

## VIRGO A

This report is meant to update the report of the 10th imaging busy week of the Virgo A LBA Lofar observation of 6 hours.

The VirgoA LBA data L23761 have been reprocessed with the demix procedure to subtract the A-team contribution to the visibilities by using a model obtained from clean components instead of the one made of gaussians provided at the busy week extracted from PYBDSM used in the last weeks.

As a result of this new approach the solution of the RS208 and RS307 which were quite noise with the previous tests look now quite stable, as shown in figure 1.

The image at 53 MHz of only one subband is already very good, as shown in figure 2.

The data have been re-observed since, at that moment, we were not aware about this destructive effect on the result of BBS when using gaussians models for complex sources such as VirgoA.

The resulting tests on the demixing procedure are very positive from this dataset in terms of solutions and images, therefore we strongly recommend to implement the demixing procedure in the standard pipeline. No comments could be made at the moment on the comparison between the demixing and the standard directional dependent calibration, which could be a goal of the next busy week.

Further test are running at the moment in order to understand when a model (extracting by gaussians) could be considered satisfactory.

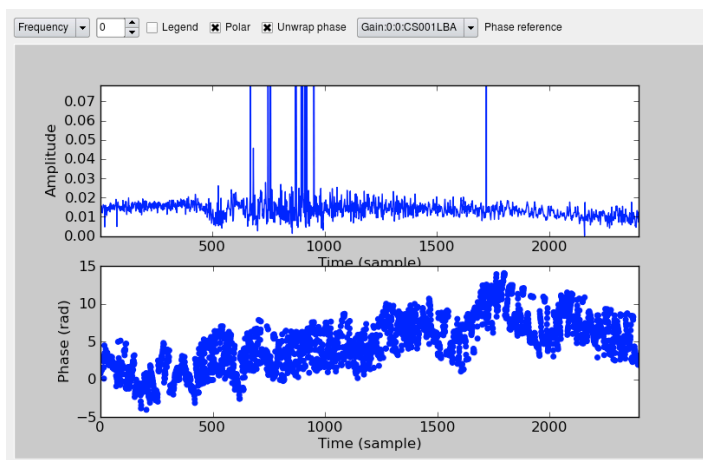


Fig 1: BBS solutions of the RS307LBA.

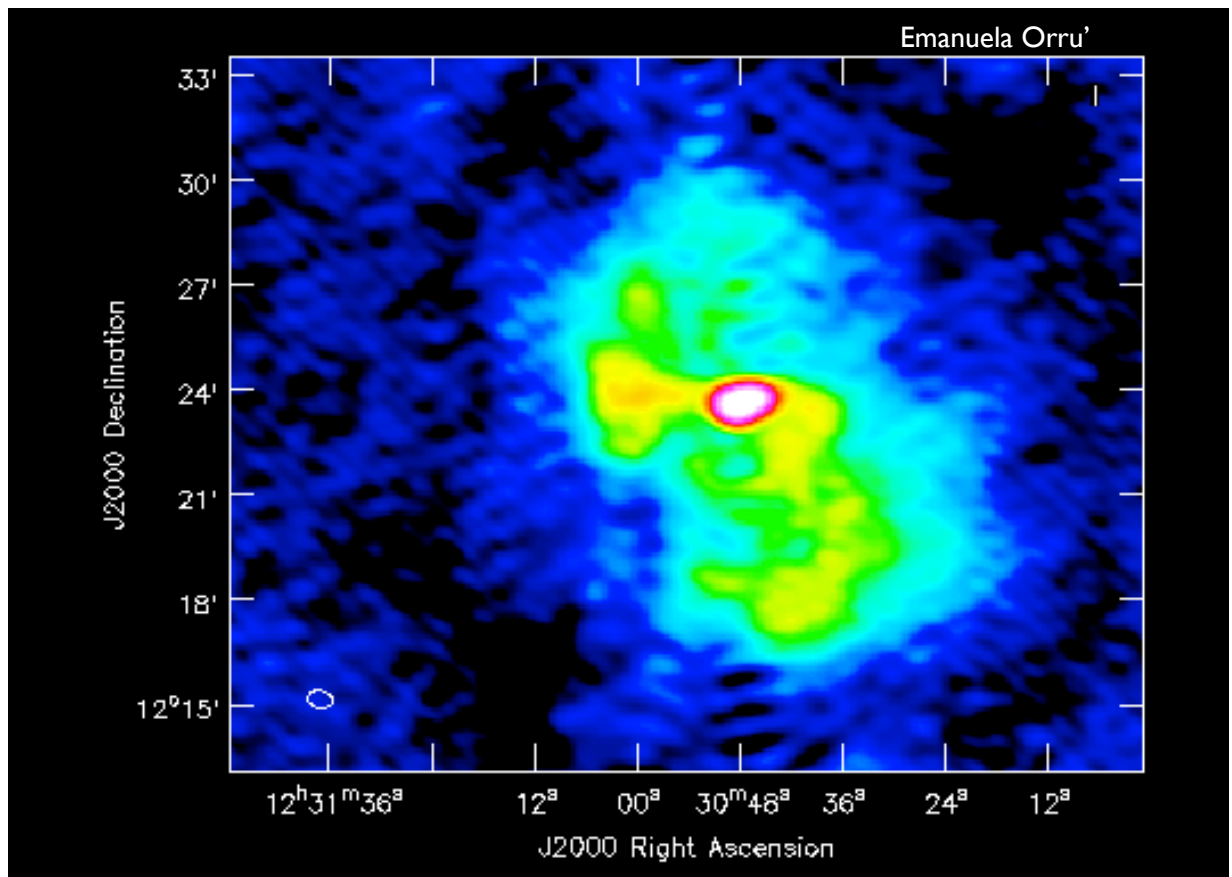


Figure 2: Virgo A LBA image at 53 MHz obtained using the demix.