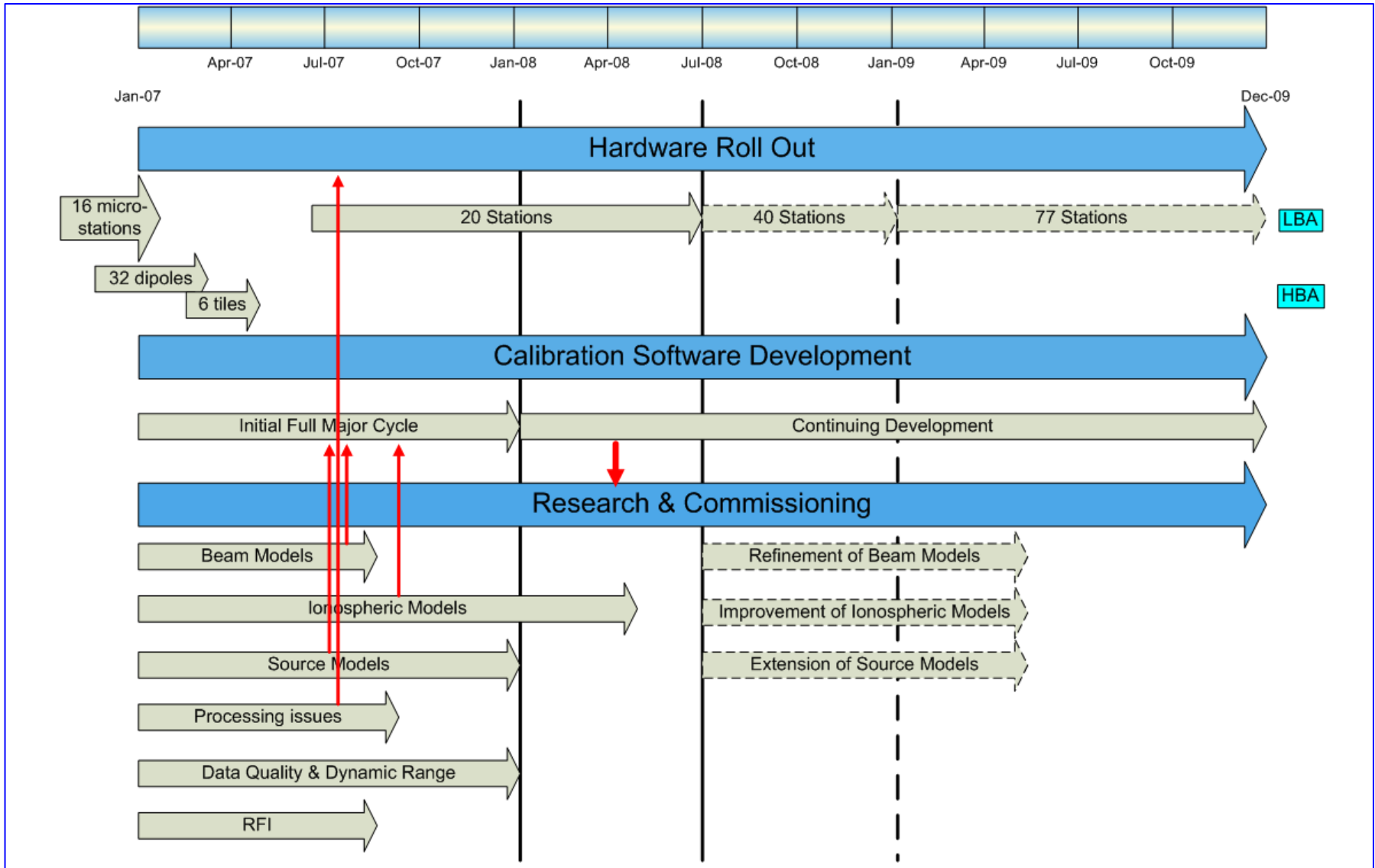


Calibration and Commissioning Plan

LOFAR as an Imaging Radio Telescope

R.J. Nijboer
(ASTRON)

A.G. de Bruyn
(ASTRON & Kapteyn Institute Groningen)



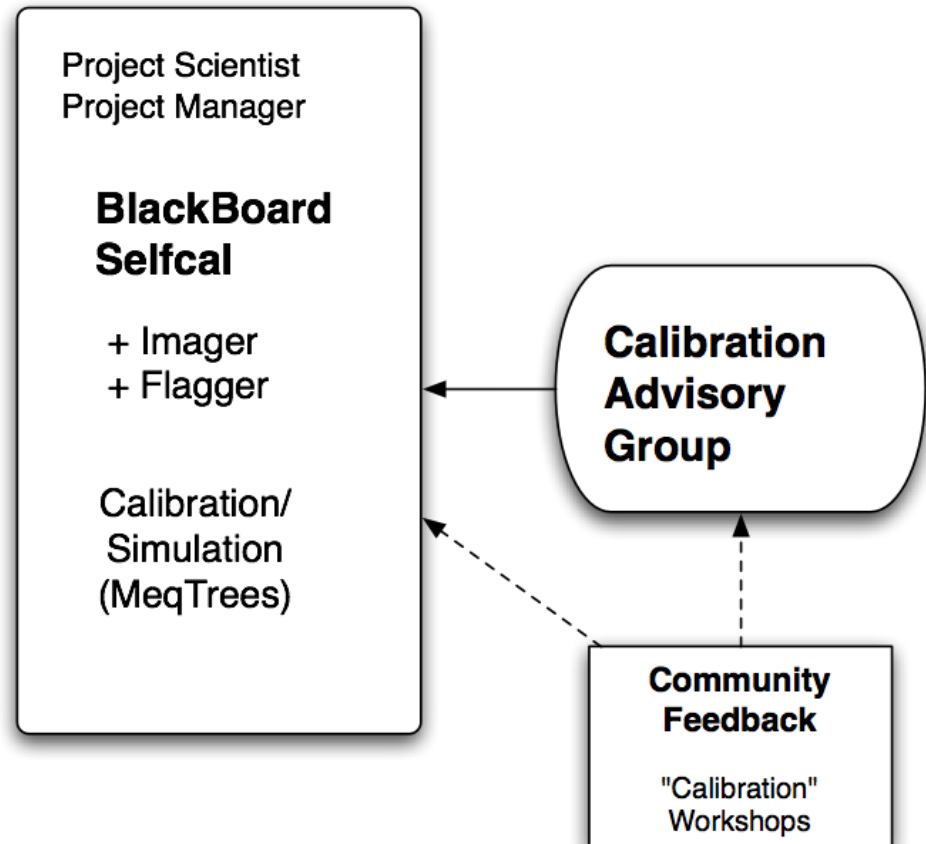
- Reduce and analyse data: from CS1 to near-final LOFAR
- Help design and test calibration functionality in BBS
- Interface to the USG and KSP software groups
- Run simulations of problems still unresolvable by observations
- Report progress at weekly meetings
- Condense knowledge in wiki, short reports, and memos

- About 8 people which are available about 50% of their time

- Ger de Bruyn (chair, Calibration Project Scientist)
- Ronald Nijboer (Calibration Project Manager)
- Stefan Wijnholds (ASTRON)
- Michiel Brentjens (ASTRON / EoR KSP)
- Sarod Yatawatta (EoR KSP)
- Vishambhar Pandey (EoR KSP)
- Amitesh Omar (Surveys KSP)
- Mamta Pandey (Surveys KSP; from July 2007)
- Casey Law (Transients KSP)
- Andreas Horneffer (Cosmic Rays KSP)

- Advises Project Scientist and Project Manager
 - on priorities
 - on topics that require more expertise than available within the CTT

Calibration Development, Testing and Commissioning



	Date	Description of topic	People	Status
Beams	apr-07	LBA dipole model and HBA dipole model	Yatawatta, Hamaker	ongoing
	jun-07	HBA tile beam model		not started
	jun-07	HBA station configuration and station beam model	Wijnholds, Brentjens	ongoing
	jun-07	LBA & HBA station beam (to 10dB level; main lobe)		not started
	jun-07	Polarization characteristics (dipoles / station beam; LBA / HBA)	Hamaker, Yatawatta	ongoing
	aug-07	Implementation and verification	Van Zwieten, Pandey	not started
Ionosphere	mei-07	Initial ionospheric phase model	Mevius, Anderson, Noordam, Van Bommel	ongoing
	jul-07	TID observations		not started
	jul-07	Analysis of GMRT / VLA data	Omar, Surveys KSP	ongoing
	aug-07	Implementation in BBS		not started
	sep-07	Frozen flow approach		not started
	mei-07	estimation of Faraday rotation using GPS data	Brentjens, de Bruyn	not started
	jul-07	CS1 on Crab pulsar	Brentjens, de Bruyn	not started
	jul-07	WSRT LFFE on ms pulsars	Bernardi, de Bruyn	ongoing
	dec-07	Faraday rotation strategy in BBS		not started
mrt-08	Post processing strategy		not started	

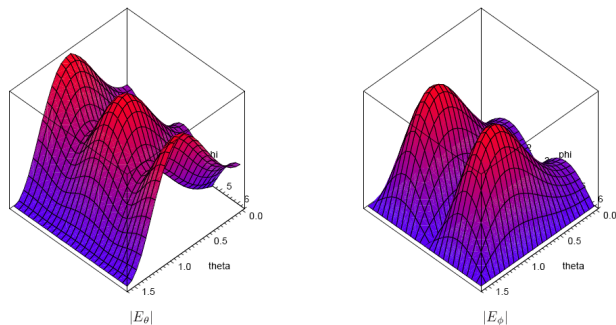
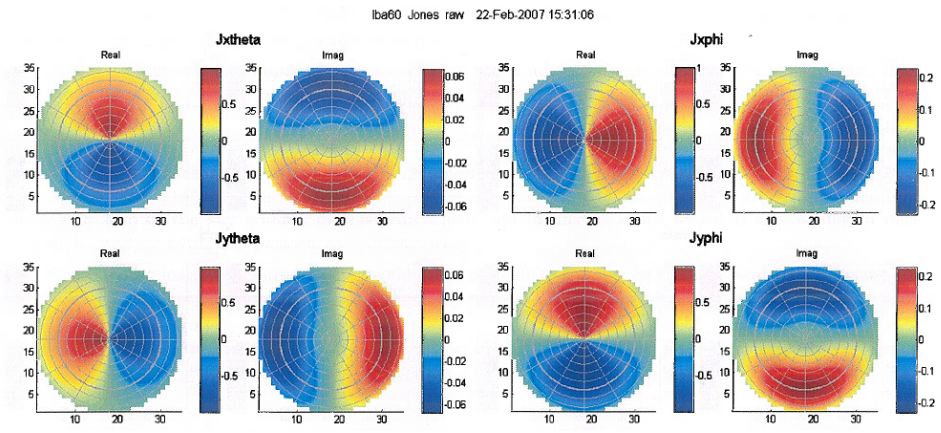


Figure 6: Beam at 80 MHz



Source Models				
	jun-07	Initial GSM	Mohan, van Weeren	ongoing
	jul-07	flux scale procedure	Strom, Brentjens, Bregman, Wijnholds	ongoing
	jul-07	calibration fluxes for High Band	Strom, Brentjens, Bregman, Wijnholds	ongoing
	sep-07	absolute flux scale Low + High Band		not started
	okt-07	deconvolution with shapelets		not started
	dec-07	secondary, unresolved flux calibrators		not started
Processing Issues				
	jun-07	Processing statistics (CPU time / IO requirements / ...)	van Zwieten, van Diepen, Pandey, Yatawatta	Half started
	jul-07	minimum processing needs study	Brentjens	ongoing
	sep-07	Broadband issues and global solve strategy		not started
	sep-07	Peeling vs. simultaneous solution		not started?
Data Quality & Dynamic Range				
	mei-07	Estimation and verification of cross-talk	Wijnholds	ongoing
	jul-07	Estimation of data quality using CS1 redundancy	Pandey, de Bruyn	not started
	jul-07	CS1 dynamic range around CasA, CygA, NCP	Yatawatta, Pandey, Brentjens	ongoing
	aug-07	uv-coherence scale & dynamic range study	Noordam, de Bruyn	not started
	dec-07	determine required phase and gain errors		not started
RFI				
	jul-07	impact weak non-linearity on data	Boonstra	not started
	jun-07	occurrence of unacceptable intermodulation signals	Boonstra	not started
	aug-07	statistical information on RFI	Boonstra + stagair	ongoing