

# How to write a good ALMA proposal ?

Lihwai Lin  
(ASIAA)

Previous ALMA reviewers from Taiwan:  
Tzu-Ching Chang; Pin-Gao Gu;  
Naomi Hirano; Hyosun Kim;  
Yi-Jehng Kuan; Shih-Ping Lai;  
Lihwai Lin; Satoki Matsushita;  
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(special thanks to Yu-Nung, Kazushi, and Hsi-An)

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# OUTLINE

- ALMA review process
- Tips for proposal writing

# Cycle 5 Statistics

- 1664 proposals submitted in cycle 5
- 433 Grade A+B (approved) projects
- Over-subscription rate  $\sim 4$

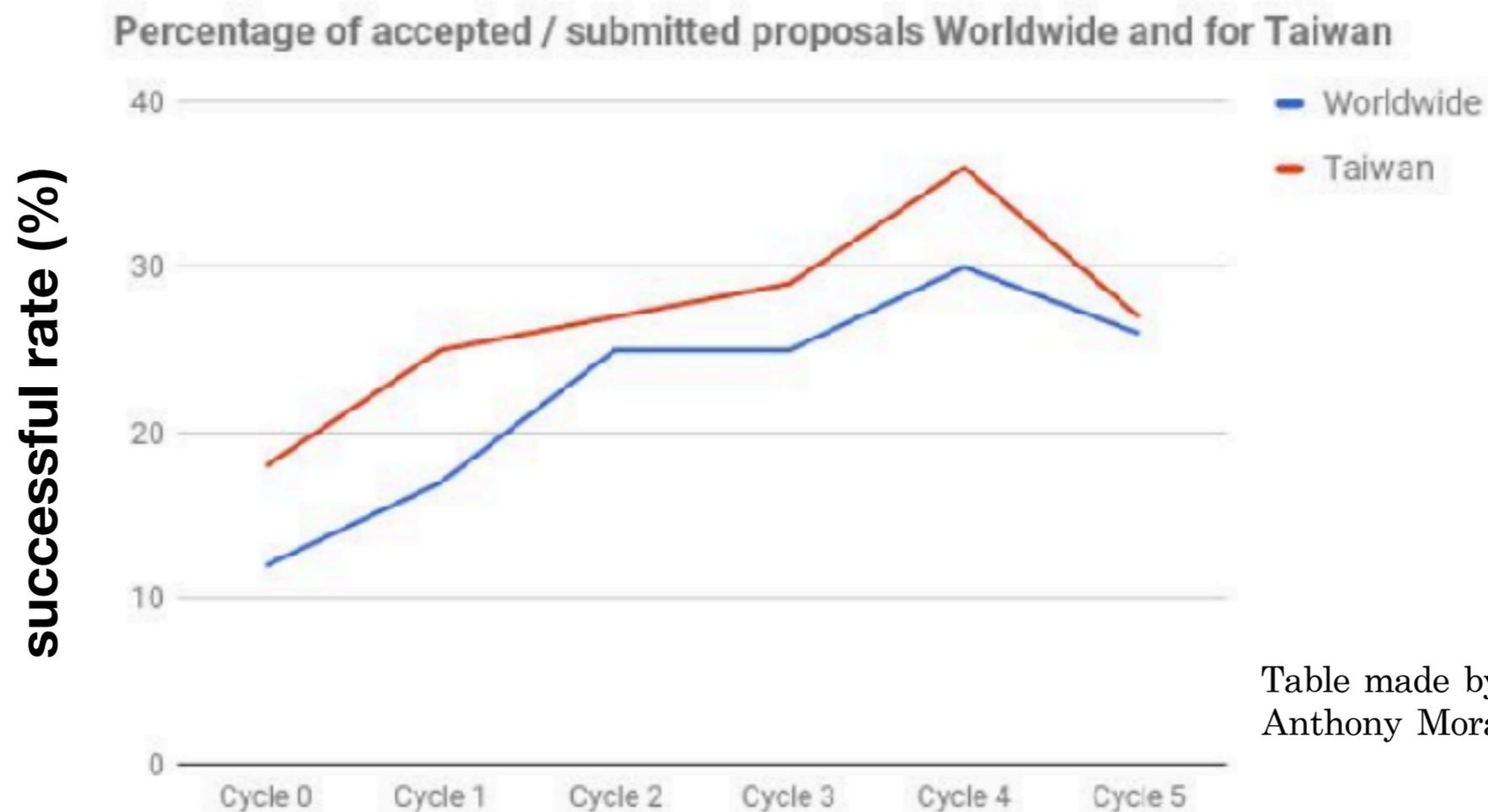


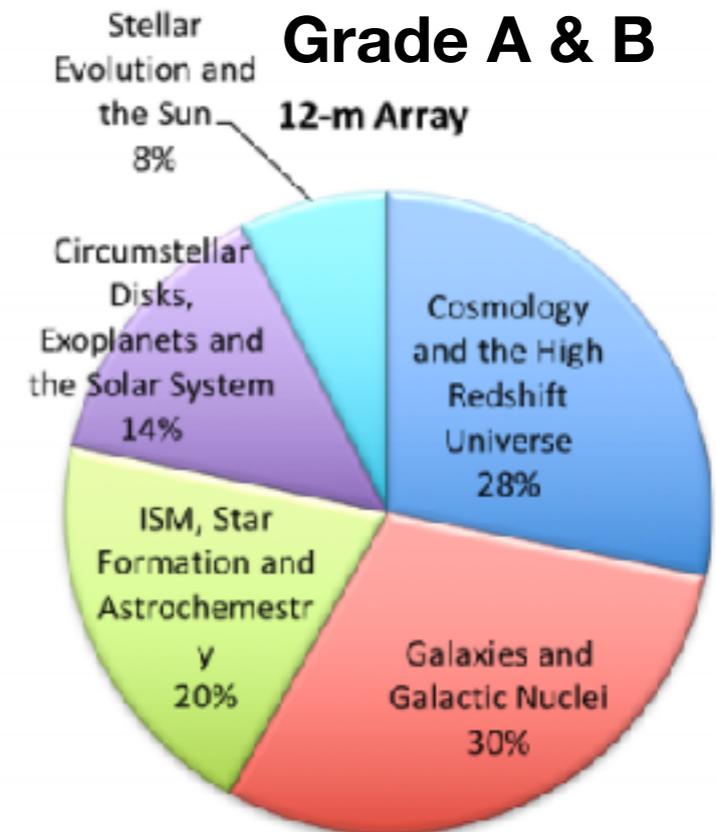
Table made by  
Anthony Moraghan et al.

# Proposal Review in Cycle 5

- 5 science categories:

1. Cosmology and the high redshift universe
2. Galaxies and the Galactic Nuclei
3. ISM, Star Formation and Astrochemistry
4. Circumstellar Disks, Exoplanets and Solar System
5. Stellar Evolution and the Sun

- 18 panels in total (4 panels in each category; 2 for the 5th category), with 8 reviewers in each panel => 144 reviewers



# Proposal Review Process

- Two phases of review:
  - **Stage I:** Every proposal gets preliminary scores from 8 reviewers; reviewer reads ~100 proposals within 3-4 weeks. **Typically 15-20 mins per proposal.**
    - = > the lowest 30-40% proposals are discarded (triaged), unless they are rescued from the reviewers.
  - **Stage II:** The remaining 60-70% proposals go to the stage II face-to-face (f2f) TAC meeting for discussions. All these proposals will be re-scored, merged with other panels for a final ranking.

Accepted proposals will be assigned letter grades of A, B, or C. Up to 33% of the available time will be assigned to Grade A proposals, and 67% to Grade B proposals.

# face-to-face review (stage II)

For example:



- Panel members consist of not only observers, but also theorists.
- Typically, there might be a couple of reviews who are experts in your field.
- Your proposal needs to convince experts as well as people not working in your subject.
- The primary assessor (normally the expert in your field) summarizes the proposal and comments from stage I review. Reviewers provide further comments and re-score the proposals.

# General Guidance on Proposal Writing

- **Background:**

- Are they important and exciting, and how?

- Justify the importance of your sciences by providing the big pictures of this topic and the up-to-date development of this field

- **Goals:**

- What are the unsettled issues and what are the problems that this observation is going to tackle?

- **Observation design:**

- How are your design of experiments/observations different from other people's efforts?

- Justify the sample/target selections and the observing bandpasses, etc.

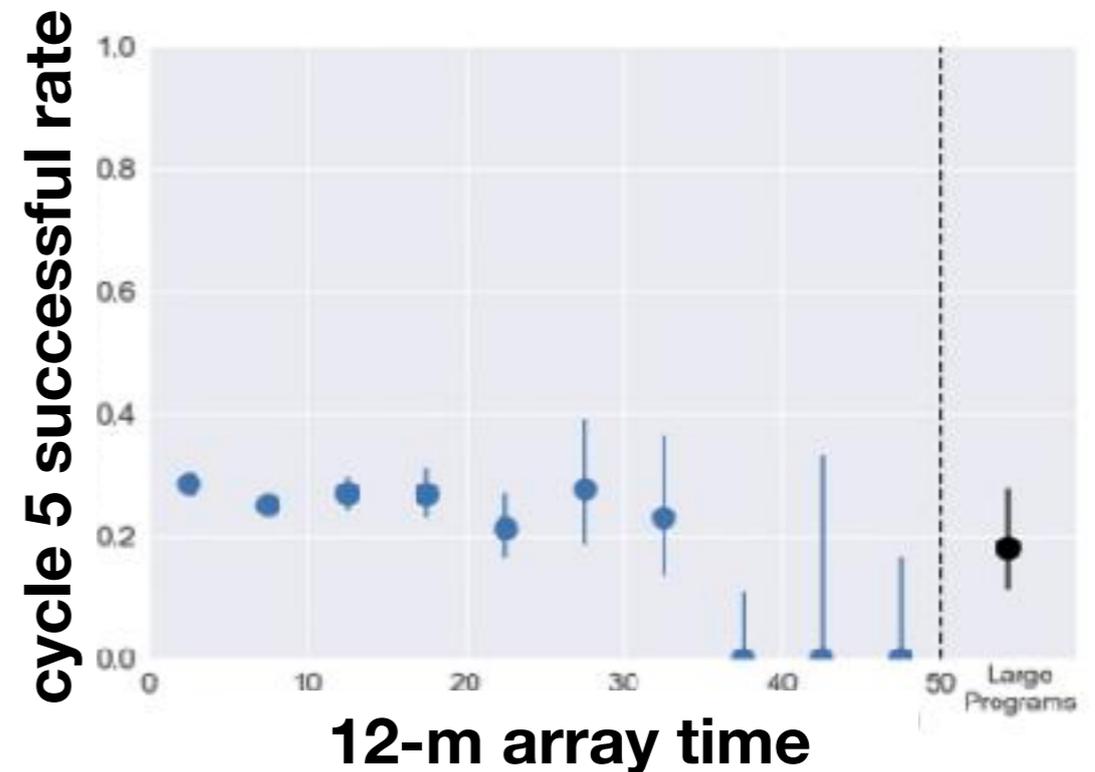
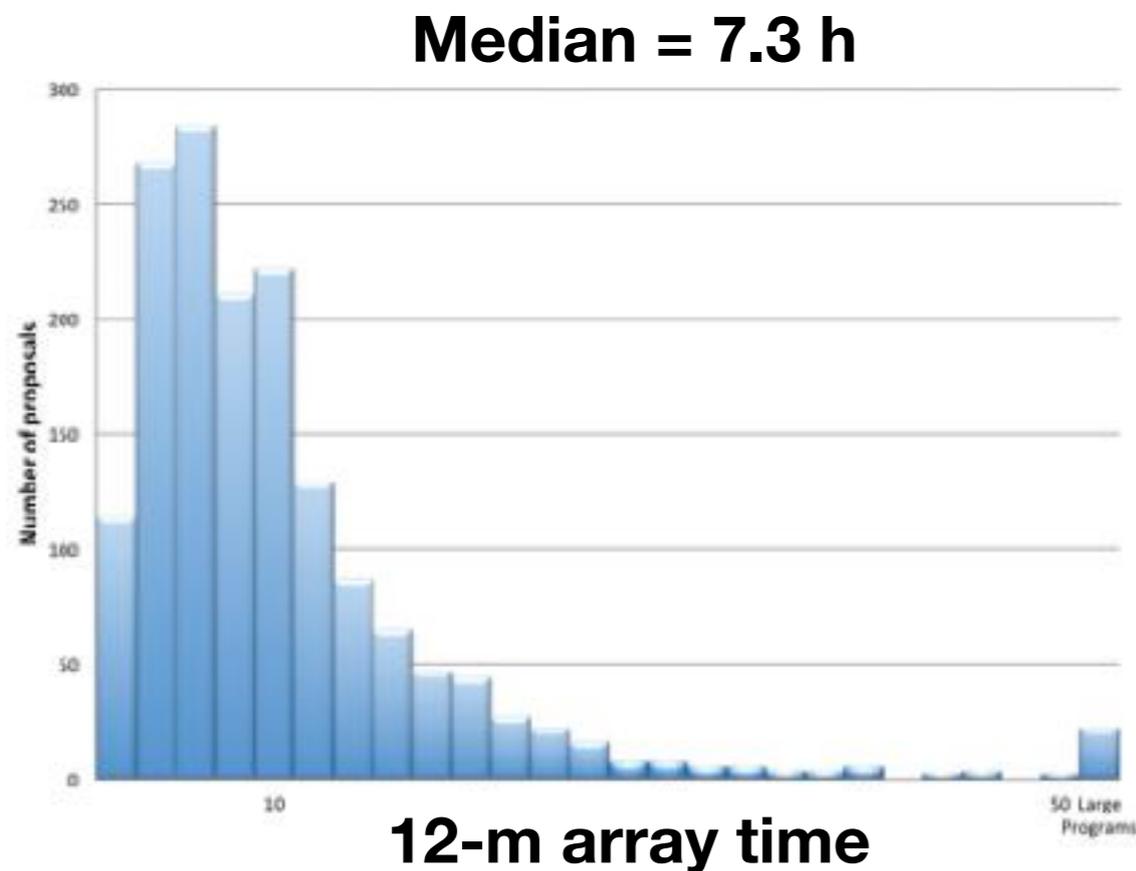
- Justify your arguments with theoretical/simulation predictions if any.

- **Outcome:**

- What are the expected results from this program? Are they going to directly answer the 'big question' ?

# Does the Proposal Size Matter?

number of submitted proposals



- ALMA continues to encourage the community to submit Regular Proposals that request over 10 hours of 12-m Array time.
- The reviewers have no preference toward small- or large- size proposals, as long as the requested time/sample is well justified.

# Does English Matter?

- **In theory—No.** The reviews are specifically told to judge the proposal based on sciences only, and not to be picky on the English writings.
- **In practice—Yes.** People cannot understand your proposal within a short time if your English writing is really bad.
- **Suggestions:** Find someone to help polish your English, or at least to comment whether he/she understands the key-point/logic of your proposal.

# Other Tips

- Follow the proposal format regulation. Never go beyond the page limit or use smaller fonts.

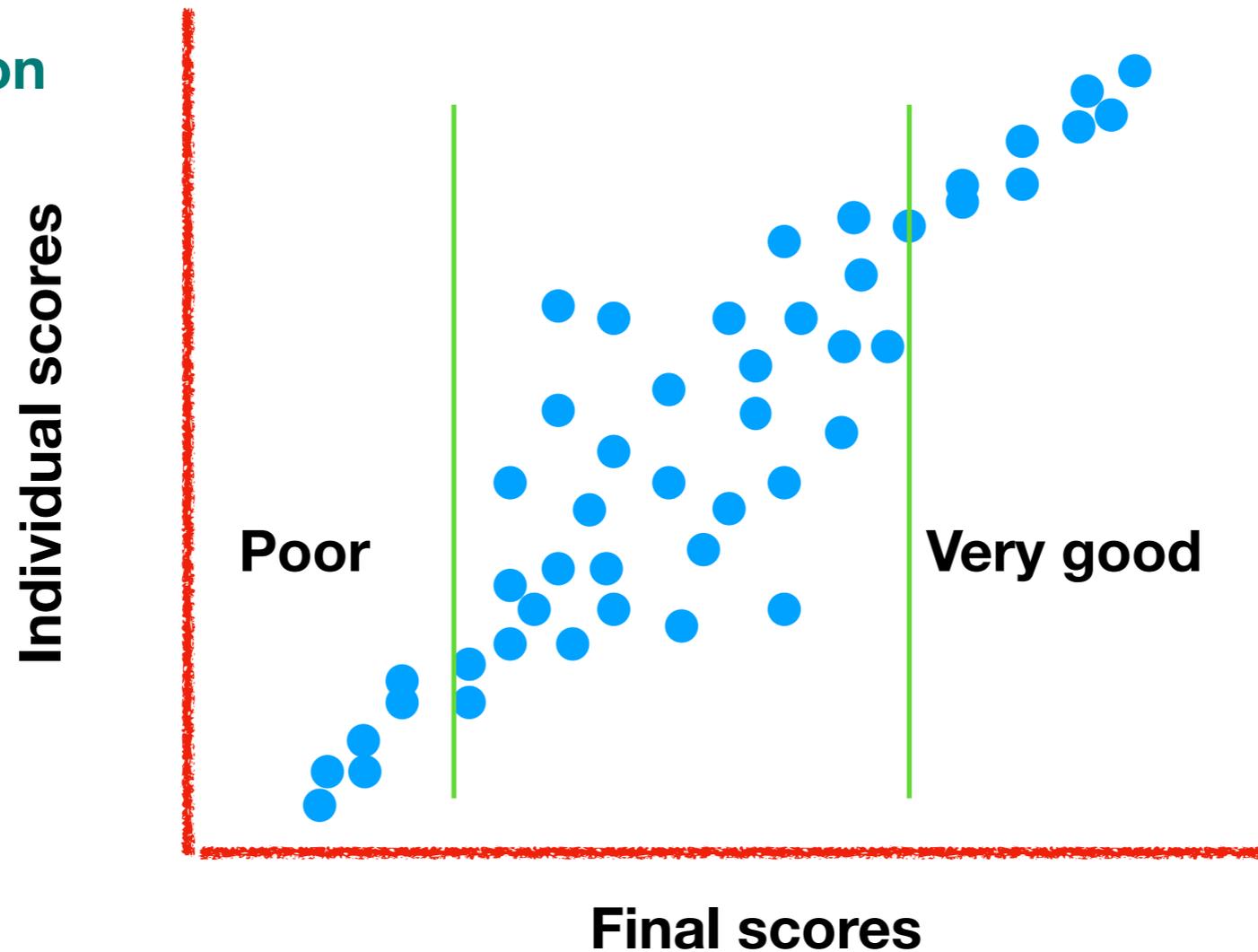
proposal guide:

*“The total length of the PDF document is limited to four pages for Regular, ToO, Solar and mm-VLBI Proposals and to six pages for Large Programmes (A4 or US Letter format), with a font size no smaller than 12 points.”*

- Figures need to be simple enough for the reviewers to catch the key points. Avoid using very complicated plots.

# Personal Observation

schematic illustration  
(not real data)



- Don't feel too bad if your proposals were rejected.
- *Aim at writing the best proposals!*

# Before you submit your proposal ...

- Ask friends of yours who work on a similar field (not necessarily the same) to read your proposal.
- See if they understand and get excited about your program.

*Good Luck!*