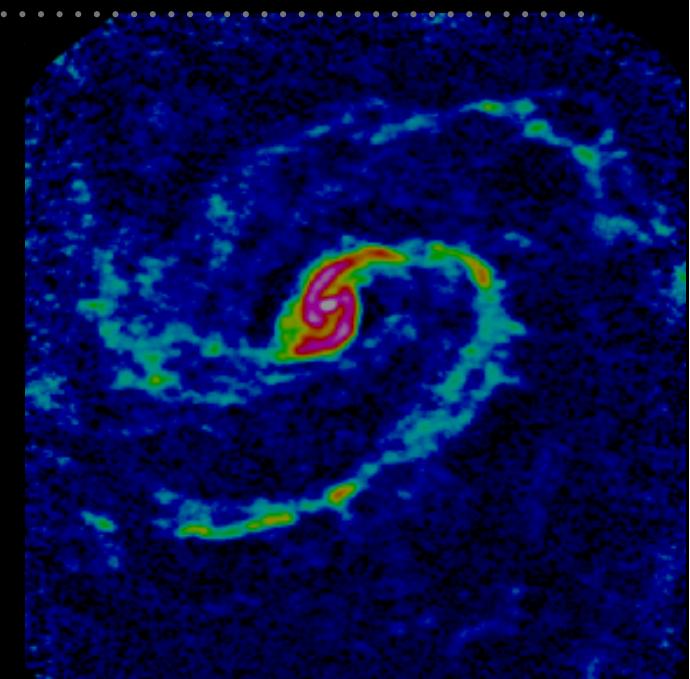
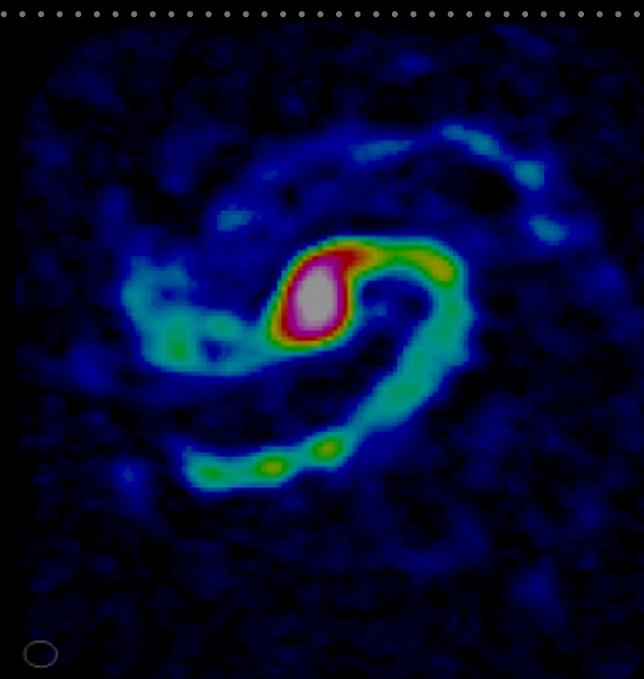
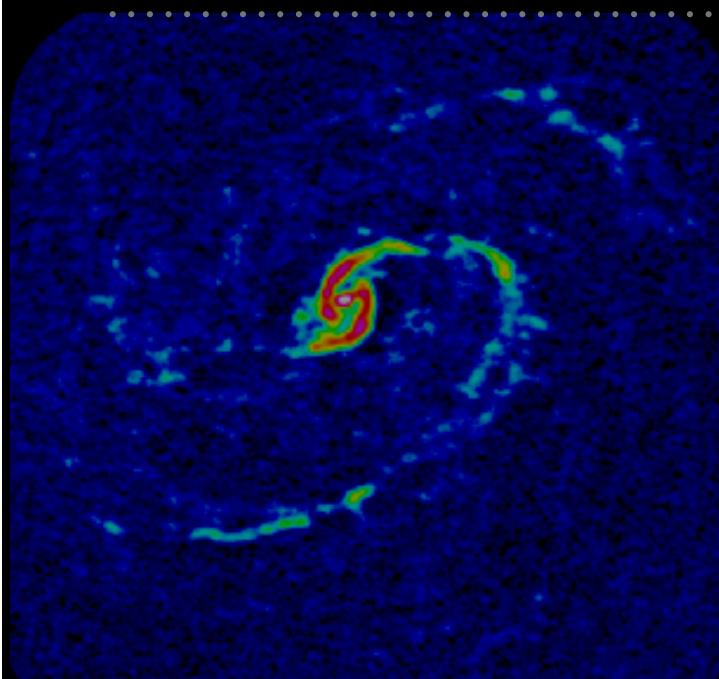


DATA COMBINATION GROUP



MOTIVATION

This!

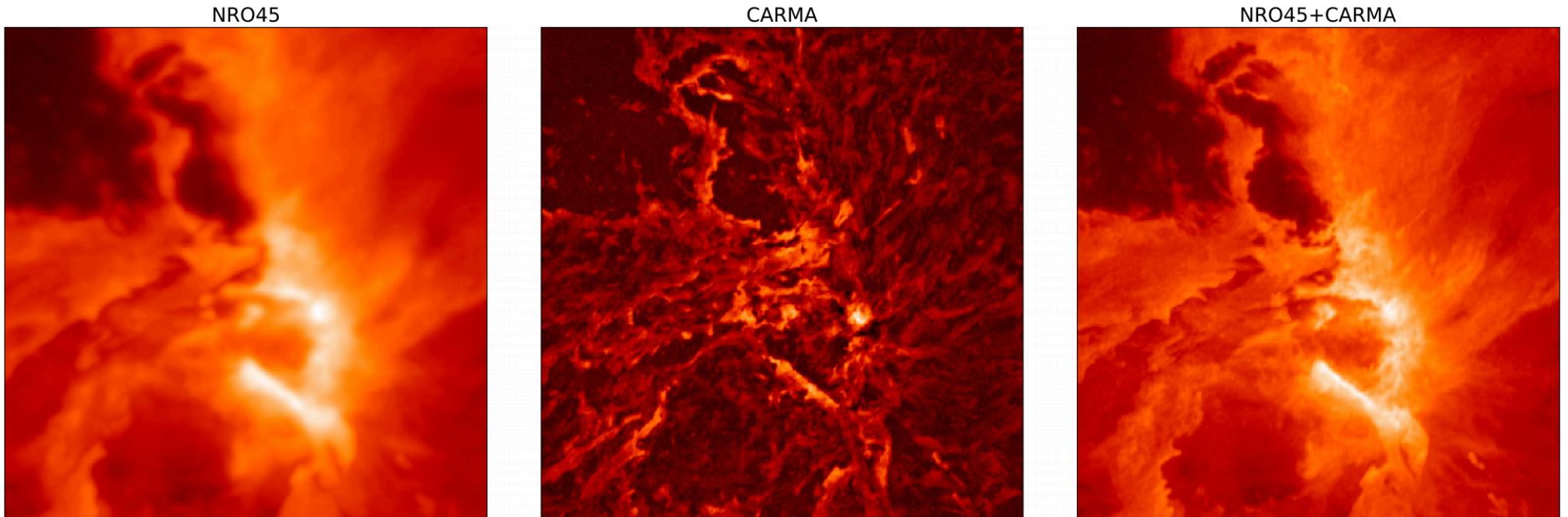


Figure 2. Sample comparison of the NRO45, CARMA, and combined maps. (Left) ^{12}CO peak intensity maps from NRO45, (middle) CARMA, and (right) the combined CARMA+NRO45 data sets. All panels show the same $19'.0 \times 18'.7$ (2.21 pc \times 2.17 pc) area centered around the ONC and Orion KL region and includes the Orion Bar. The increased sharpness of the extended images when the CARMA observations are combined with those from NRO45 is immediately clear.

MEMBERS

If you want to be part of the group send an e-mail to sanchez@ph1.uni-koeln.de

Adele Plunket (ESO Chile →
NRAO)

Tsuyoshi Sawada (ALMA Chile)

Sandra Burkutean (Italian ARC)

Daniel Harsono (Allegro ARC)

Yanett Contreras (Allegro ARC)

Lydia Moser (German ARC)

Alvaro Sanchez-Monge (German ARC)

Thomas Stanke (ESO Garching)

Hauyu Babab Liu (ESO Garching)

Dirk Petry (ESO Garching)

Ke Wang (ESO Garching)

Ivan Marti-Vidal (Onsala ARC →
Madrid)

Daniel Tafoya (NAOJ)

Adam Ginsburg (NRAO)

Catherina Ubach (NRAO)

Ed Fomalont (The world, NRAO,
ALMA...)

Melissa Hoffman (NRAO)

Peter Teuben (Maryland)

Jin Koda (Stony Brook Univ., USA)

- Kick OFF!! : 15 February 2018

Goals:

Short term:

- (1) Each member comment on the methods they are using,
- (2) Begin sharing scripts/data
- (3) Determine some diagnostics for comparing the methods

Mid-term:

- (1) Consistent testing of methods
- (2) Internal guides written so that we can share methods

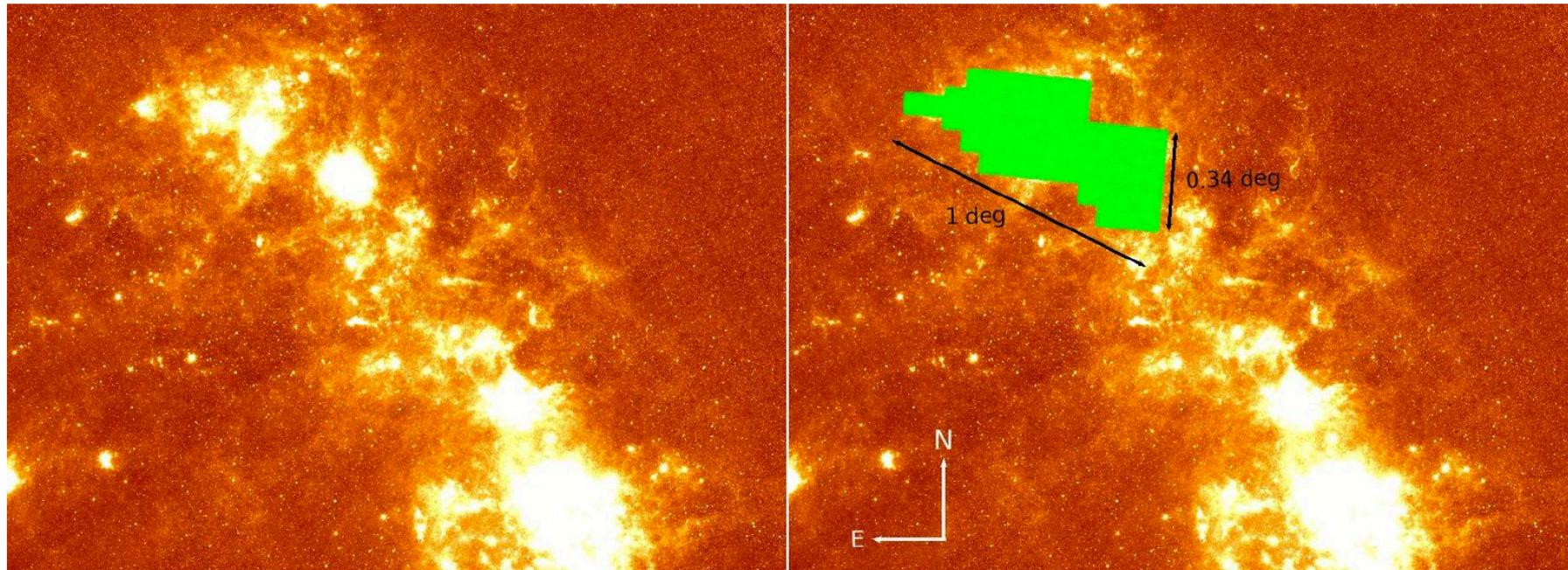
Longer-term:

- (1) Face-to-face meeting
- (2) Final coordination of methods
- (3) Guides created for the community to use

METHODS

- Feather
 - CASA (with or without single dish image as model)
 - uvcombine (Adam Ginsburg)
- Joint deconvolution
 - TP2VIS (Peter Teuben, Jim Koda). Available to be used as part of CASA
 - SD2VIS (Ivan Marti-Vidal)
- GUI Combination (Sandra Burkutean). Feather, joint deconvolution, single dish image as model for cleaning.

SMC PROPOSAL

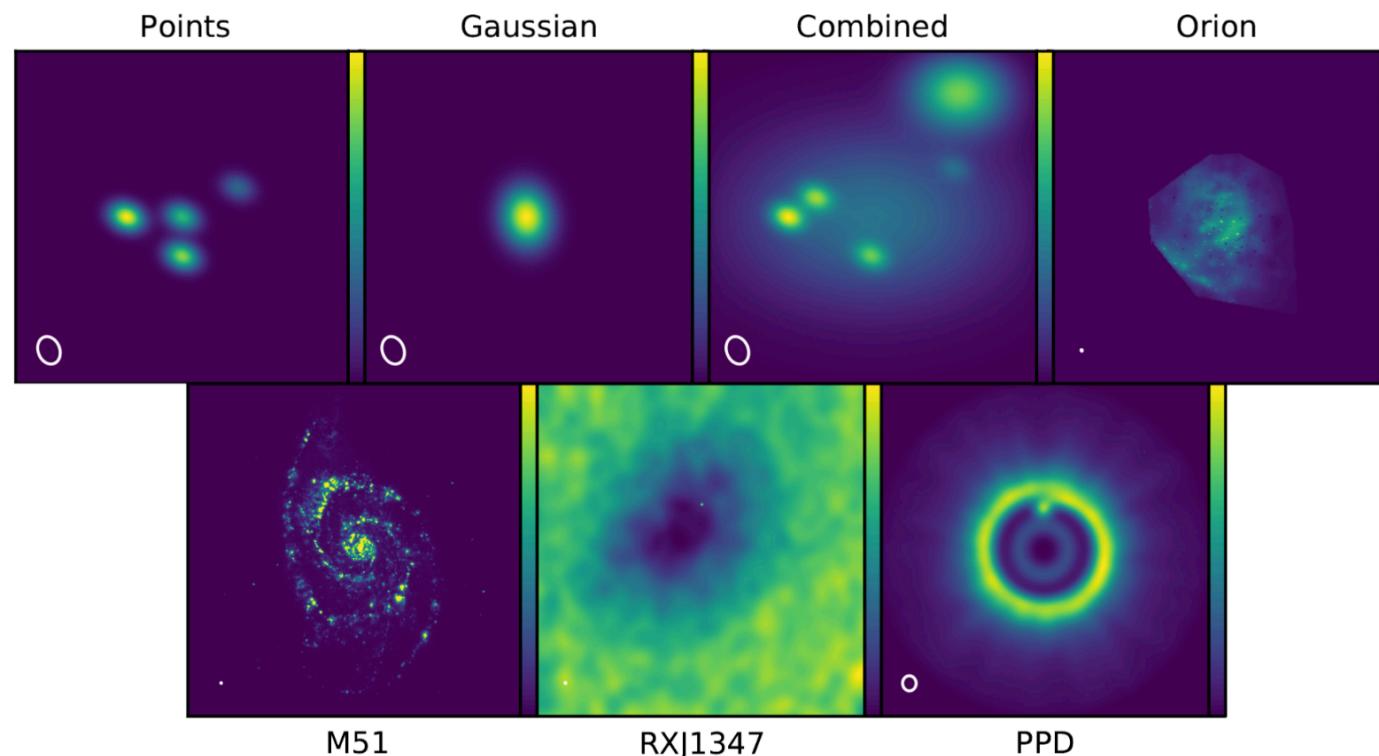


Band 6, and back up Band 3 observations.

Team (alphabetically ordered) Claudia Agliozzo, Sandra Burkutean, Luciano Cerrigone, Yanett Contreras, Akihiko Hirota, Melissa Hoffman, Adam Ginsburg, Remy Indebetouw, Mark Lacy, Hauyu Baobab Liu, Lydia Moser, Norikazu Mizuno, Rosita Paladino, Dirk Petry, Neil Phillips, Adele Plunkett, David Rebolledo, Thomas Stanke, Daniel Tafoya, Catarina Ubach

CURRENT TESTS WE KNOW OF..

- RICA: Code developed by a summer student at NRAO, on data from VLA + GBT (<https://mileslucas.gitlab.io/rica/index.html>)
- Paper: <https://gitlab.com/mileslucas/rica-report/blob/master/report.pdf>



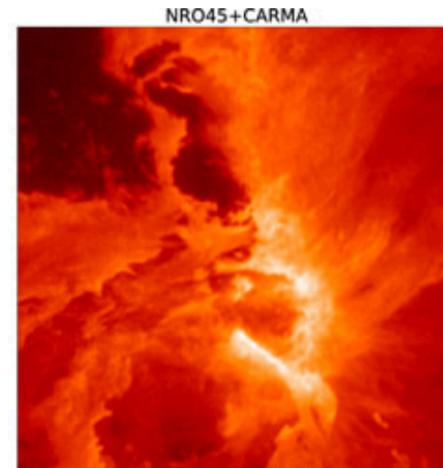
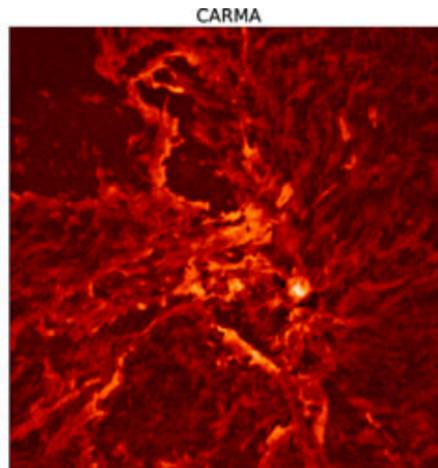
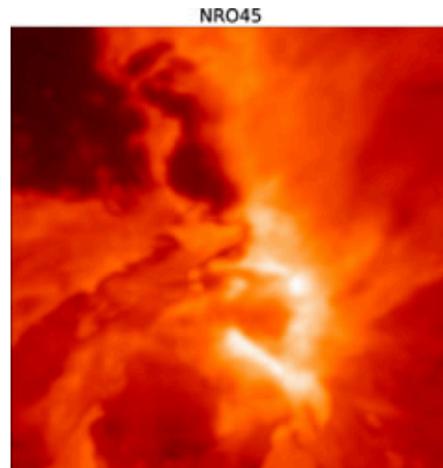
NEW FANCY WEBSITE

<https://hera.ph1.uni-koeln.de/~sanchez/datacombination.html>

DataCombination team activities – Interferometer and single-dish data combination

Most of the areas of study in astronomy, such as star formation, the study of extragalactic structures, the evolution of stars and planetary nebulae, depend on high spatial dynamic range observations that can provide information on both the diffuse, extended emission and the dense, more localized emission where astrophysical processes happen. In the last decade, facilities such as the Atacama Large Millimeter/submillimeter Array ([ALMA](#)), which has opened a new window to the study of the 'Cold Universe', aim at providing extremely high fidelity images by combining observations at high-spatial resolution (usually interferometers) with lower-spatial resolution (usually single-dish telescopes) that can recover the extended emission. The **DataCombination team** aims at testing different methods for the combination of high and low-spatial resolution images, with the goal of providing the community with a guide on how to combine interferometric and single-dish data.

In this page we will report the activities within the *DataCombination team*. We aim at discussing different combination methods and report on the results. We provide links with different tests, tutorials and guidelines.



FACE TO FACE MEETING —> DATA COMBINATION WORKSHOP(S)

- Meeting in July 2019



If you are interested in participating, let me know

- Follow up meeting in 2019/20 (after July) at NRAO. More details by the end of the year.