Workflow

Step 0: Getting set up

Download the Data: Get what you need from the ALMA archive

Program Overview: Get familiar with the program setup, the pipeline products, and what happened at the AOS

Restoring the Pipeline Calibration: Get the calibrated data

Inspecting the Weblog: Understand how the pipeline calibration went

Useful Dictionaries: Create useful dictionaries for the reduction and imaging process

Step 1: Prepare the continuum

Manual Flagging: Apply any manual flags

Pseudo-continuum Measurement Sets: Split out the continuum spectral windows, with the line spectral windows averaged down and spectral lines flagged

Initial Continuum Images: Create intial continuum images for each execution block and each spectral window

Initial Self-Calibration: Perform one initial round of self-calibration, on each execution block

Step 2: Phase alignment (detour to modular CASA)

Align Long-Baseline Execution Blocks: Align LB execution blocks to a chosen LB reference execution

Align Short-Baseline Execution Blocks: Align SB execution blocks to the concatenation of aligned LB executions

Step 3: Self-calibration of the continuum

Self-Calibration of Short-Baseline Execution Blocks: Self-calibrate the aligned SB executions

Self-Calibration of SB+LB Data: Self-calibrate the aligned SB and LB executions

Create Final Continuum Measurement Set: Final continuum measurement set (1 in total) achieved! 🥳

Step 4: Prepare the lines

Manual Flagging: Apply any manual flags

Splitting Out Line Spectral Windows: Split out the line spectral windows, with the continuum spectral windows averaged down

Apply Phase Shifts: Apply the same phase alignments as determined for the continuum

Apply Self-Calibration Solutions: Apply the same self-calibration solutions as determined for the continuum

Continuum Subtraction: Perform continuum subtraction in uv-space

Create Final Line Measurement Sets: Split spectral windows out of each execution block, then combine across execution blocks. Final measurement sets (8 in total) achieved! 🥳

Proceed to Imaging