

How to Write Proposals

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Three Types of Motivation

1. I want to observe NGC666
2. I want to use ALMA
3. I want to solve a problem

Whatever your motivation is, there is only one way to write proposals.

Proposal Recipe

1. Introduce the scientific background
2. Scientific question to be answered
3. Why previous work was inadequate?
4. How can ALMA help answer it?
5. Proposed program
6. Immediate objectives
7. Scientific impact
8. Feasibility

1. Introduction/Background

Reviewers may not be familiar with what you propose to do. Give a **brief/succinct** introduction.

Write only **relevant** material. Do not waste space writing things that reviewers do not need to know.

Ex: Interstellar dust comes from evolved Stars, and core-collapse SNe inject silicates...

2. Scientific Question

Raise the **reviewers' curiosity**, make them want to see the proposed observations and results.

This had better be a **worthy** question.

This is essentially **why** you do the proposal.

Ex: Supernovae are supposed to be sources of dust, but little has been detected, why?

3. Previous Work Was Inadequate

You need to know **what has been done**.

You need to state why **previous work is inadequate** (resolution? Wavelength?).

Ex: Previous observations with Spitzer can detect only warm dust, not cool dust...

4. How Can ALMA Answer It?

1. High angular resolution.

- Wavelength coverage.
- Sensitivity.
- Southern sky.

Ex: ALMA is sensitive and covers longer wavelengths to detect cool dust.

5. Proposed Program

Make sure “Proposed Program” is a section heading or begin the the paragraph with “We propose...”.

Reviewers need this to find the proposed program fast during the review...

6. Expected Results

What are the physical parameters that can be immediately derived from the observations.

These physical parameters allow us to discriminate between competing models or understand a phenomenon...

Ex: The ALMA fluxes can be used to make SEDs for dust model fits to get dust mass

7. Scientific Impact

Describe the impact from small scales to broader scales.

The results will help us understand the origin of jets in young stars. This mechanism can be applied to jets and accretion disks around compact objects...

8. Feasibility

This is technical justification.

The proposed observations need to have the resolution and sensitivity to allow you to do the proposed science.

Ex: Based on SN666's brightness in IR, we assume blackbody model and predict the brightness at 3mm. According to online tools, we figured X amount of integration is needed to get S/N of ...

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Don't

1. has been studied previously (Joe et al. 2013)
- 2.... reported by Me et al. (2016, submitted)
3. It is obvious...
4. inconsistency in time request (abstract & text)
5. Spelling errors, typos, etc.
6. Use small fonts to squeeze in more text
7. Alter proposal template
8. Exceed page limit

Do

The most important part of a proposal is the abstract.

Many reviewers read ONLY the abstracts...

*It is not hard to write proposal, if you
can write in English...*

Writing in English

1. Vocabulary

1. Grammar

1. Style of writing

Writing Is Hard ?!

Grammatically correct is not adequate!

Construct each sentence with proper focus and emphasis.

Make proper transitions between sentences to make the text flow.

Constructing a Sentence

Subject

Verb

Stress Position

The **subject** is what is being discussed/described.

The **verb** articulates the action.

The **stress position** provides clue to the emphasis of the sentence.

Linking Sentences Together

Topic Position

Verb

Stress Position

The topic position establishes a perspective for viewing the sentence as a unit. It should provide the linkage (looking backward) and context (looking forward).

Linking Sentences Together

Topic Position

Verb

Stress Position

Put in the topic position the old information that links backward; put in the stress position the new information you want the reader to emphasize.

Good luck on your proposal.