What is the measured or expected bandpass stability?

Sarah Wood - 2021-03-17 - Project Planning

The QA0 criteria that have been adopted by ALMA requires an amplitude wiggles across the spectral window of $< 3$ dB on the autocorrelations (not due to atmospheric features). QA0 is given SEMIPASS if the bandpass calibrator signal is too weak, with amplitude wiggles across the spectral window of $> 3$ dB or strong CW signals, and the phase/gain calibrator cannot be used instead.

It is important to measure the spectral response during an observation by performing at least one bandpass observation per spectral setup (i.e., SB execution, because each re-execution entails a tuning optimization) for interferometric observations that require high spectral accuracy.

Some more information can be found in Chapter "Calibration and Calibration Strategies" of the ALMA Technical Handbook.

Related article

- "What is the tested capability of ALMA for bandpass calibration precision?"