

Effelsberg Single Station Data

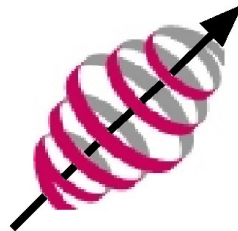
Report to the GLOW Technical Working Group by
Wolfgang Reich, 2008 May 05, in Tautenburg.
All slides copied from that meeting.

GLOW station slides from:

M Brueggen
B Ciardi
J Eisloffel
G Mann
W Reich

James M Anderson

Max-Planck-Institut
für Radioastronomie



LOFAR



MAX-PLANCK-GESELLSCHAFT



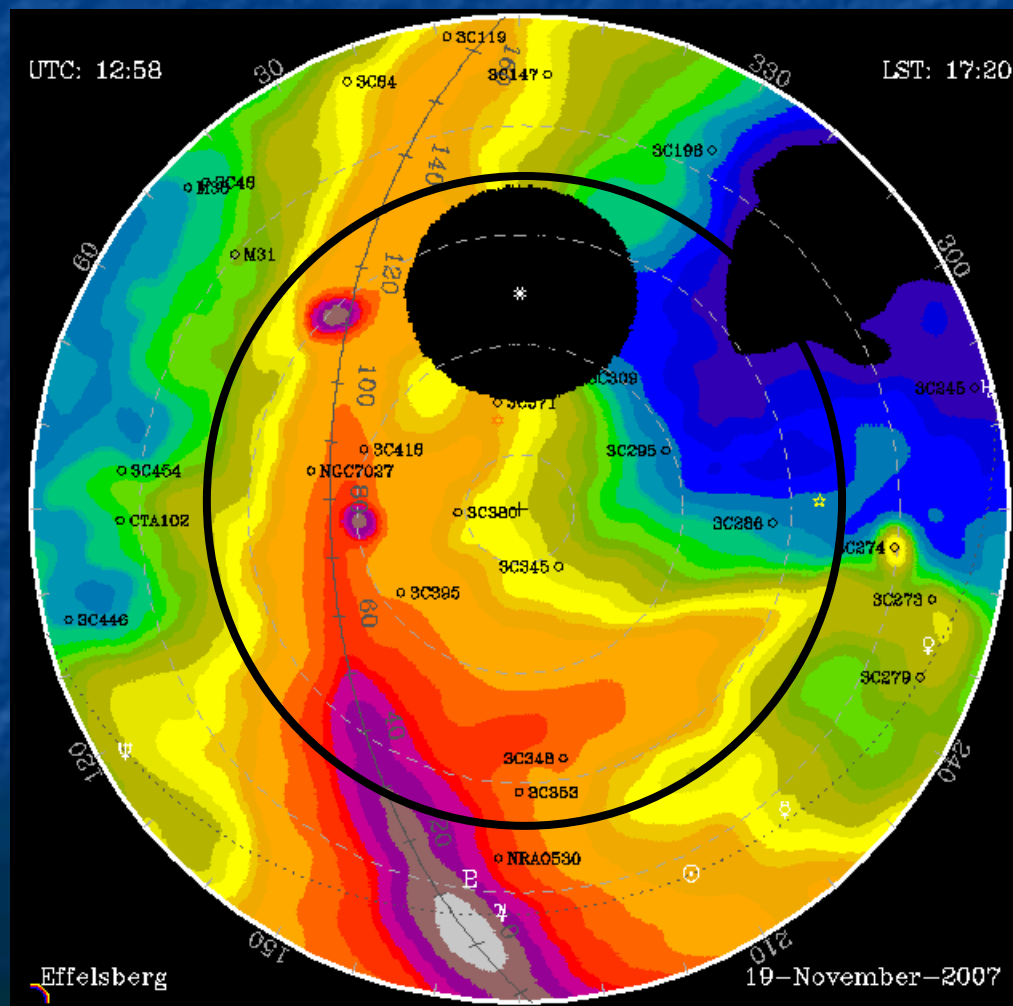
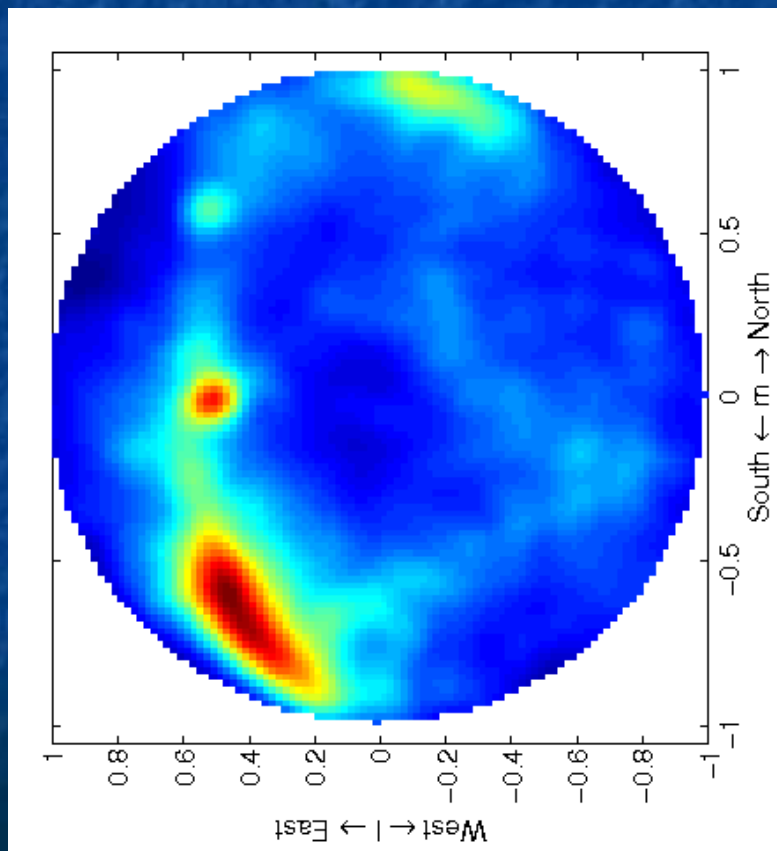
Status Effelsberg Station IS-DE1

Wolfgang Reich
MPIfR, Bonn

IS-DE1: „stand-alone“ mode
96 X-Dipole, $\tau=1$ s, $f=42$ MHz

45 MHz:
Maeda et al. (1999)

S. Wijnholds, P. Müller



Status LOFAR Station Effelsberg

Fiber + Software

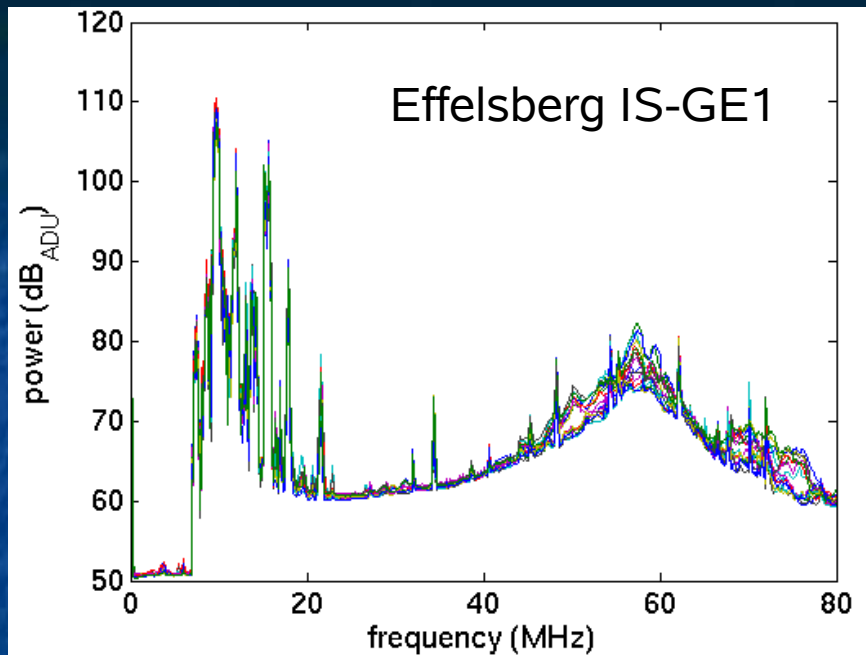
- **End of October 07:** Fiber Effelsberg - Bonn complete, DFN contract in Dec 07 to connect with FZ Jülich → RWTH Aachen: April 08
→ **Talk by A. Oberreuter**
- **End of October 07:** P. Müller visited ASTRON to collect and discuss 'stand-alone' software
- Hardware for 'stand-alone' mode: 3
PCs + 12TB disk + HP-switch (data stream direction: 'stand-alone'-PCs or Groningen)

Status LOFAR Station Effelsberg 'stand-alone' mode

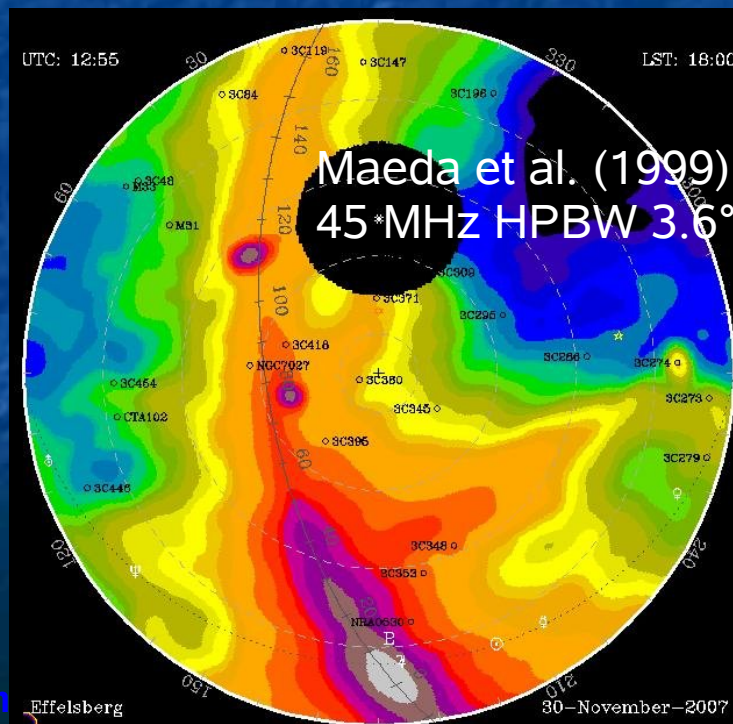
- all-sky snapshots: 0-100 MHz in 512 channels (195 kHz) in two polarizations
- automatic observing procedures and data conversion into Effelsberg reduction system by P. Müller
- Standard set-up: 20-80 MHz, 310 channels
- '24h run' (observe every 30m for 1s/channel):
→ ~30.000 maps (111x111 pixel)

RFI 100m telescope direction

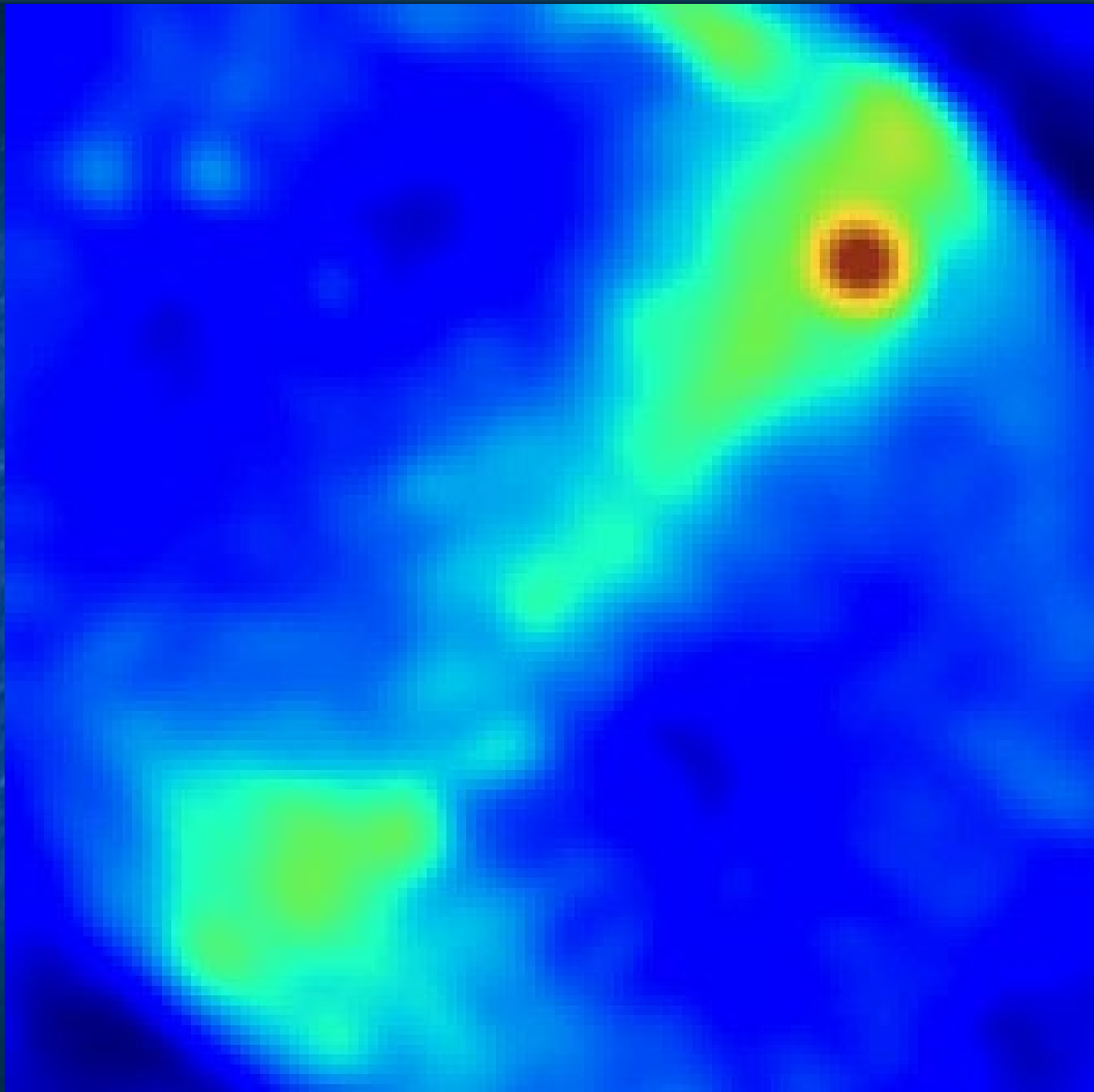
14.66 MHz, one channel
 Nov. 29th 2007, LST
 18h $\tau = 1$ sec, $\Delta\nu = 156$
 kHz HPBW $\sim 23^\circ$

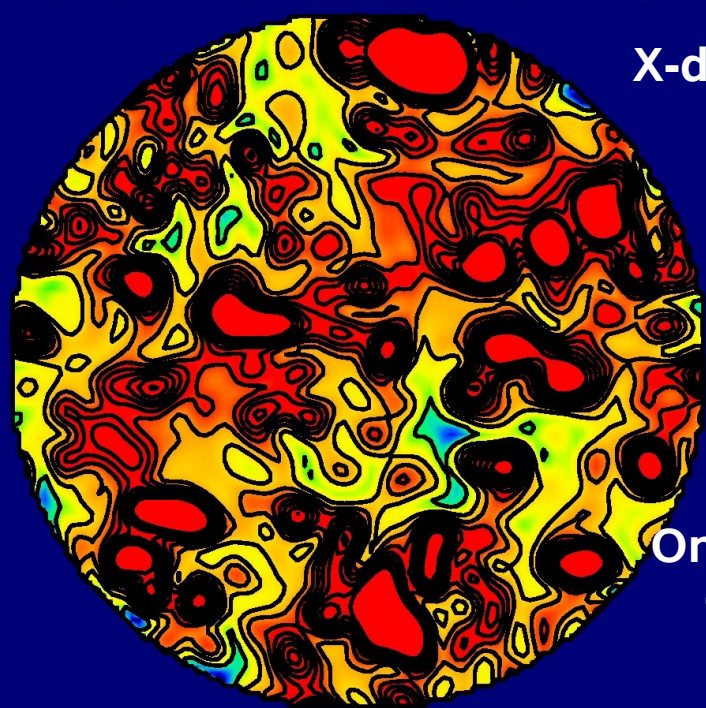


46.6 MHz – 51.9 MHz
 mean of 33 channels
 HPBW $\sim 6.8^\circ$



45.9 MHz
1 Channel
 $\tau = 1$ sec
 $\Delta t = 30$ min
23.11.07
P. Müller

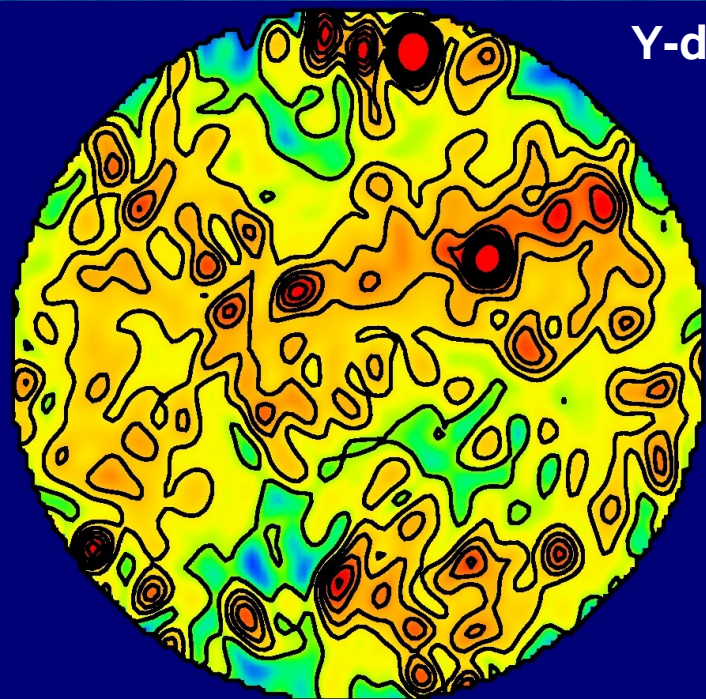
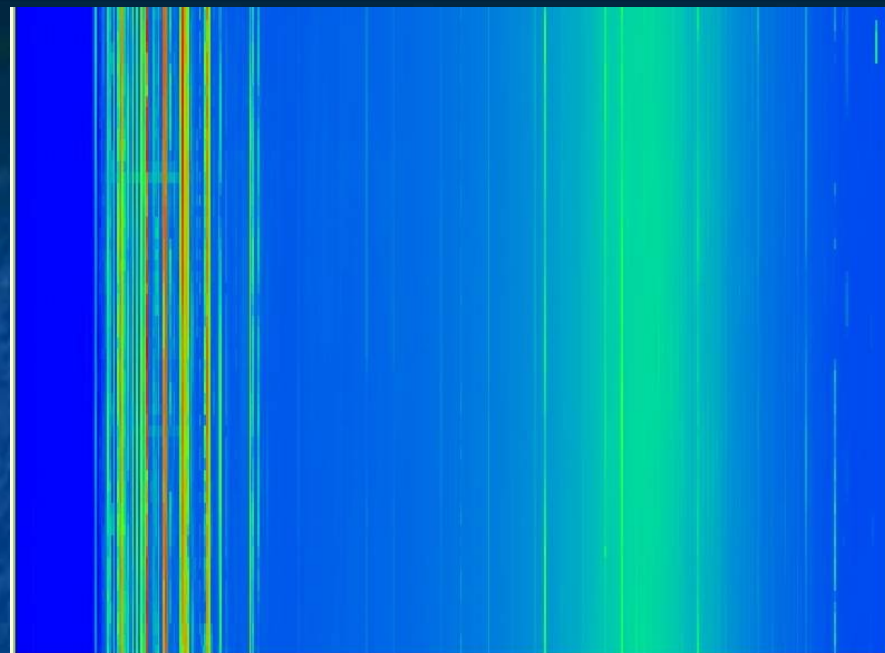




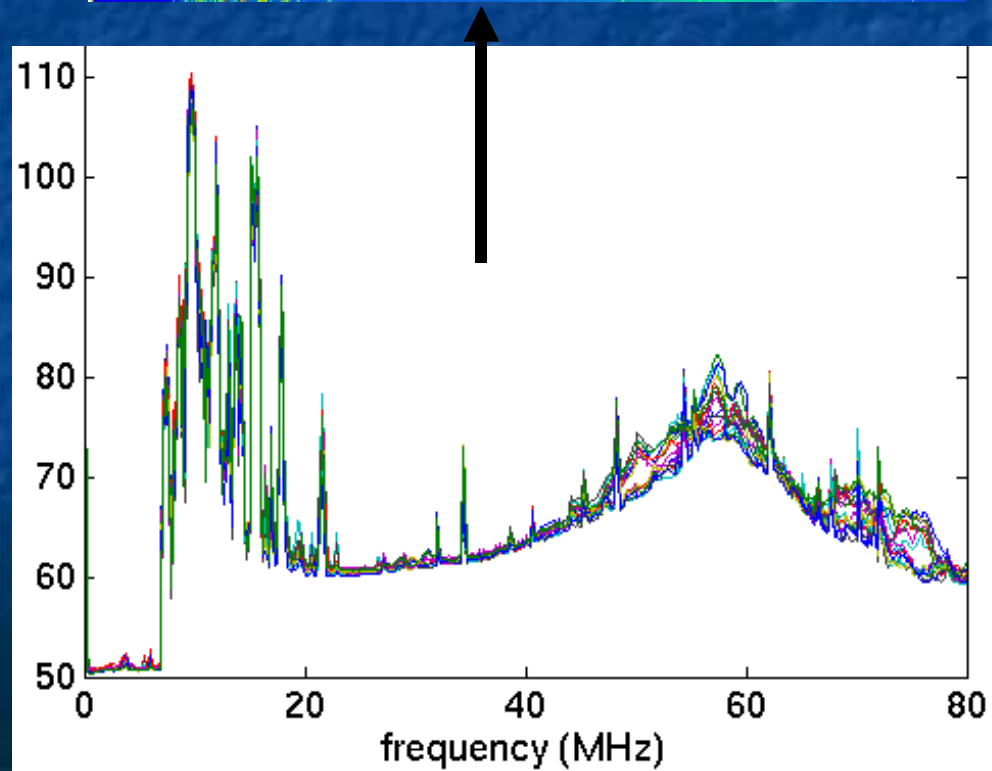
X-dipoles

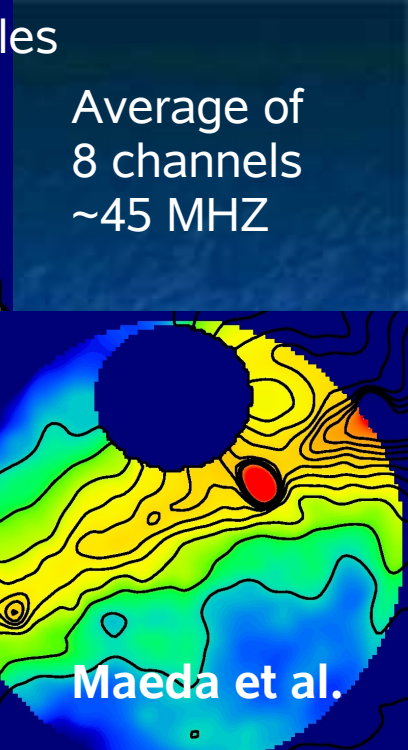
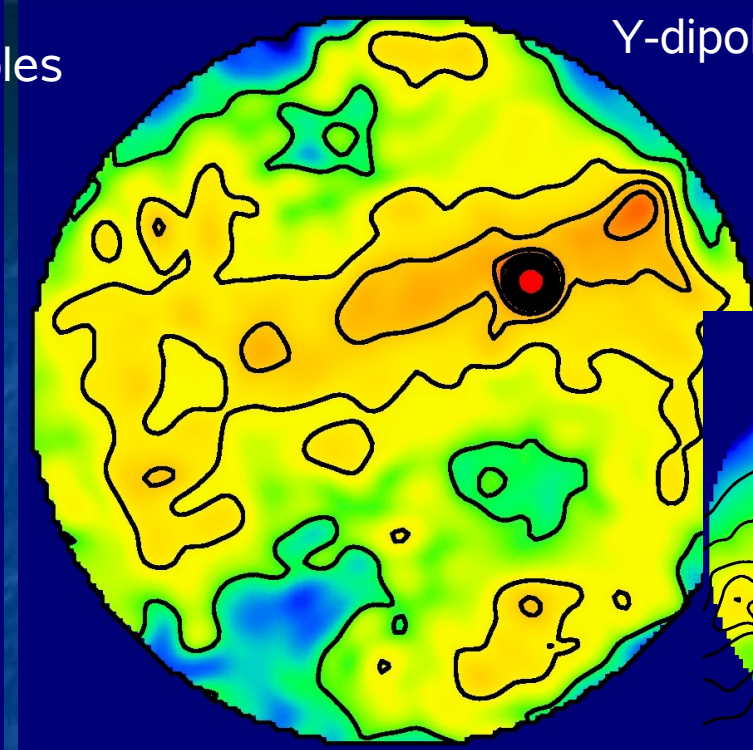
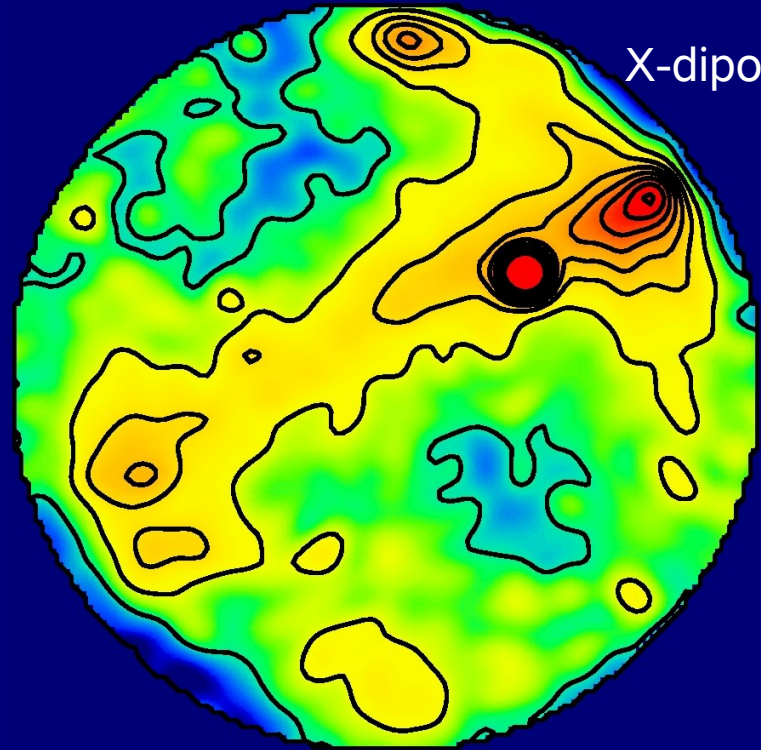
One channel
~45 MHz

Time ↑



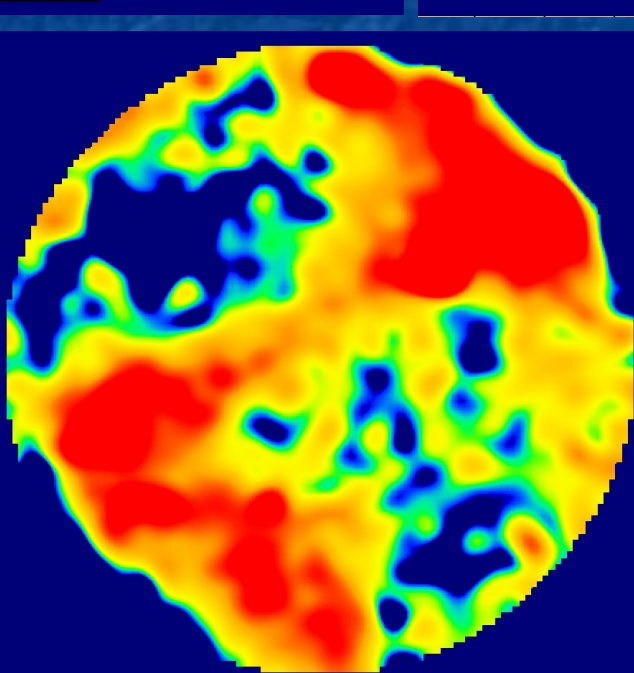
Y-dipoles





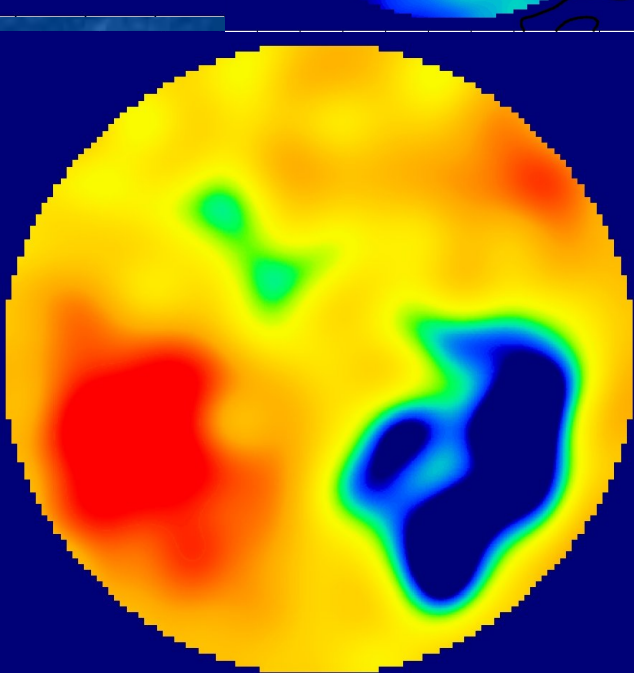
Dipole
difference: X-Y
at ~45 MHz (8
channels)

LOFAR Status Meeting



X-Y at
~21 MHz 1
channel

mes M Ande



Next steps

- extend the use of 'stand-alone' mode with local recording (clarify problems)
- interferometric experiments CS1 – IS-DE1 on selected sources (also polarization ?)

End of Effelsberg Single Station Data Presentation

GLOW Tautenburg Meeting: 2008 May 05--06

Chair: Ralf-Juergen Dettmar

Vice-chair: Marcus Brueggen

Secretary: Rainer Beck (Note: This position will change in the next couple of months when Matthias is confirmed in Tautenburg)

Technical Working Group Chair: James M Anderson

Scientific Working Group Chair: Benedetta Ciardi

Station Status Reports

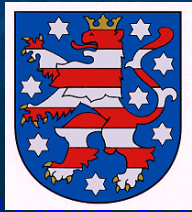
- Tautenburg
- Potsdam
- Garching
- Juelich
- Effelsberg

LOFAR Station at TLS Tautenburg



Jochen Eislöffel

Thüringer Landessternwarte Tautenburg



LOFAR 14/27

Field after the clearing – Apr 2008





Remote LOFAR-Station in Potsdam-Bornim

Gottfried Mann
Astrophysikalisches Institut Potsdam,
An der Sternwarte 16, D-14482 Potsdam, Germany
GMann@aip.de

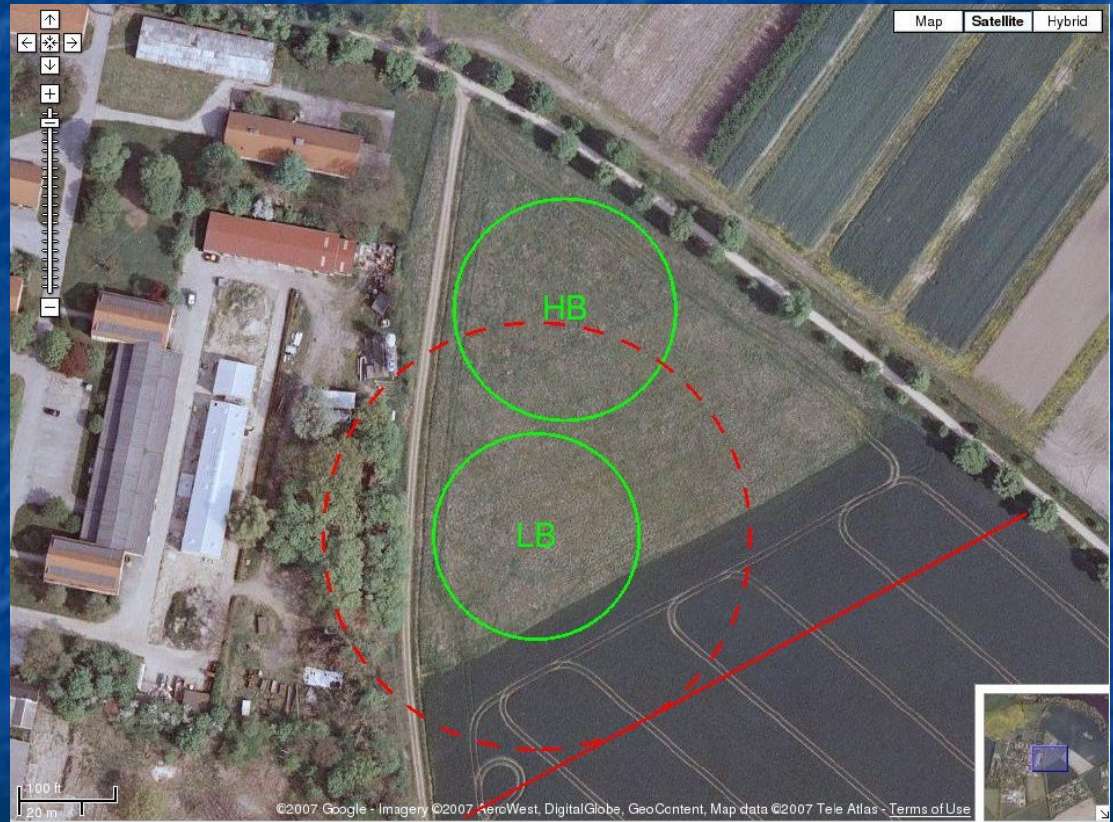


The AIP as a member of GLOW
intends to establish a remote
LOFAR station in Potsdam-Bornim
in the neighbourhood of the
Leibniz-Institut für Agrartechnik
Potsdam-Bornim e.V.,
because of the good link to the
DFN (Deutsches-Forschungs-Netz)





Remote LOFAR Station in Potsdam-Bornim





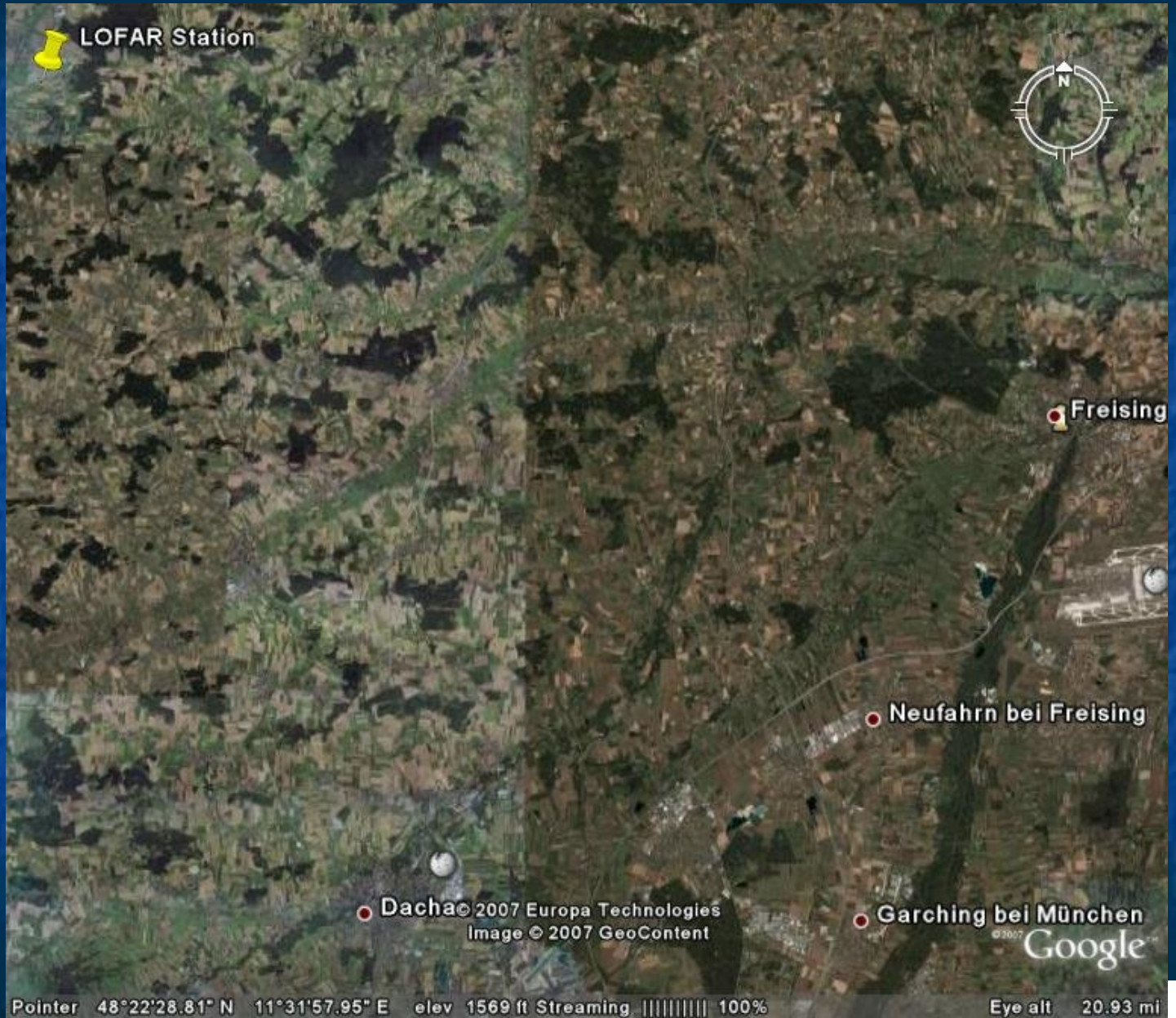
Status



- preparation for a contract of ordering a remote LOFAR station at ASTRON (expecting the draft of the contract next week)
- the LOFAR station will be paid by the budget of the institute
- preparation of the area (e.g. geometric measurements, cable channels etc.) (soft money in the framework of EFRE)
- AIP intends to become a full member of the DFN together with the ATB
- applying for 4 positions for LOFAR
 - in the framework of SAW of the WGL
 - dynamics of CMEs (solar physics)
 - reionization and intergalactic medium
 - week activity at black holes
 - in the framework of Verbundforschung of the BMBF
 - IT position of the solar KSP



MPA Remote Station



MPA Remote Station



Antragsteller:

PI: Jacobs University Bremen

Ruhr-Universität Bochum

Universität Bonn

Universität Hamburg

Astrophysikalisches Institut Potsdam

Thüringer Landessternwarte Tautenburg

in Zusammenarbeit mit dem

Forschungszentrum Jülich

- 6 Dec. 2007 **meeting in Bremen**
- 20 Dec. 2007 **proposal finished**
- April 2008 **review panel makes recommendations**
- May 2008 **grants awarded**
- **D-LOFAR received very good reviews and is largely going to be funded**

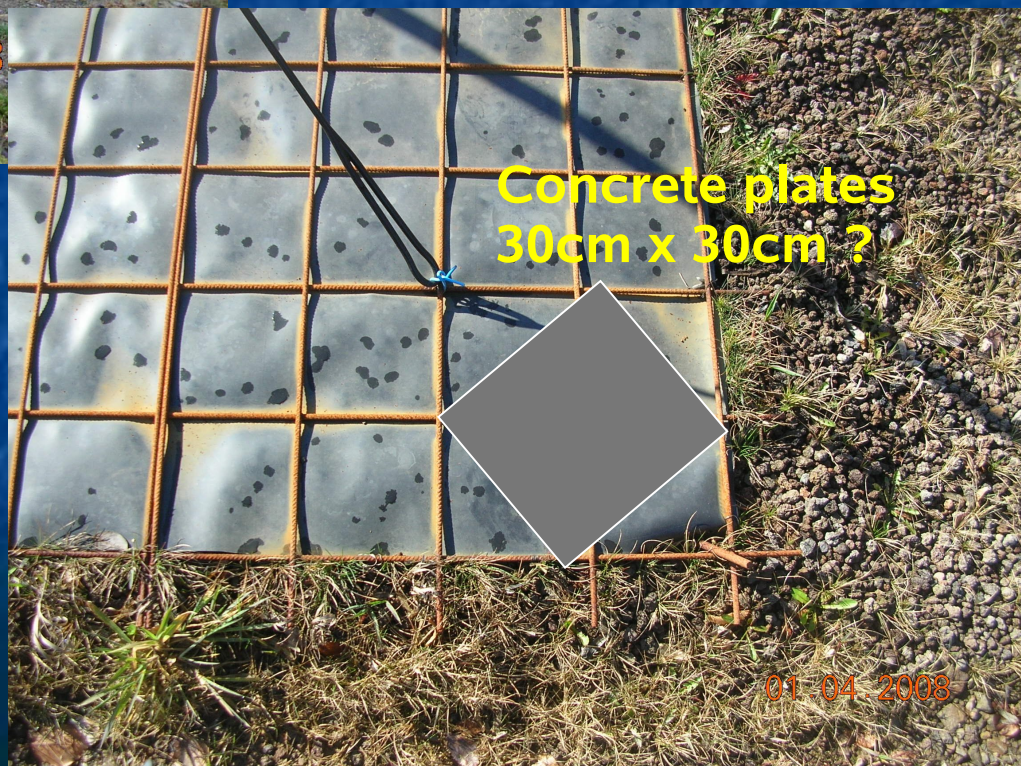


March 2008



30.03

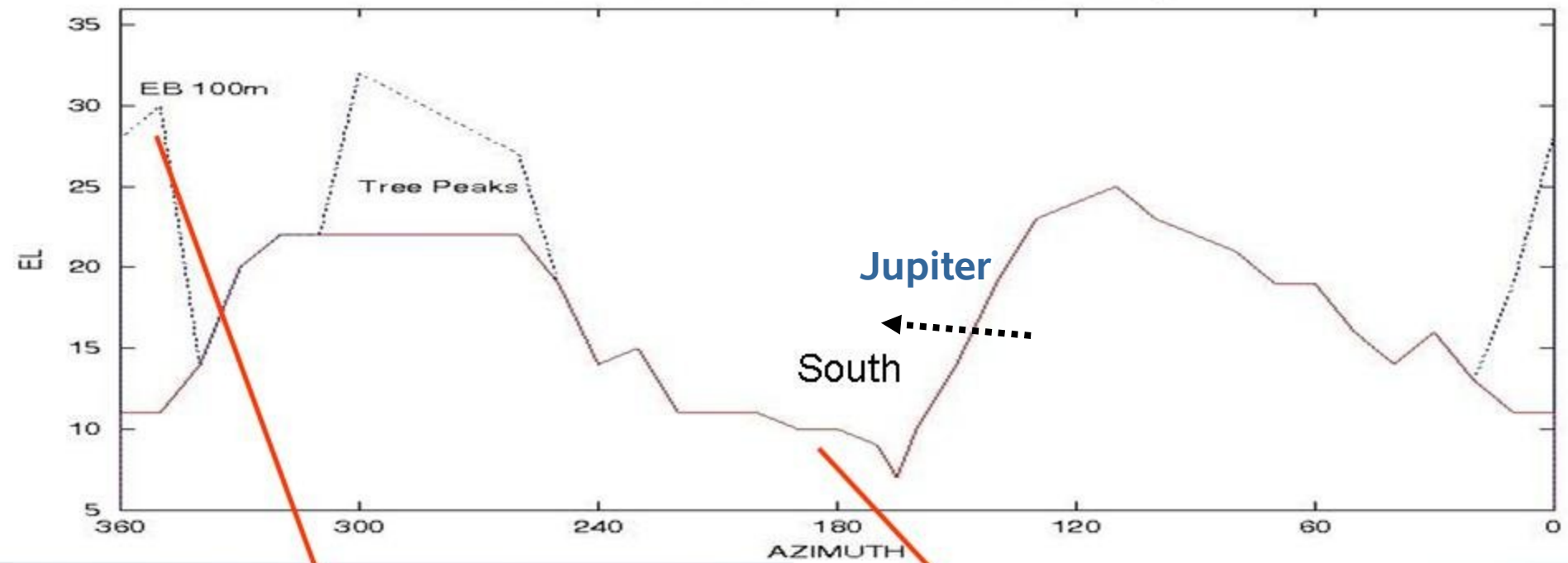
after two storms in
March 2008



Concrete plates
30cm x 30cm ?

01.04.2008

Instrumental Horizon LOFAR Station Effelsberg



HBA Field Planning

- Is there enough space for 96 tiles?
- If 60 cm spacing required, perhaps not
- Survey commissioned



The End