lution of up to 8000. This is illustrated in Figures 4a and b.

Acknowledgements

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Jiang, H. et al. 2007, ApJ, 134, 1150
Pettini, M. 2009, arXiv0909.3301v1
Vernet, J. et al. 2007, The Messenger, 130, 5

Links

[1] http://www.eso.org/sci/facilities/paranal/instruments/xshooter
[2] http://www.eso.org/sci/activities/vltsv/xshootersv/
[3] http://www.ast.cam.ac.uk/research/cassowary/

ALMA First Fringes at 5000 m Altitude

The first two fully equipped ALMA antennas were transported to the ALMA Operations Site (AOS) at 5000 m altitude in September and October 2009 as planned. Figure 1 shows one of the antennas on its way to the AOS. After single dish functional tests, the two antennas were connected together (see Figure 2) as an interferometer using the ALMA production components previously installed inside the AOS Technical Building on Chajnantor at 5000 m. On 1, 2 and 5 November 2009, stable fringes were detected on the 160 m baseline at 3 mm, 1.3 mm and 0.85 mm. Figure 3 shows the amplitude and phase measured for the source 0538-440 at a frequency of 235.5 GHz and Figure 4 for the extragalactic radio source 3C454.3 at 345.8 GHz. The two-antenna array was remotely controlled from the Operations Support Facility (OSF) Technical Building at 2900 m altitude. In the near future further antennas will be added to the array in preparation for the start of early science operations in 2011.

More details at http://www.eso.org/public/events/announcements/aos_interferometer/.

Credit: ALMA (ESO/NAOJ/NRAO)

Figure 1. The transporter Otto is shown carrying one of the antennas from the OSF to the AOS. See Kraus et al. 2007 (*The Messenger*, 132, 23) for more information on the ALMA transporters.

Credit: ALMA (ESO/NAOJ/NRAO), A. Quintana/J. Olivares (ALMA)

Figure 2 (above). Fringes were obtained between these two antennas at the 5000 m ALMA Operations Site.

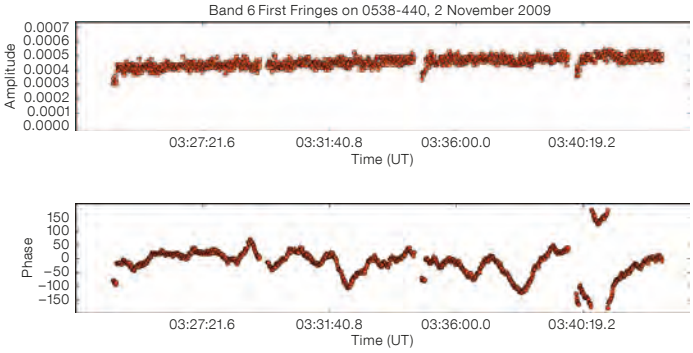

Figure 3 (left). Fringes at 235.5 GHz (ALMA Band 6) — amplitude and phase measured for the radio source 0538-440.

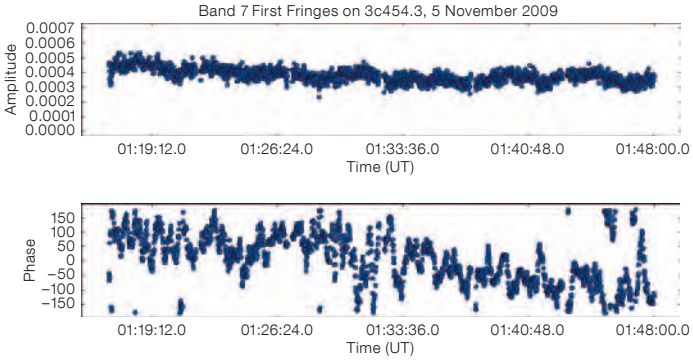

Figure 4. Fringes at 345.8 GHz (ALMA Band 7) — amplitude and phase measured for the radio galaxy 3C454.3.