



Report from the event  
***ALMA COMMUNITY DAYS 2017***  
supported by RadioNet

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**TITLE** *ALMA COMMUNITY DAYS 2017 OF THE GERMAN ARC NODE*

**DATE:** *27/28 MARCH 2017 AND 03 APRIL 2017*

**LOCATION:** *UNIVERSITY OF BONN, GERMANY, AND UNIVERSITY OF BERN,  
SWITZERLAND*

**MEETING WEBPAGE:** *<https://www.astro.uni-bonn.de/ARC/events/commdays2017/>*

**HOST INSTITUTE:** *ARGELANDER-INSTITUTE FOR ASTRONOMY, UNIVERSITY OF BONN,  
GERMANY; CENTER FOR SPACE AND HABITABILITY, UNIVERSITY OF  
BERN, SWITZERLAND*

**RADIONET** *TO BE FILLED BY MANAGEMENT*

**BENEFICIARY / NO:**

# Report:

## 1. SCIENTIFIC SUMMARY

In response to the ALMA Call for Proposals, the German ARC node has organized Community Days for the local ALMA community since the beginning of scientific observations with ALMA in September 2011. These events have been adjusted each year to cater to the changing needs of the local community. Contrary to similar events in other European countries, the German ALMA Community Days have always attracted a large number of participants. Therefore, we organized the **German ALMA Community Days 2017** in Bonn on March 27-28, again focussing on practical aspects of ALMA and on proposing for ALMA time in combination with hands-on tutorials. Similar to last year, the general introduction to radio interferometry and the hands-on tutorial on how to use the ALMA-OT for preparing an ALMA proposal proved to be the most popular among the registered young participants, while the presentations on ALMA and its capabilities also attracted more senior local astronomers. Our continued effort in training the local community shows results: In the last proposal cycle (Cycle 4), German PIs had an **excellent success rate** of ~45% and one of the two accepted large programmes is led by a German PI.

Very few scientists in Switzerland currently use radio/mm/submm facilities or submit radio astronomical proposals, e.g. for ALMA observing time. Several young scientists approached us saying that they would like to learn more about ALMA and radio/mm/submm facilities in general, but that they did not have a budget to attend a training abroad. The **Swiss Community Day 2017** in Bern on April 03 aimed to improve the knowledge about radio astronomy and in particular ALMA in Switzerland, most importantly among the PhD students and postdocs. Astronomers from all major Swiss astronomy and space science departments had registered their interest in such a training event. In addition, the participants come from a large variety of research fields: cosmology and extragalactic science, protoplanetary disks, astrochemistry, cometary science, solar physics, solar system science, and exoplanetary science. With them as ambassadors, we hope to spread knowledge about ALMA and radio astronomy in all major Swiss institutes. During the Community Day, the participants learned the basics of radio interferometry, how to prepare their own ALMA proposal addressing important research questions in their fields and how to get help if needed. The preliminary proposal submission statistics already prove the impact of the Swiss community Day: The number of proposals submitted before April 20, 2017 by a Swiss PI **increased by 40%** compared to last year's number and both the numbers of unique PI and CoIs from Switzerland increased in Cycle 5 compared to previous cycles.

Detailed information regarding the Community Days organized by the German ARC node in 2017 can be found at <https://www.astro.uni-bonn.de/ARC/events/commdays2017> and the corresponding subpages.

## 2. AGENDA OF THE EVENT

### German ALMA Community Days 2017

#### Monday, 27 March

13:30 - 14:00 *Registration*

#### Session 0: Brief introduction to radio interferometry (for non-radio astronomers)

14:00 - 15:00 [Introduction to the basic concepts and terminology of radio interferometry I](#) - A. Sanchez-Monge

15:00 - 15:30 *Coffee and Tea*

15:30 - 16:30 [Introduction to the basic concepts and terminology of radio interferometry II](#) - A. Sanchez-Monge

16:30 - 16:50 [Sensitivity calculations](#) - Y. Pidopryhora



## Tuesday, 28 March

09:30 - 10:00 *Registration*

### Session 1: ALMA in Cycle 5

10:00 - 10:10 Welcome and Logistics - *F. Bertoldi, S. Mühle*

10:10 - 10:35 [Introduction to ALMA and its capabilities in Cycle 5](#) - *A. Biggs*

10:35 - 10:55 [The life of an ALMA project: from a proposal to delivered data](#) - *R. Schaaf*

10:55 - 11:15 [Getting help: support for \(prospective\) ALMA users](#) - *S. Mühle*

11:15 - 11:45 *Coffee and Tea*

11:45 - 11:55 [The ALMA-OT in Cycle 5](#) - *A. Biggs*

11:55 - 12:15 [Simulating ALMA observations](#) - *L. Moser*

12:15 - 12:35 [Data mining: making the most of the ALMA archive](#) - *B. Magnelli*

12:35 - 14:00 *Lunch break*

### Session 2: ALMA-OT Tutorials

14:00 - 17:00 ALMA-OT tutorial/level 1+2 - *A. Biggs, ARC staff*

## Swiss ALMA Community Day 2017

### Monday, 03 April 2017

08:30 - 09:00 *Registration*

09:00 - 09:10 Welcome and Logistics - *S. Wampfler, S. Mühle*

### Session 0: Brief introduction to radio interferometry

09:10 - 09:55 [Introduction to the basic concepts and terminology](#) - *L. Moser*

10:00 - 10:45 [Introduction to the basic concepts and terminology](#) - *S. Mühle*

10:45 - 11:00 [Sensitivity calculations](#) - *B. Magnelli*

11:00 - 11:30 *Coffee and Tea*

### Session 1: ALMA in Cycle 5

11:30 - 11:55 [Introduction to ALMA and its capabilities in Cycle 5](#) - *S. Randall*

11:55 - 12:10 [The life of an ALMA project: from a proposal to delivered data](#) - *L. Moser*

12:10 - 12:25 [Getting help: support for \(prospective\) ALMA users](#) - *S. Mühle*

12:25 - 12:40 [Simulating ALMA observations](#) - *L. Moser*

12:40 - 12:55 [Data mining: making the most of the ALMA archive](#) - *B. Magnelli*

12:55 - 13:45 *Lunch break*

### Session 2: ALMA-OT Tutorials

14:00 - 17:00 ALMA-OT tutorial/level 1 - *S. Mühle, S. Randall*

14:00 - 17:00 ALMA-OT tutorial/level 2 - *B. Magnelli, L. Moser*

Affiliations of the speakers/tutors:

Prof. Frank Bertoldi, Dr. Benjamin Magnelli, Dr. Lydia Moser, Dr. Stefanie Mühle, Dr. Reinhold Schaaf, Dr. Yurii Pidopryhora – **German ARC node**, Argelander-Institut für Astronomie, Bonn, Germany

Dr. Álvaro Sánchez-Monge - **German ARC node**, I. Physikalisches Institut der Universität Köln, Cologne, Germany

Dr. Suzanna Randall, Dr. Andy Biggs – **ESO ARC node**, ESO, Germany

Dr. Susanne Wampfler - **Center for Space and Habitability**, University of Bern, Switzerland

### 3. PARTICIPANTS

About 30 astronomers attended the German ALMA Community Days in Bonn, more than one third of them female. Most registered participants were students and young researchers from the Bonn/Cologne area, one participant came from the university of Bielefeld and three participants came from the Max Plank Institut für extraterrestrische Physik in Garching bei München. Given that the German ARC node is located at a centre of radio astronomical research and that it has organized Community Days in connection with every Call for Proposals since the beginning of scientific ALMA observations in 2011, the large number of young and local researchers was to be expected. The presentations and the tutorial were given by staff of the German ARC node and an expert from the ESO ARC, in total two women and five men.

For the Swiss Community Day, 37 participants registered for the event, most of them coming from major universities in Switzerland with an astronomy or space science department. Nine of the registered participants came from abroad, either from southern Germany or taking the opportunity of a research stay in Switzerland to attend the Community Day. About half of the participants were female. We did not query the nationality or seniority of the registered participants, but the names and apparent age distribution suggest a diverse audience in both aspects. Two female and two male experts from the German ARC node plus one female tutor from the ESO ARC were supposed to go to Bern. With one of the male experts having to cancel his trip on short notice, the Community Days in Bern were led by three female and one male ALMA experts.

Please find the signed attendance lists at the end of this report.

### 4. RADIONET FINANCIAL CONTRIBUTION

The high oversubscription rate of ALMA calls for optimal preparation of both current and aspiring ALMA users in the catchment area of our ARC node. To that end, the German ARC node has organized ALMA Community Days in Bonn before each proposal deadline since the first ALMA Call for Proposals in 2011. Given the continued strong interest of the German community in such an event, we again organized the **German Community Days in Bonn on 27/28 March 2017** as preparation for the Cycle 5 ALMA proposal deadline on 20 April 2017.

High travel costs to the nearest ARC node sometimes form a big obstacle for potential new users of ALMA to attend such an event, especially for astronomers from southern Germany and Switzerland. In order to reach out to these communities as well, we organized the first-ever **Swiss ALMA Community Day in Bern on 03 April 2017**. Like the Community Days in Bonn, the Swiss Community Day included a short introduction into radio interferometry, an introduction to ALMA and overview of the capabilities for the next proposal cycle, a hands-on training with the ALMA-OT, the ALMA software needed to submit a proposal, and the possibility to consult the experts for advice on already planned proposals. From the staff involved in the German ALMA Community Days, a subset of four ALMA experts were to go to Bern, assisted by an ALMA expert from the ESO ARC, to cover all important aspects of radio interferometry and proposal preparation, and to conduct the software tutorial and proposal clinic.

While the Argelander-Institute for Astronomy covered all expenses incurred for the German ALMA Community Days (rooms, equipment, catering), and the Center for Space and Habitability provided rooms, equipment and catering in Bern, there was no budget for sending German ARC node staff to the Swiss Community Day. We received a total of 1800,- Euro funding by RadioNet for travel and subsistence of the four experts from the German ARC node, which enabled us to make the first-ever Swiss ALMA Community Day a reality. The supported experts are:

- Dr. Alexander Karim – German, German ARC node, Argelander-Institut für Astronomie, Bonn, Germany
- Dr. Benjamin Magnelli – French, German ARC node, Argelander-Institut für Astronomie, Bonn, Germany
- Dr. Lydia Moser – German, German ARC node, Argelander-Institut für Astronomie, Bonn, Germany
- Dr. Stefanie Mühle – German, German ARC node, Argelander-Institut für Astronomie, Bonn, Germany



In the end, Dr. Karim unfortunately could not go to Bern because of medical reasons. His planned contributions were taken over on short notice by the three other experts from the German ARC node, who each gave one of the presentations originally assigned to Dr. Karim. **By sending tutors** to Bern instead of supporting the travel costs of individual participants to Bonn, we managed to **train about 30 participants** in the basics of radio interferometry, introduce them to ALMA and encourage them to use this world-class mm/submm interferometry for their own research, at a cost of about 60 Euro per participant.

## 5. PUBLICATIONS

Detailed information regarding the Community Days organized by the German ARC node in 2017 can be found at <https://www.astro.uni-bonn.de/ARC/events/commdays2017> and the corresponding subpages. Extensive documentation on ALMA, the ALMA support structure, the different stages of an ALMA project and the current Call for Proposals are available at <https://almascience.eso.org/proposing>. The software used during the ALMA-OT workshops can be found at <https://almascience.eso.org/proposing/observing-tool>. Given that the Community Days were largely based on this documentation and all the slides of the presentations are available online (<https://www.astro.uni-bonn.de/ARC/events/commdays2017/bonn/prog2017bonn.shtml> and <https://www.astro.uni-bonn.de/ARC/events/commdays2017/bern/prog2017bern.shtml>, respectively), a publication of proceedings is not foreseen.