



# Report from the event supported by RadioNet

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**TITLE** Self-calibration and advances imaging workshop

**DATE:** 11-13 December 2017

**LOCATION:** Bologna, Italy

**MEETING WEBPAGE:** [http://www.alma.inaf.it/index.php/Self-calibration\\_and\\_advanced\\_imaging\\_workshop](http://www.alma.inaf.it/index.php/Self-calibration_and_advanced_imaging_workshop)

**HOST INSTITUTE:** INAF-Istituto di Radioastronomia (Italian node of the European ALMA Regional Centre)

**RADIONET  
BENEFICIARY / NO:** *INAF / 4*

# Report:

## 1. SCIENTIFIC SUMMARY

- Obtaining scientifically useful results from interferometric observations is not trivial, and requires very specific and often complex data reduction procedures. People working in the European ALMA Regional Centre network are daily facing the challenges of extracting high-quality scientific information from ALMA observations. The purpose of this Workshop was to have renowned experts in this field help us obtain a better understanding of advanced data reduction techniques, and teach us some of “the tricks of the trade”, if you will. This was accomplished by introductory talks followed by hands-on sessions on datasets selected and prepared by the tutors (including reduction scripts), that were made available to the participants for downloading beforehand, so that everyone could participate and experiment. During the entire Workshop there was ample opportunity for informal discussions with the tutors, which made the whole experience very useful. The experts we invited were Dr. Ed Fomalont (JAO & NRAO) and Dr. Anita Richards (UK ARC node, Manchester), who put a great deal of effort in coordinating their lectures and tutorials, and preparing the (ALMA-) data sets, and were very accessible to the participants before, during and after the Workshop sessions.
- To achieve maximum results, especially concerning the hands-on sessions, the number of participants was limited. We aimed to have at least one participant from each ARC-node attending, and then Master’s and PhD students who are working with ALMA data. Concerning the impact of this event on RadioNet, virtually all ARC-nodes in the European network are hosted by institutes which are RadioNet partners; the techniques and insights learned by the representatives of those nodes and institutes will be communicated to their colleagues and students, thus ensuring their dissemination in the RadioNet community at large. Furthermore the data reduction scripts used at the Workshop are downloadable from the website.
- Website: [http://www.alma.inaf.it/index.php/Self-calibration\\_and\\_advanced\\_imaging\\_workshop](http://www.alma.inaf.it/index.php/Self-calibration_and_advanced_imaging_workshop)

## 2. AGENDA OF THE EVENT

Monday 11/12/17

14:00 - 15:30 Initial imaging (talk + tutorial) [Ed Fomalont]

15:30 - 16:00 Coffee Break

16:00 - 17:30 Self-calibration (talk + tutorial) [Anita Richards]

Tuesday 12/12/17

10:00 - 13:20 Self-calibration (part II)

Coffee/Tea break at about 11:15 (ca. 15 min)

13:30 - Lunch

14:30 - 17:00 Advanced imaging + Array combination [Ed Fomalont]

Coffee/Tea break at about 15:45 (ca. 15 min)

Wednesday 13/12/17

10:00 - 13:20 Continue working on data and discussion

Coffee/Tea break at about 11:15 (ca. 15 min)

13:30 - Lunch

### **3. PARTICIPANTS**

- There were 24 participants, 13 men and 11 women (54% vs 46%). There were representatives of 5 of the 7 nodes in the network, as well as the representative of the CoE in Lisbon. The other participants were from Bologna. The invited experts were Fomalont (USA; supported by RadioNet) and Richards (UK; supported by the Italian ARC).

### **4. RADIONET FINANCIAL CONTRIBUTION**

RadioNet supported the Workshop with €2000, which was entirely used to contribute to the travel and subsistence of the expert Dr. Fomalont.

### **5. PUBLICATIONS**

The scripts used in the Workshop are available on the website. Due to the character of the Workshop there will be no other publications.