

## LOFAR MSSS

### *Multifrequency Snapshot Sky Survey*

## Update

George Heald (MSSS Project Leader)  
(on behalf of the MSSS Team)  
LSM, 24/7/2013



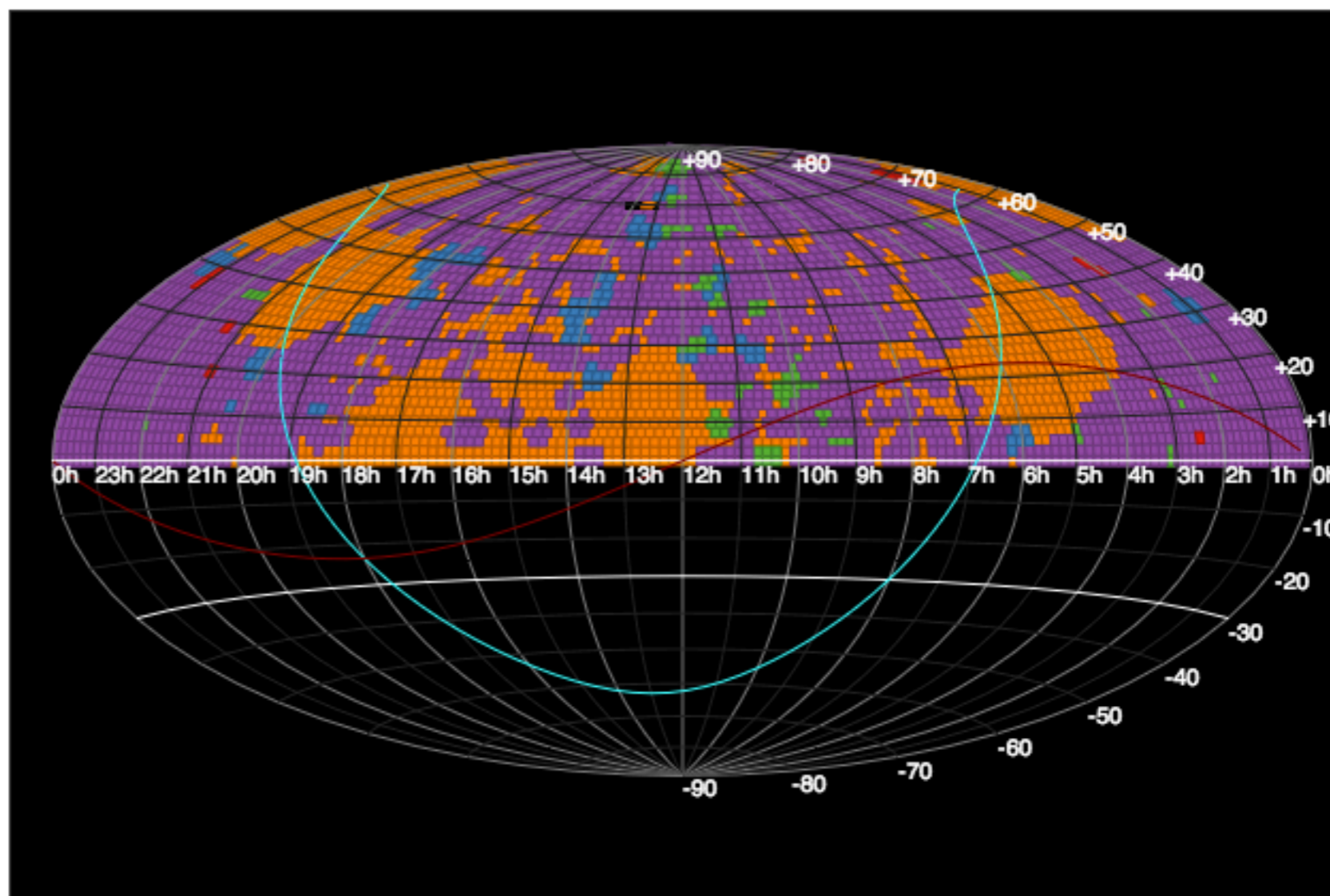
- MSSS-HBA started in February, and is almost 70% complete!

## LOFAR Observation Database

### MSSS HBA

Number of Targets	3616
Number of Calibrators	8
Start Date	8 Feb. 2013
Stop Date	11 July 2013
Completed Fields	2370 (65.5%)
Information collected	18 July 2013

Show me the data »



Hammer Projection

Map based on code from [this project](#).

Data available on CEP (2.4%)

Data archived (63.2%)

Partial data available (2.8%)

Data missing (0.3%)

Not yet observed (31.4%)

*Swinbank*

- 7C (151 MHz) compared with MSSS band 6 (151 MHz)

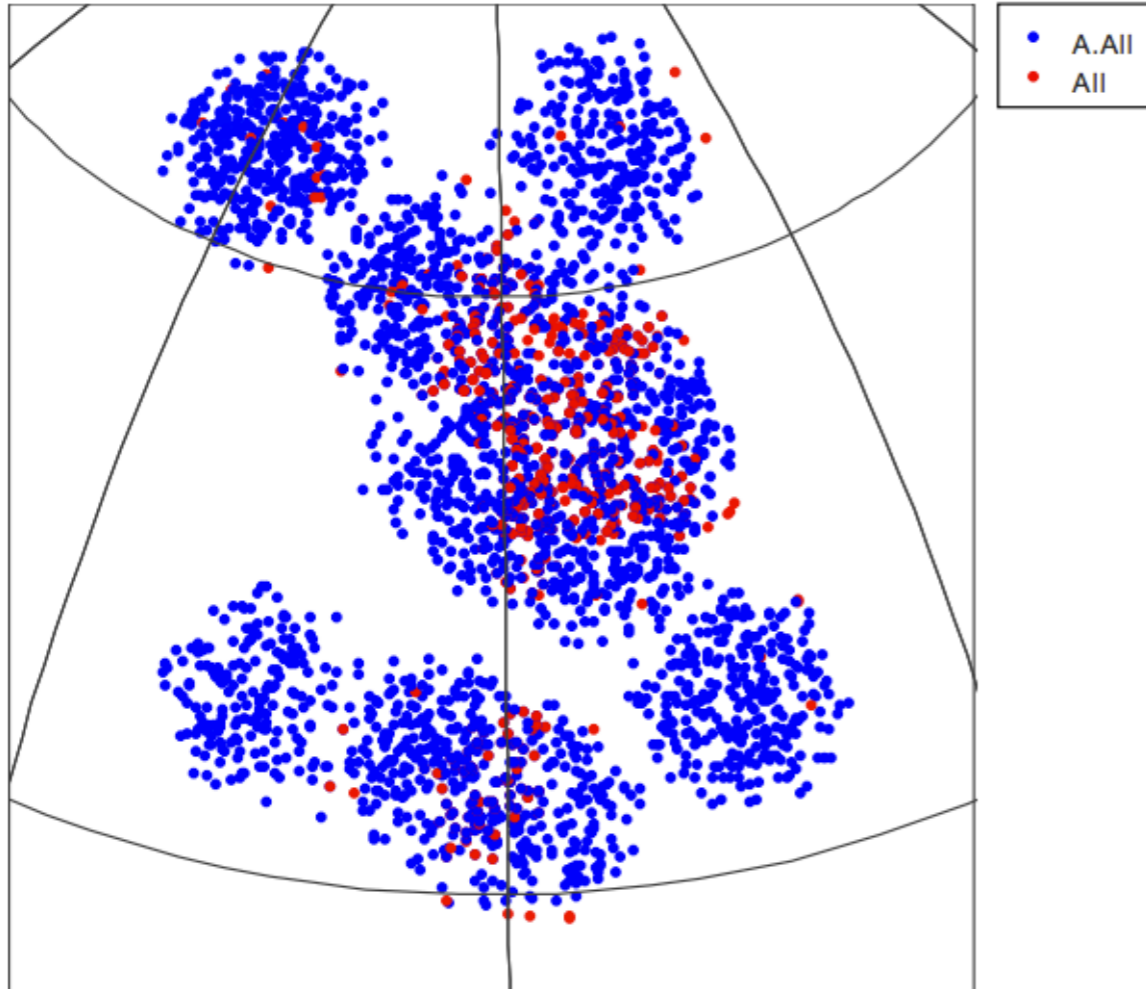


Figure 2: Positions of sources with (blue) and without (red) counterparts in 7C.

*Hardcastle*

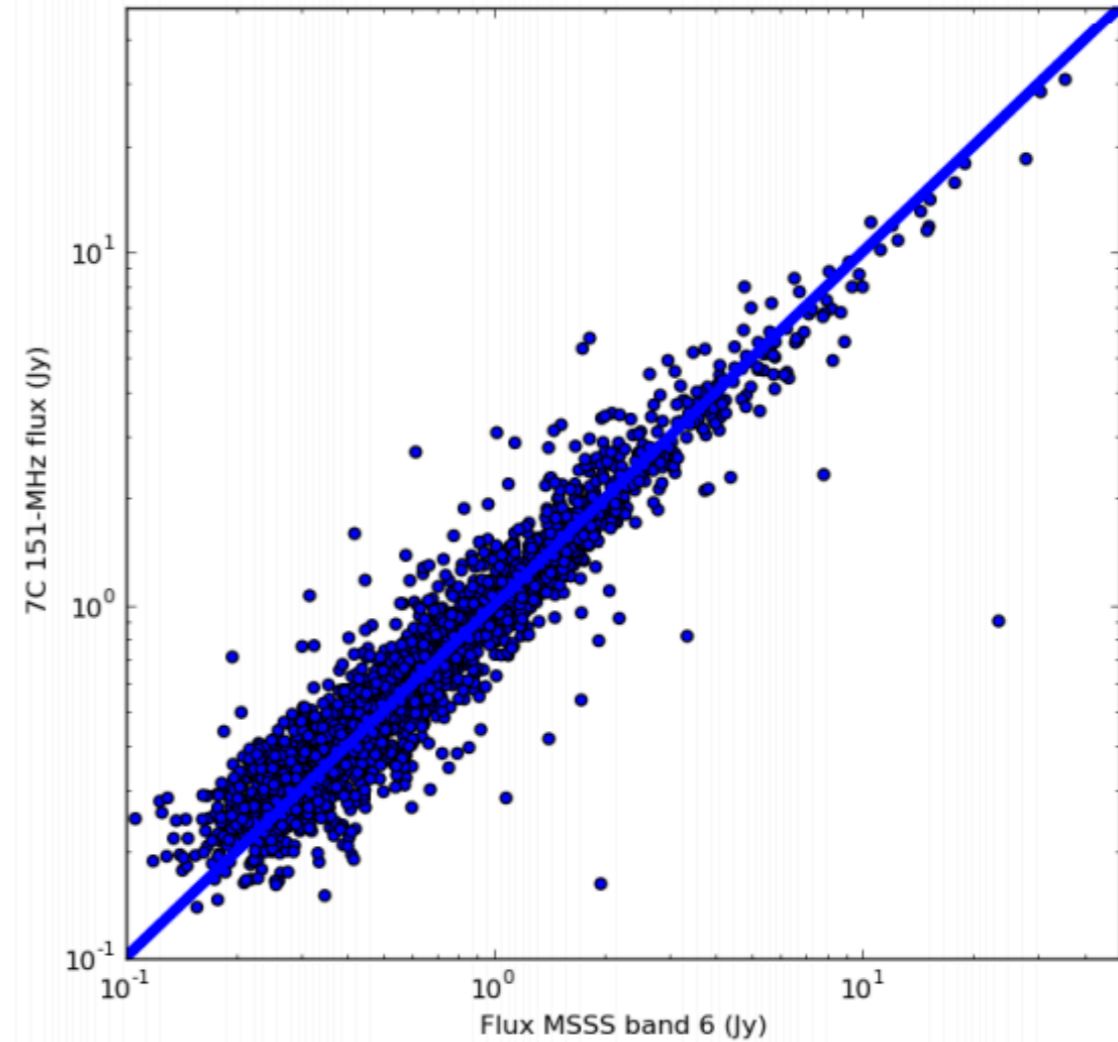
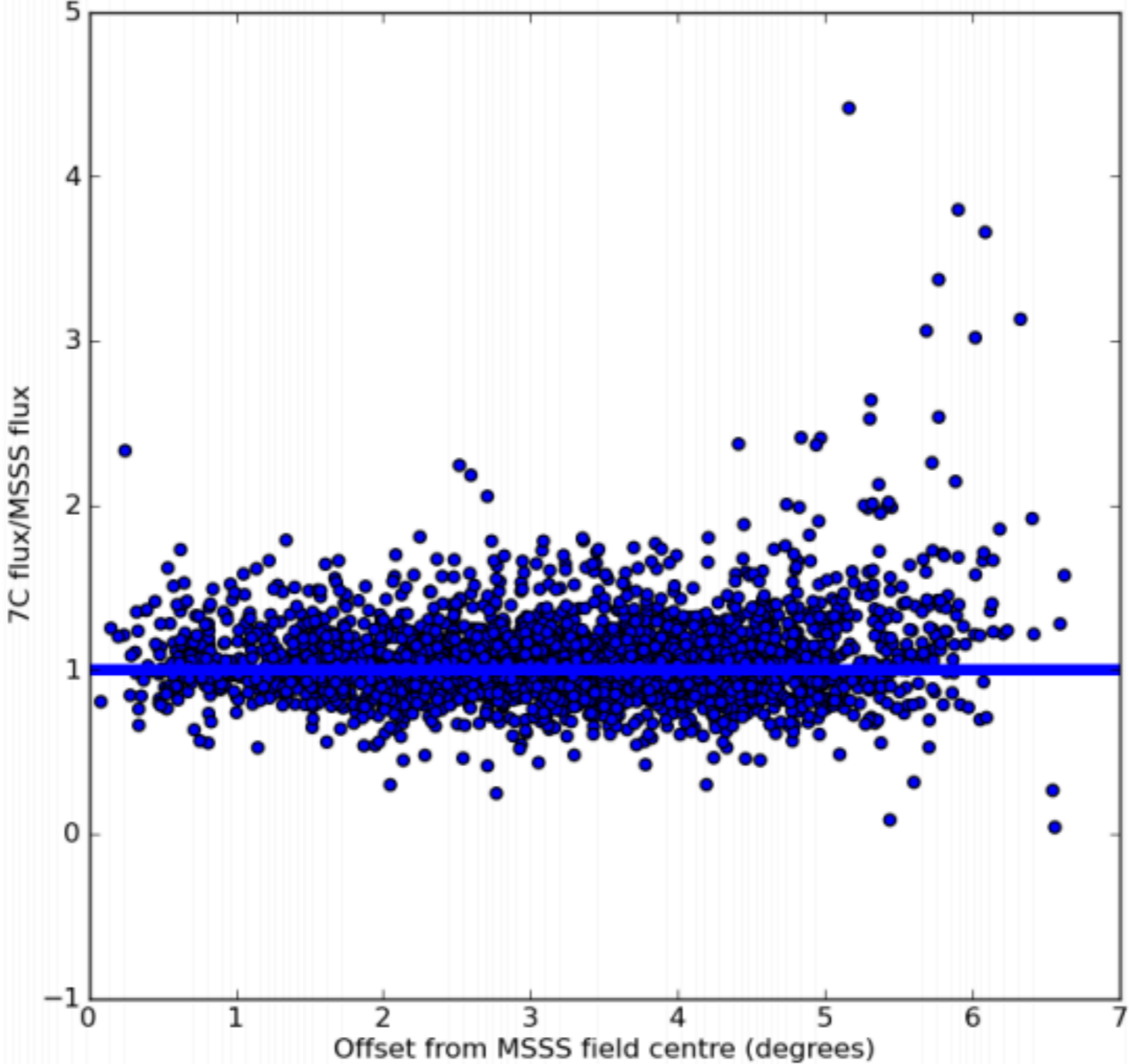
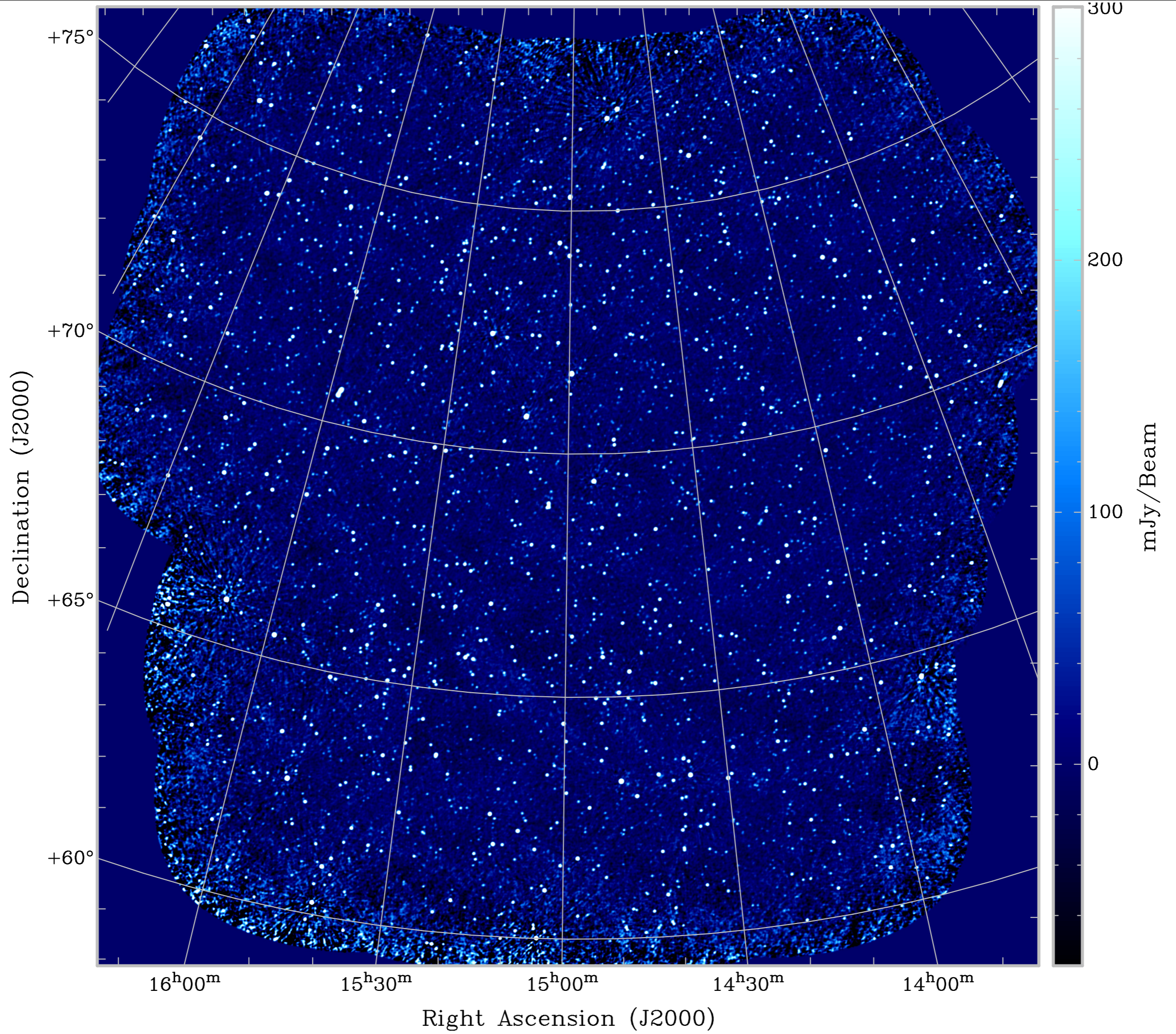


Figure 3: Flux density from 7C against flux in MSSS band 6. Solid line shows the line of equality, not a fit.

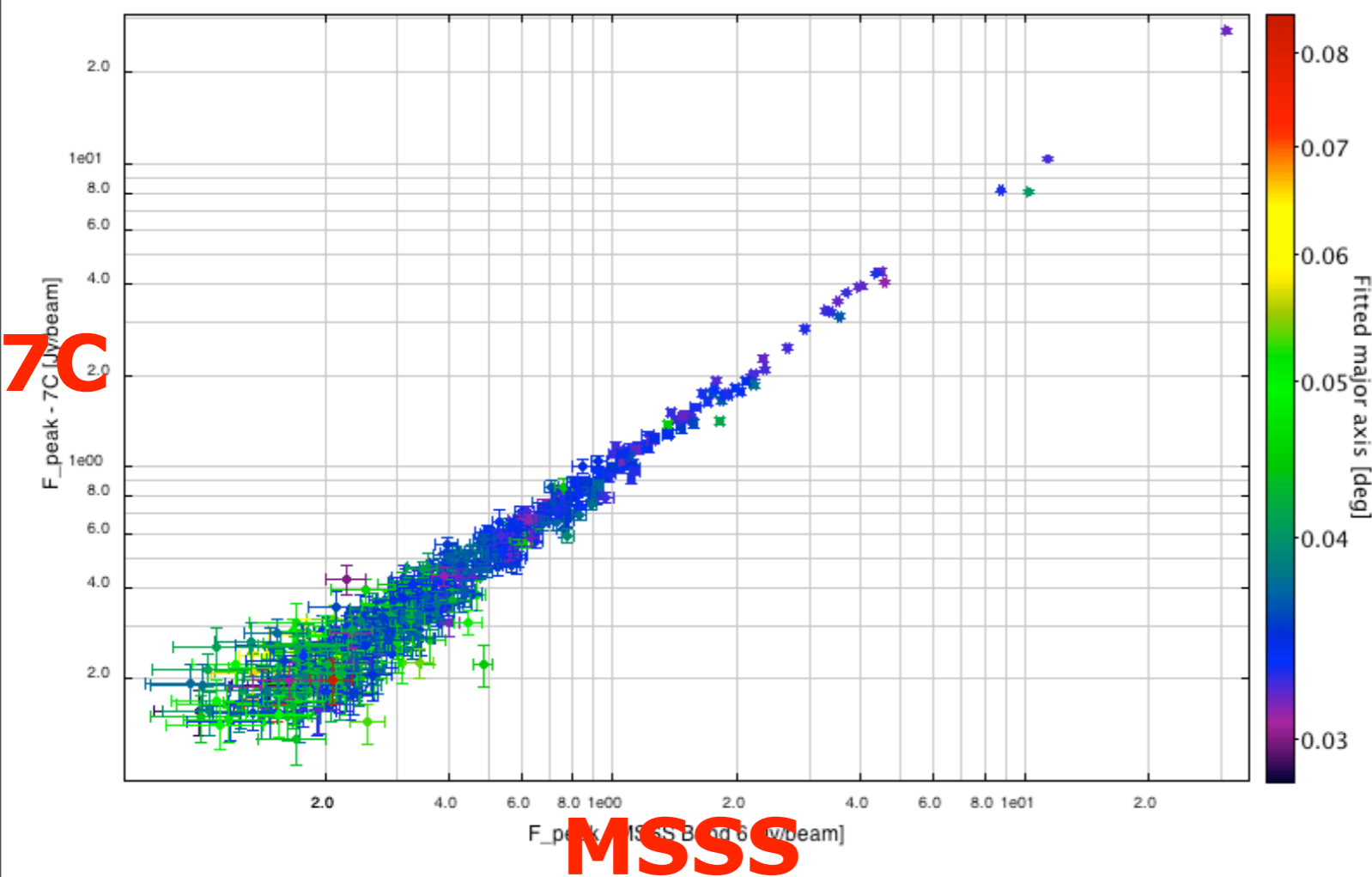


## *Hardcastle*

Figure 5: Flux ratio against offset from the field centre, in degrees.



- Completed process of deriving intermediate sky model from initial mosaic, re-calibrating, and re-imaging (now at somewhat higher angular resolution  $\sim 90\text{-}110''$ )

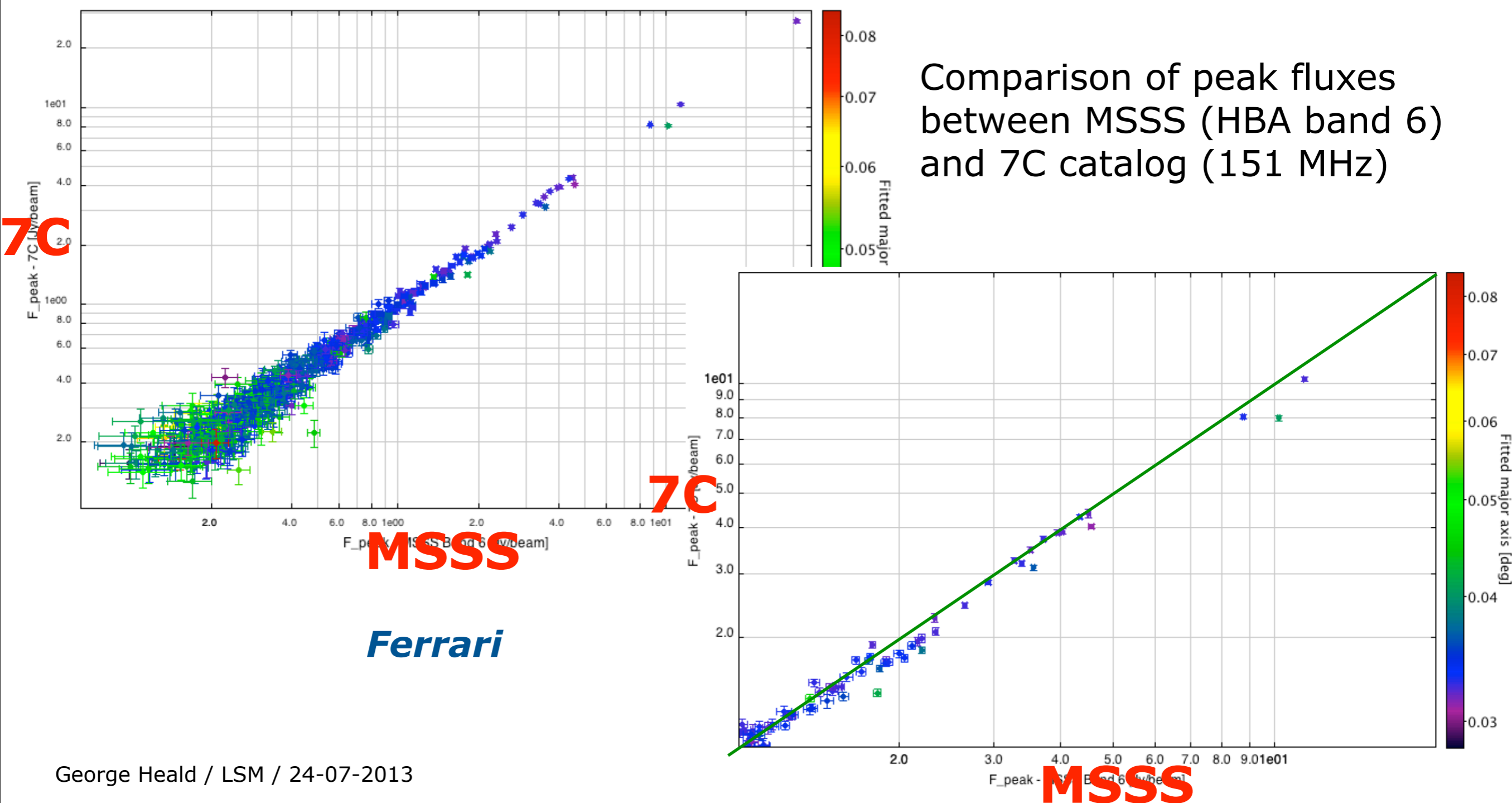


Comparison of peak fluxes between MSSS (HBA band 6) and 7C catalog (151 MHz)

**MSSS**

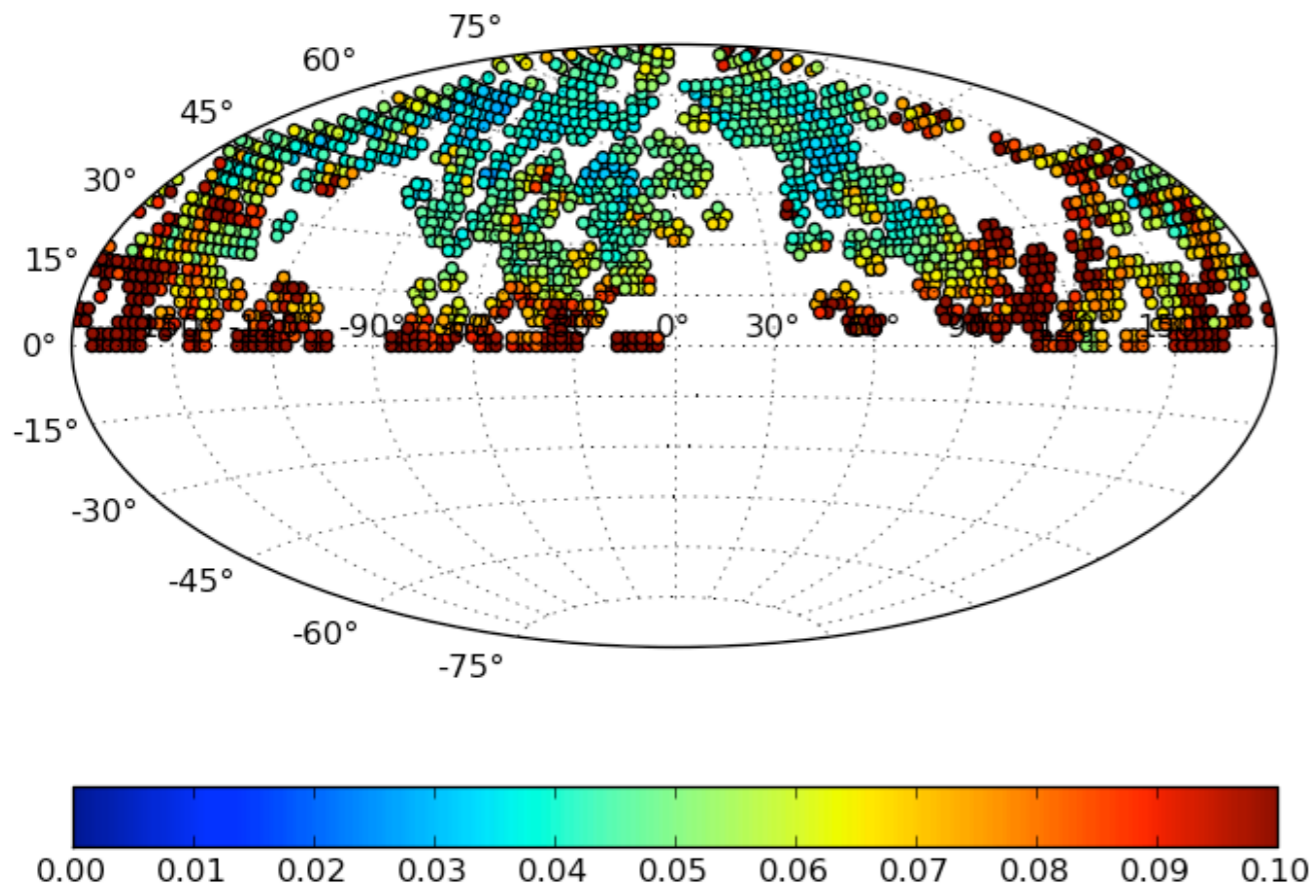
*Ferrari*

- Completed process of deriving intermediate sky model from initial mosaic, re-calibrating, and re-imaging (now at somewhat higher angular resolution  $\sim 90\text{-}110''$ )



- Band 0 (120 MHz): 1767 fields

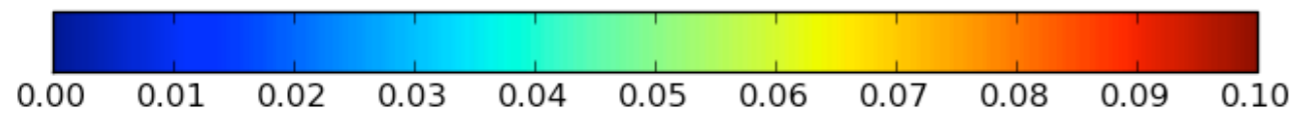
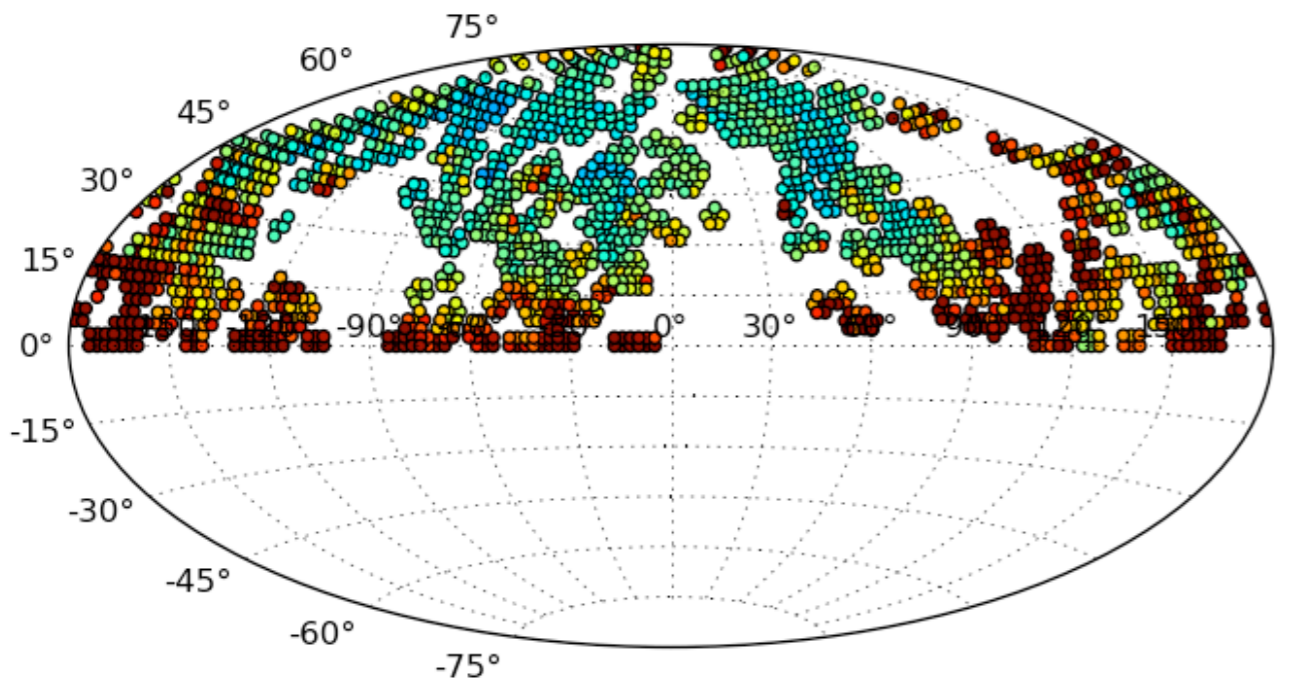
Equatorial J2000



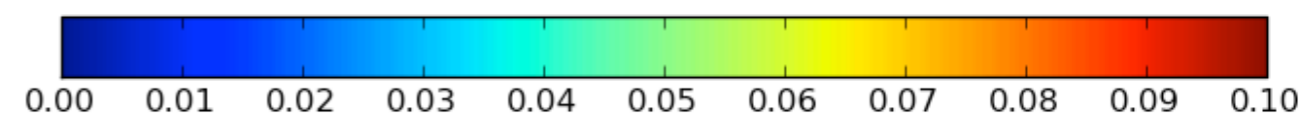
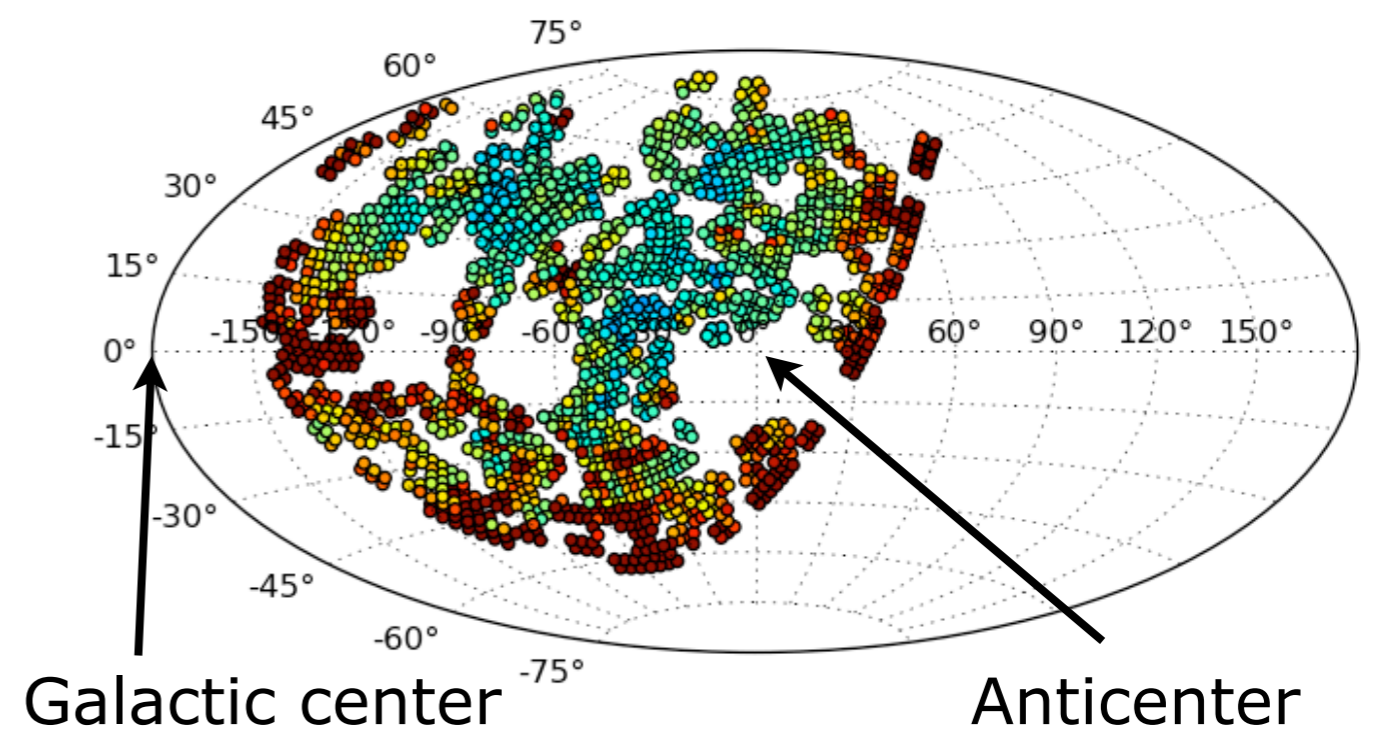


- Band 0 (120 MHz): 1767 fields

Equatorial J2000

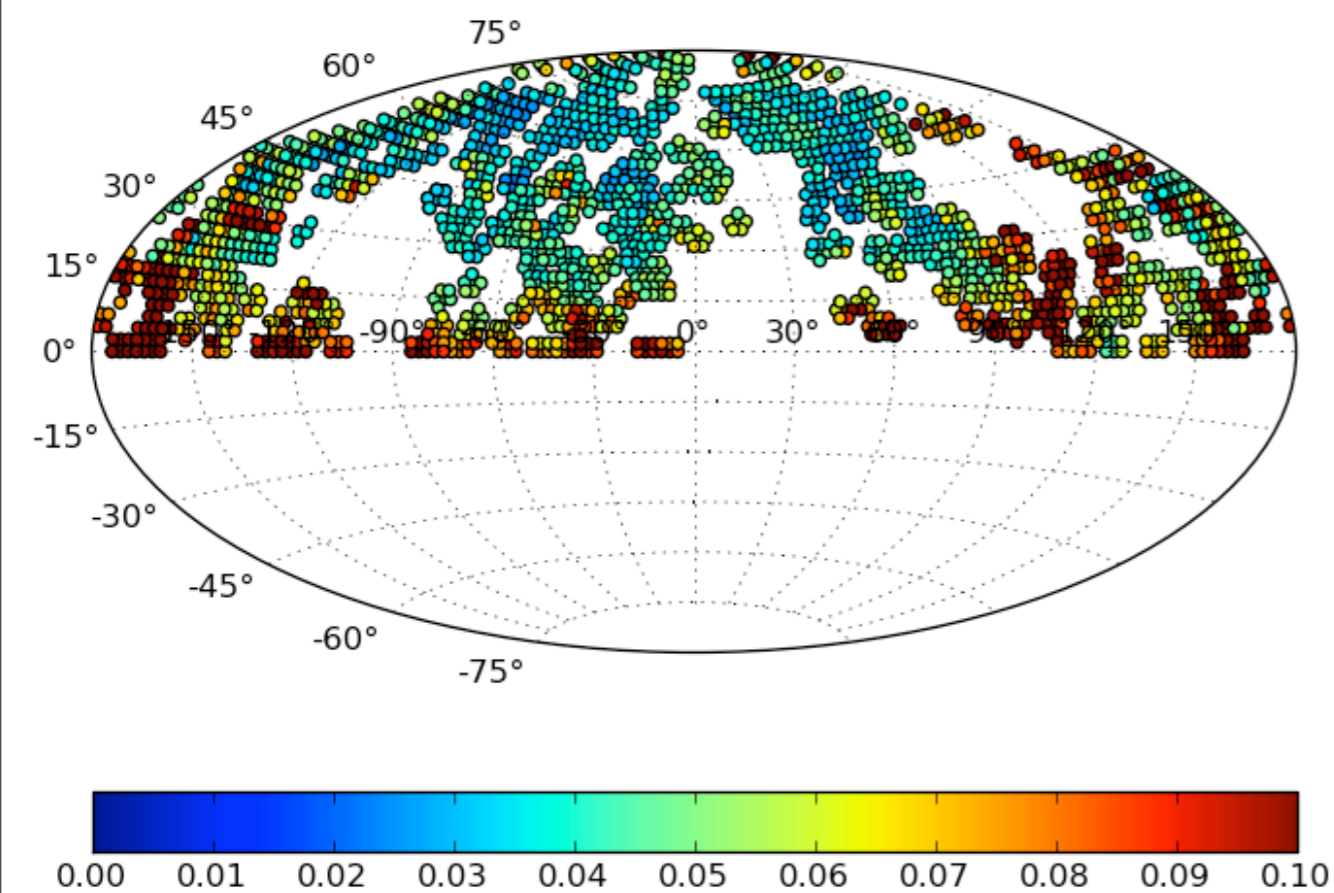


Galactic

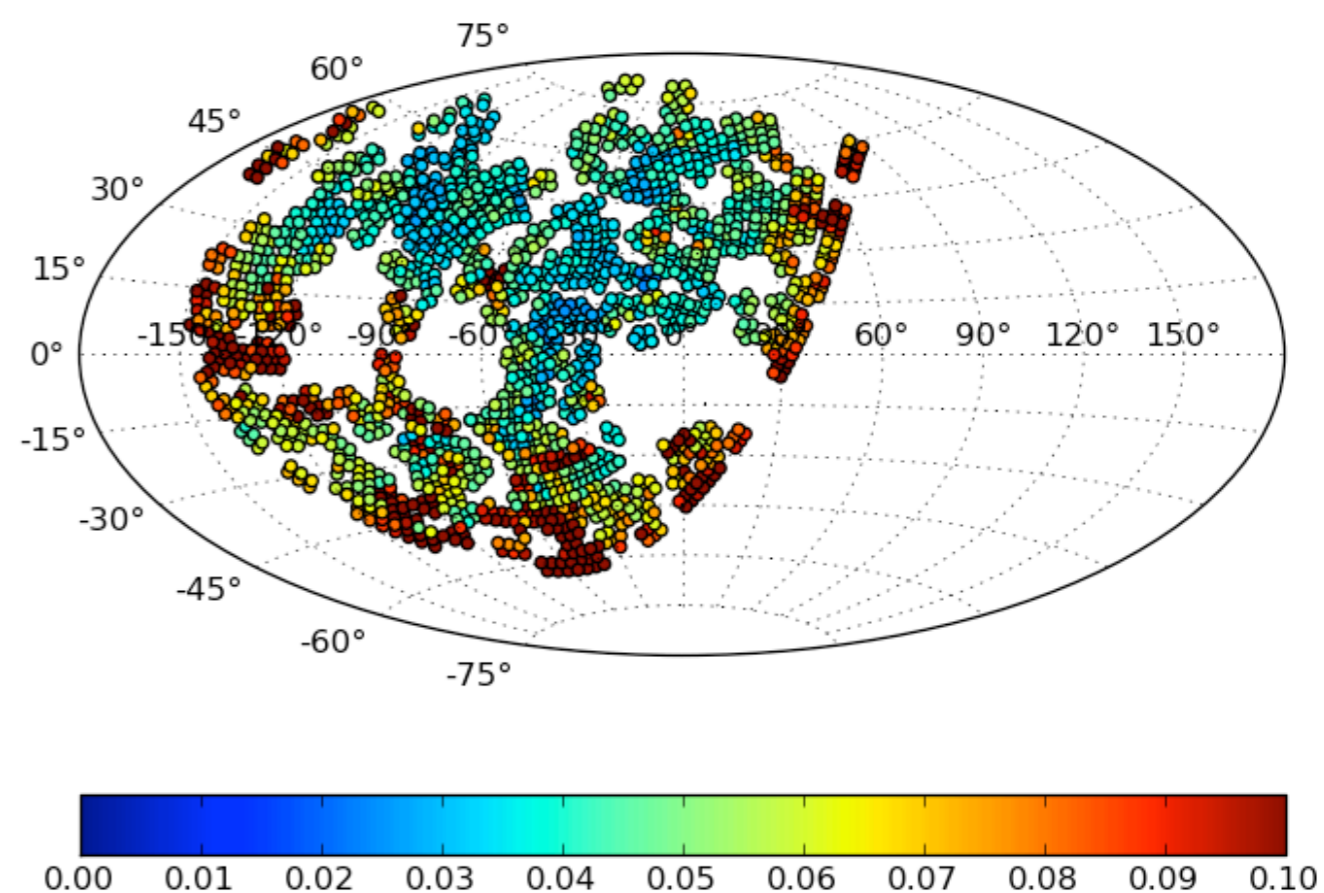


- Band 1 (125 MHz): 1779 fields

## Equatorial J2000

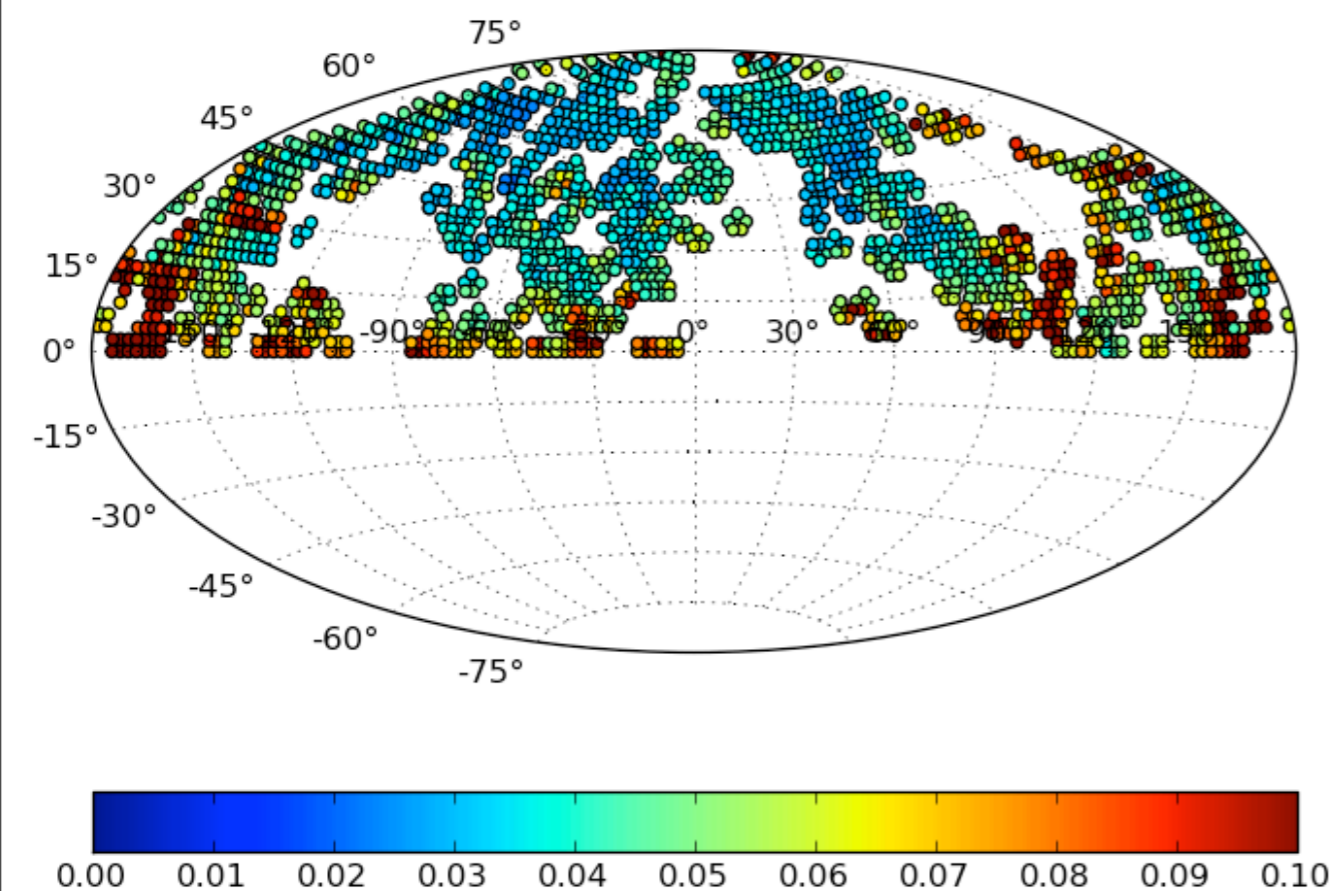


## Galactic

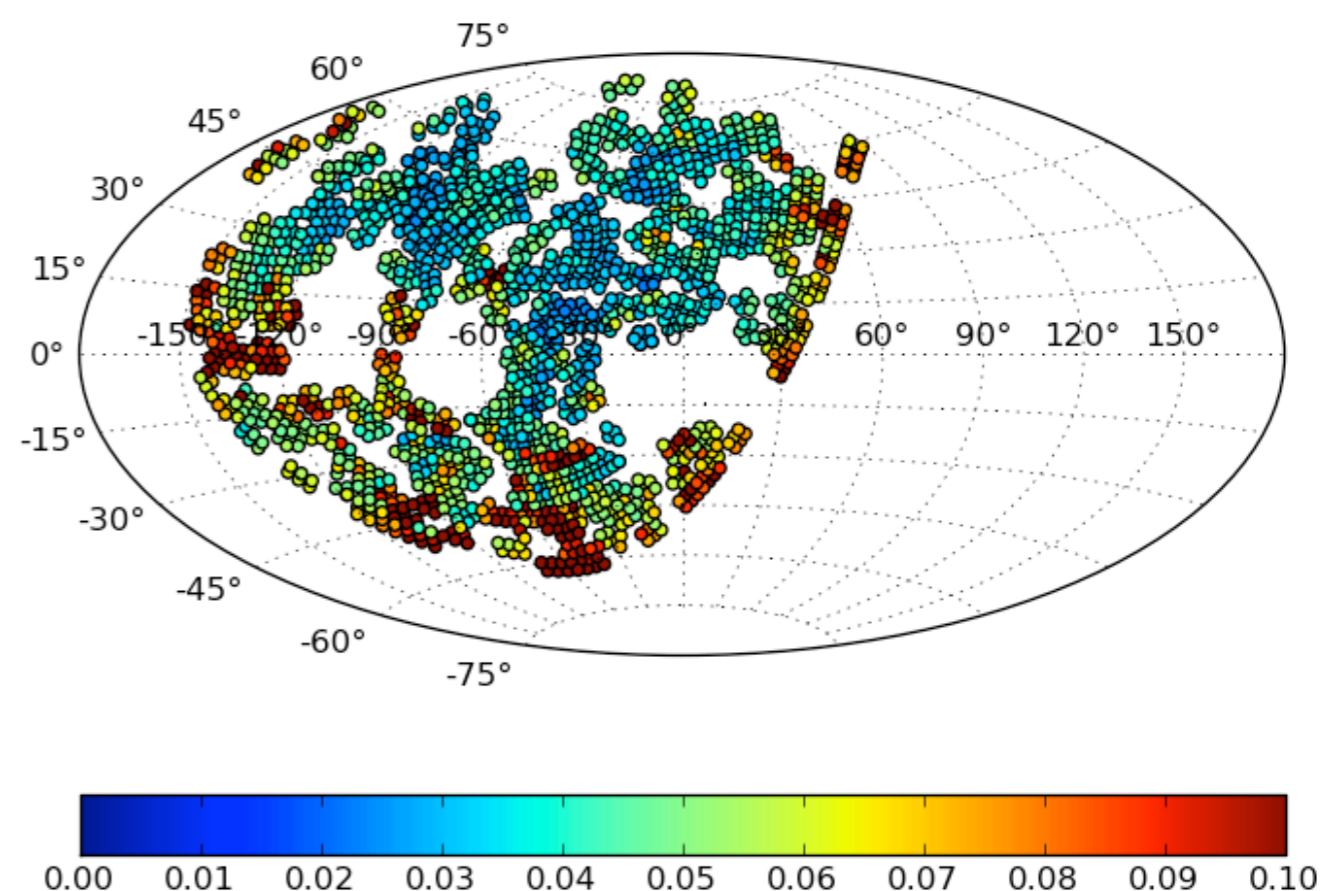


- Band 2 (129 MHz): 1781 fields

## Equatorial J2000

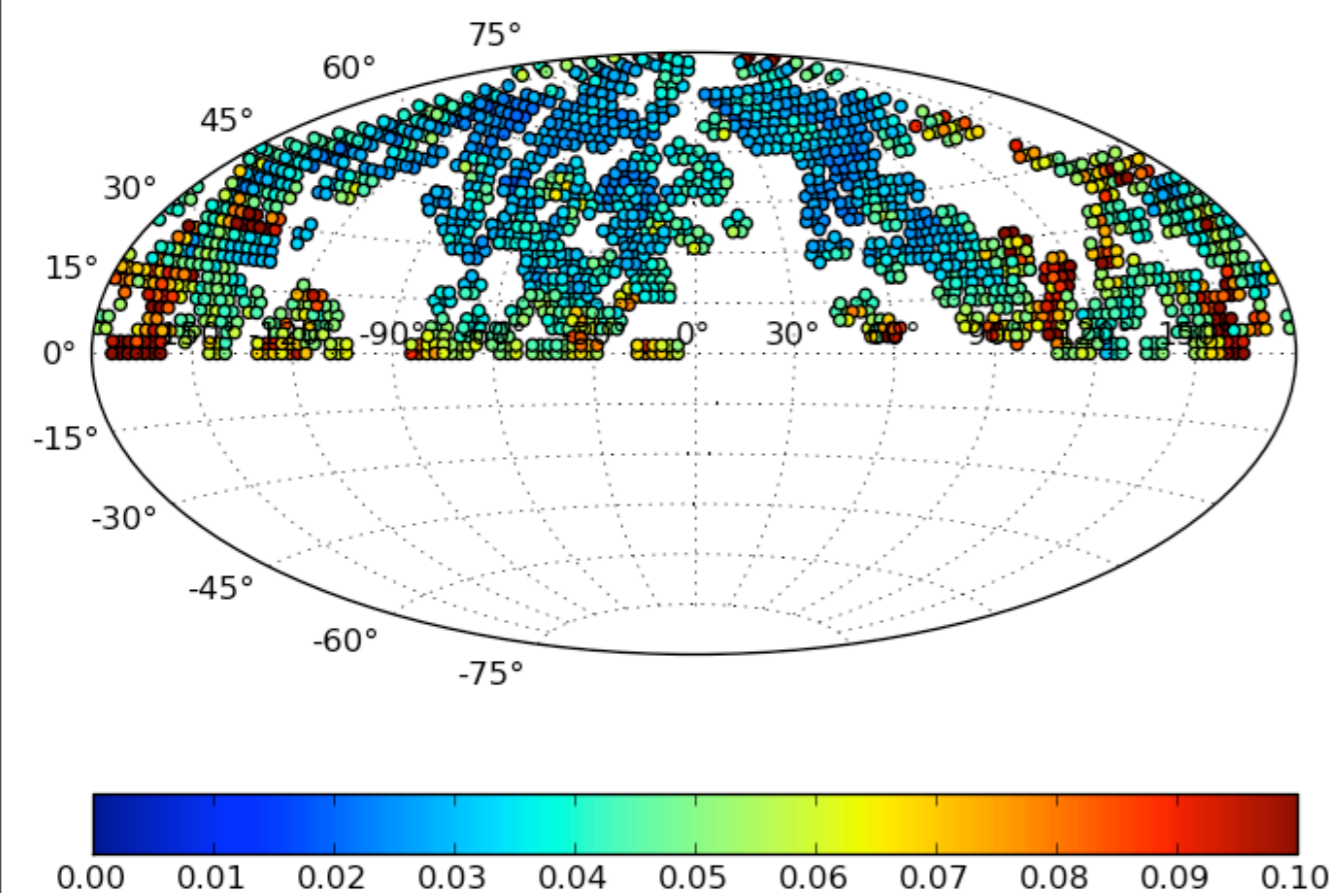


## Galactic

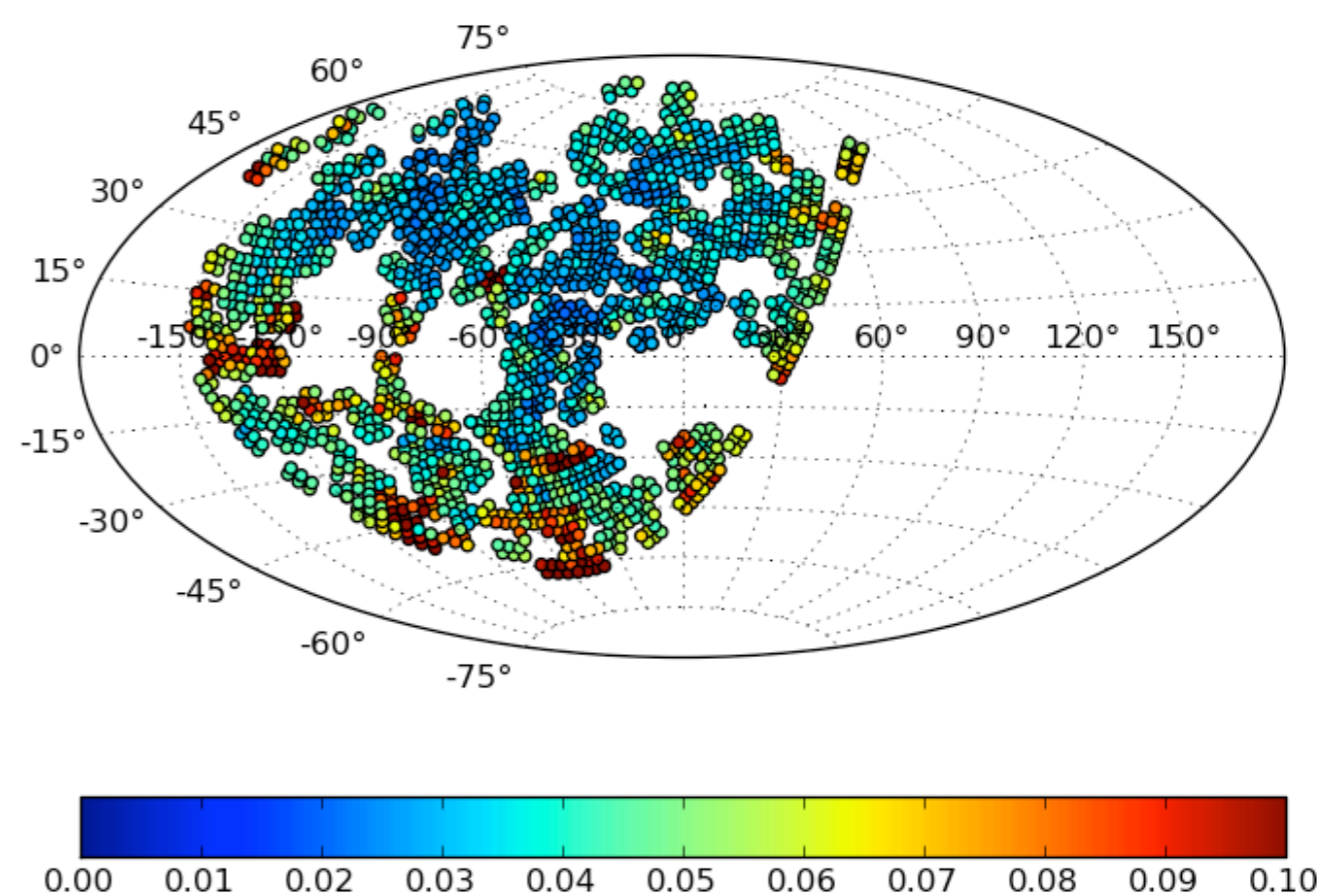


- Band 3 (135 MHz): 1781 fields

## Equatorial J2000

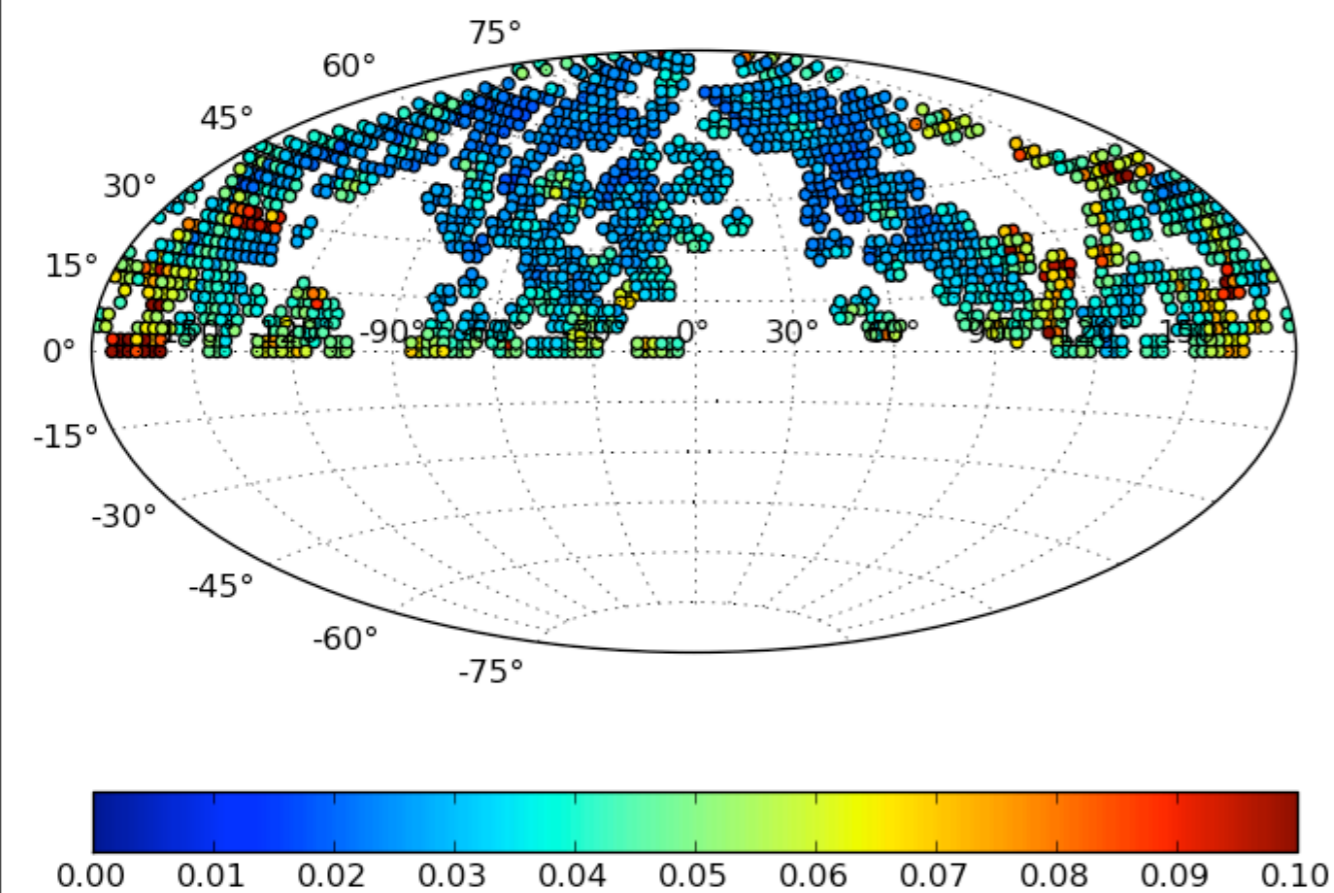


## Galactic

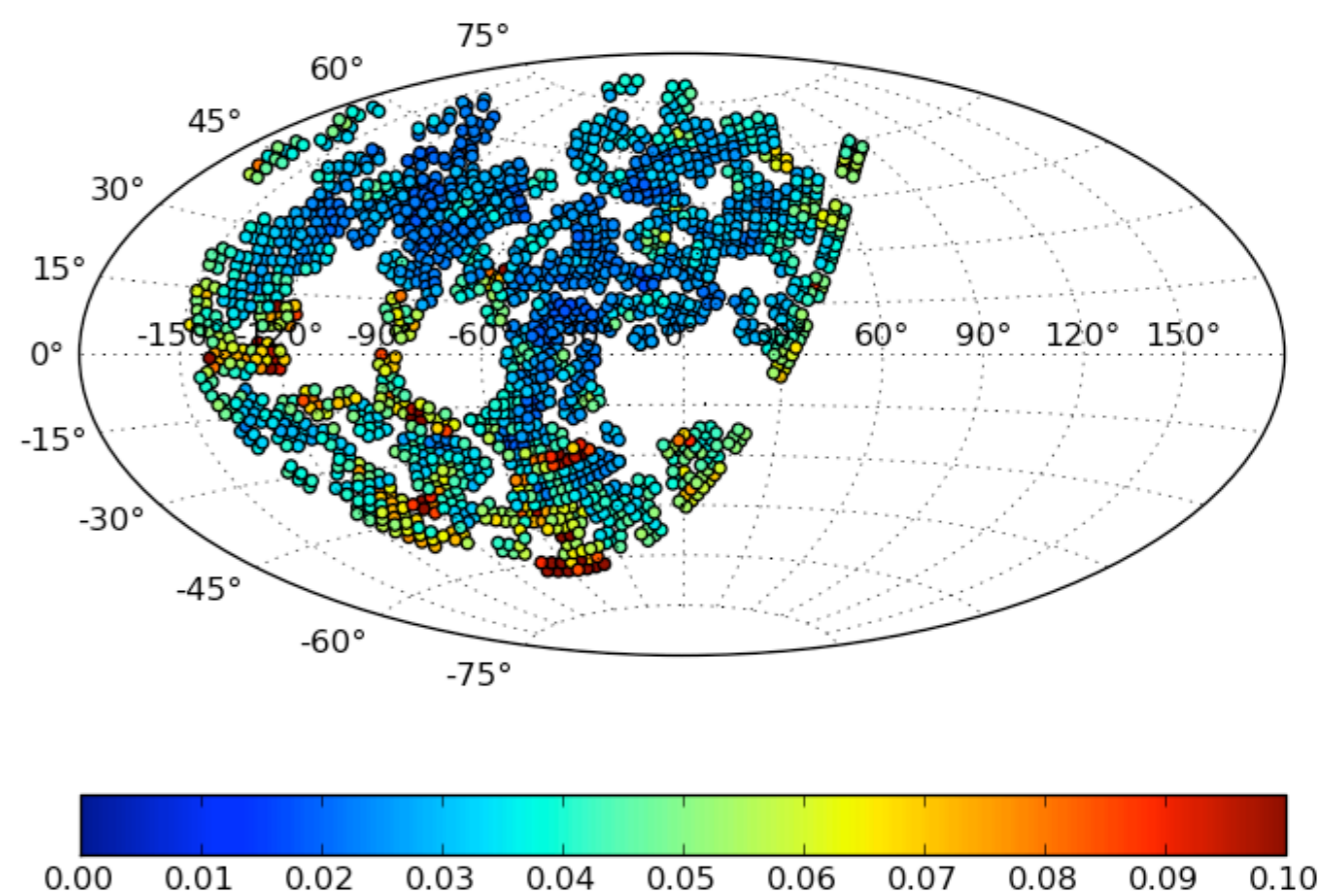


- Band 4 (143 MHz): 1781 fields

## Equatorial J2000

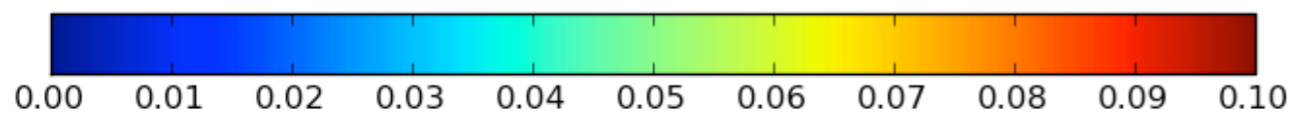
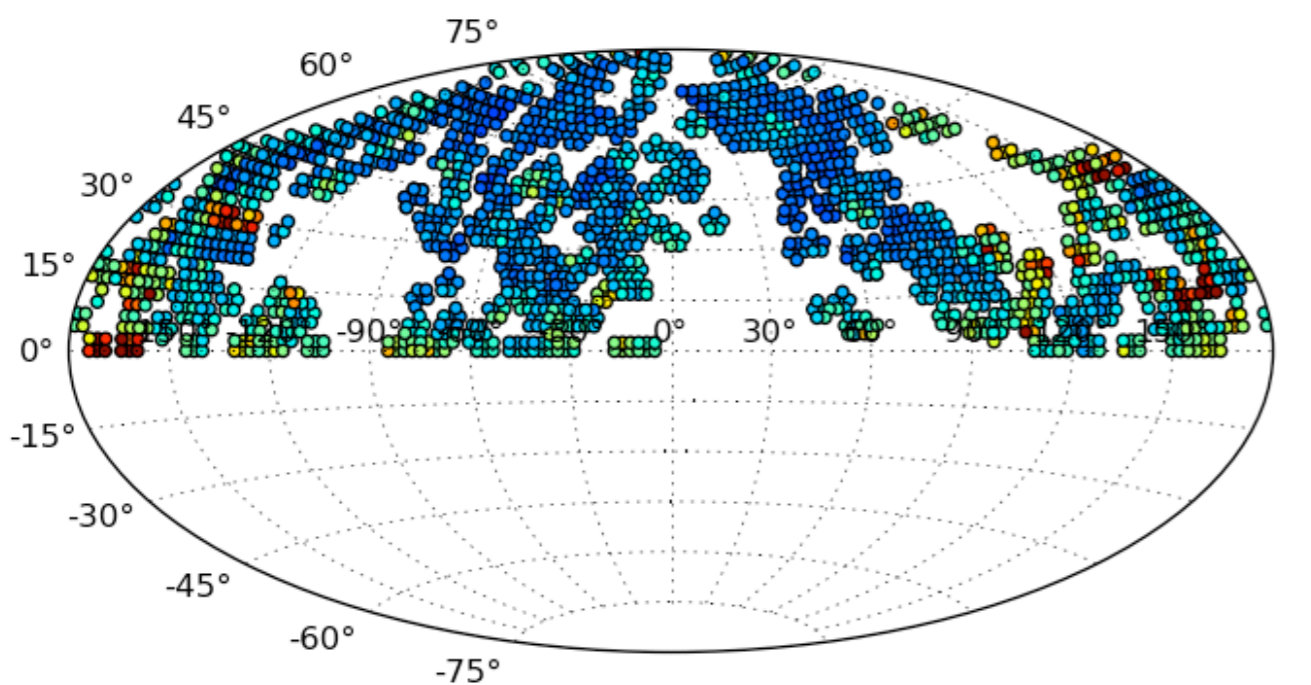


## Galactic

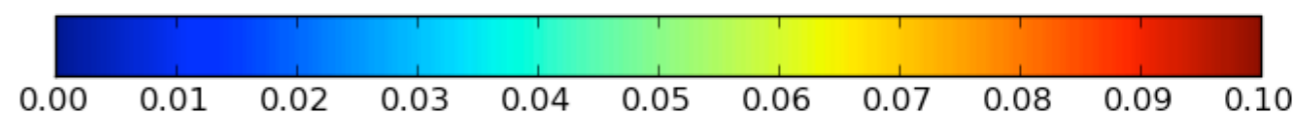
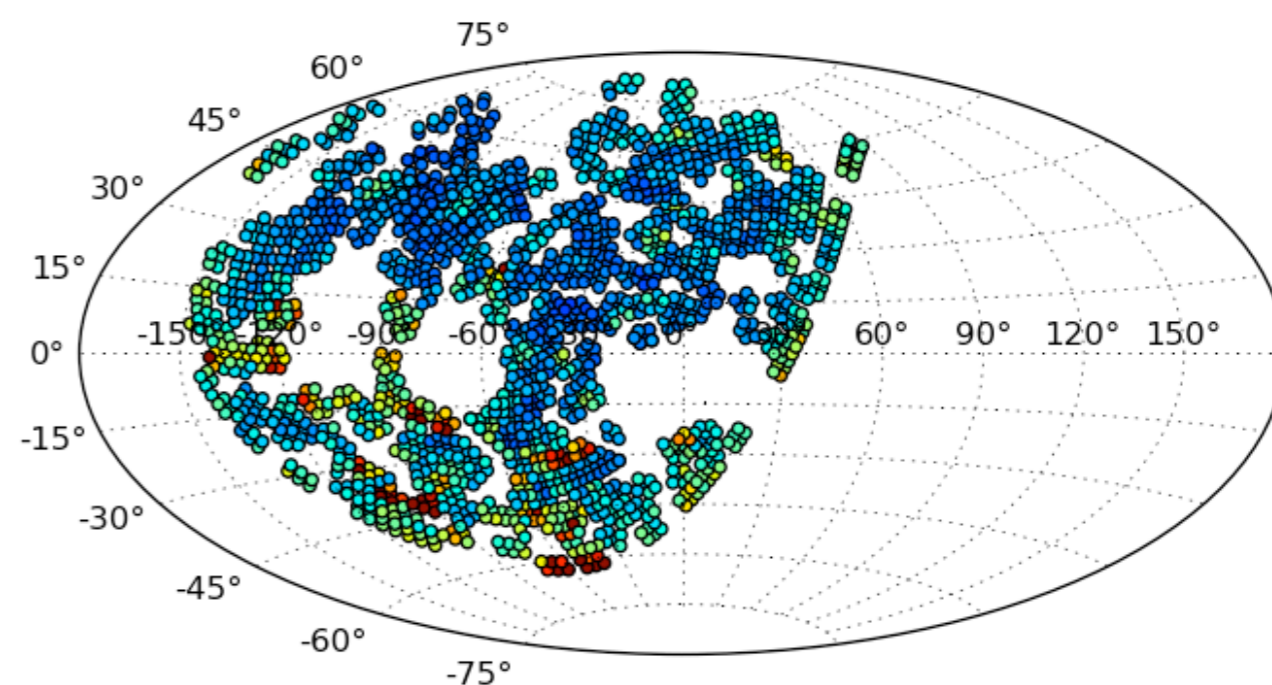


- Band 5 (147 MHz): 1776 fields

## Equatorial J2000

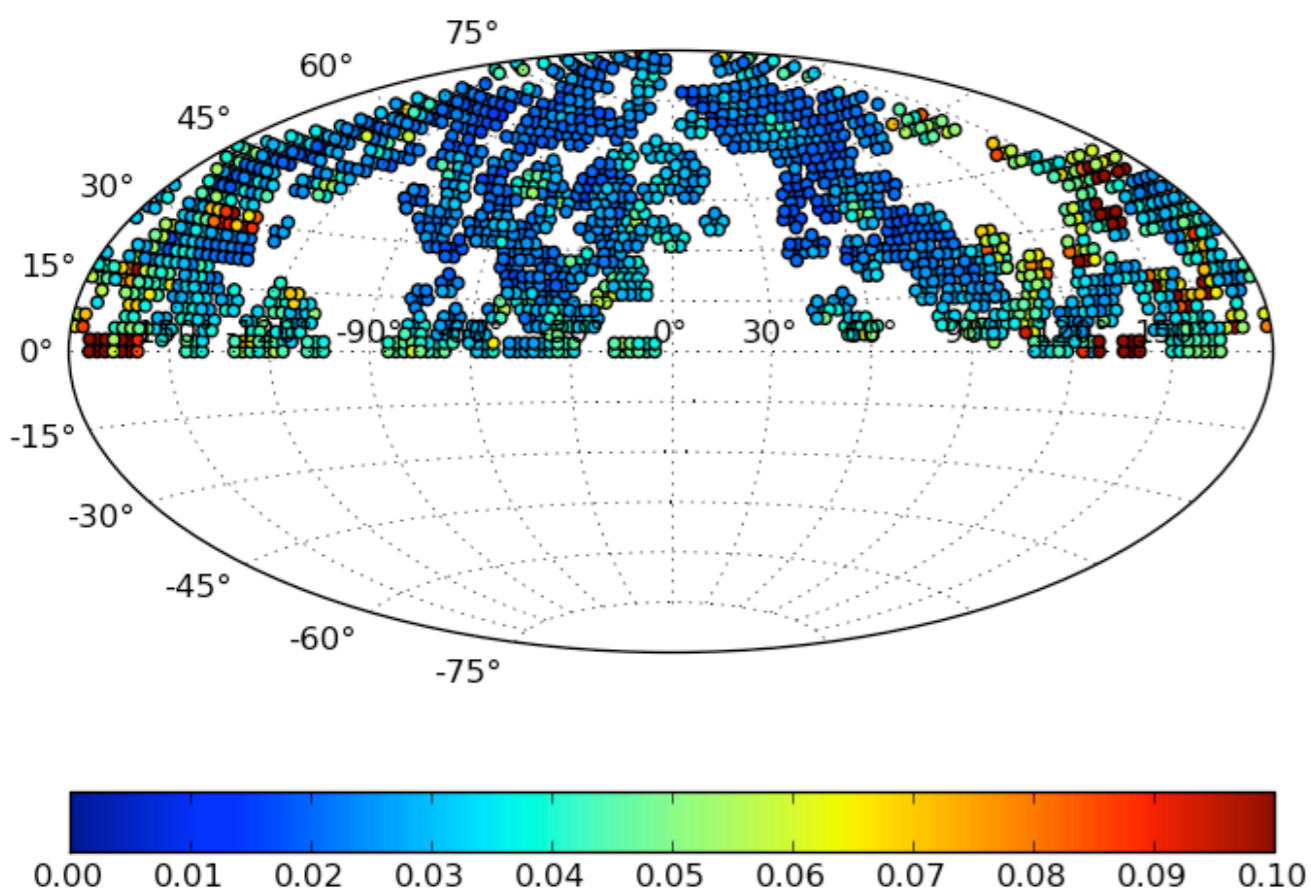


## Galactic

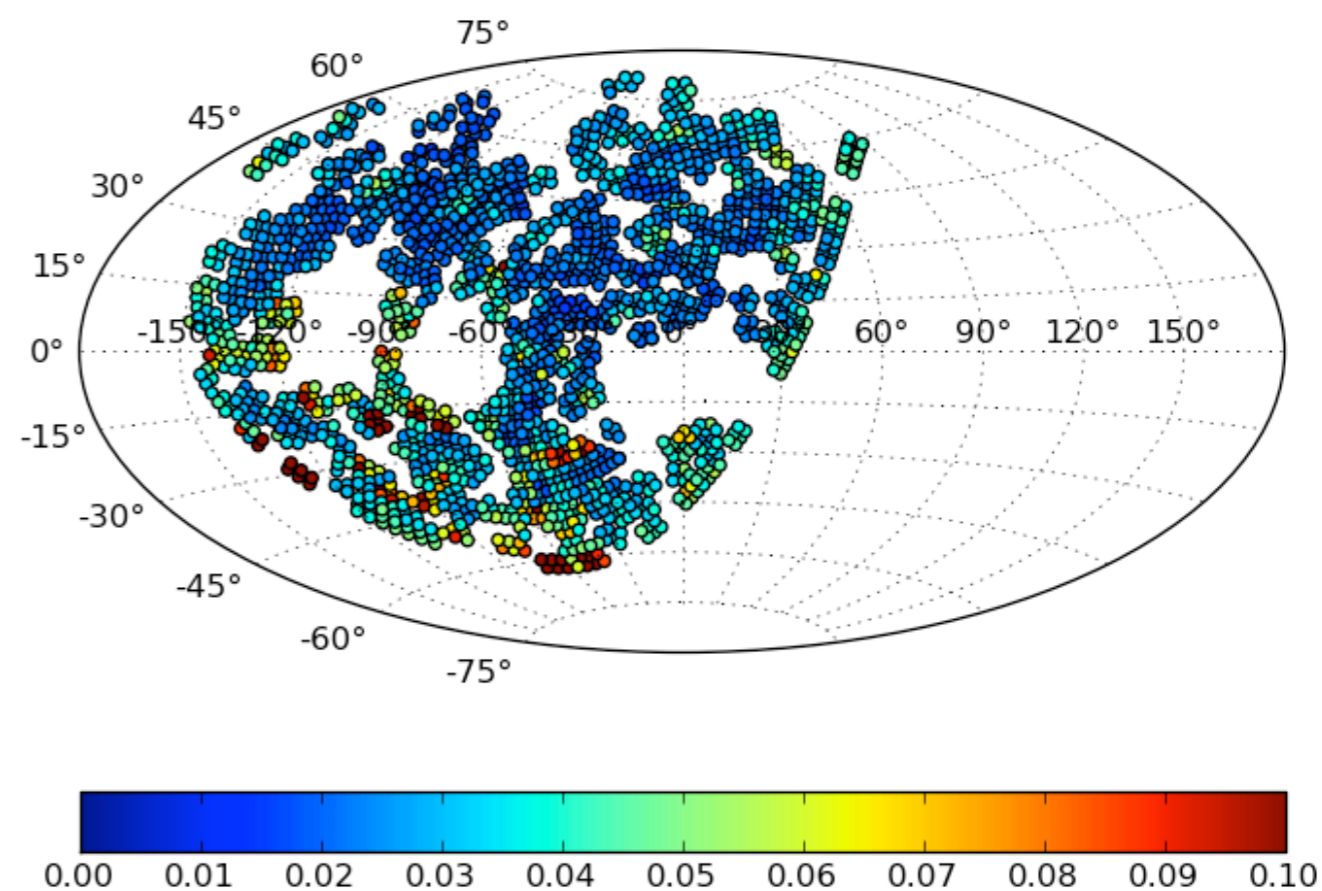


- Band 6 (151 MHz): 1775 fields

## Equatorial J2000

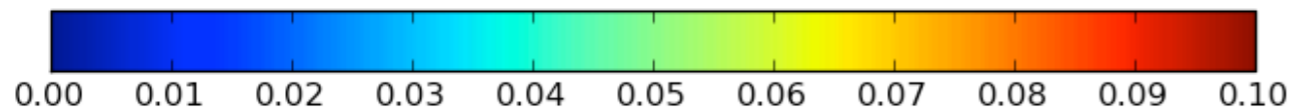
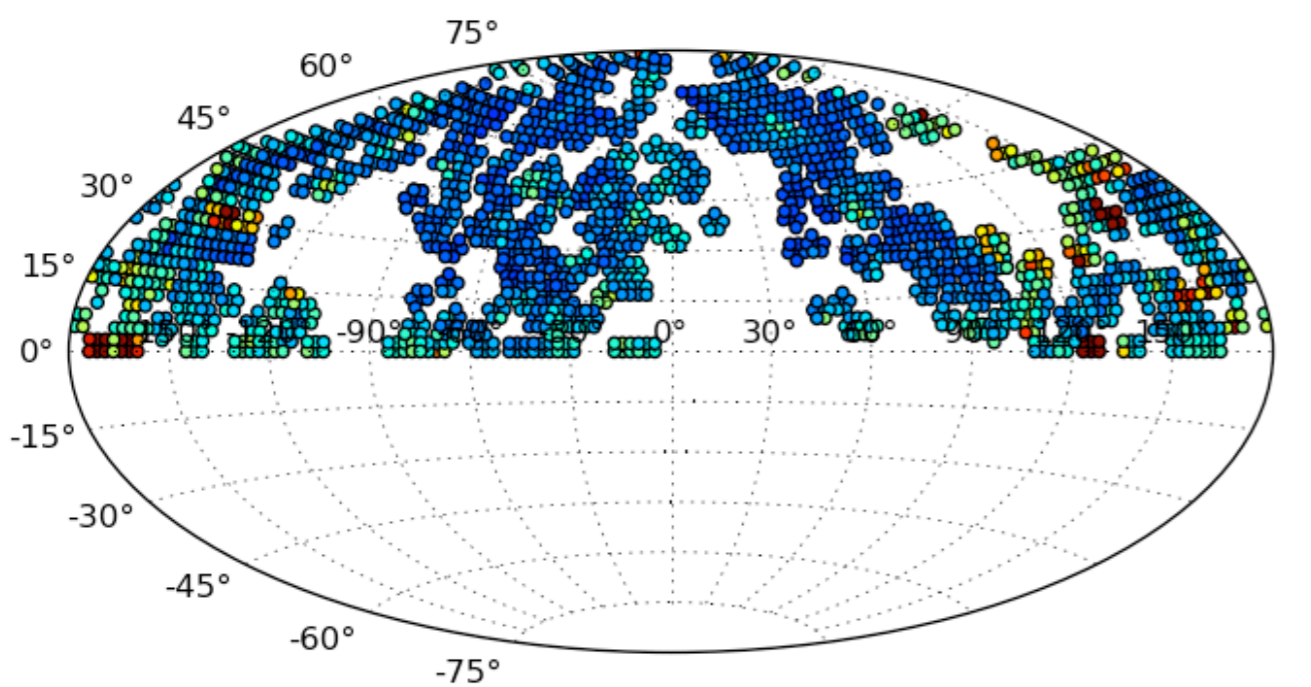


## Galactic

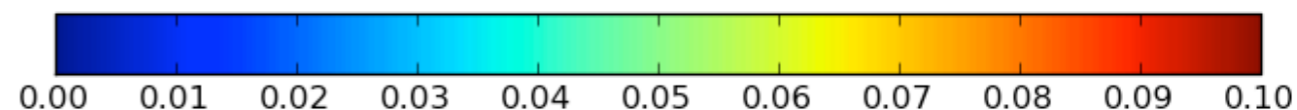
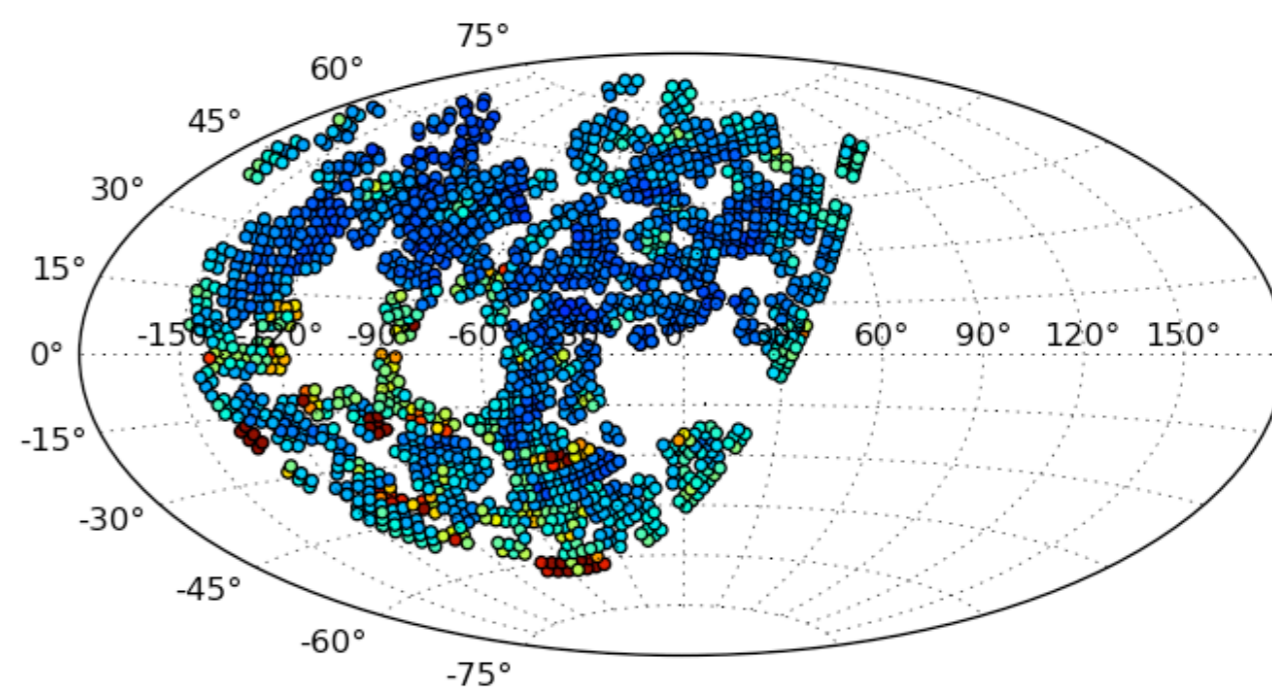


- Band 7 (157 MHz): 1780 fields

## Equatorial J2000



## Galactic





- Measured rms noise in 2510 cleaned images (from earlier in 2013)

