

V103b **Processing of the ALMA Array Elements**

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ALMA AIV (Assembly Integration Verification) is a project led by the System Integration Group (SIG) with the collaboration of the ALMA Department of Engineering (ADE). The AIV project integrates several instruments into the antennas and verifies their technical and astronomical performance of Array Elements (individual, fully equipped antennas) as single dish and interferometric systems before being accepted for array commissioning. These activities occur both at the Operations Support Facility (OSF) and at the Array Operations Site (AOS). A number of tasks used to verify antenna performance specifications are required for each Array Element. These can be divided into antenna performance tests (antenna surface accuracy, basic tracking, switching, and on-the-fly rastering), receiver performance tests (signal connectivity, LO locking, FE stability and receiver noise), and astronomical verification tasks (pointing, focus, basic interferometry, and end-to-end spectroscopic verification). Antennas which pass the suite of verification tests are delivered to the Commissioning and Science Verification group to be integrated into the operational array at the AOS.

Since the first Array Element was accepted for AIV processing in December 2008, 60 Array Elements have completed processing at the OSF. The final, 66th Array Element is expected to be delivered to the AOS towards the end of 2013.