

## **Reconfigurable Beam Measurement System and Use for ALMA Band 11 (1.25-1.57 THz)**

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A new reconfigurable beam measurement system has been recently established at NAOJ. The aim of such a system is to be able to measure beam patterns for any ALMA band, just by changing the RF source, receiver and a few microwave components used for the phase lock. This beam measurement system will be used from ALMA band 1 (35-50 GHz) to ALMA band 11 (1.25-1.57 THz). The possibility of reconfiguration has been tested and proven by measuring beam patterns at two different ALMA bands, band 10 (787-950 GHz) and 11. Measurements at band 1 frequencies are also scheduled for early 2016. Results show good quality amplitude and phase beam patterns with dynamic ranges as good as 60 dB, even at 1.5 THz.

This paper will describe the general ideas behind the concept of re-configurability, and show measurements performed at different RF bands with different configurations. We will also present some of the first amplitude and phase measurements at ALMA band 11 frequencies, including probe compensation measurements.