

LOFAR CS1

Calibration and Imaging

(cont.)

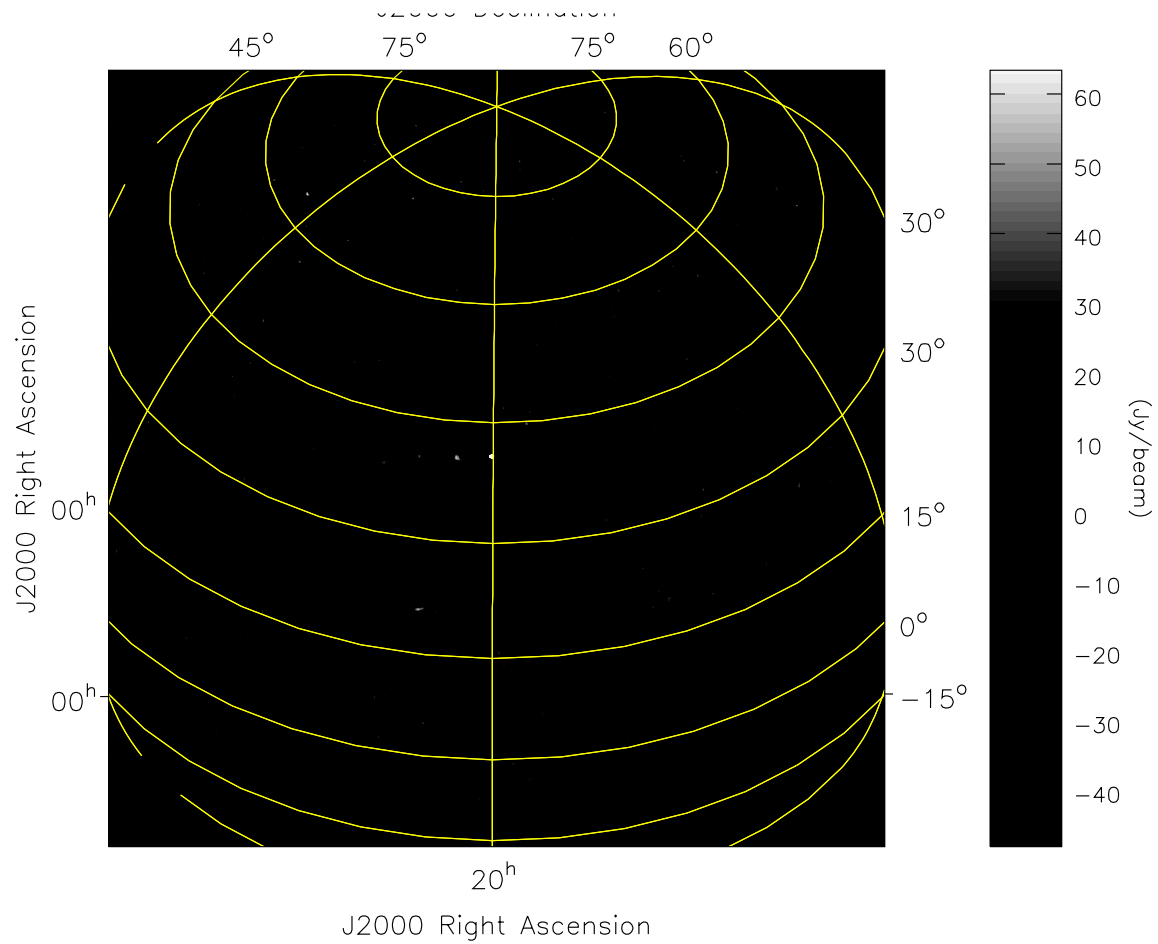
Peeling

□ Jones Matrices

$$\mathbf{G} = \begin{bmatrix} g_{11} & 0 \\ 0 & g_{22} \end{bmatrix} \quad \mathbf{J} = \begin{bmatrix} J_{11} & J_{12} \\ J_{21} & J_{22} \end{bmatrix}$$

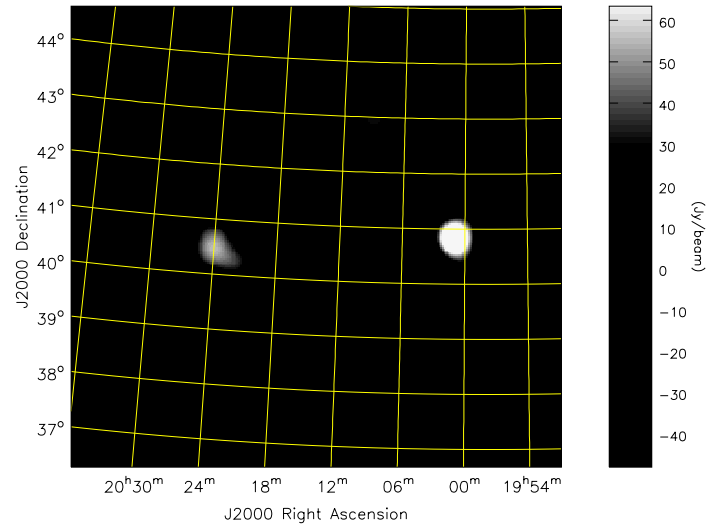
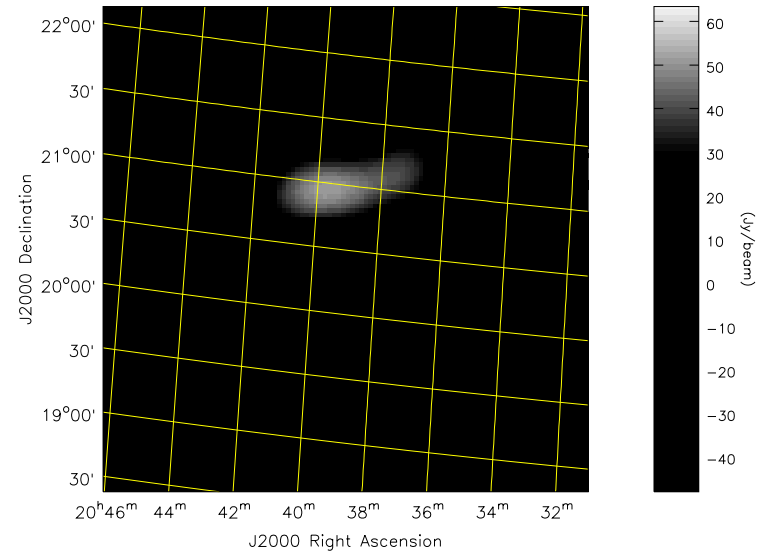
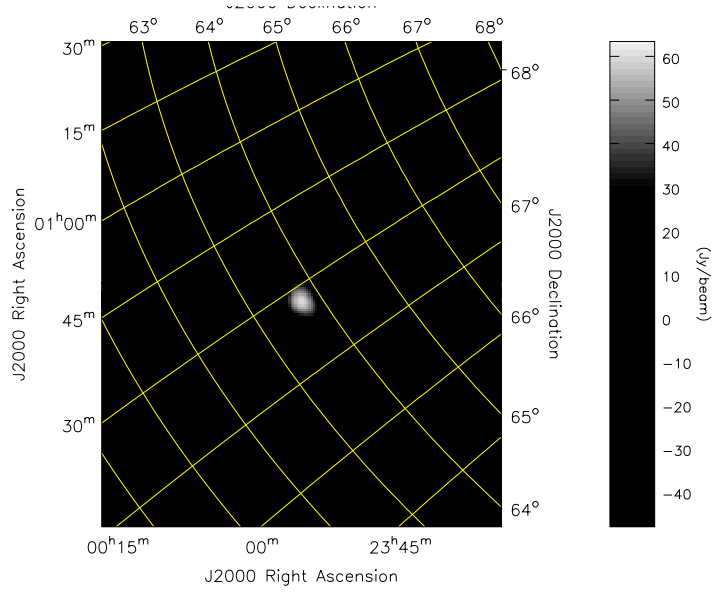
- Peel CasA and CygA. If we solve for \mathbf{J} Jones what we get is \mathbf{JP} where \mathbf{P} is the beam and projection. Since \mathbf{P} is an image plane effect, we cannot use this to correct the residual data.
- Hence we peel with \mathbf{G} Jones and use the solution of CygA to correct the residual data.

Average Residual Image After Peeling



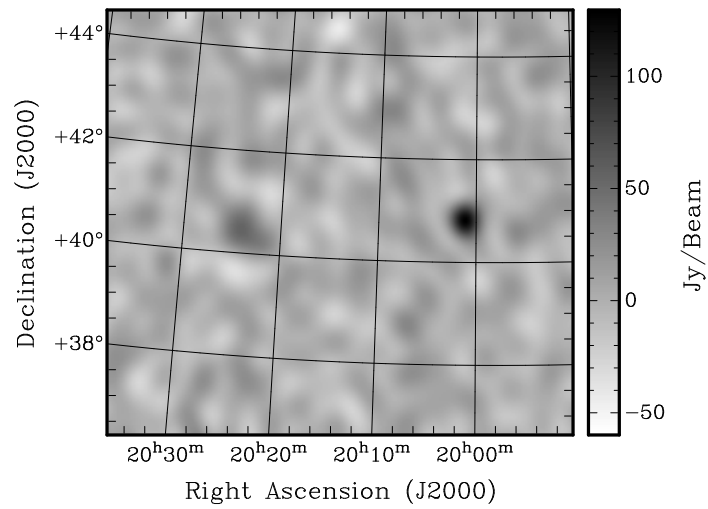
L2007_01061

Closeups

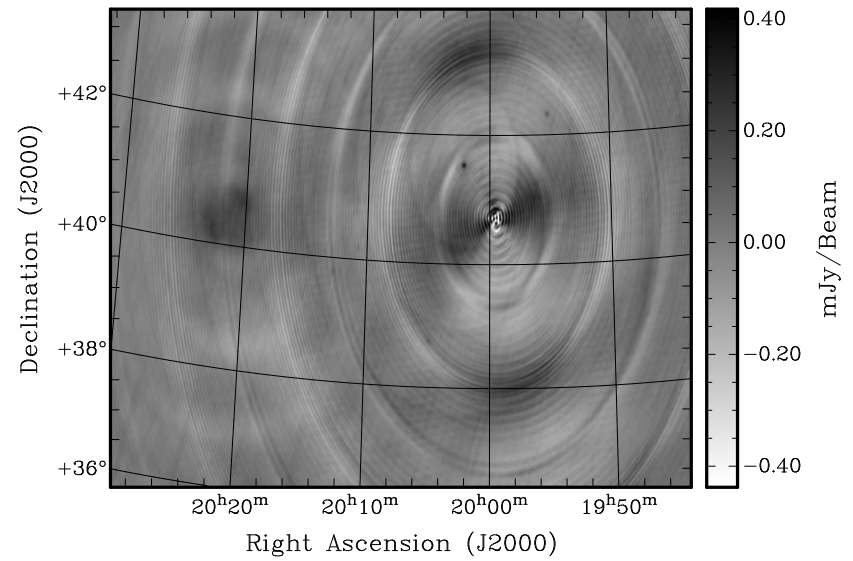


L2007_01061

Closeups...

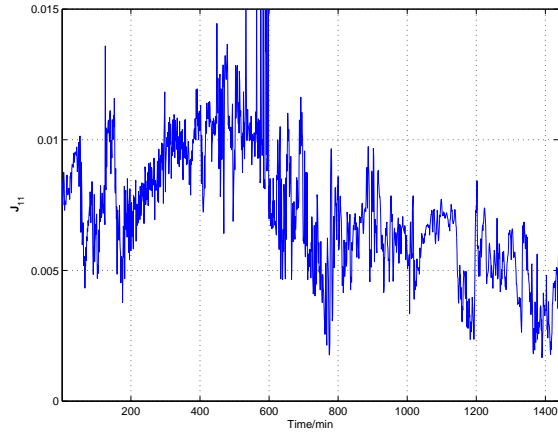


CS1 L2007_01061

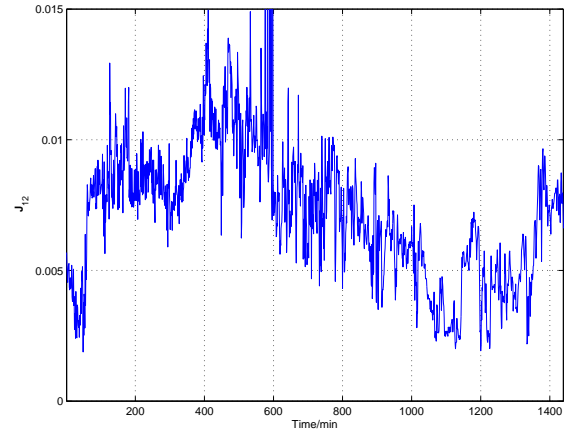


WSRT-WHAT

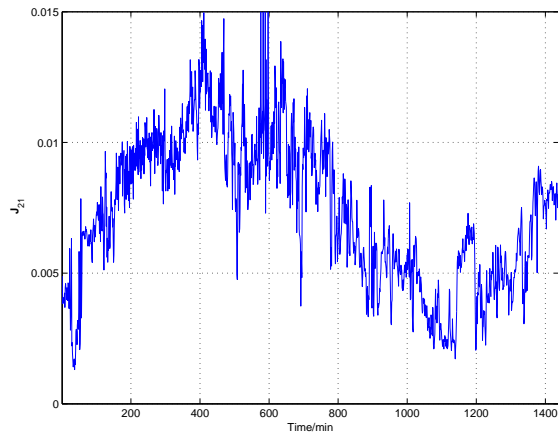
Rainy day solutions



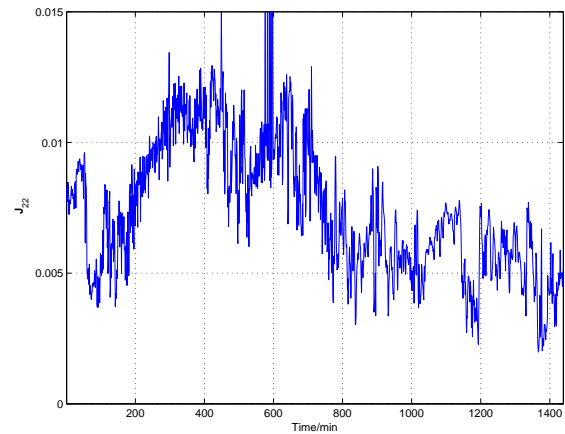
$\overline{J_{11}}$



$\overline{J_{12}}$



$\overline{J_{21}}$



$\overline{J_{22}}$

L2007_01384