

# ALMA Science

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The PDF proposal summary generated by the OT reports three time estimates: the total time required on the 12-m Array for all configurations, the total ACA (7-m Array plus total power) time, and the non-standard mode time required on the 12-m Array. Since the 12-m and the ACA Array are queued for observations separately and can be observed simultaneously, the time taken into account for the proposal assessment is the 12-m time. A more detailed breakdown of the times can be brought up with the 'Time Estimate' button in the Control & Performance editor on a per Science Goal basis, or viewed for the entire project by clicking on the clock icon in the OT toolbar.

For most projects, the total time for a Science Goal is calculated in detail based on the requested sensitivity for the most extended configuration (either a 12-m configuration or the Standalone ACA) including all pointings, tunings, calibrations and overheads. The times for any smaller arrays (e.g. a second 12-m configuration or the Total Power Array) are calculated by multiplying the on-source time of the largest array by pre-calculated factors derived from simulations and then calculating the necessary calibration and other overheads. The total ACA time is given by the TP time if TP observations are scheduled and by the 7-m Array time if not, under the premise that these arrays can be operated in parallel. Using the TP Array without the 7-m Array is not allowed.

For VLBI and Solar observations, a 12-m Array time request (including all calibrations and overheads) is directly entered by the user into the OT rather than being computed based on a sensitivity goal. For VLBI, this is the total time including all calibration and overheads. For solar observations, the **on-source** time is entered and the OT calculates the expected total time based on information provided by the solar commissioning team.

You can override the OT's time estimates in the Control and Performance editor. The value entered must be the total time required for the most extended 12-m Array including all calibrations and overheads, and the time override must be fully justified in the Technical Justification. Time overrides apply to the most extended 12-m Array; the resulting time for any more compact configurations will be computed by the OT using the factors described above.