

General advices for proposal writing

ALMA Cycle 2

Resources

-> **ALMA Science Portal**

[*almascience.eso.org*](http://almascience.eso.org)

Call for Proposals
Documents

Cycle 2 capabilities
Proposers Guide
Technical Handbook

Observing Tool
Helpdesk

-> **ARC Nodes** -> **Nordic ARC**

[*nordic-alma.se*](http://nordic-alma.se)

Face-to-face support
Local expertise
General advices

Before starting (brief checklist)

Can the source(s) be observed at all ?

ALMA can see sources up to Dec~+50 deg

Is the required angular resolution achievable ?

Is the line (redshifted) in one of the offered ALMA band ?

What about the atmospheric transmission ? (atmospheric lines)

Is the source extended ? Is a mosaic required ?

ALMA 12m-array FOV = $21'' \times 300 / \text{Frequency (GHz)}$

If the source is ~ half the FOV, it is extended

Is the required sensitivity achievable ?

Point source -> use **Jansky** unit

$$1 \text{ Jy} = 10^{-26} \text{ W m}^{-2} \text{ Hz}^{-1}$$

Extended source -> Use brightness temperature $T_B(\text{K}) = c^2 / 2k\nu^2 I_\nu$

Guidelines

Proposals must be written in English

Include the following sections:

- Science case
- Figures, tables, references (optional)
- A brief statement of likely potential for publicity

Format PDF < 20 MB for the whole proposal

Total length limited to 4 pages (A4 or US Letter format, font > 11pt)

Can use the ALMA proposal template .tex form

Proposals must be self-contained

Consultation of external documents should not be required for understanding the proposal

Technical justifications (to be entered directly in the OT)

Technical justifications

To be entered directly in the OT (dedicated text box, < 4000 char.)

Any associated figures must be included in the science case PDF

Should address (if relevant):

- Sensitivity (signal-to-noise ratio, dynamic range, ...)
- Imaging requirements (uv-coverage, extended sources, ...)
- Correlator setup (total bandwidth, spectral resolution, ...)
- Calibration (additional calibration request, user-defined calibration, ...)
- Bandpass accuracy (spectral response of up to 1000 at B3,4,5,6, and 500 for B7,8,9)
- Scheduling / time constraints
- Data rate (max data rate 60 MB/s, average 6 MB/s
justification needed if data rate is > 12 MB/s)
- Special constraints on standard observing modes
 - large overheads ratio, > 30%
 - very short (<2 min) or lengthy (continuously >40 min) on-source observations
 - Continuous observations of > 2h at best weather (best quartile) will be rejected