

ALMA Science

Knowledgebase > General ALMA Queries > Can ALMA data be used for studying Earth's atmospheric effects?

Can ALMA data be used for studying Earth's atmospheric effects?

Sarah Wood - 2020-09-21 - General ALMA Queries

Raw ALMA data files include autocorrelation outputs from the antennas which do not have atmospheric or instrumental effects subtracted. In principle, a well-modeled astronomical source could be subtracted from the autocorrelations, leaving the atmospheric total power and instrumental effects. The user would then be required to account for the instrumental effects to obtain an atmospheric measurement. Astronomical observations tend to tune away from the deepest atmospheric absorption, but it is present, particularly in the higher bands 7 and 9.