomographic imaging

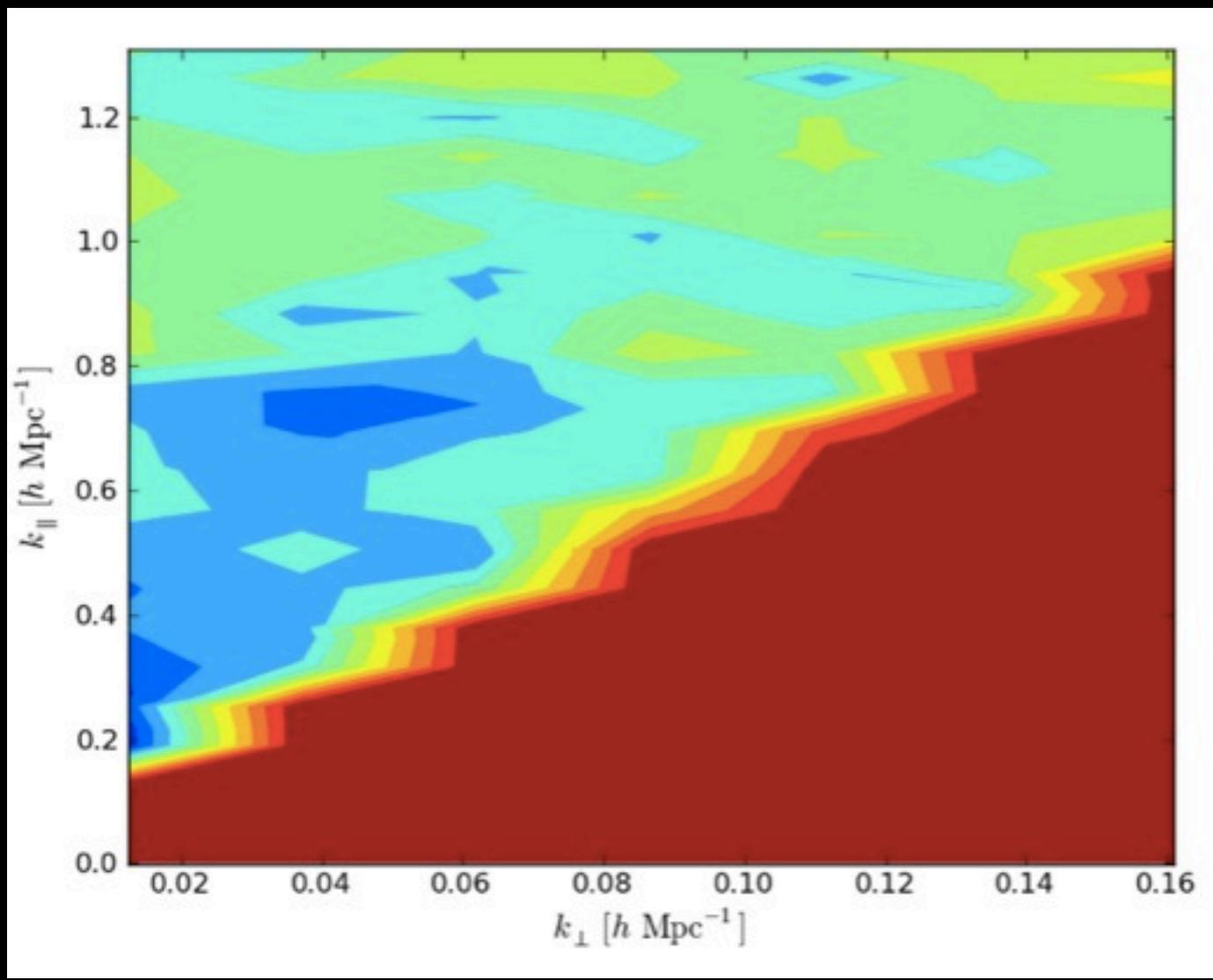


- Santos 2005
- Zahn 2010
- Zahn 2007
- Santos 2008,2010
- Trac and Cen 2008
- Mesinger 2010

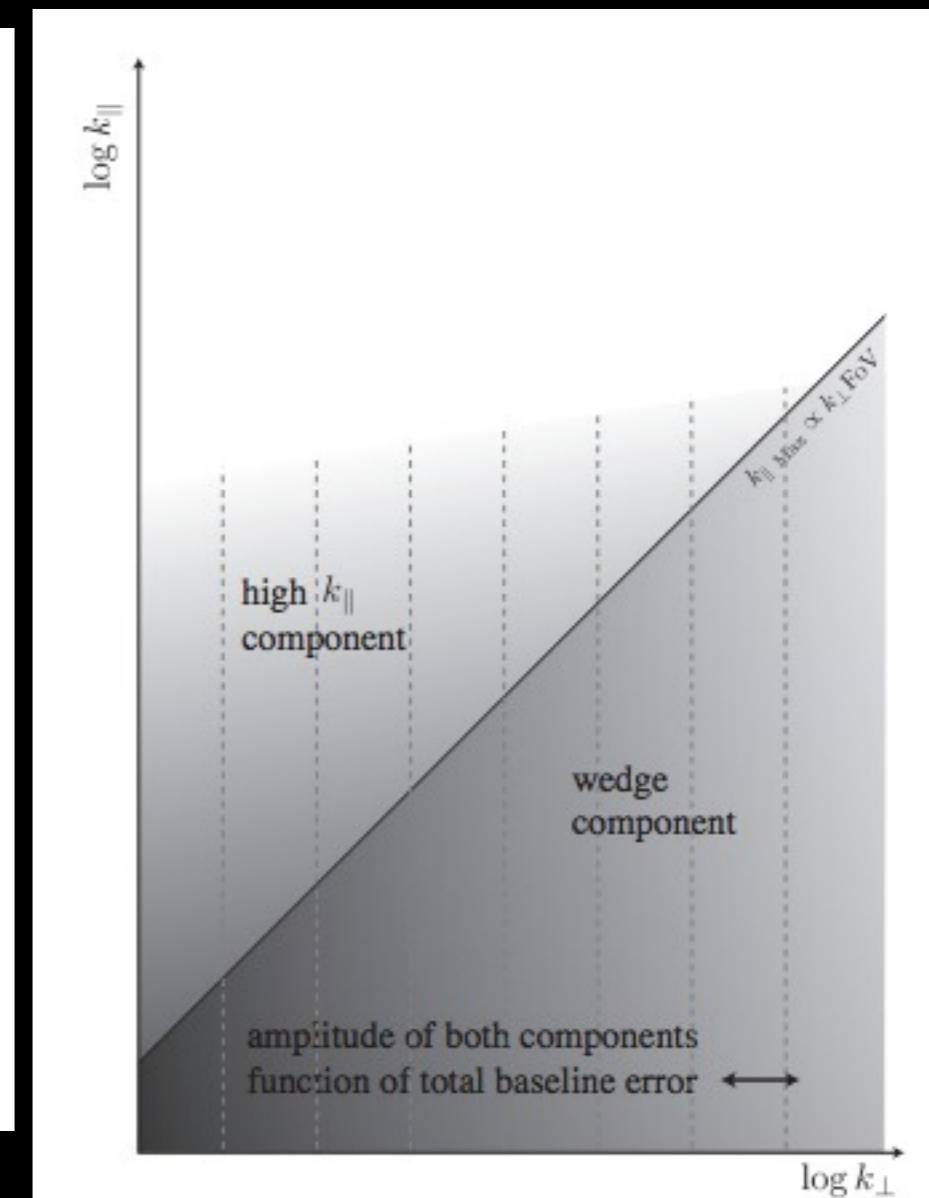
Table 1: Fiducial size scale (z=8)

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



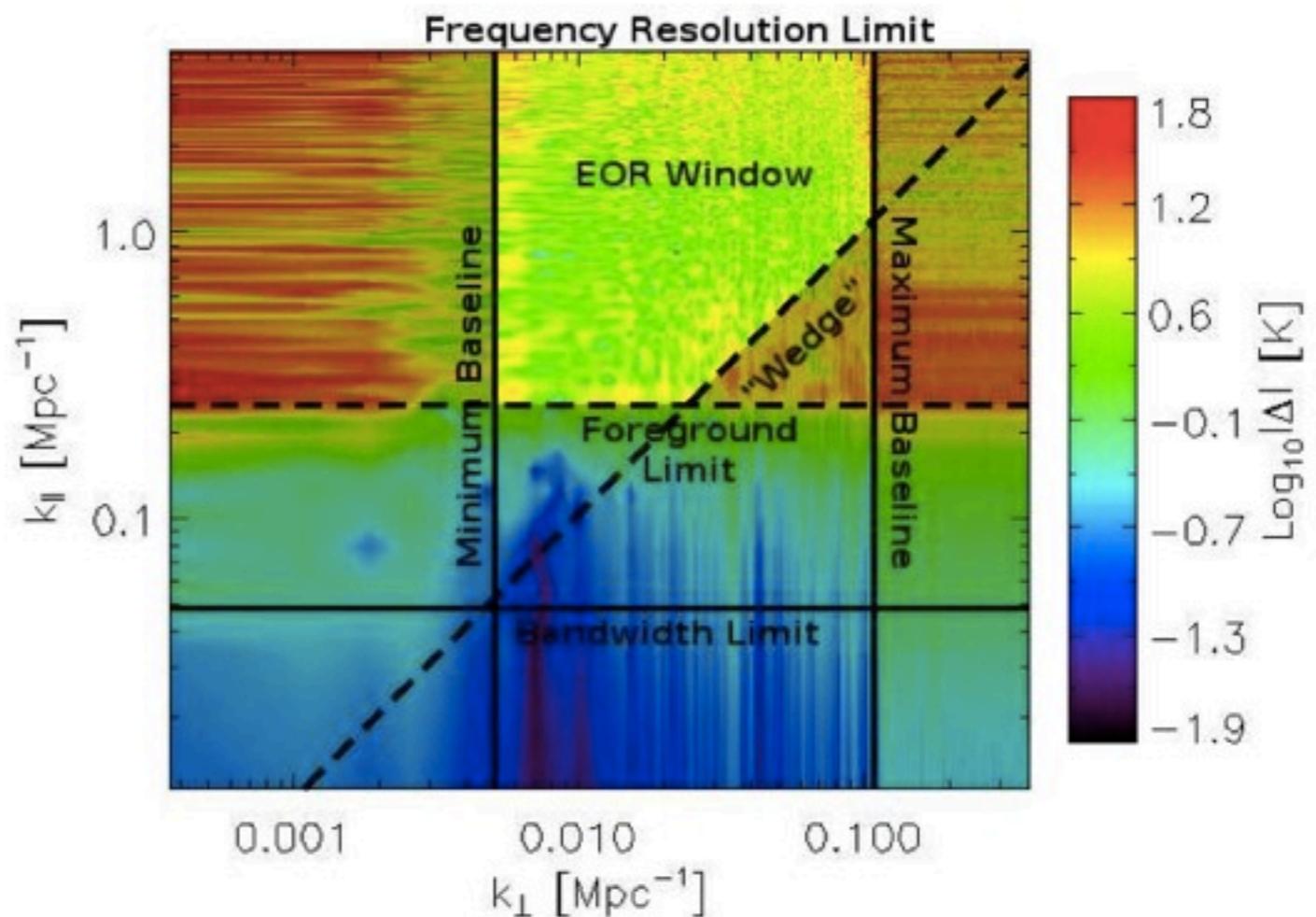


Parsons 2012 (submitted)



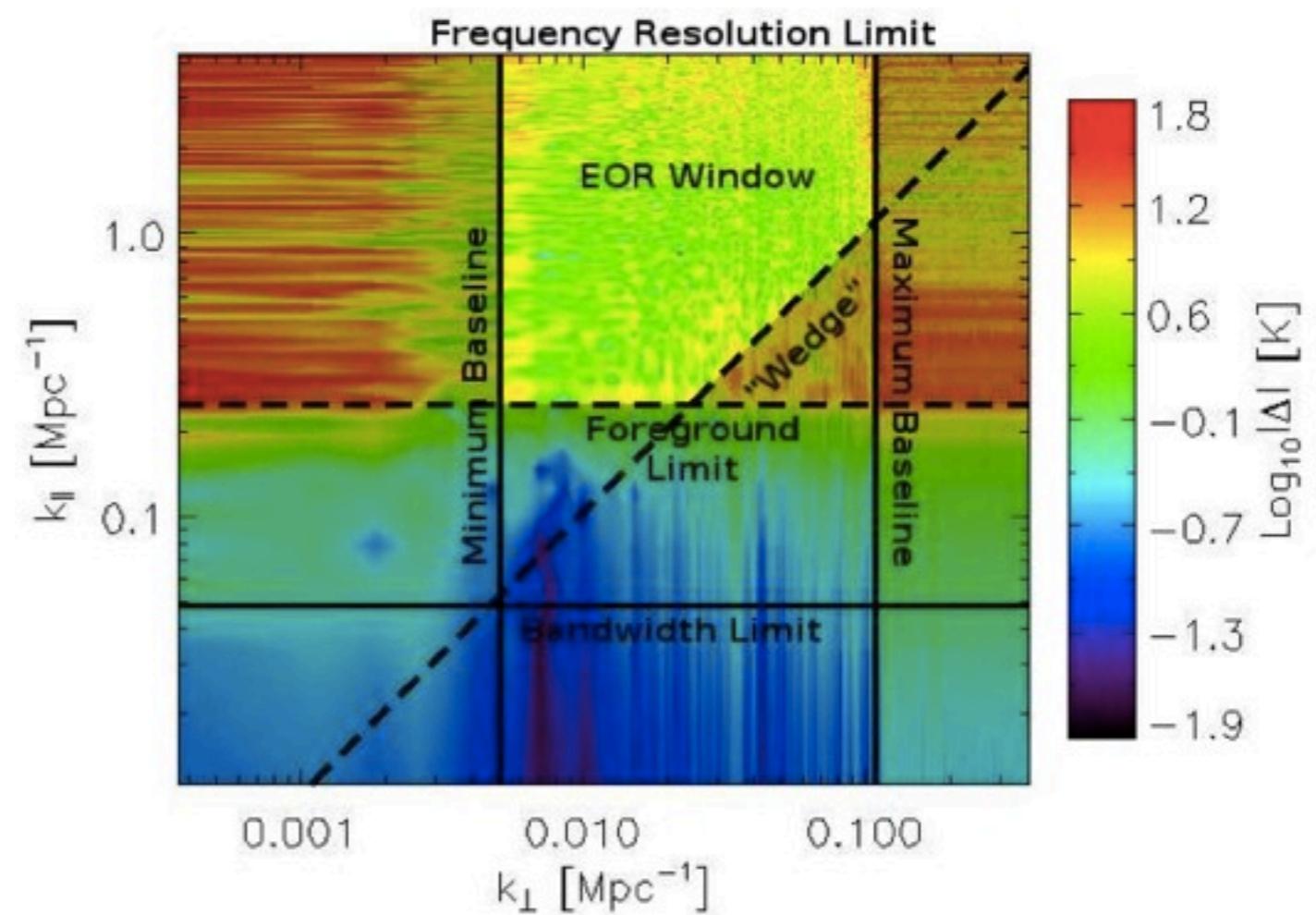
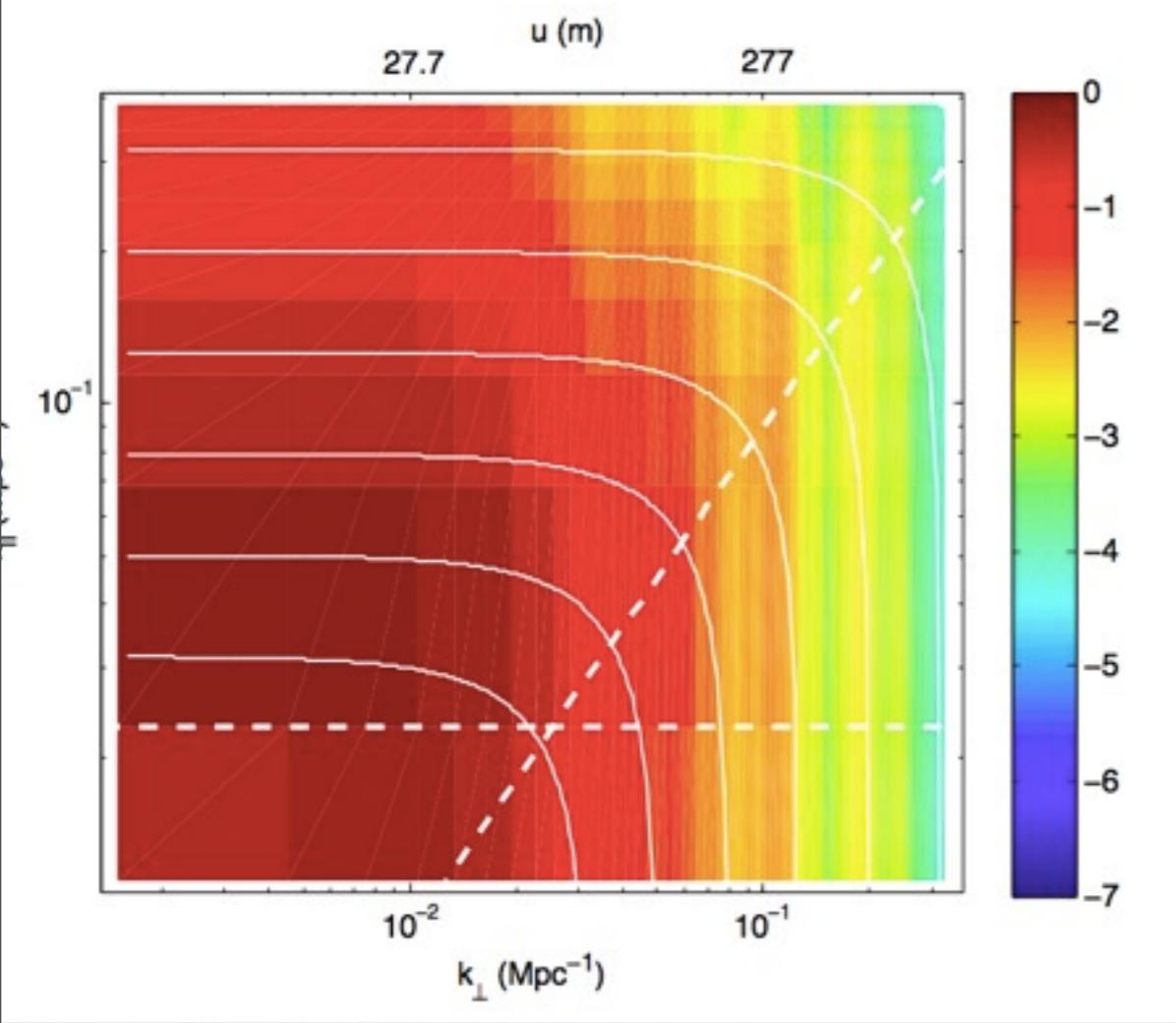
Morales 2012 (submitted)

The EoR Window



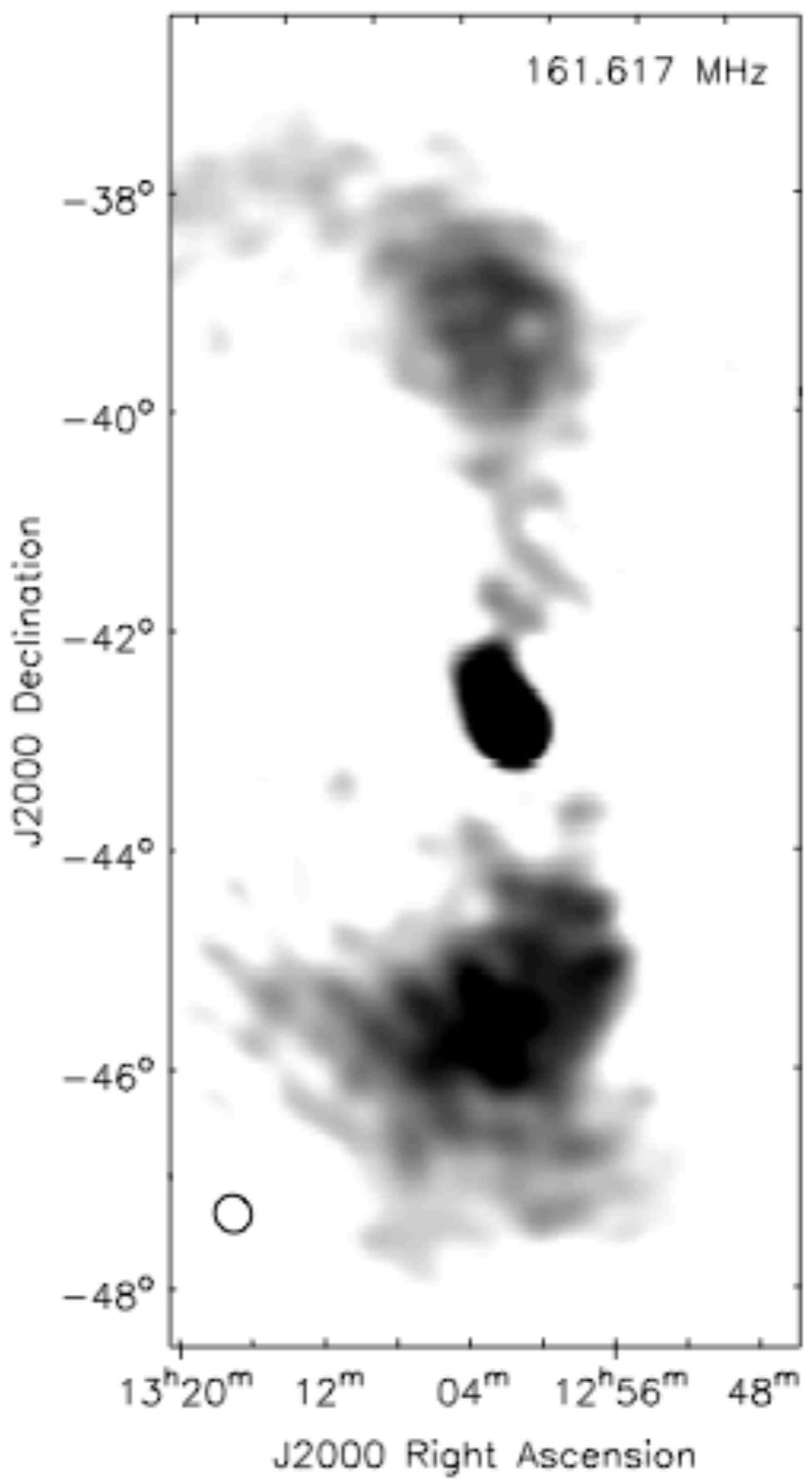
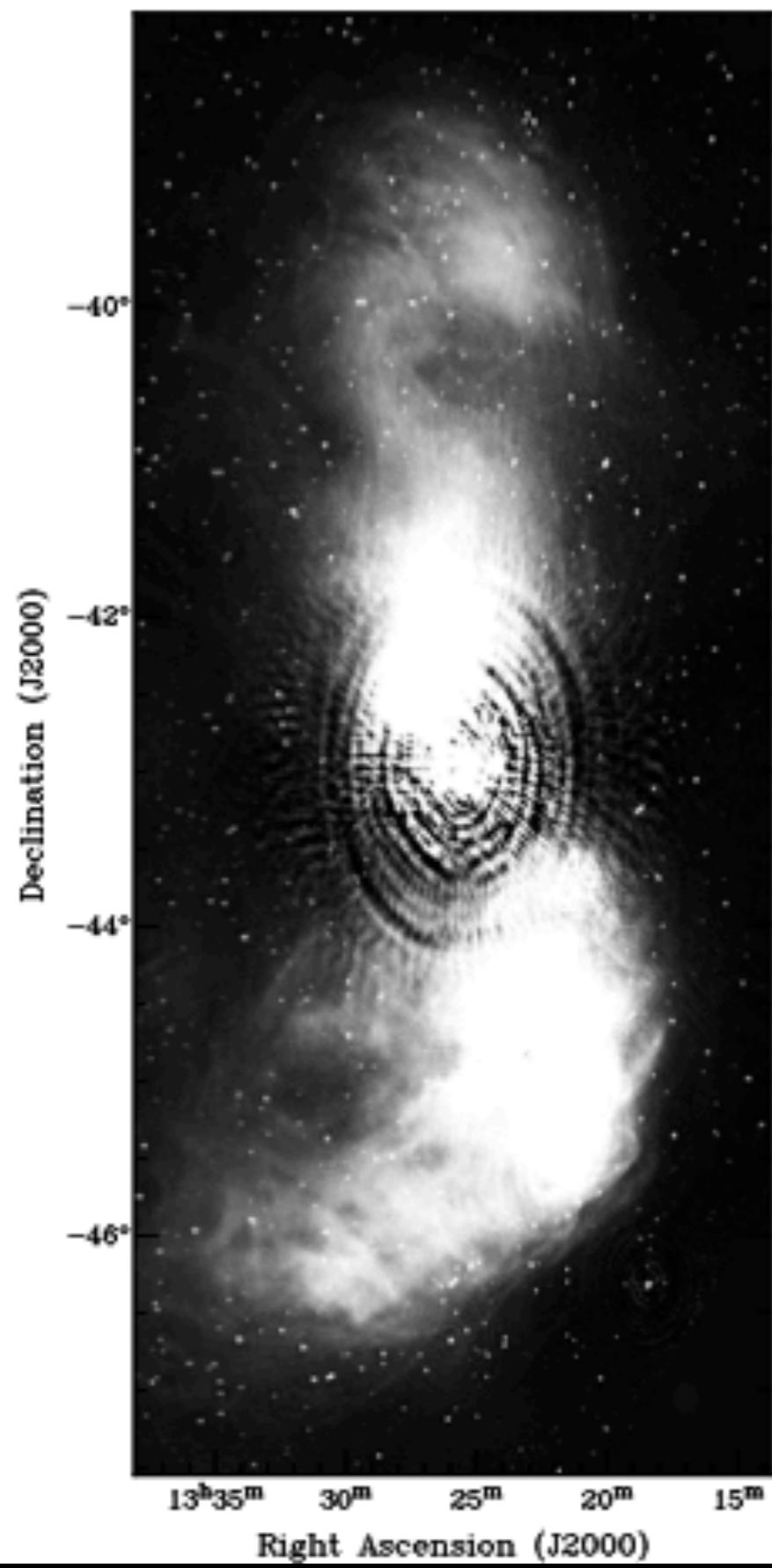
Williams thesis 2012

The EoR Window

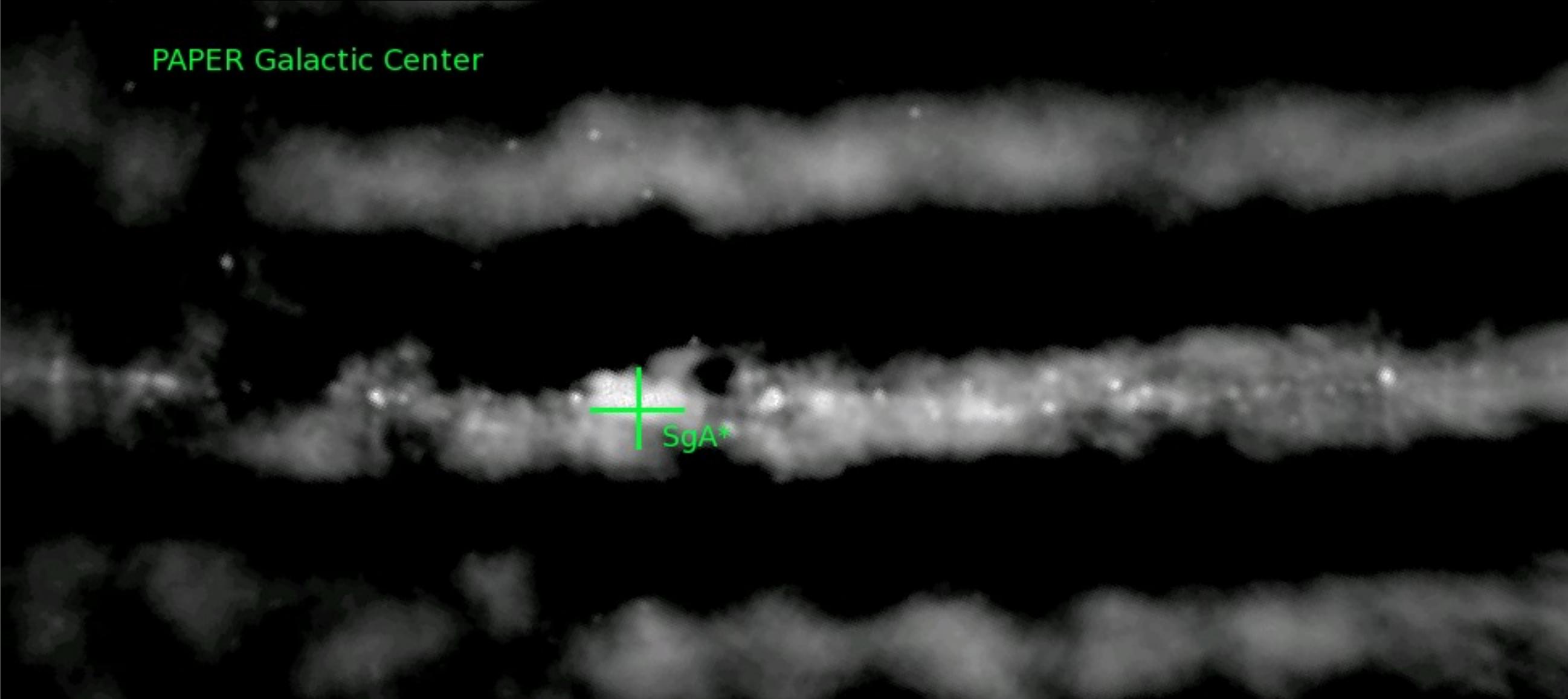


Beardsley, 2012 (submitted)

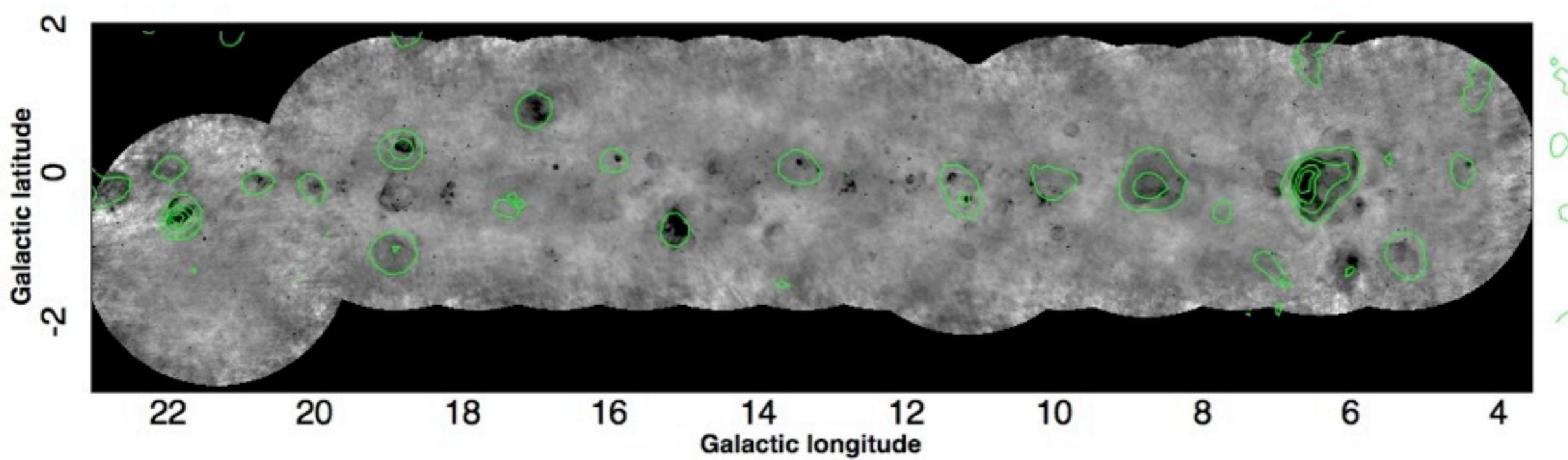
Williams thesis 2012



PAPER Galactic Center

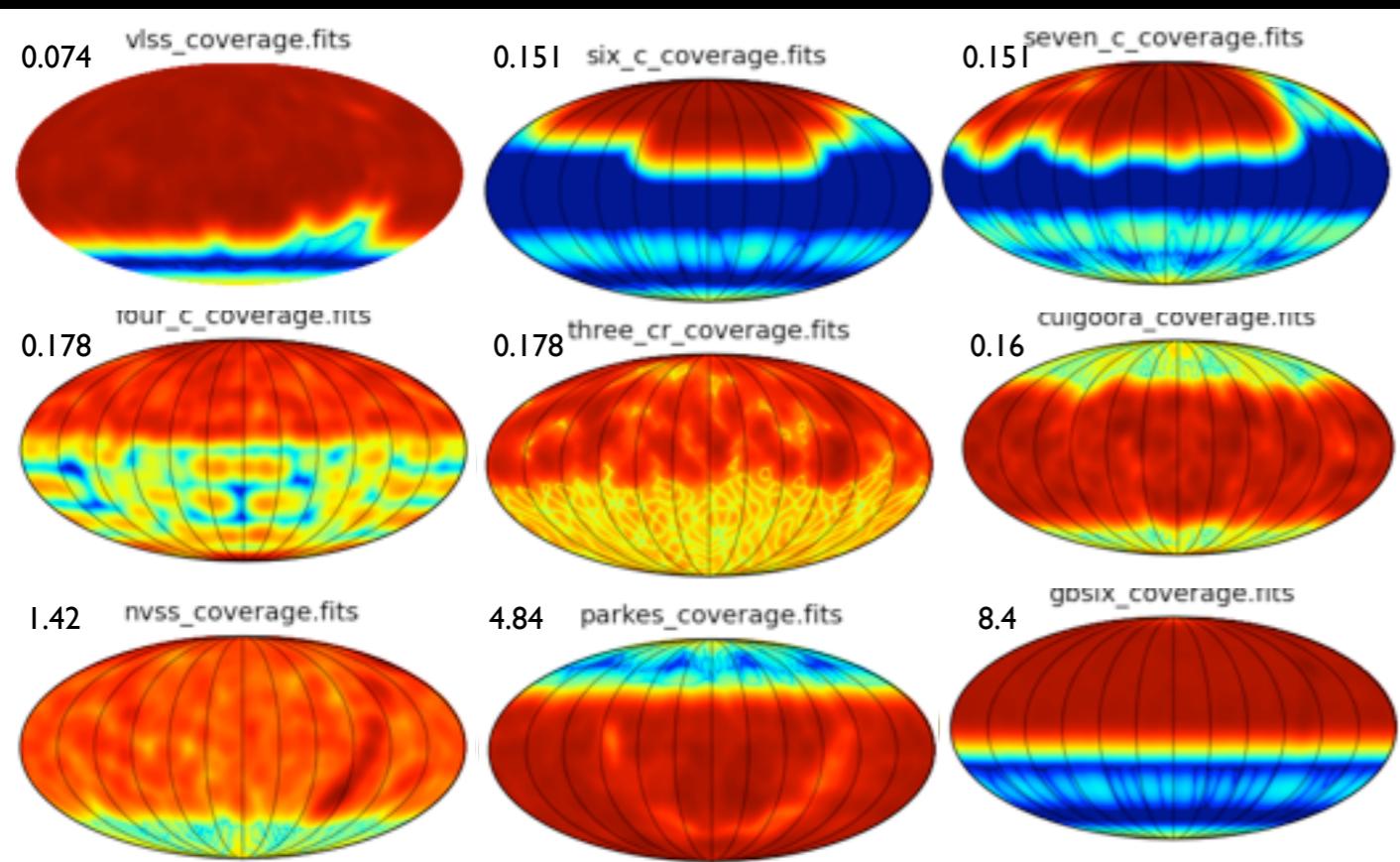


SgA*

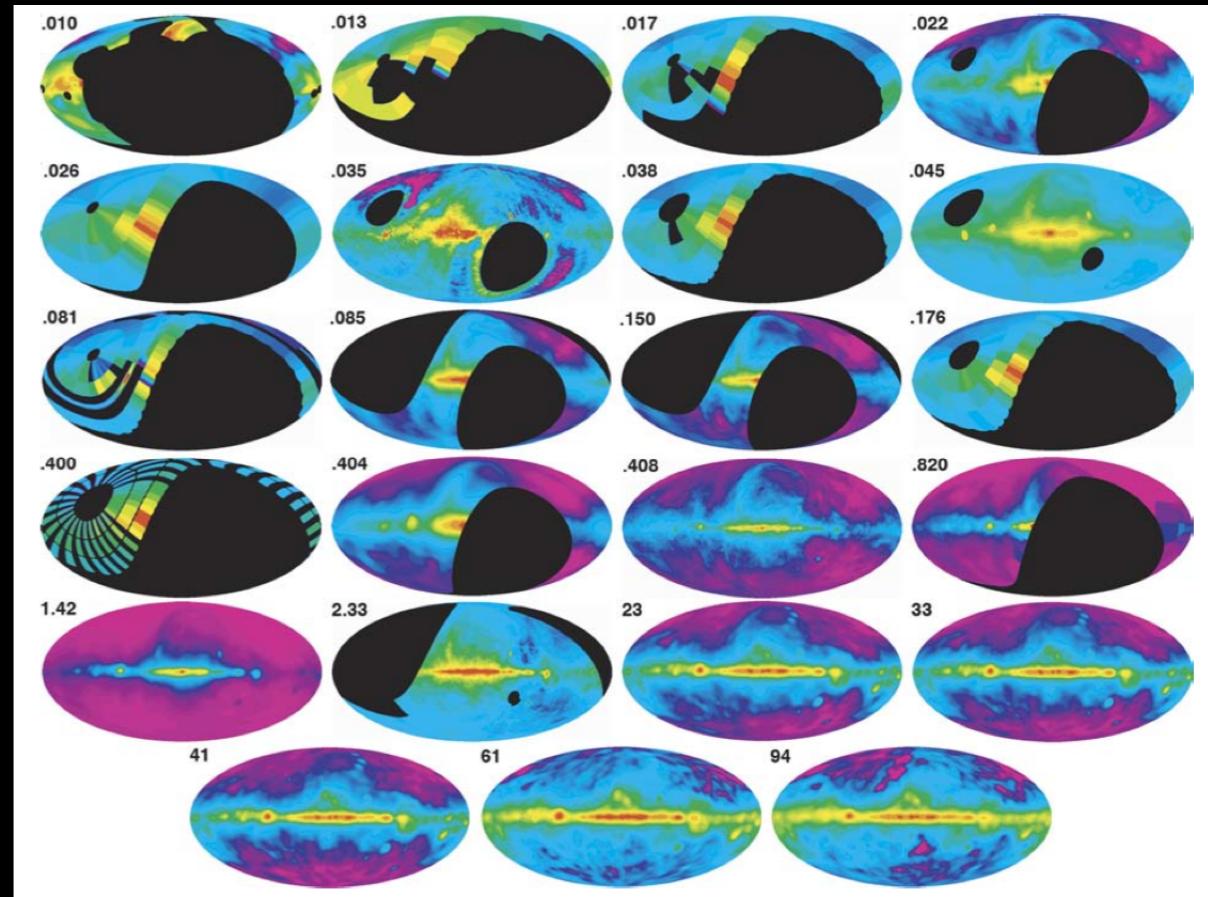


2m Inventory

Catalogs



large scale

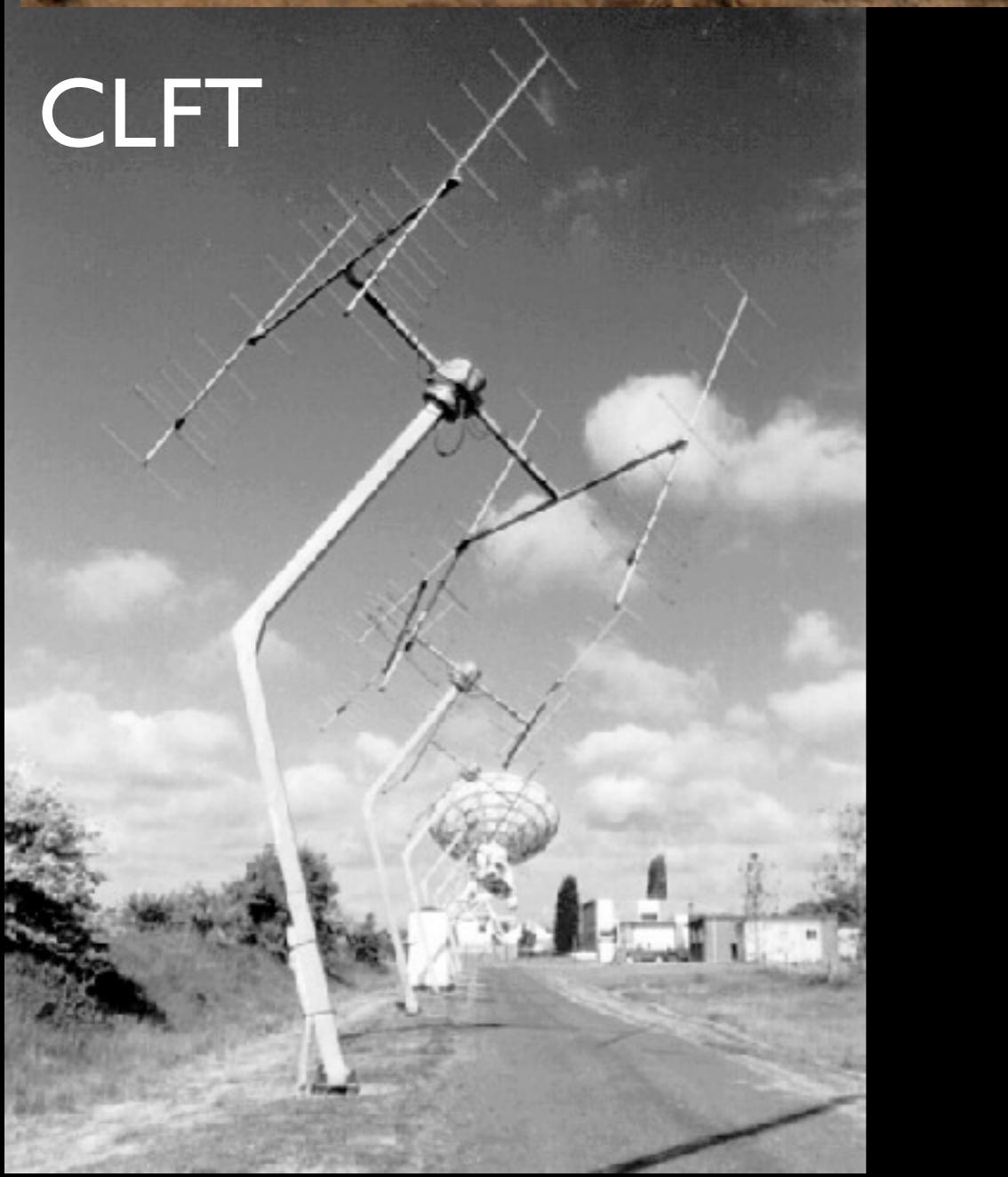


de Oliveira-Costa et-al 2008

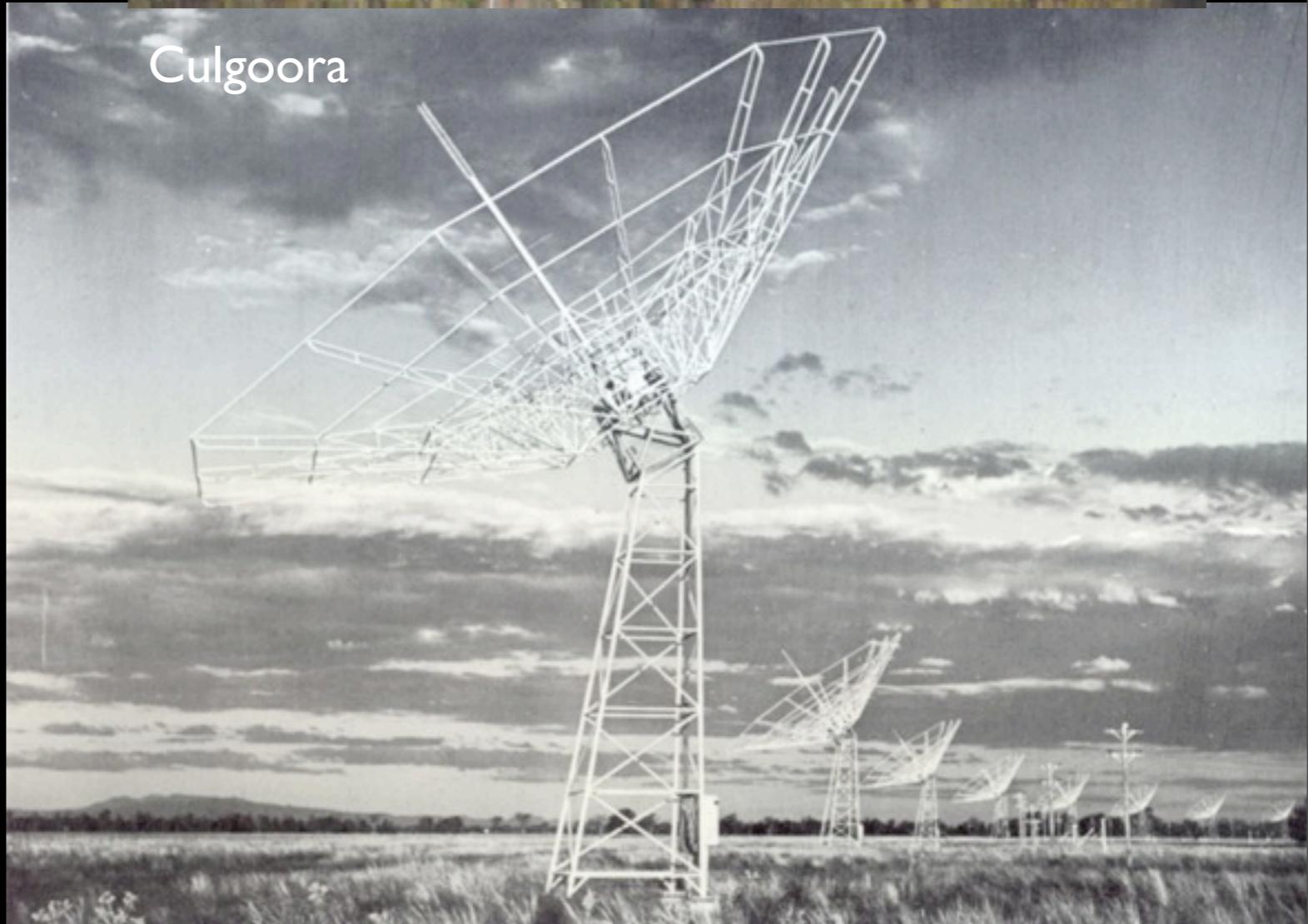
VLSS



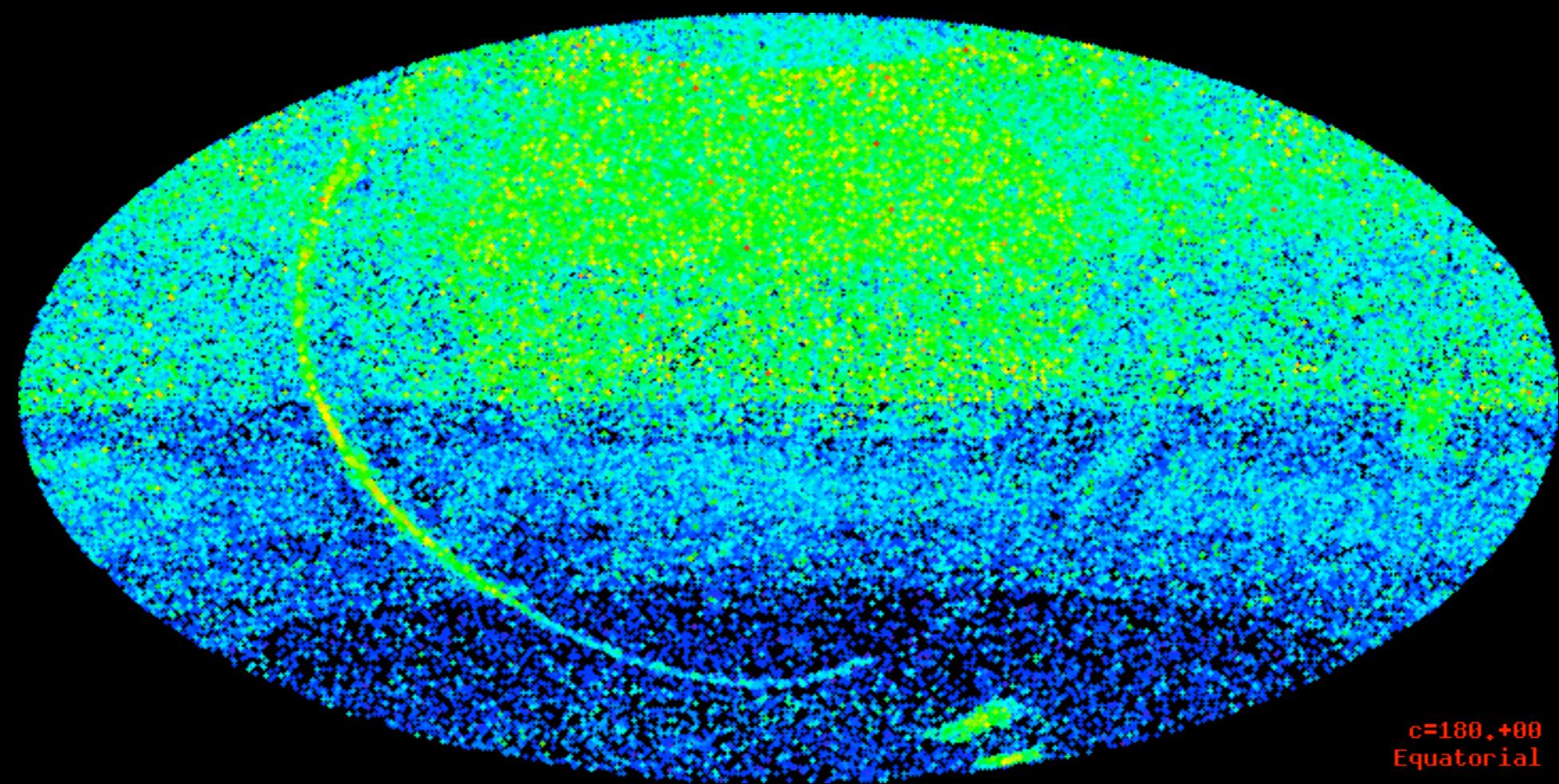
CLFT



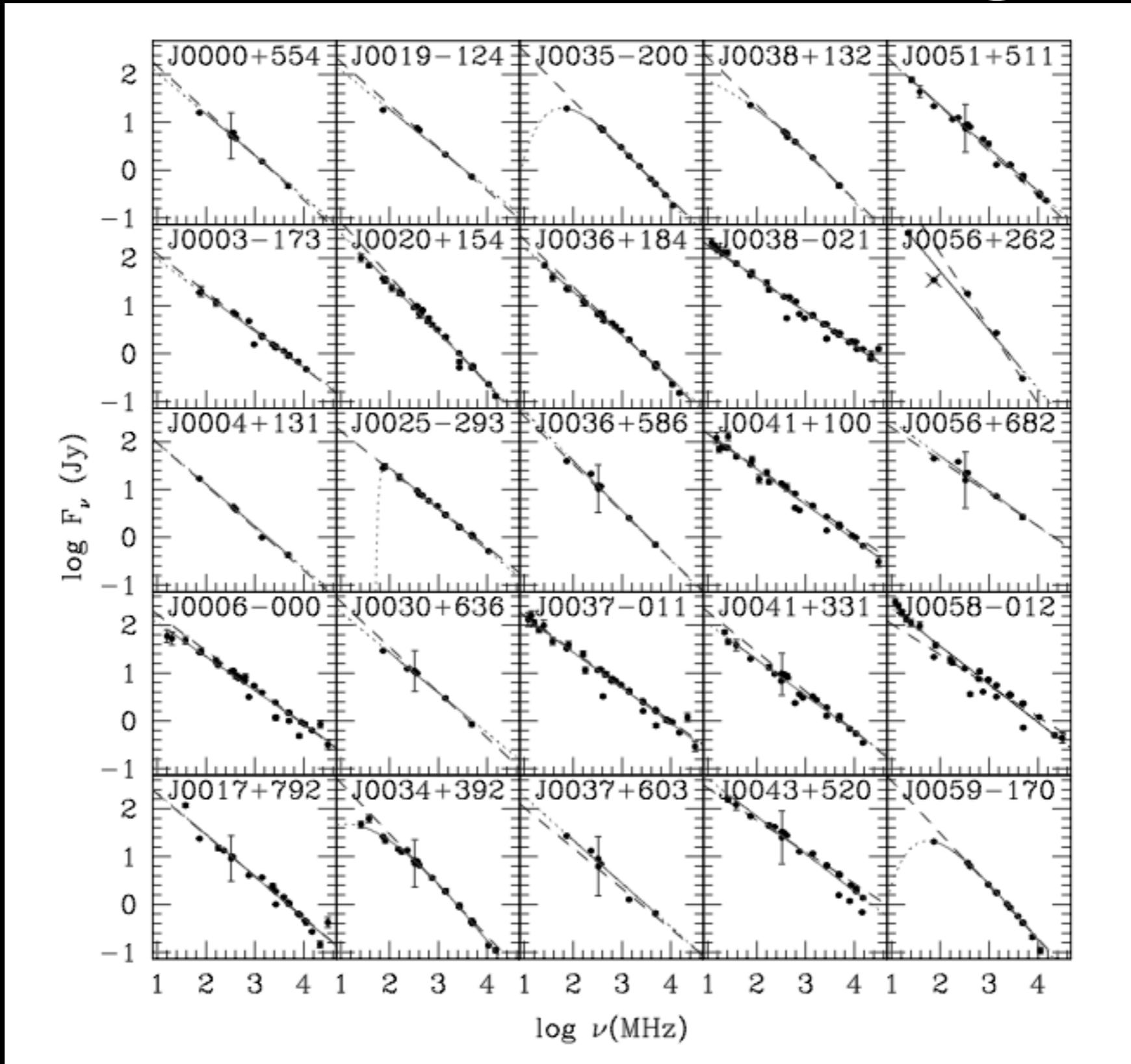
Molonglo

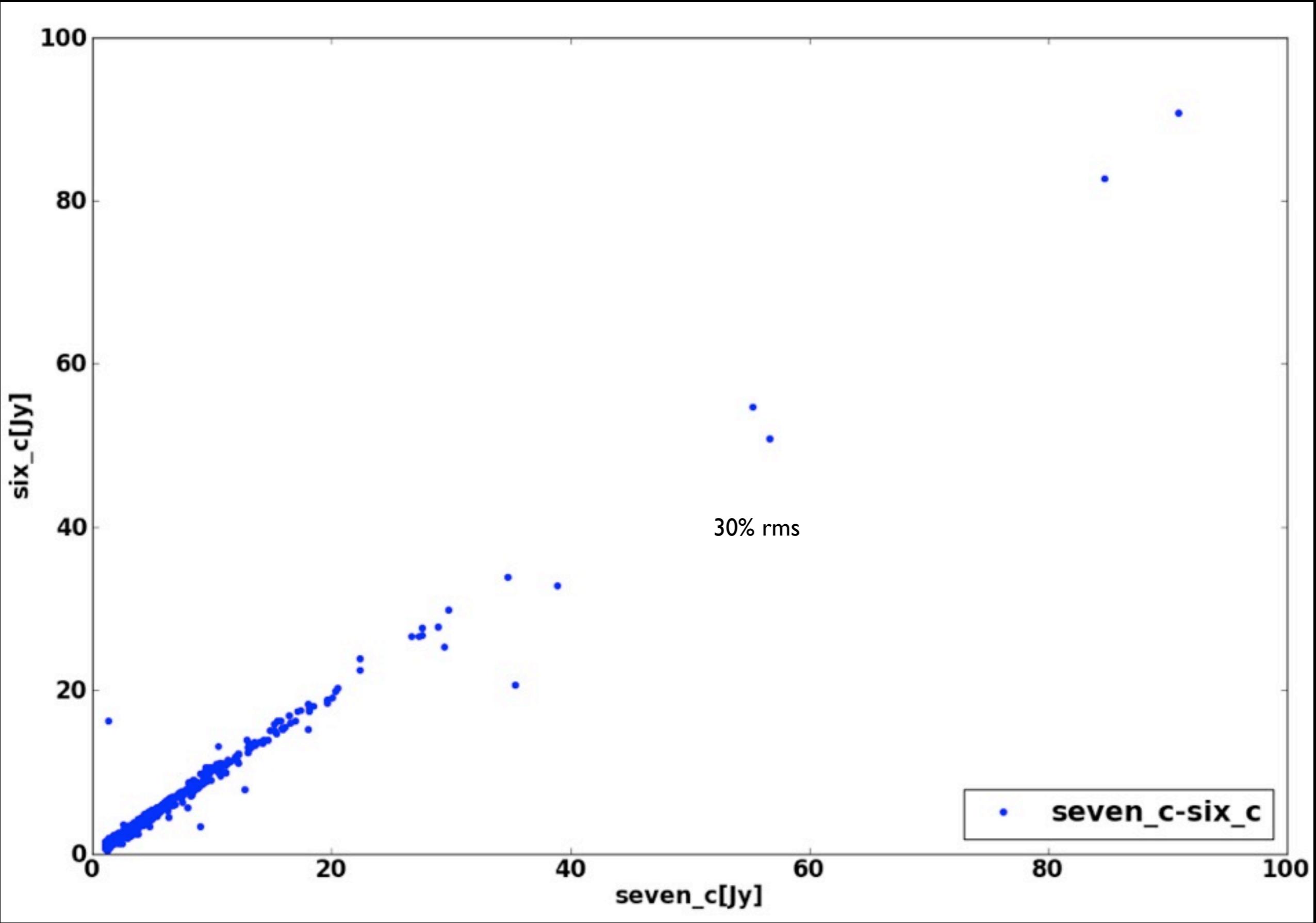


Culgoora

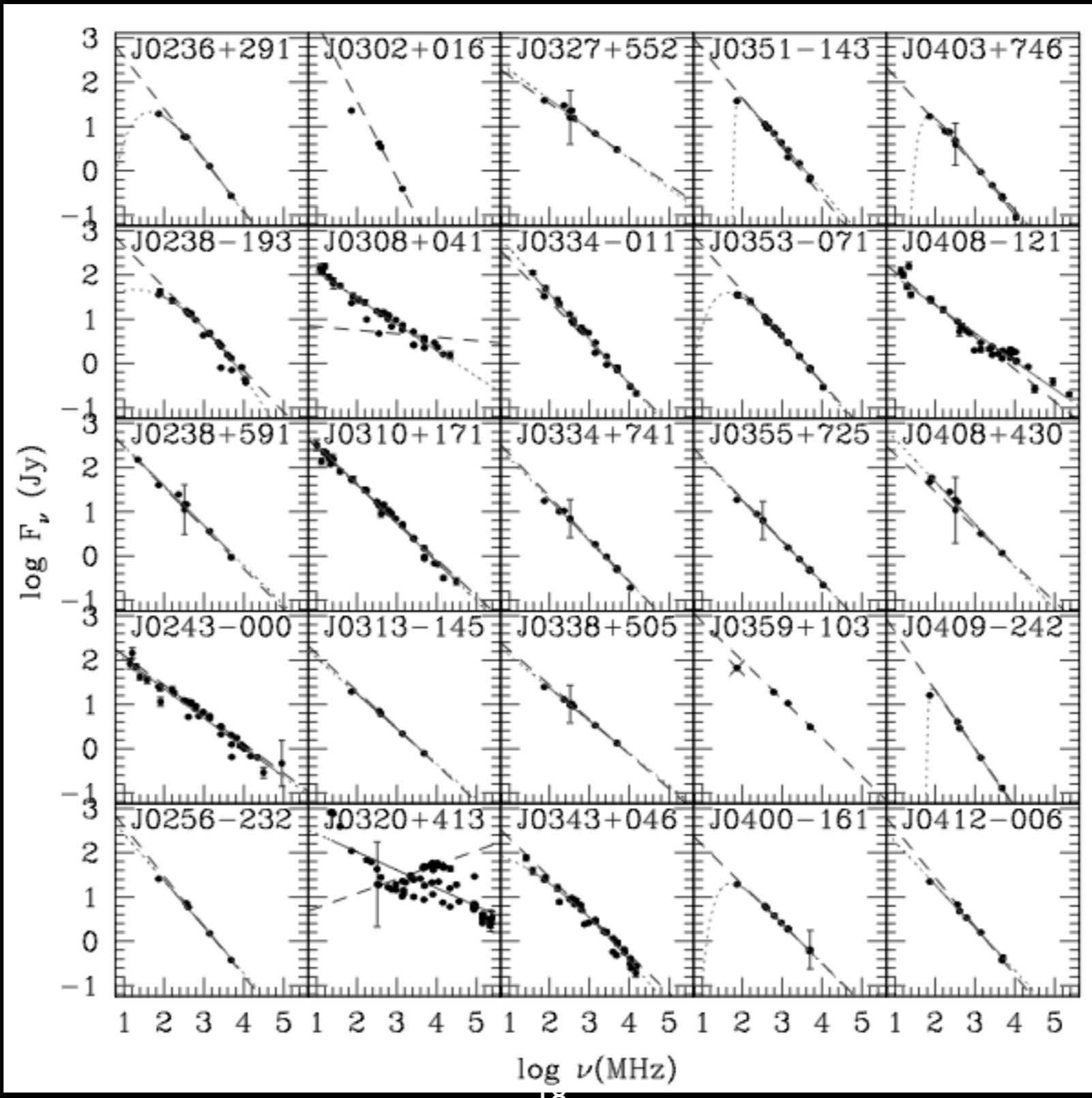


How well do catalogs do?

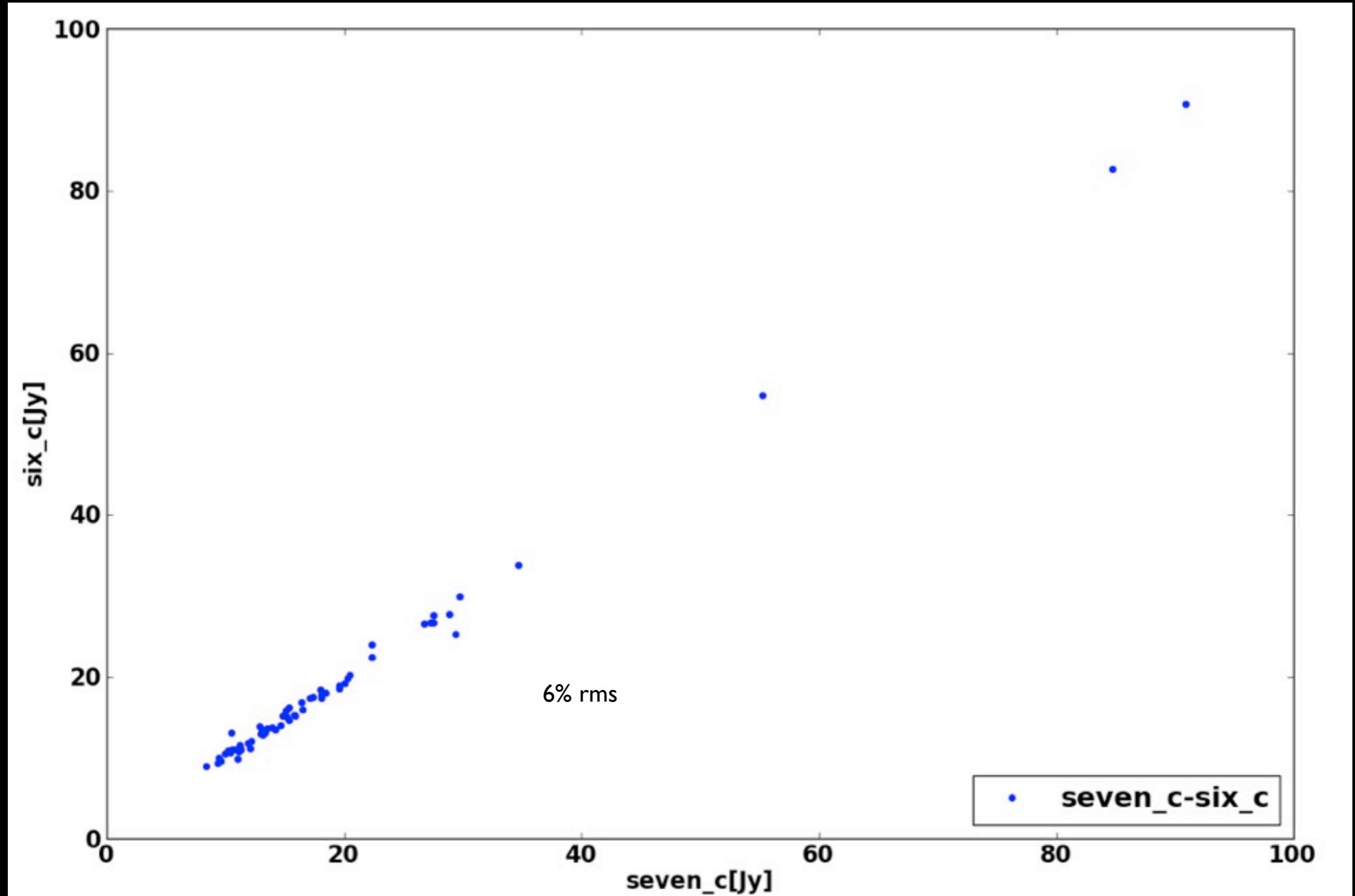




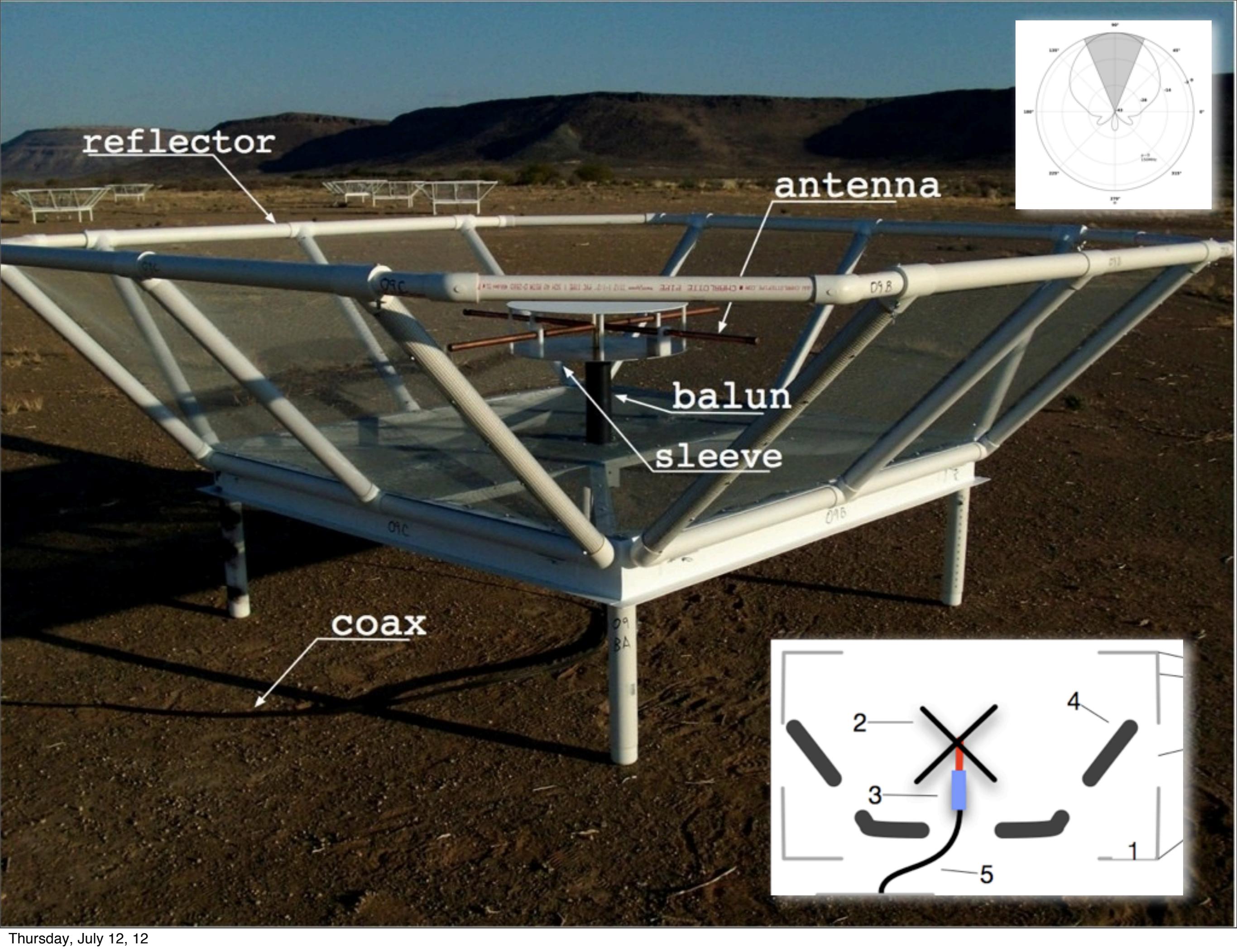
How well do catalogs do?



“Gold Standard” Sources













PSA 16

2009

PSA32 Grid

2012



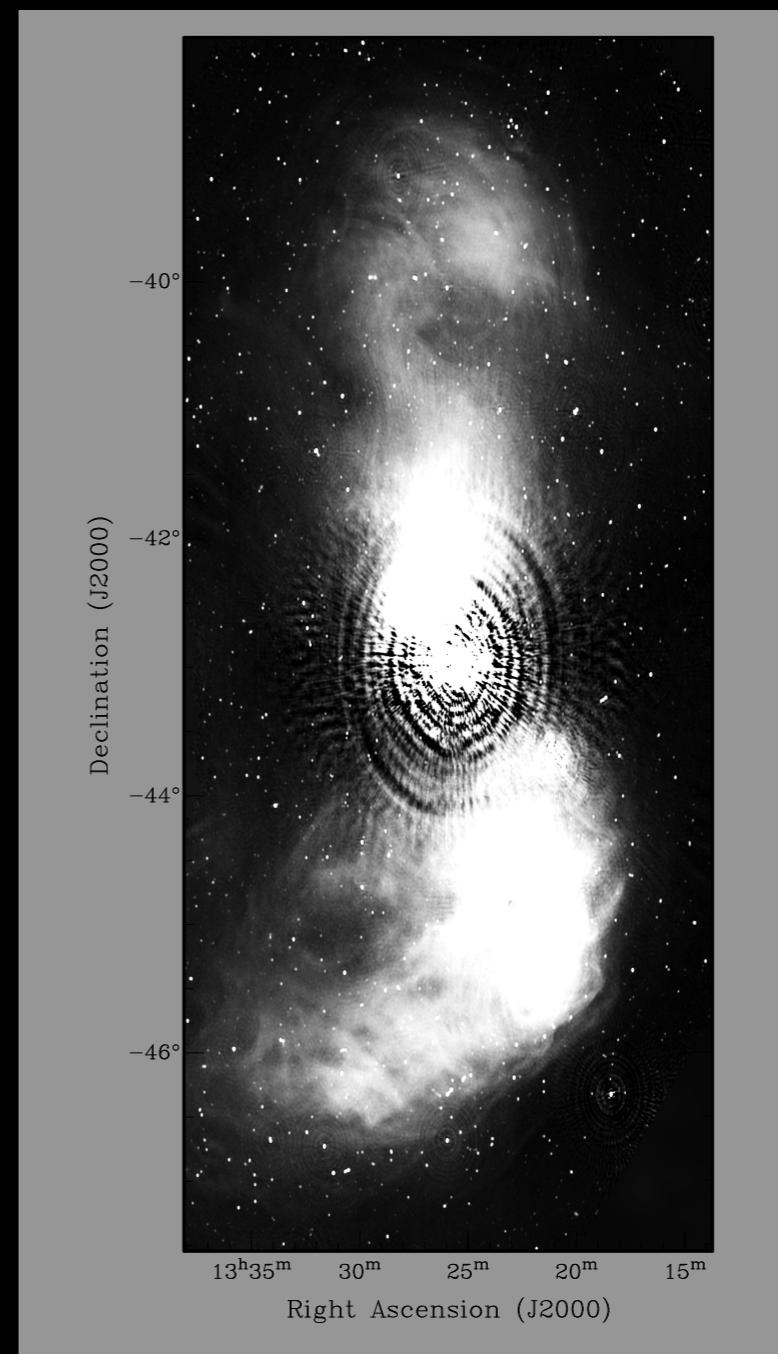
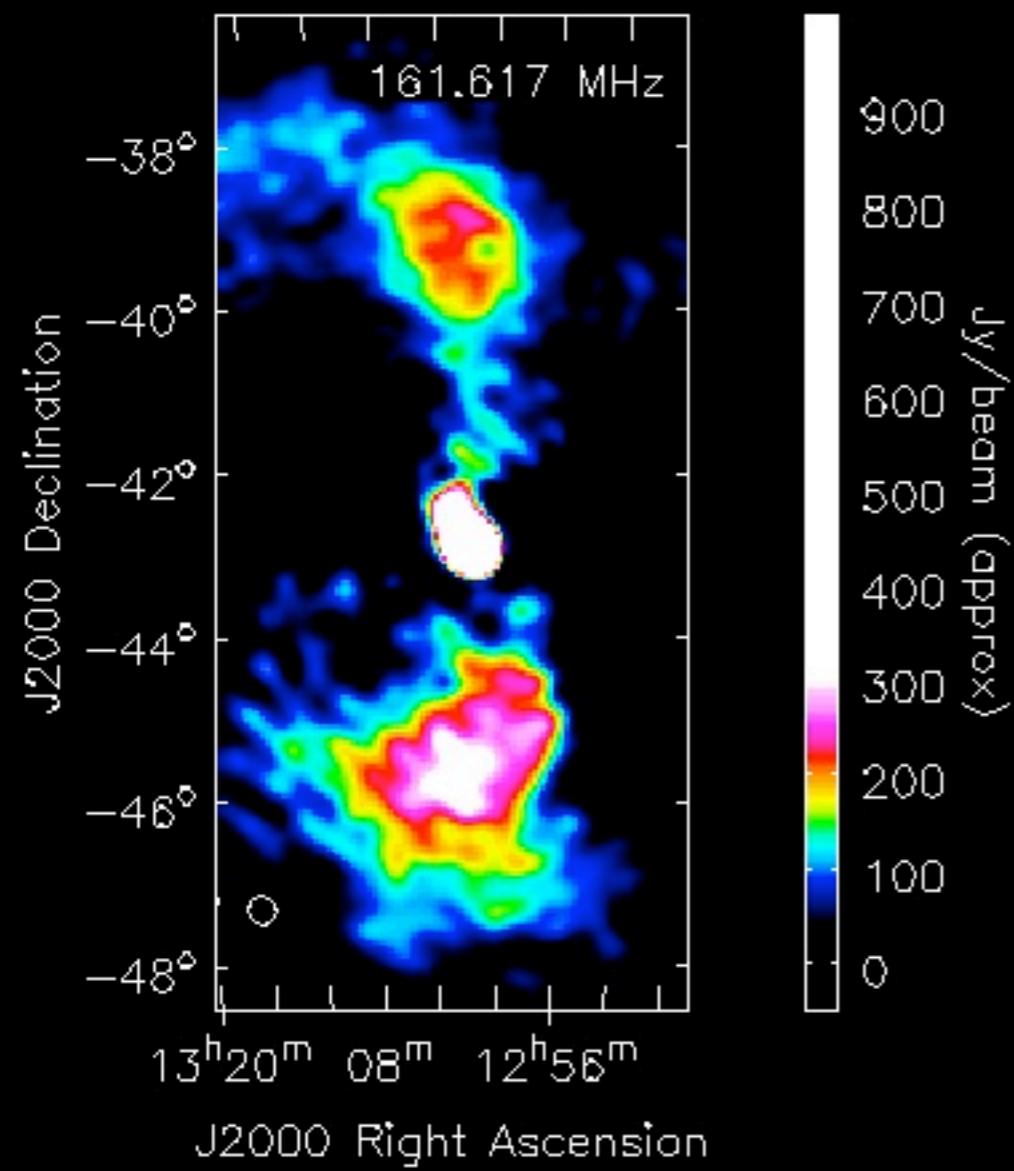
PSA64

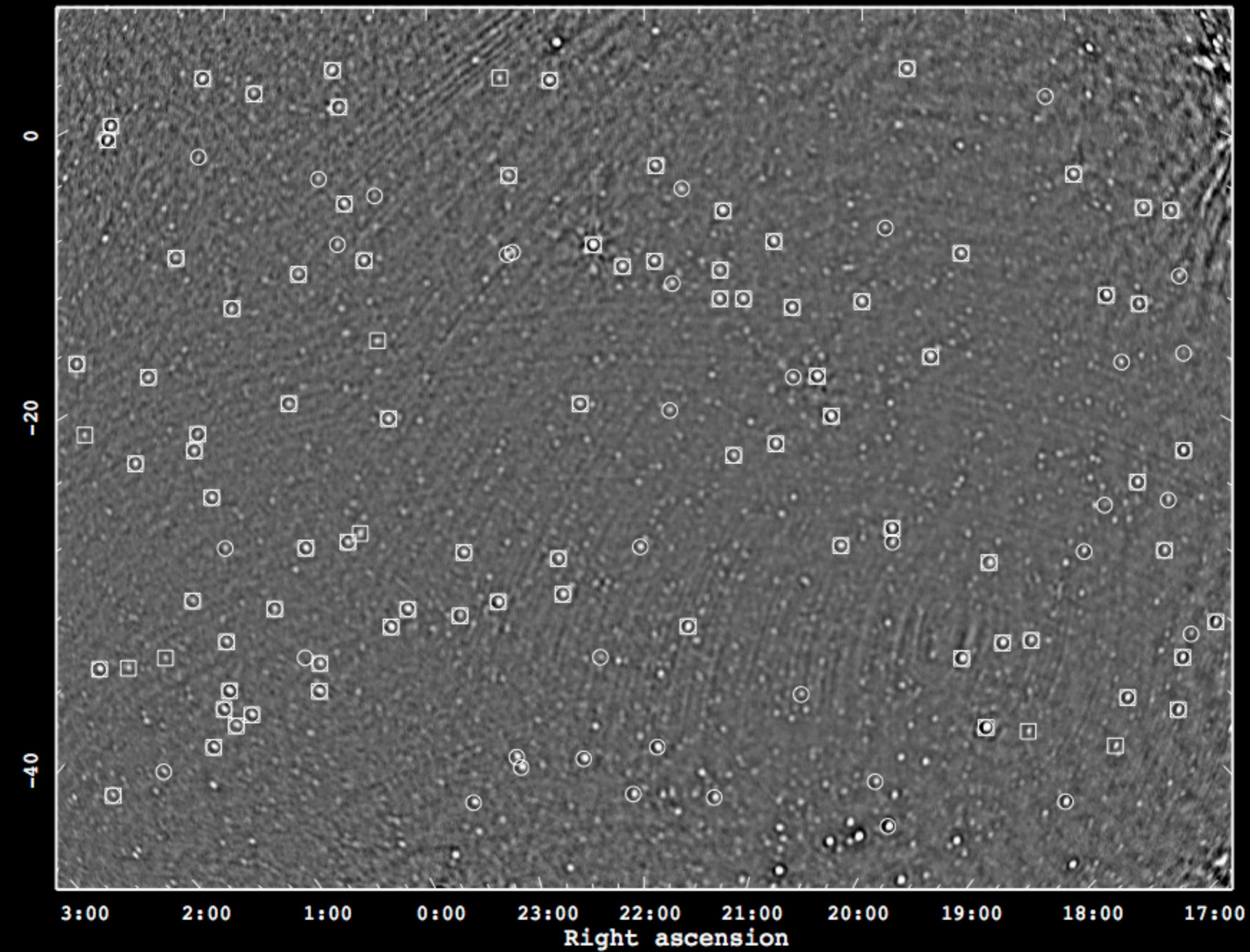
2011

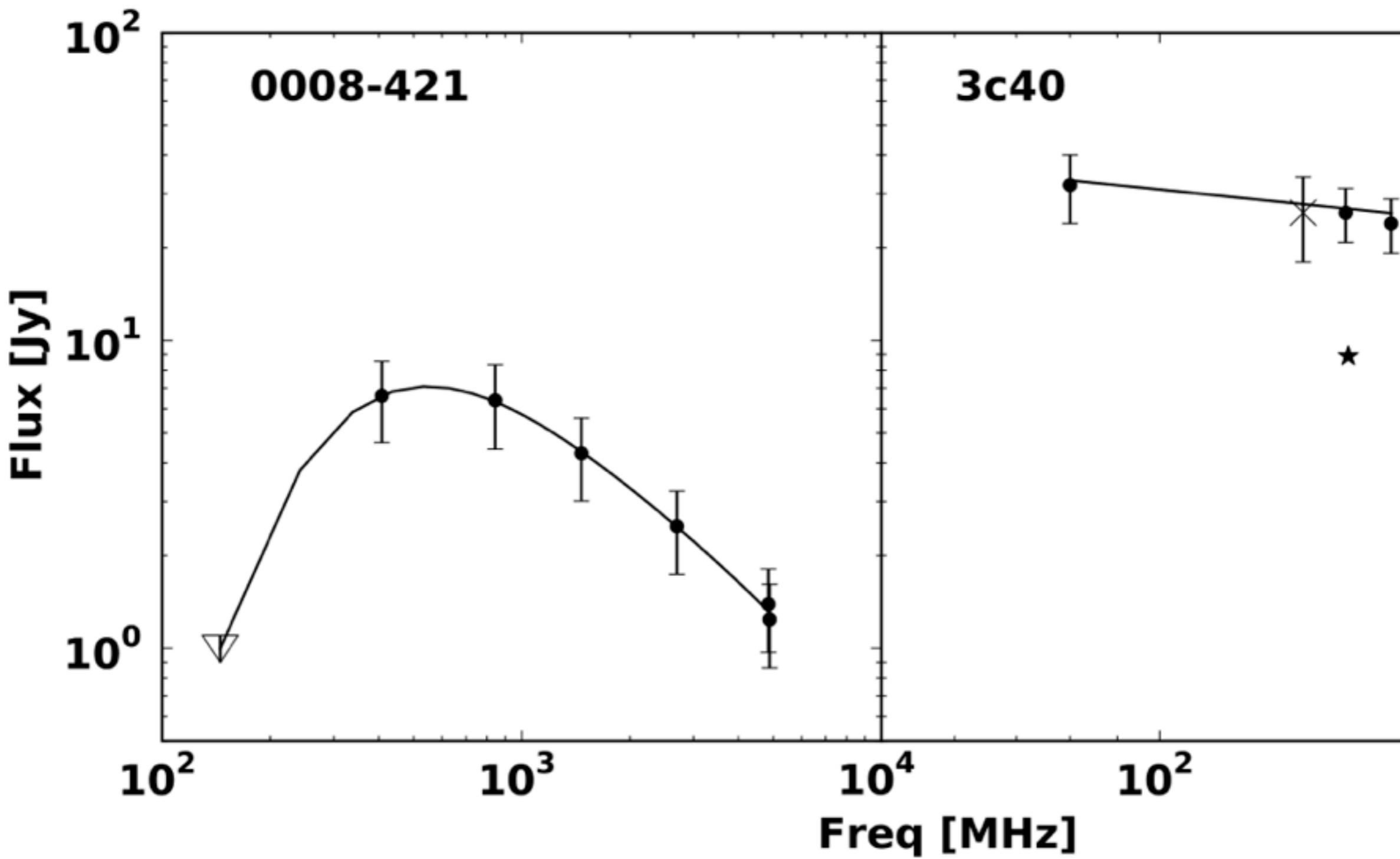


PAPER

Parkes/ ATCA

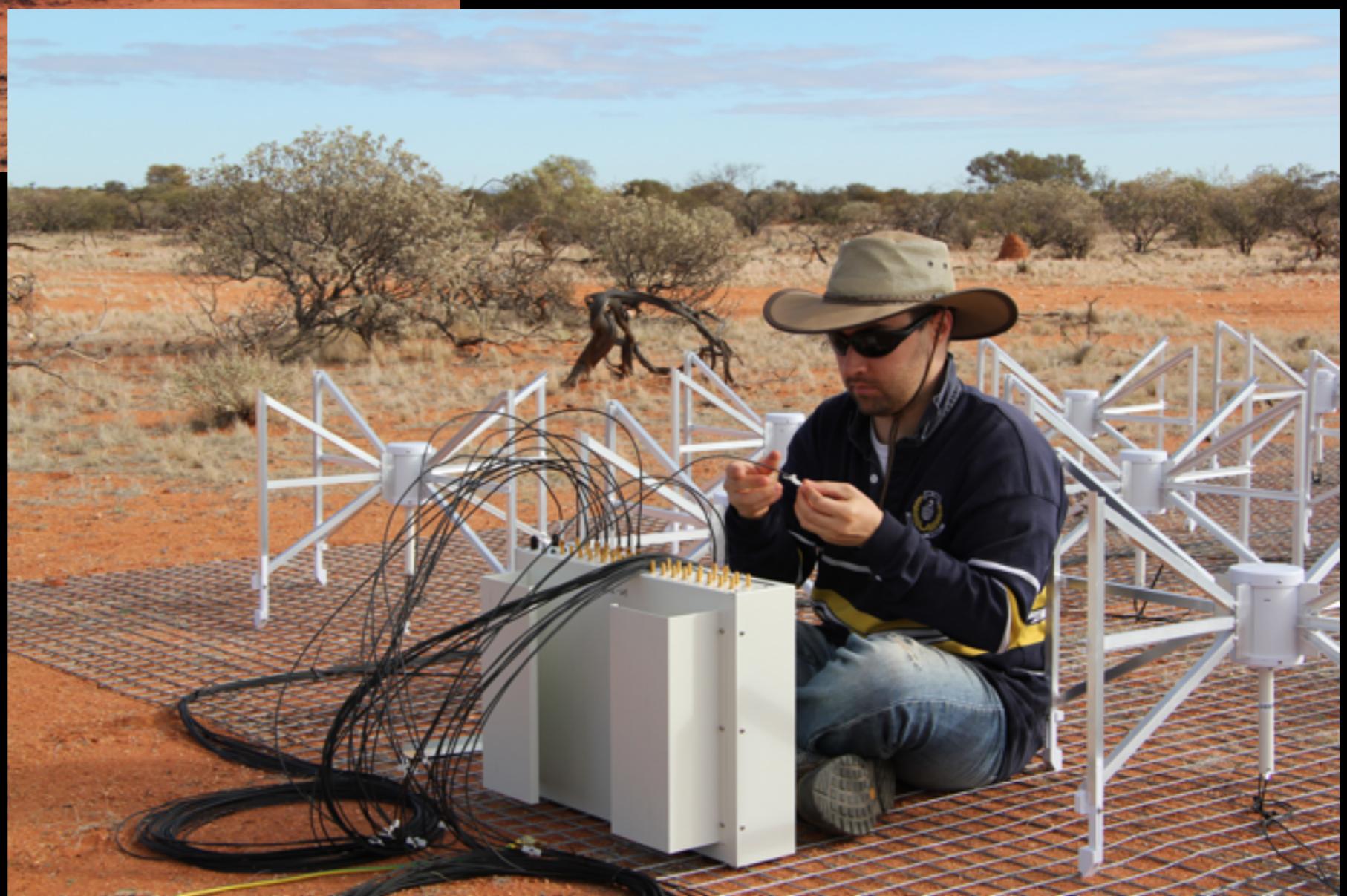


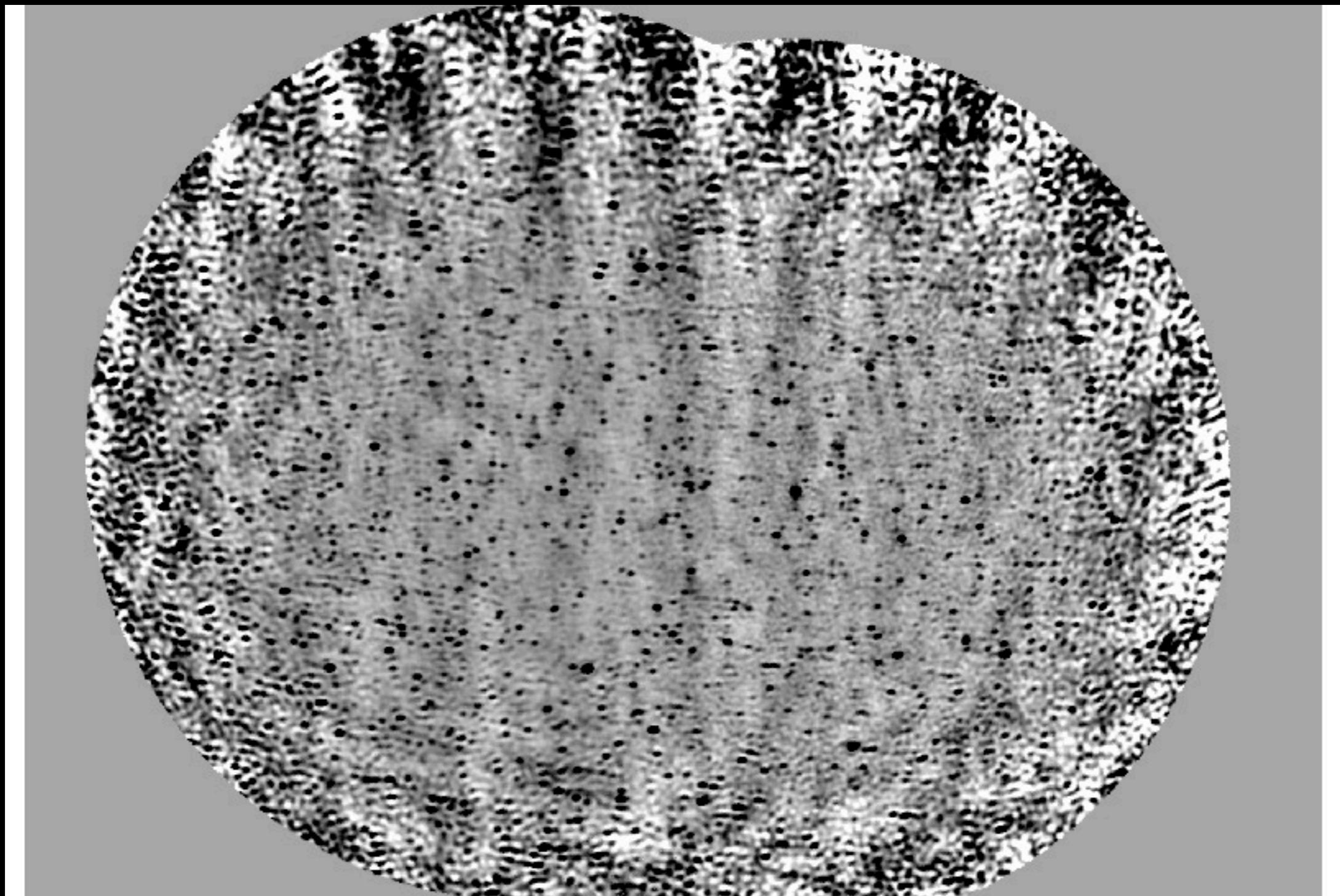




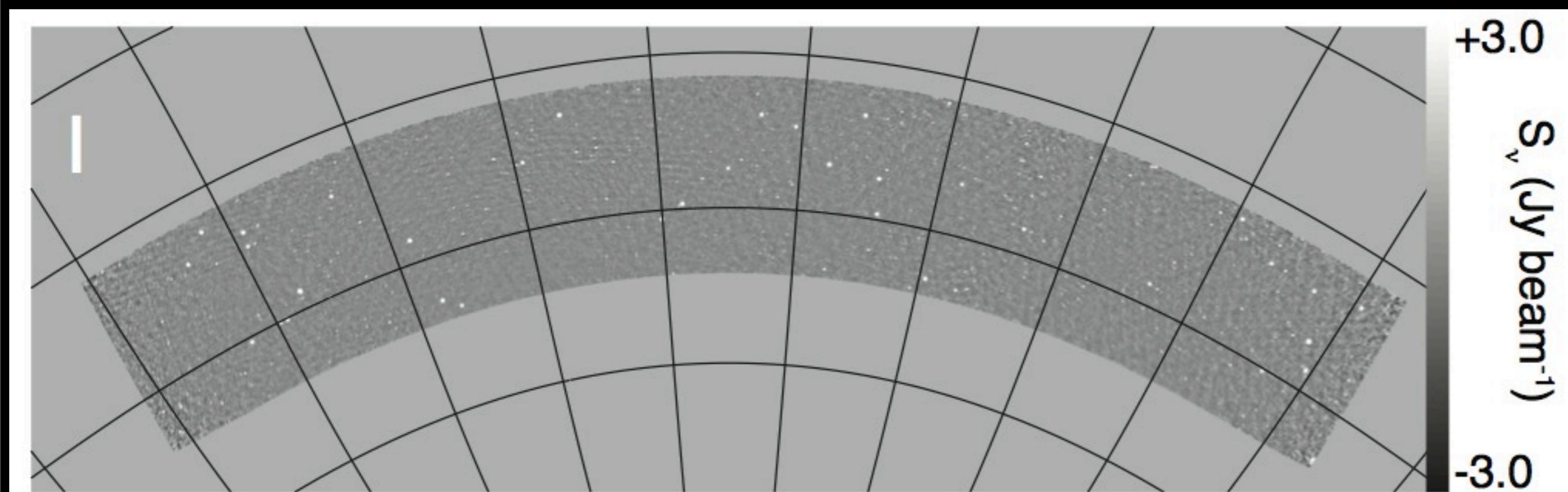


MWA128
2012

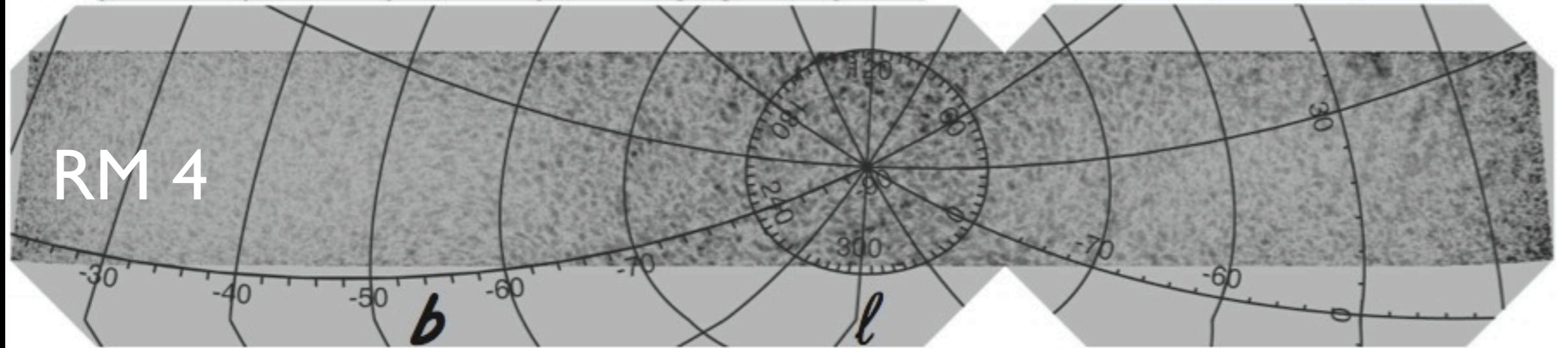
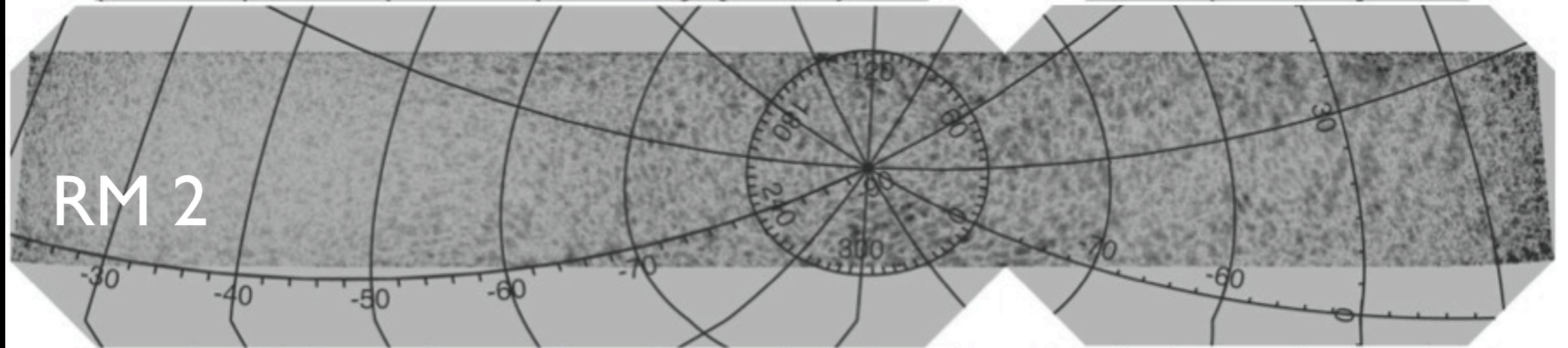
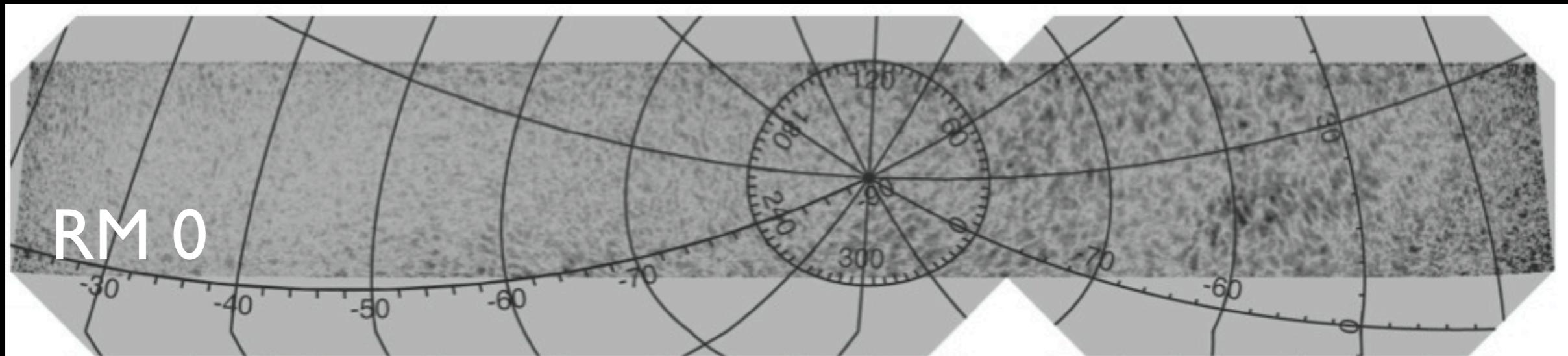




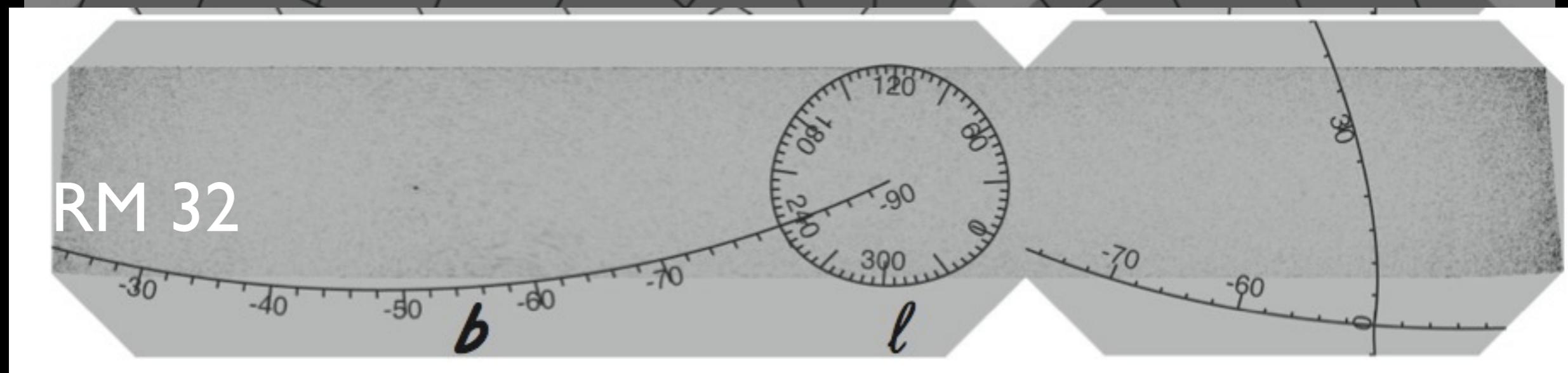
MWA32 2011



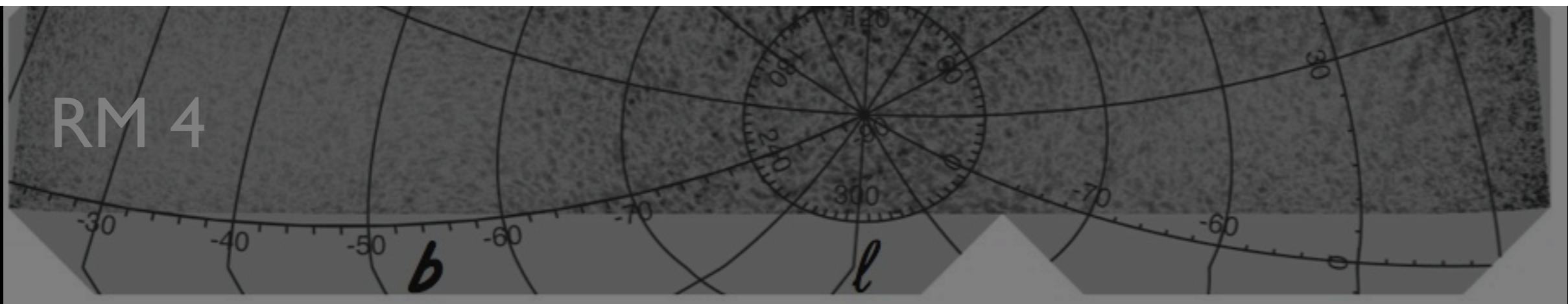
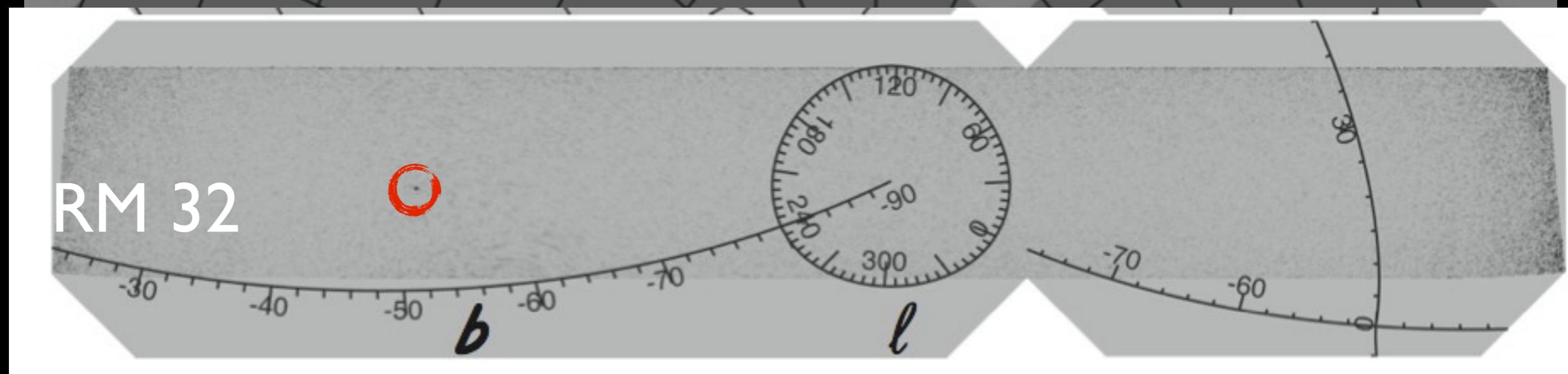
Bernardi in prep 2012



Bernardi in prep 2012



Bernardi in prep 2012



Bernardi in prep 2012

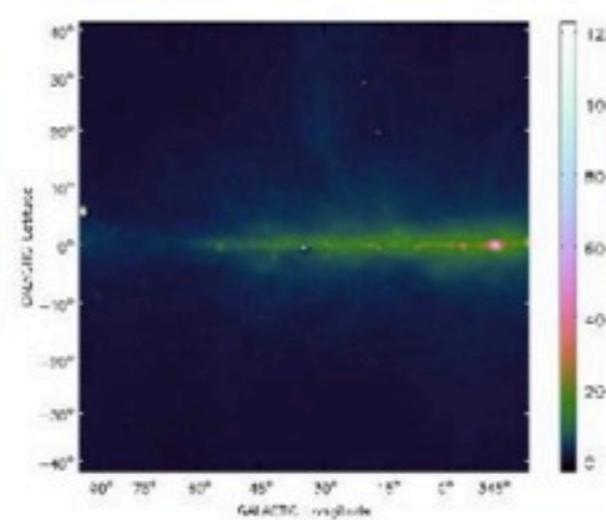
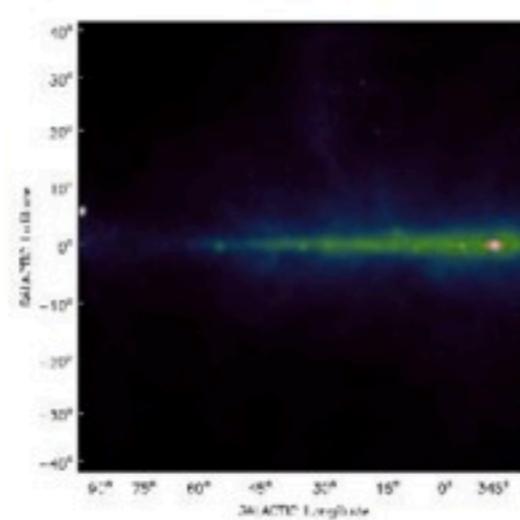
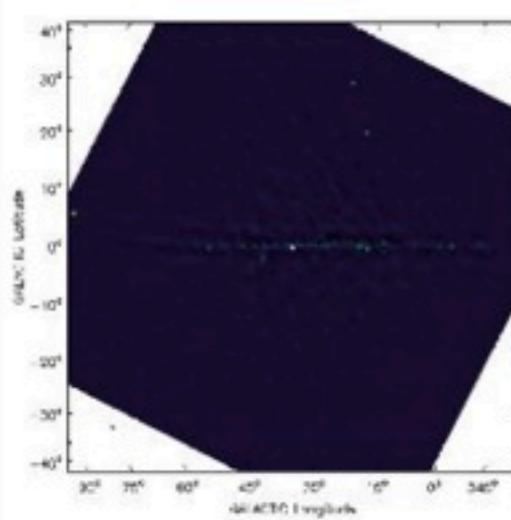


Murchison Widefield Array Timeline Now Highlights

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funding cuts
statement on NRAO 81



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

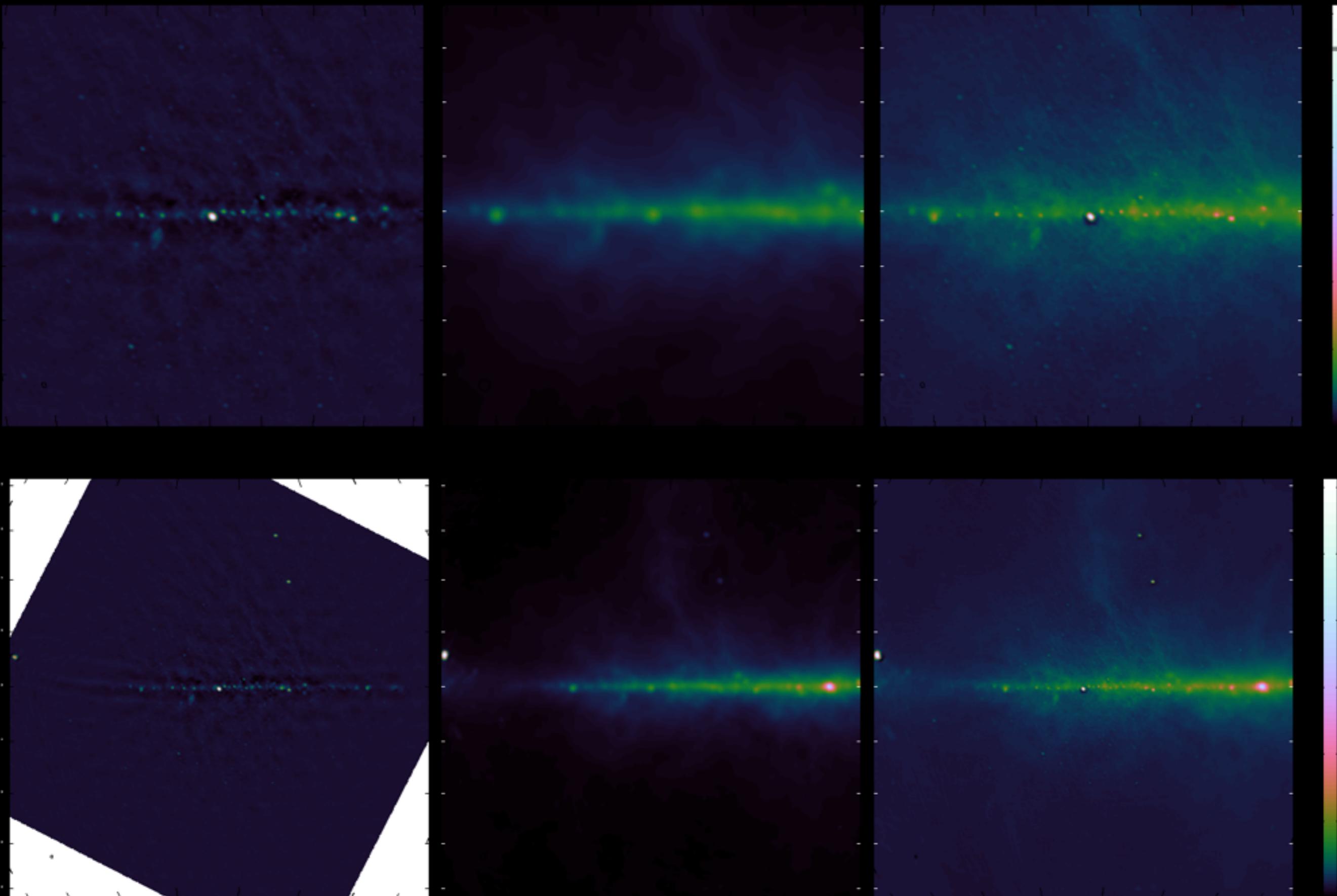
 Paolo de Marchi E' una immagine del piano
della via lattea ricavata dai radio telescopi
See Translation
June 27 at 9:47pm · Like · 21

 Paolo de Marchi stanno costruendone una

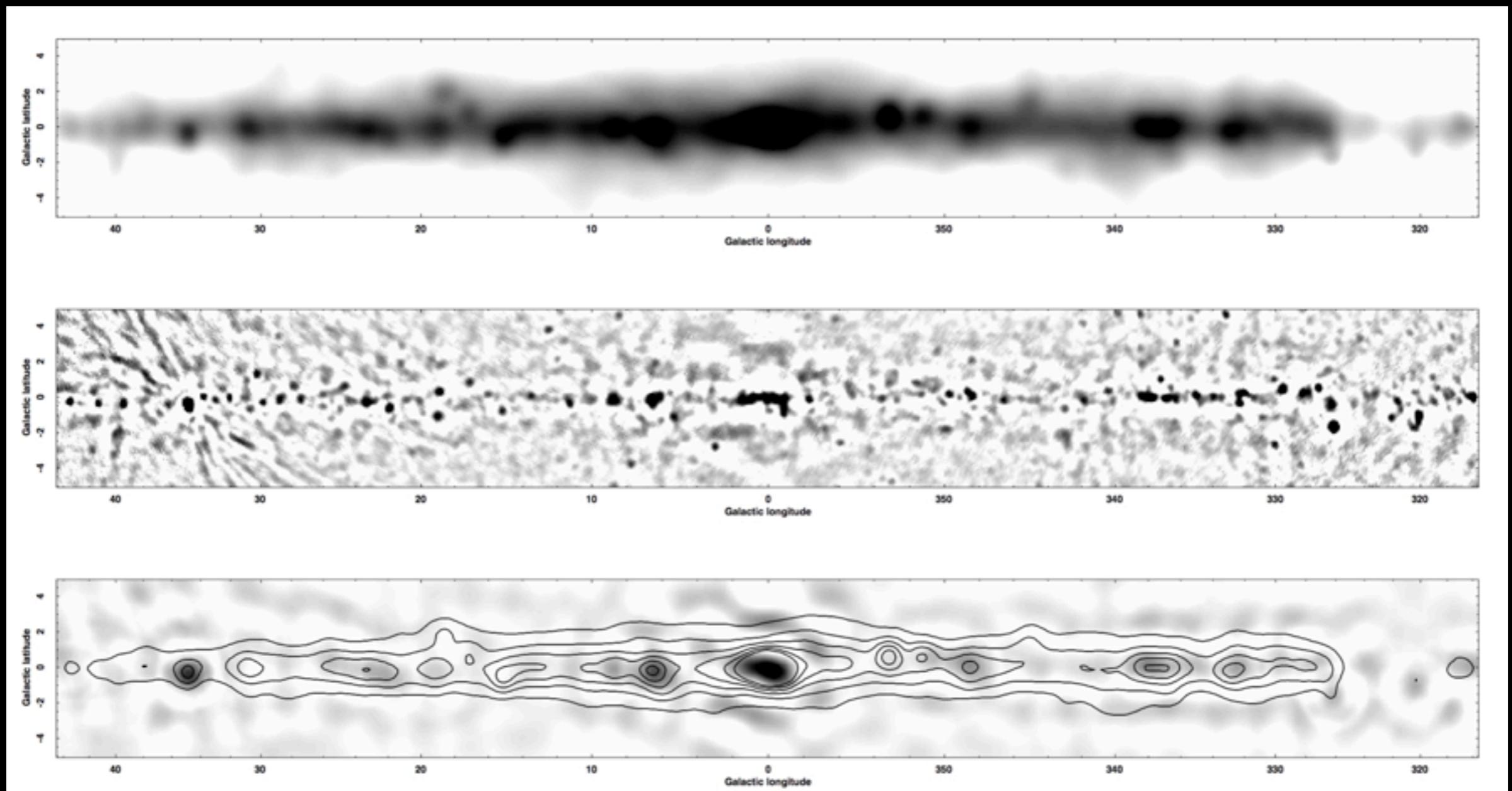
 Write a comment...

60/128 fully functional MWA tiles completed. Good luck
army!

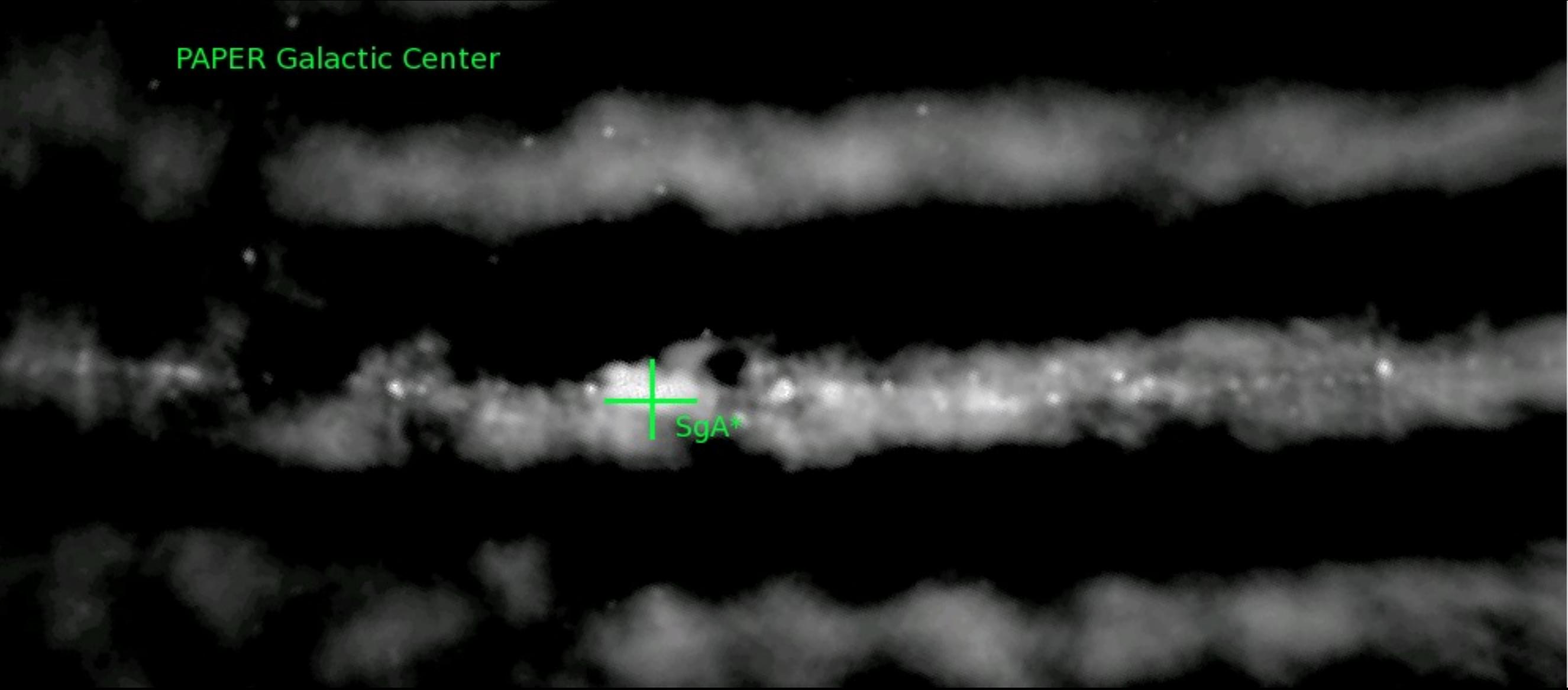
Go online to see who's
to chat



N. Hurley Walker 2012 MWA32



PAPER32 2011

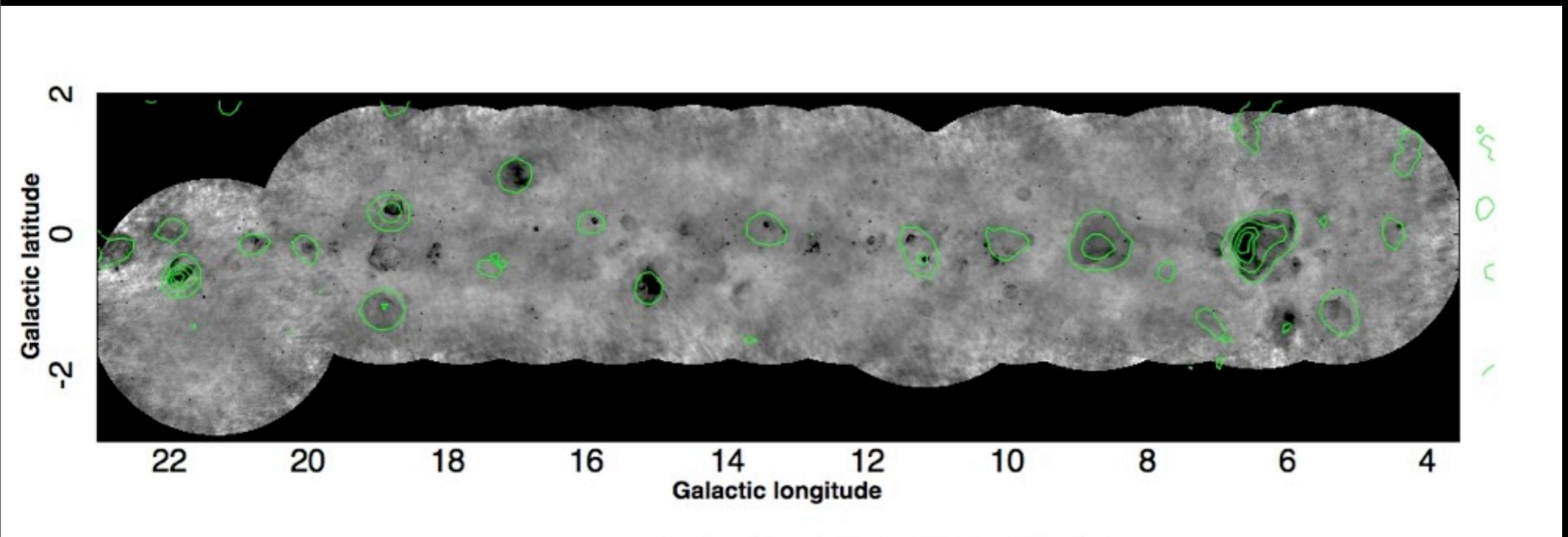


PAPER Galactic Center

+

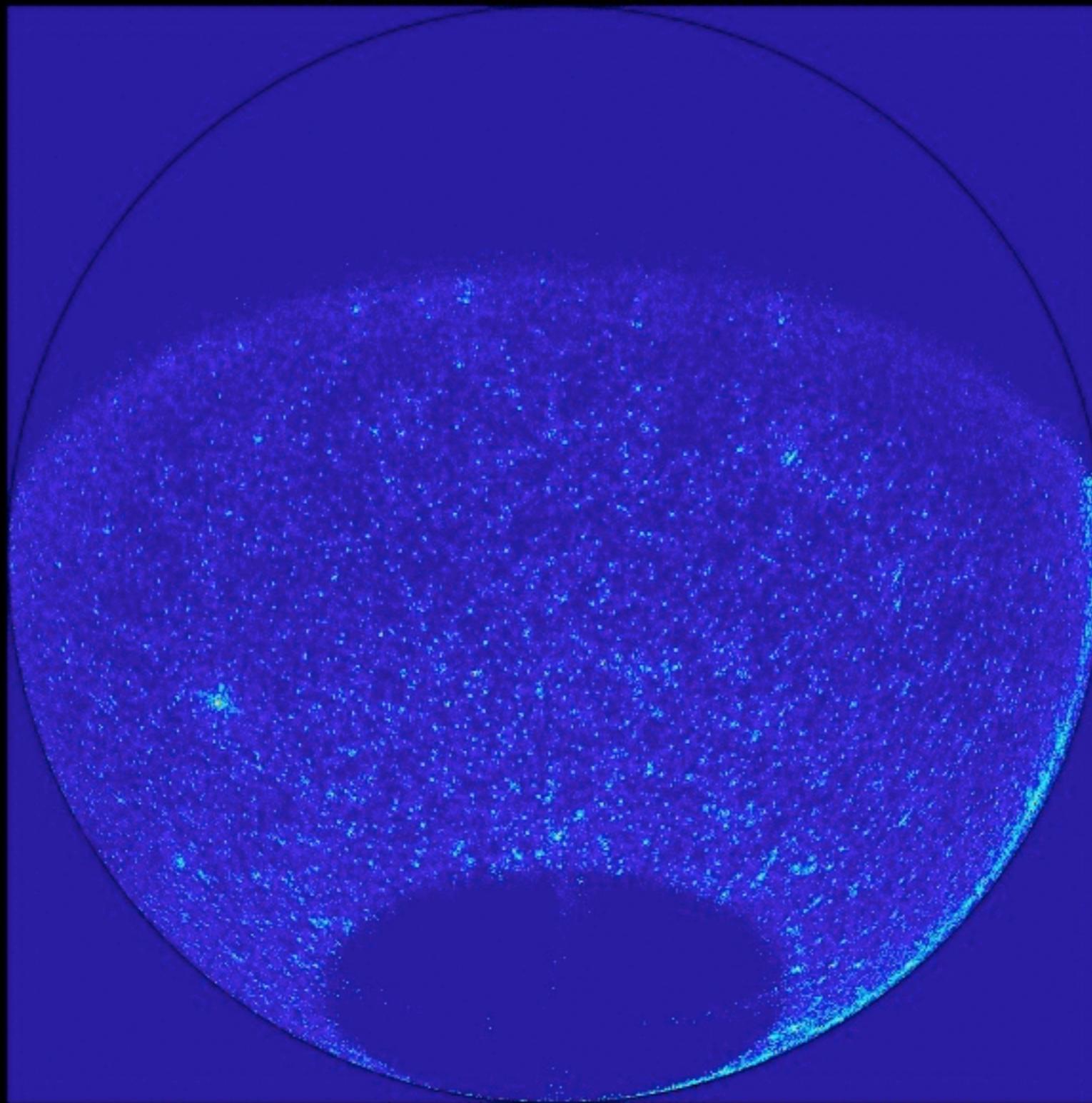
SgA*

PAPER32 2011



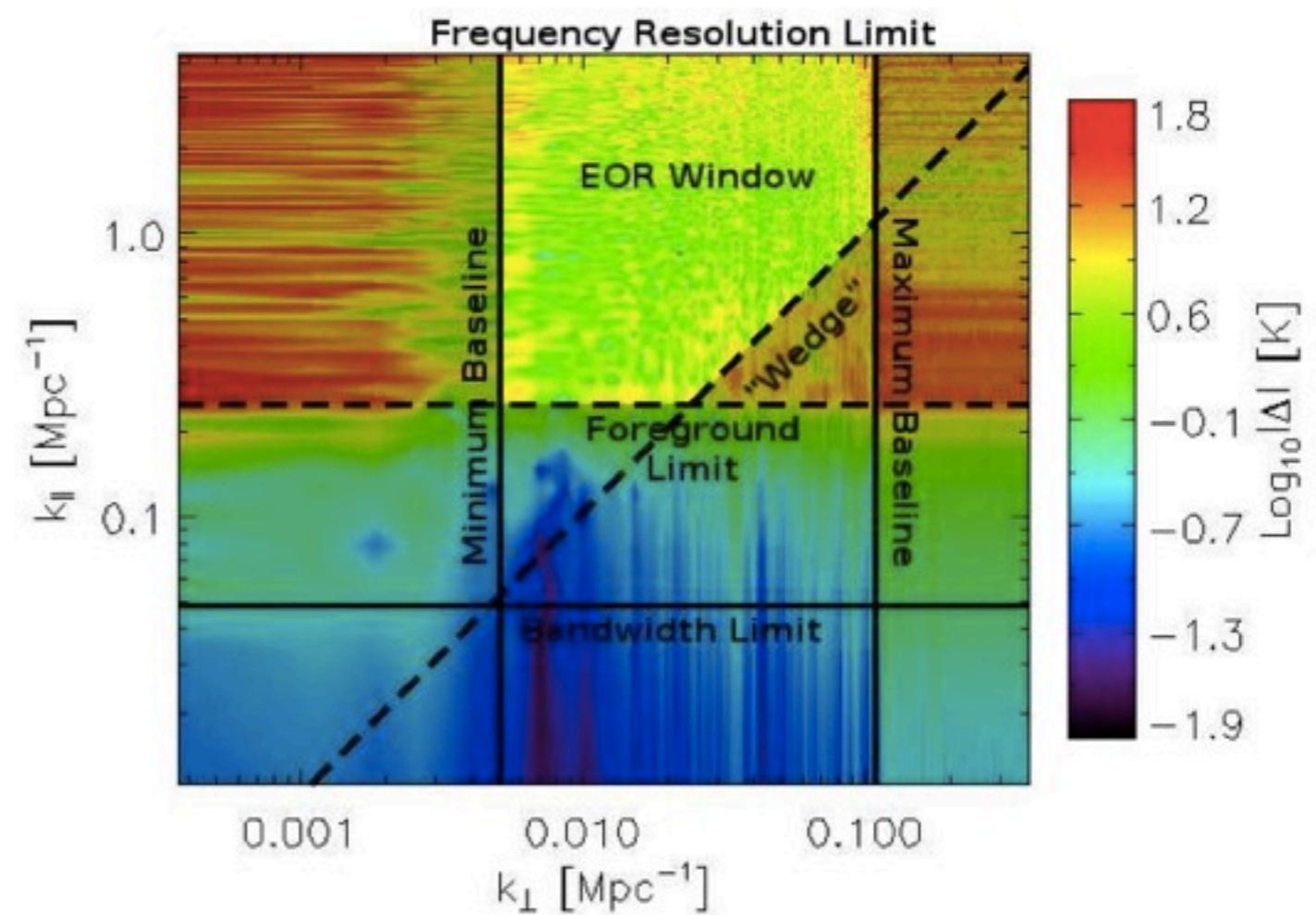
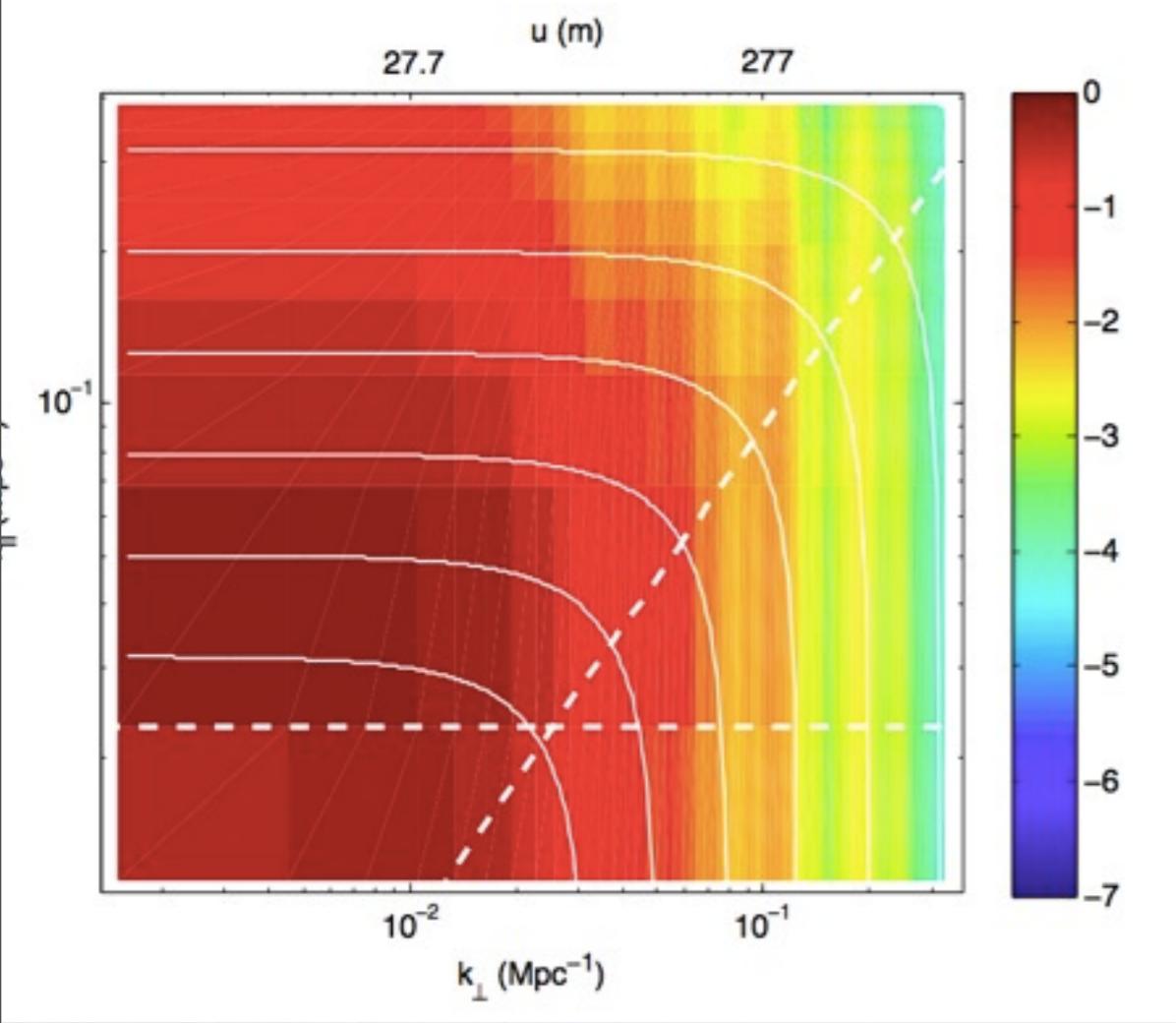
VLA 90cm Brogan 2006 +
PAPER32

PAPER South Africa



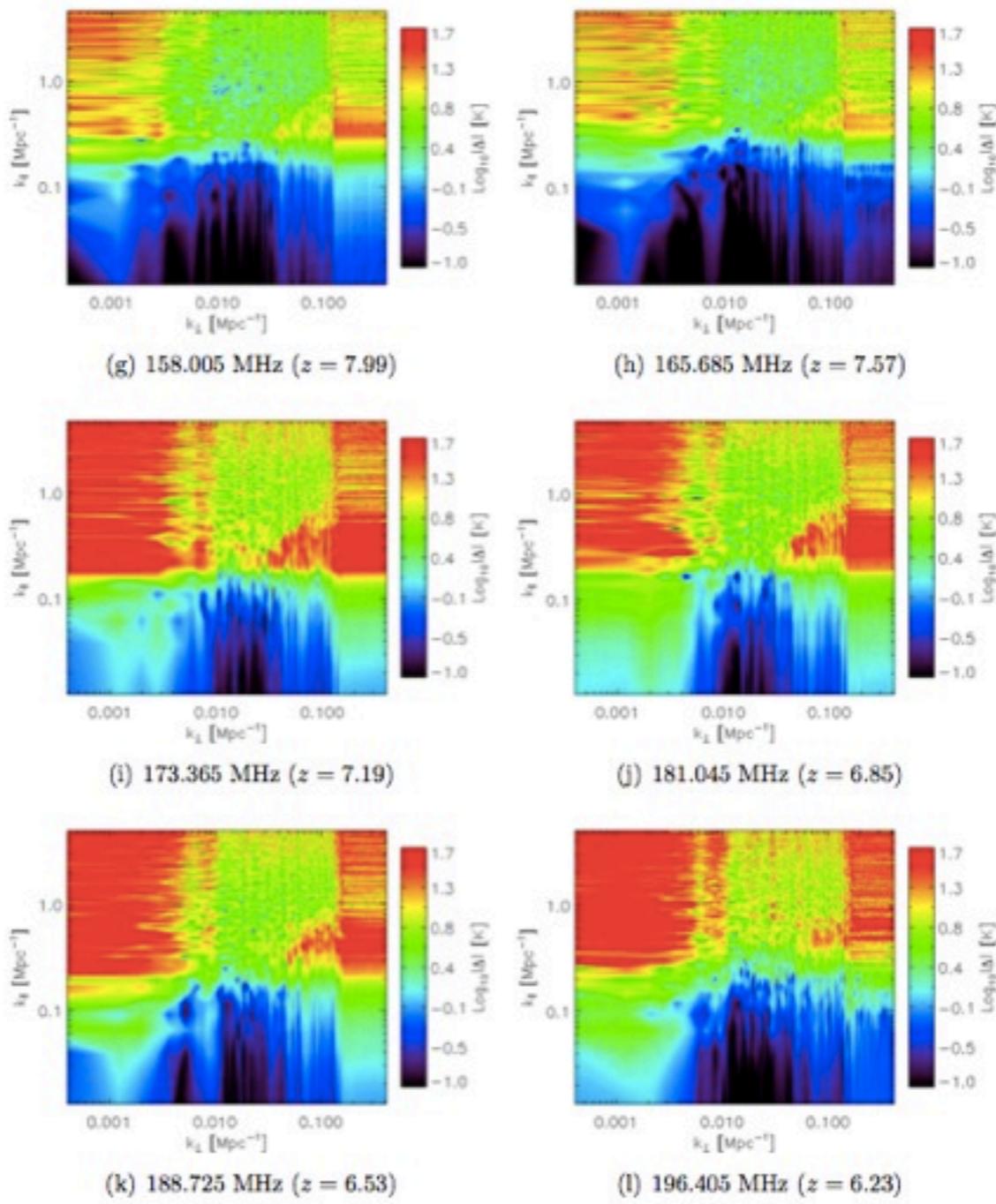
0h-30d

The EoR Window



Beardsley, 2012 (submitted)

Williams thesis 2012

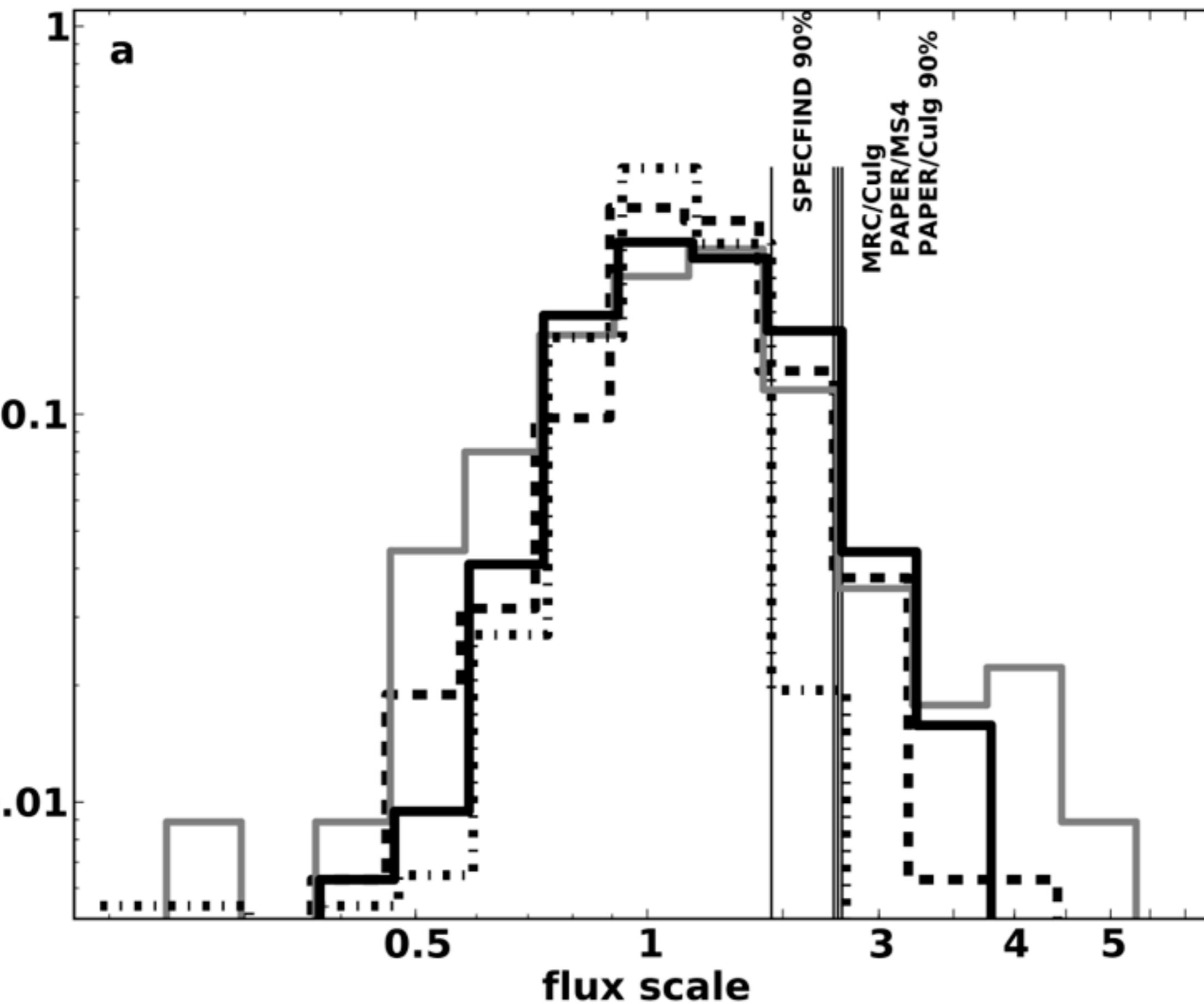


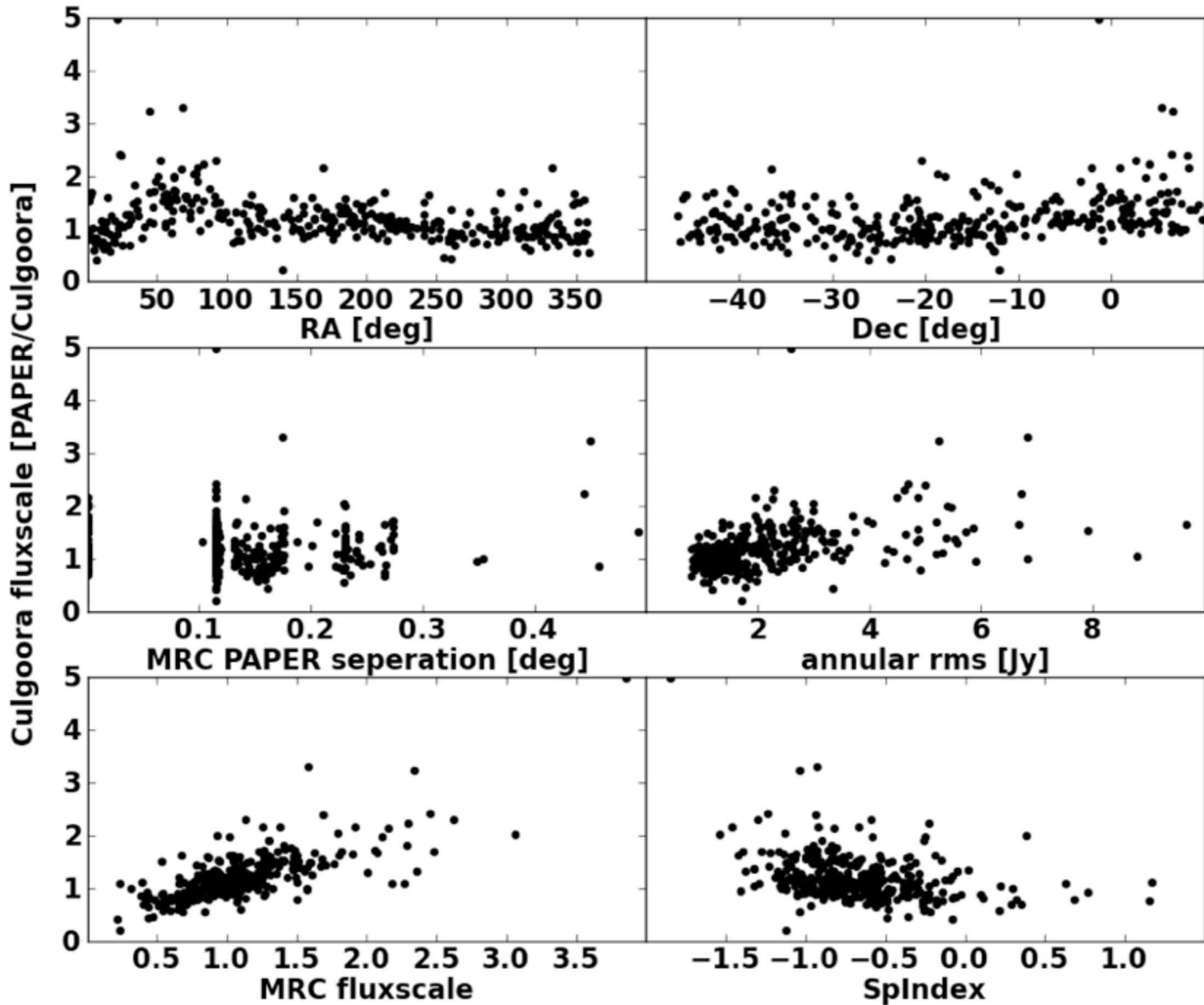
Williams thesis 2012

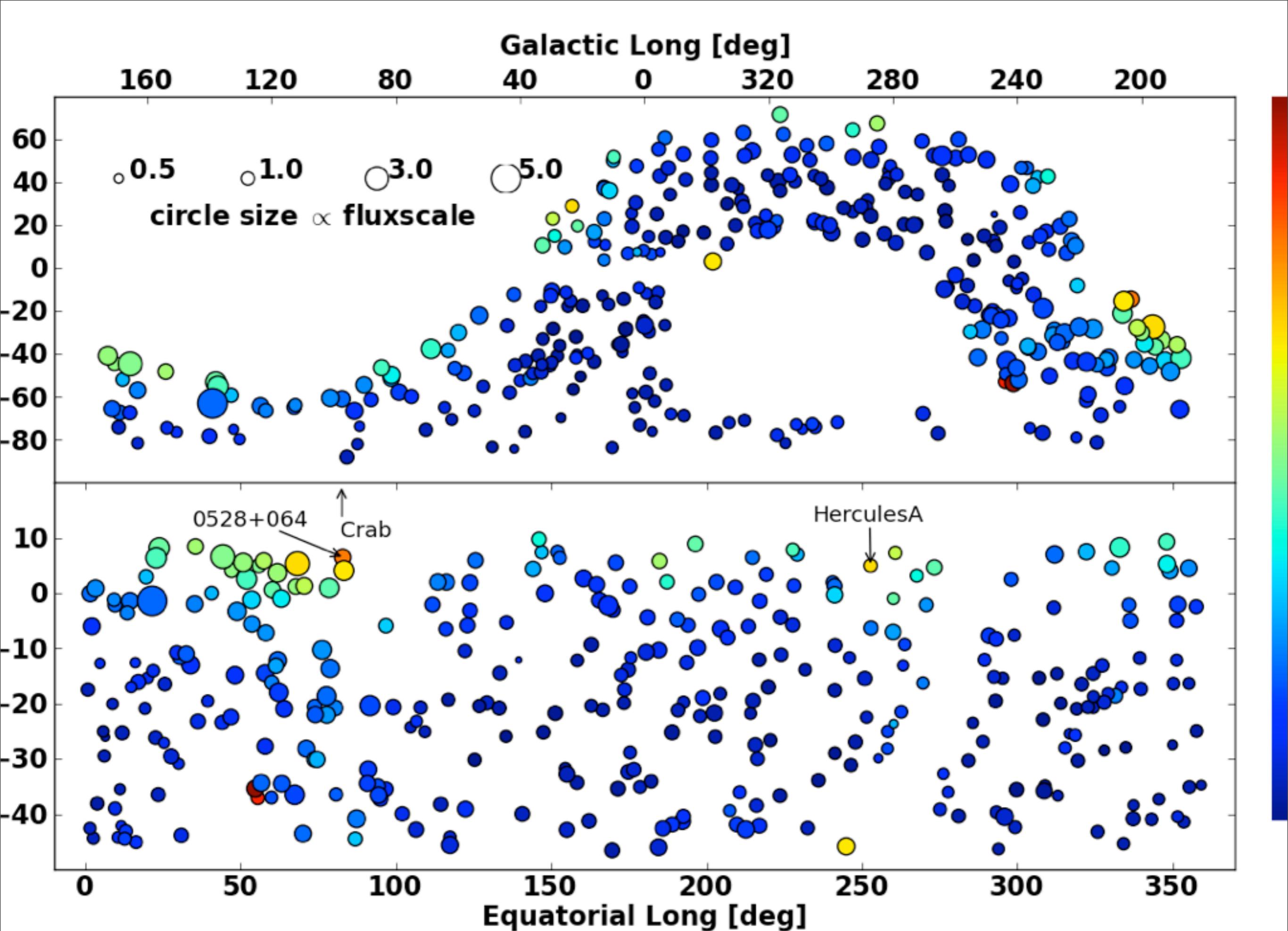
Table 1. PAPER fluxes for 480 MRC sources and matching Culgoora fluxes (where available)

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







psa455_336_cal_v2.fits

