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Report on the Workshops

VLTI Community Days VLTI Winter School

held at ESO Headquarters, Garching, Germany, 6–10 March 2017

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The infrastructure of the Very Large Telescope Interferometer (VLTI) is in the process of being upgraded and second-generation interferometric instruments are entering service (GRAVITY) or under construction (MATISSE). The VLTI Community Days presented these developments and began a discussion with the community on the future of the VLTI. Prior to the VLTI Community Days, a short Winter School was held to introduce early stage researchers to VLTI observation and data reduction.

VLTI Community Days

There have been two previous VLTI Community meetings — one at the European Week of Astronomy and Space Science (EWASS) in 2015 in La Laguna in Tenerife ("VLTI Community Day") and one combined with a PIONIER community meeting in 2014 in Grenoble. This meeting in Garching attracted nearly 60 members of the VLTI community, including ESO personnel. On the first day of the meeting, speakers from ESO updated the community on the status of the VLTI following the upgrades to the VLTI infrastructure over recent years (see ESO 2015 Annual Report[1]), as well as the forthcoming ones. The early results from the first of the second-generation VLTI instruments, GRAVITY, were presented by Frank Eisenhauer from the Max-Planck-Institut für extraterrestrische Physik (MPE), the Principal Investigator of the instrument. In particular, the community was impressed by the observations of the Galactic Centre[2]. Results with the first generation VLTI instruments, the MID-infrared Interferometric instrument (MIDI) and the Precision Integrated Optics Near-infrared Imaging ExpeRiment (PIONIER) were also presented. The status of the Multi Aper-Ture mid-Infrared SpectroScopic Experiment (MATISSE), the second-generation instrument still under construction and due for commissioning in 2018, was also presented.

The second day of the meeting was dedicated to the forthcoming evolution of VLTI operations, as well as the result of prospective exercises by ESO (the VLTI Roadmap, which was presented to the 89th Scientific Technical Committee [STC] in April 2017), and the report from the working group of the European Interferometry Initiative entitled "The future of interferometry"[3].

The last day of the meeting provided the opportunity for the community to present ideas and science cases for future instruments. Two projects were presented: the first was for an *L*-band high-contrast interferometric instrument, aimed at studying planet formation around young stars and, ultimately, the planets themselves. The second was for a visible high-spectral-resolution instrument, which would boost VLTI angular resolution, allowing exquisite images of stellar surfaces.

VLTI Winter School

The school, held from 6 to 8 March 2017, just prior to the VLTI Community Days, attracted about 15 participants, ranging from masters students to postdocs. The four half-day sessions aimed specifically at providing the necessary knowledge to apply for time with the latest VLTI instrument GRAVITY. The programme included an introduction to interferometry, observation preparation, and GRAVITY data reduction, as well as general interferometry data reduction and image reconstruction. The classes and practical sessions were given by members of the User Support Department and Paranal Science Operations, as well as participation from VLTI community experts.

Details of the programmes of both the Community Days and the Winter School, together with links to some of the presentations, are on the workshop webpage[4].

Links

[1] ESO Annual Report 2015: https://www.eso.org/public/products/annualreports/ar_2015/
[2] GRAVITY observations of the Galactic Centre: https://arxiv.org/abs/1705.02345
3 European Interferometry Initiative: http://www.european-interferometry.eu/working-groups/the-future-of-interferometry-in-europe
[4] Workshop webpage: http://www.eso.org/sci/meetings/2017/VLTI-2017.html

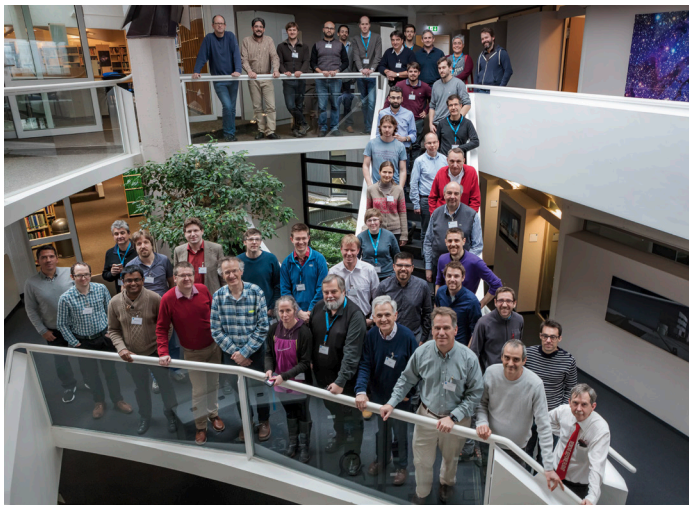

Figure 1. (Left) The participants at the VLTI Community Days pose in the entrance hall at ESO Headquarters.

Figure 2. (Above) All the participants at the VLTI Winter School, both students and lecturers together, in the Headquarters lobby.