

German LOFAR

Rainer Beck

MPIfR Bonn

LOFAR activities in Germany

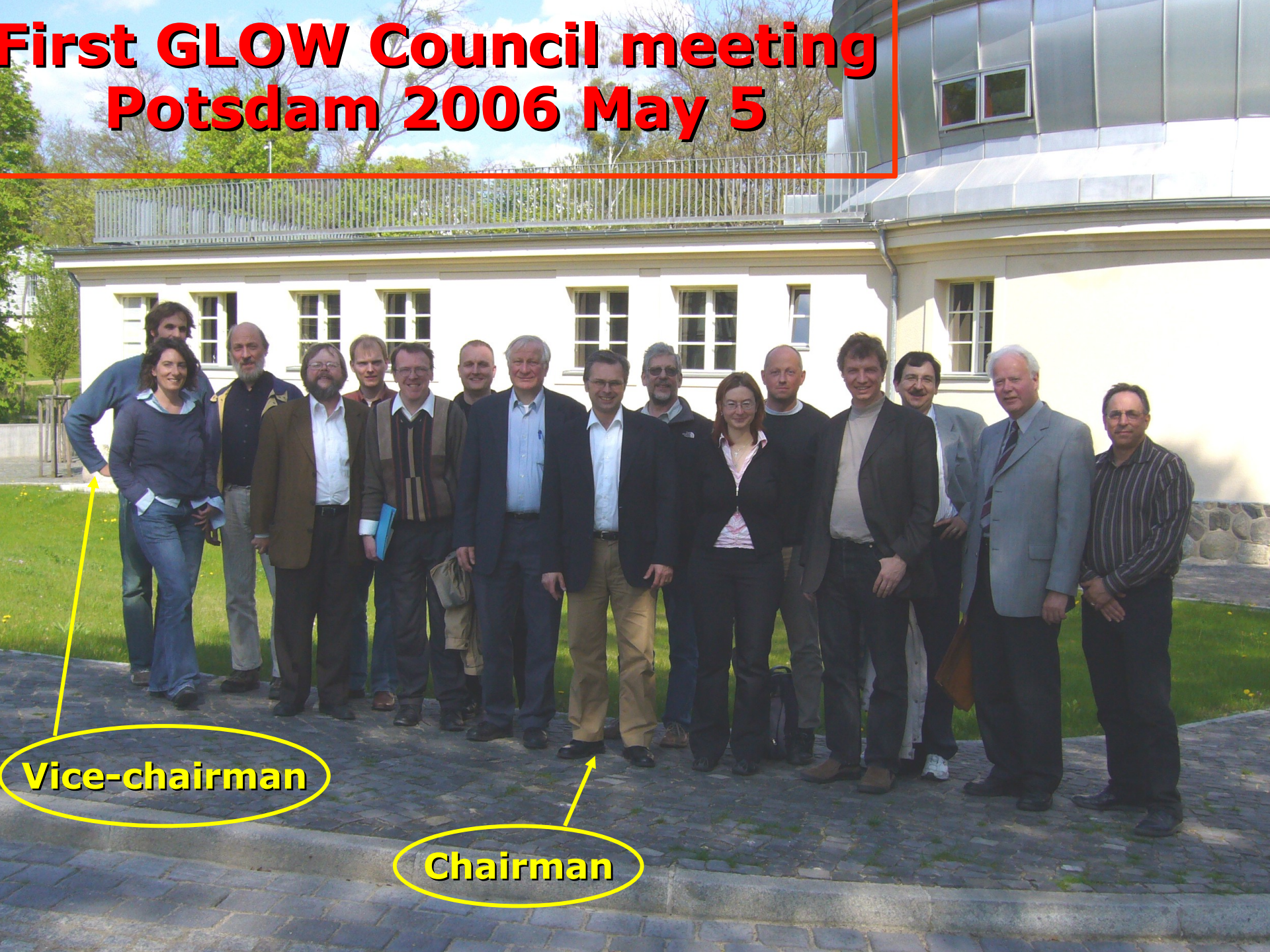
- May 2004: **First German LOFAR meeting** in Bremen
- Sept 2005: Publication of the **German LOFAR White Paper**
- Sept 2005: First **German LOFAR workshop** in Cologne
- April 2006: Formation of **GLOW (German Long Wavelength Consortium)**
- May 2006: MoU between ASTRON and FZ Jülich
- Dec 2006: MoU between LOFAR and MPIfR
- Dec 2006: Construction of LOFAR station at Effelsberg
- Jan/March 2007: Submission of **KSP proposals**
- Mar 21 2007: First light for the Effelsberg station
- ~ May 2007: MoU between LOFAR and GLOW
- ~ Oct 2007: Data link between Effelsberg and Bonn

German LOFAR White Paper

September 2005



First GLOW Council meeting Potsdam 2006 May 5



Vice-chairman

Chairman

Members of the German Long Wavelength Consortium (GLOW)

- Astronomisches Institut der Ruhr-Universität **Bochum**
- Argelander-Institut für Astronomie **Bonn**
- Max-Planck-Institut für Radioastronomie **Bonn**
- International University **Bremen**
- Max-Planck-Institut für Astrophysik **Garching**
- Sternwarte **Hamburg**
- Forschungszentrum **Jülich**
- 1. Physikalisches Institut der Universität **Köln**
- Astrophysikalisches Institut **Potsdam**
- Thüringische Landessternwarte **Tautenburg**

Organisation of GLOW

Members

Council

Board

Chairman
Anton Zensus

Vice-chairman
Marcus Brueggen

Secretary
Rainer Beck

Ralf-Jürgen Dettmar

Matthias Steinmetz

Working Groups

Science WG
Benedetta Ciardi

Technical WG
Wolfgang Reich

First 7 LOFAR stations in Germany



Wanted:

**At least 5
more stations**



MAX-PLANCK-GESELLSCHAFT

International Station Germany 1 (IS-GE1) at Effelsberg



29.11.2006





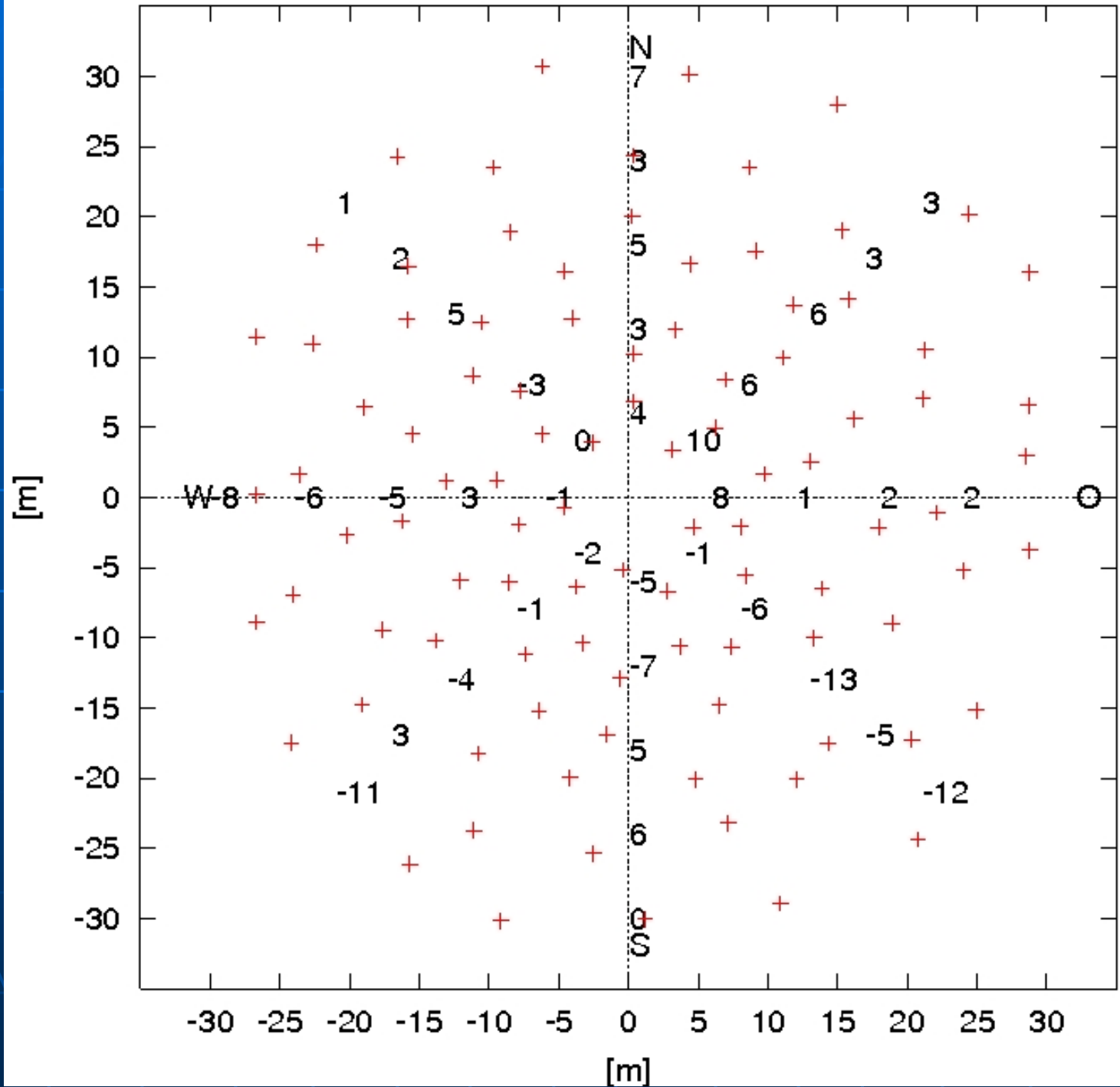
29.11.2006



16.01.2007

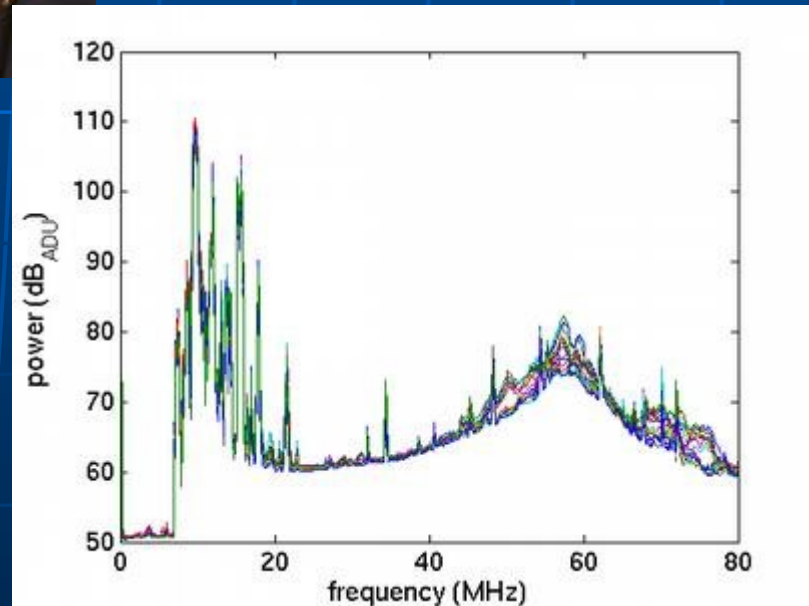


14.03.2007





2007 March 21:
"First light !"





International Station *GE1* at Effelsberg



MAX-PLANCK-GESELLSCHAFT

- May 2006: **Contract** with ASTRON
- May 2006: **RFI** measurements
- Autumn 2006: **Preparation of site**
- Early 2007: **Installation of low-band antennas**
- ~ Oct 2007: **Fast data link to Bonn**
- ~ End 2007: **Joint observations** with Exloo core station CS-1
- 2008: **High-band antennas**

Glas fibre links
(3 Gbit/s):

Effelsberg

→ Bonn

→ via DFN
to FZ Jülich

→ via *Surfnet*
to Groningen



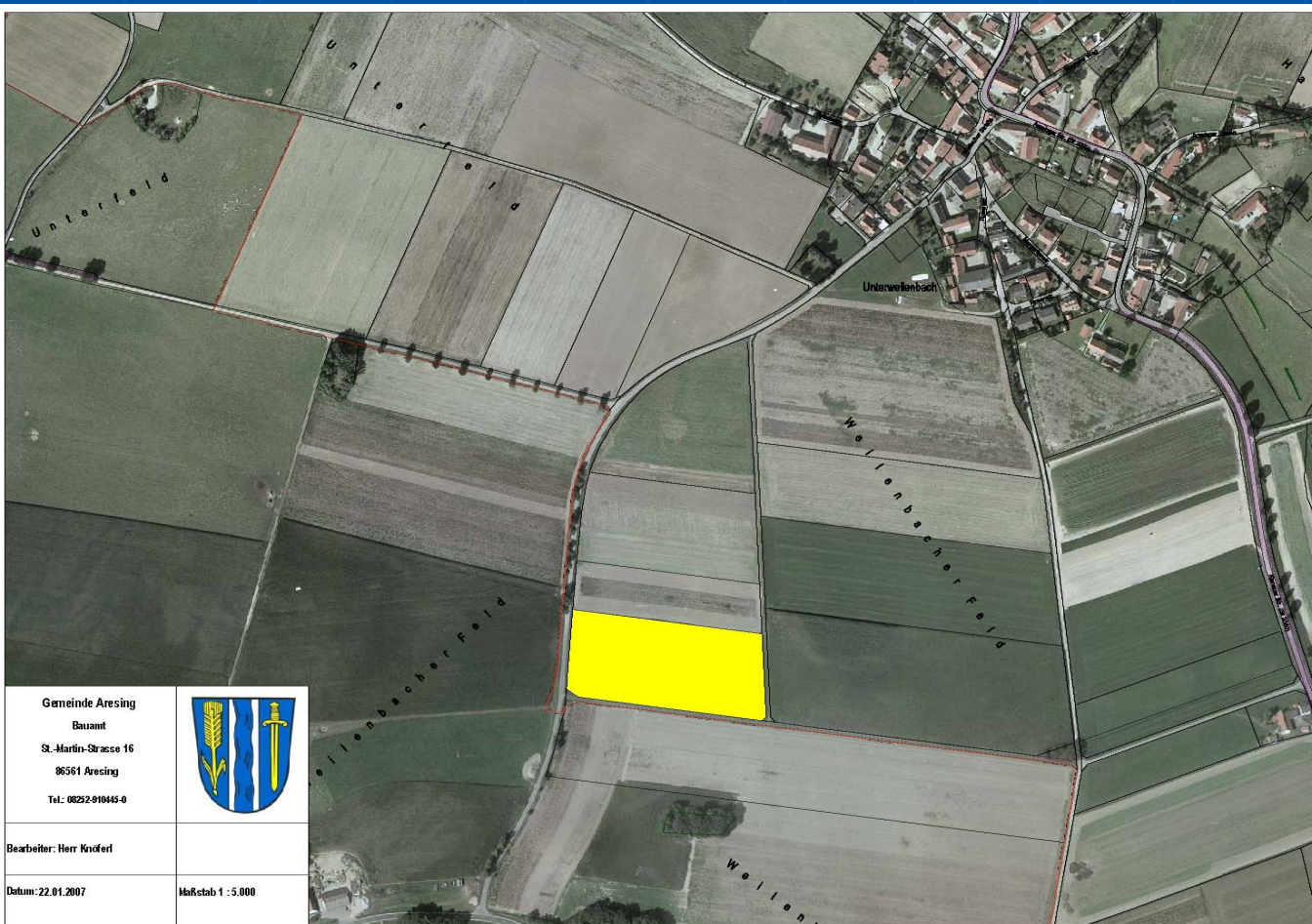
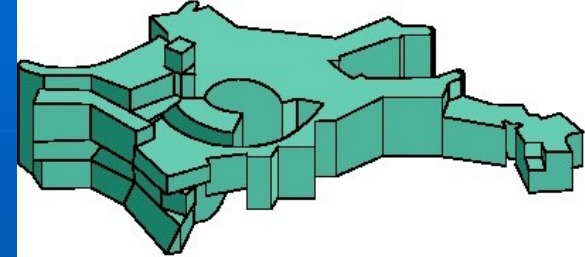
LOFAR Stationen





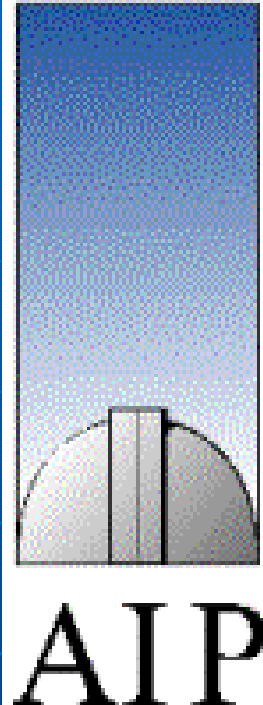
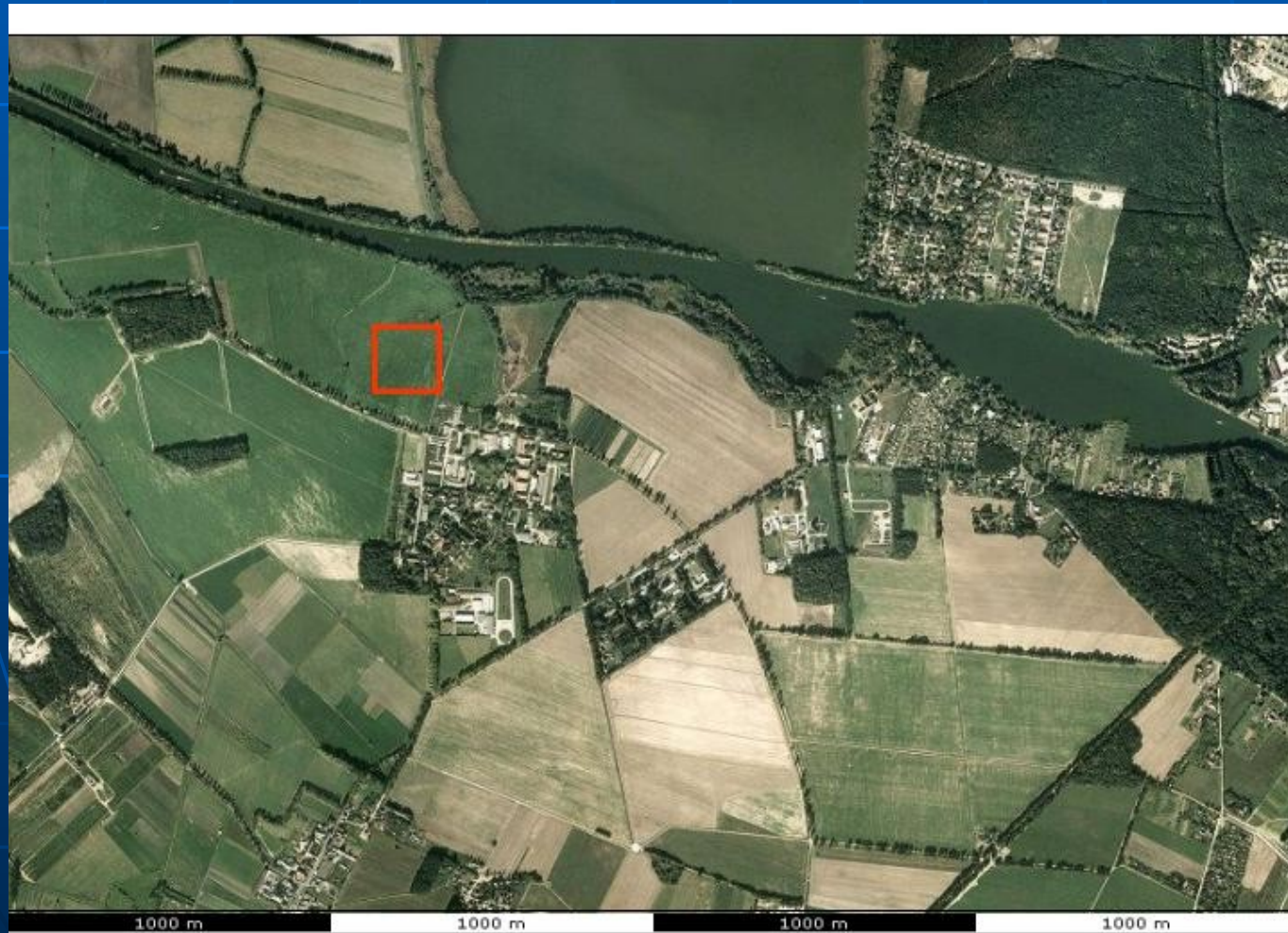
MAX-PLANCK-GESELLSCHAFT

IS-GE2: Garching / Unterweilenbach



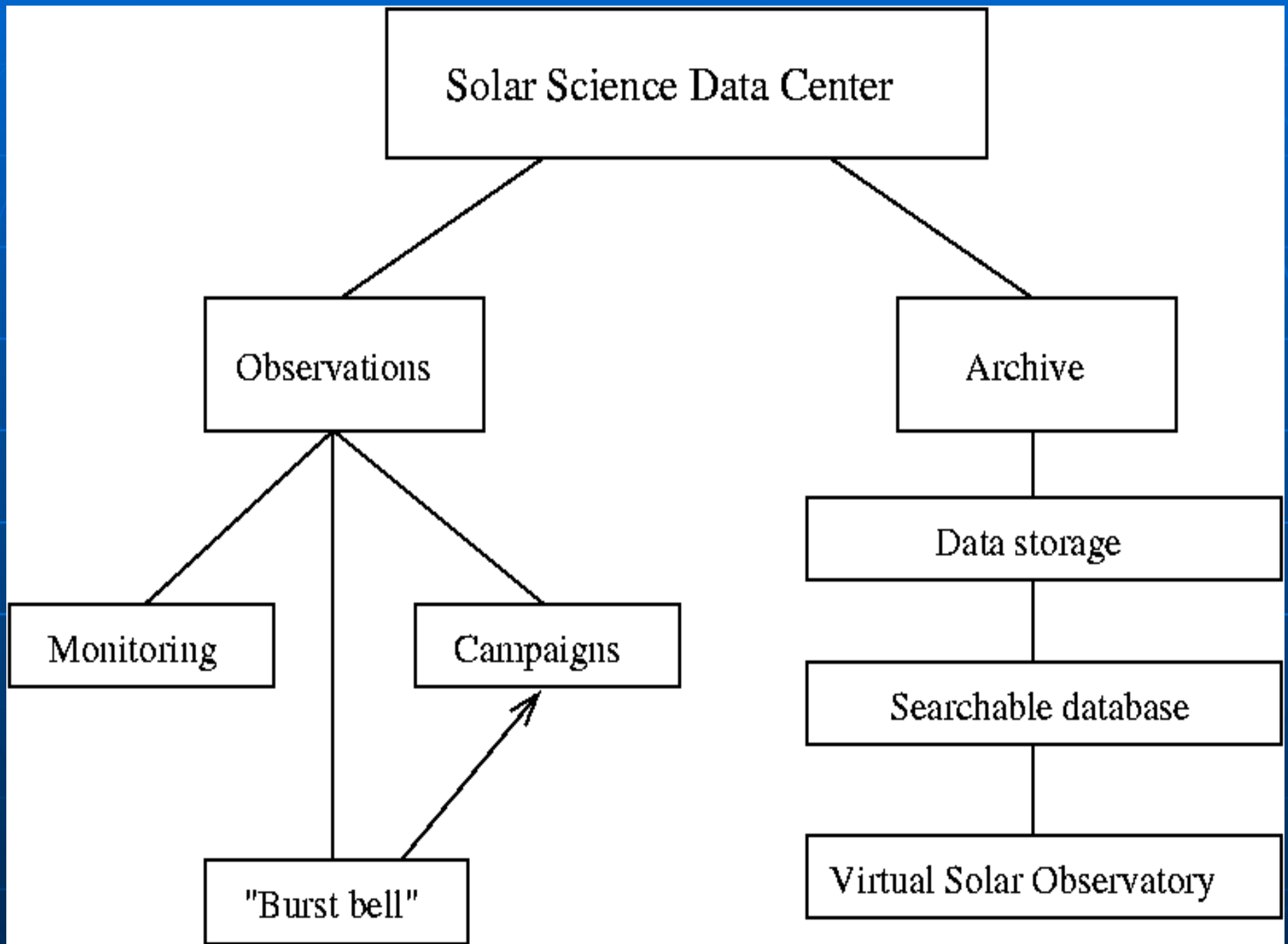
Gemeinde Aresing Bauamt St.-Martin-Strasse 16 86561 Aresing Tel.: 08252-91045-0	
Bearbeiter: Herr Knöferl	
Datum: 22.01.2007	Maßstab 1 : 5.000

IS-GE3: Potsdam/Bornim (2008)



Contributions to LOFAR software

- **Software for stand-alone station**
(MPIfR Bonn)
- **Data storage and supercomputing**
(FZ Jülich)
- **Software infrastructure** (MPA Garching)
- **GRID computing** (AIP Potsdam, FZ Jülich, MPIfR Bonn)
- **Solar data center** (AIP Potsdam)
- ...



LOFAR science interests in Germany

- **Cosmology:** Epoch of Reionization and large-scale structures
(MPA Garching, Int. Univ. Bremen, AIP Potsdam)
- **Magnetic fields in galaxies, clusters and relics**
(MPIfR Bonn, Univ. Bochum, Univ. Bonn, MPA Garching, AIP Potsdam)
- **Milky Way surveys**
(MPIfR Bonn, AIP Potsdam)
- **Stellar jets**
(Tautenburg Observatory, MPIfR)
- **Gravitational lenses**
(Univ. Bonn & Hamburg Observatory)
- **Exoplanets**
(Tautenburg Observatory, Hamburg Observatory)
- **Solar physics**
(AIP Potsdam)
- ...

Proposals for International LOFAR Key Science Projects

- **Polarization / magnetic fields**
(submitted in Jan 2007)
- **Solar radio astronomy**
(submitted in March 2007)
- **Stellar and galactic jets**
(in prep)



E-LOFAR :
excellent prospects for
European radio astronomy