AGA5802 Proposals

Prof. Alessandro Ederoclite

Write the proposal → Time Allocation Committee → TAC did not understand a word / I got time at MY telescope

2
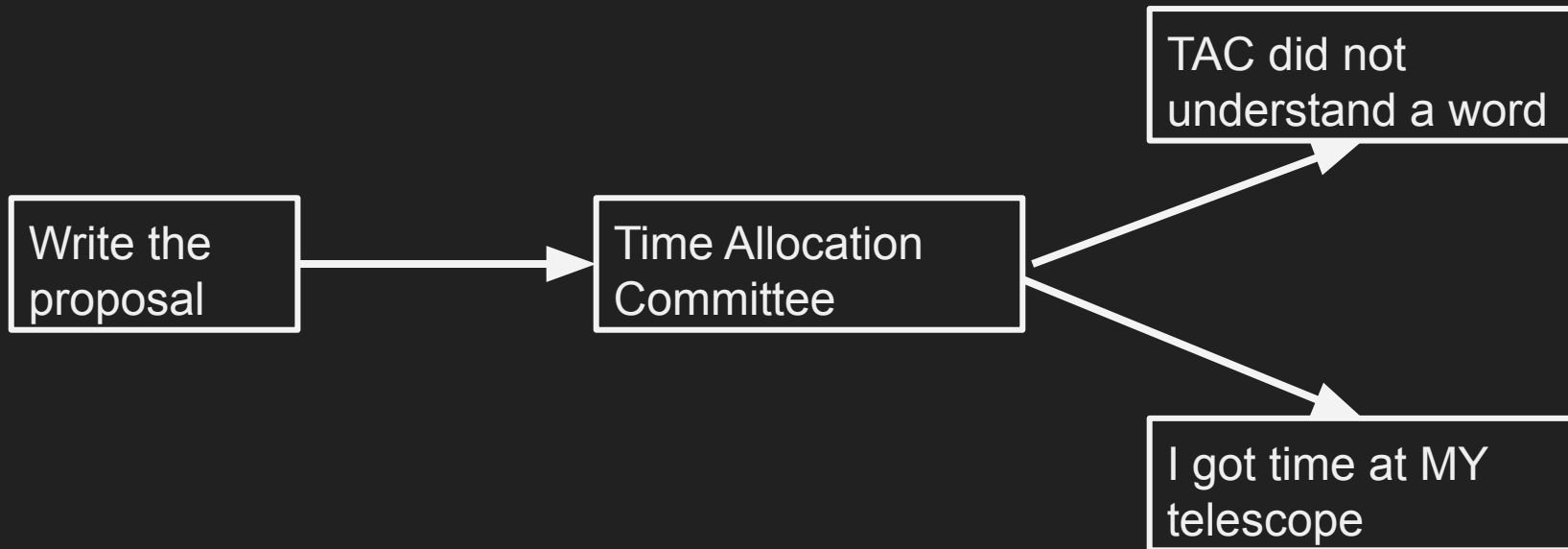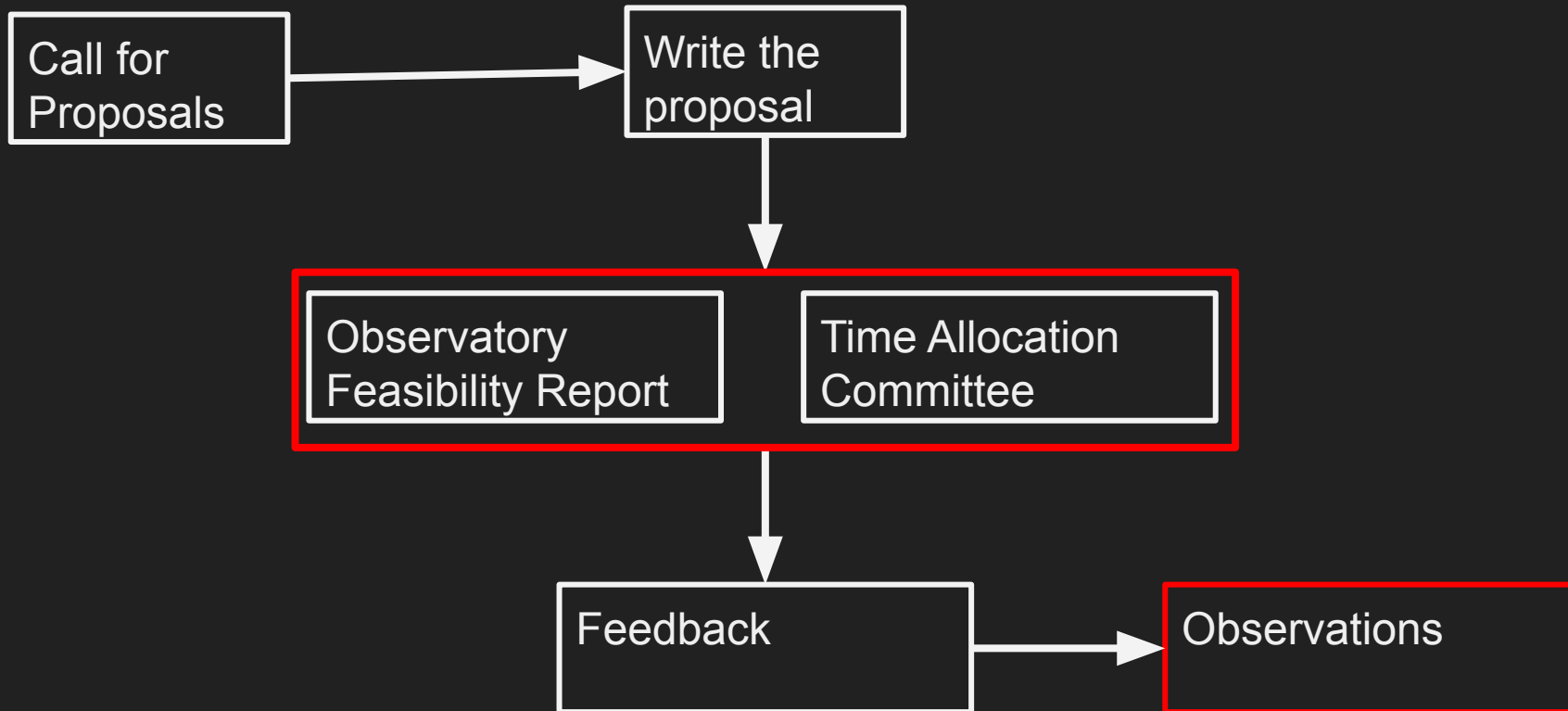
Definitions

DEFINITIONS: VISITOR vs. SERVICE

VISITOR (or "TRADITIONAL")

- The observer goes to the observatory
- Required if observing strategy needs to be adjusted
- Only observing mode in some telescopes

SERVICE (or "QUEUE")

- The observatory executes "Observing Blocks"
- Ideal if one has many targets spread over the semester
- Only observing mode in some telescopes

DEFINITIONS: LP, DDT, TOO, RRM…

"G" is not only a letter:

- GO - Guest Observations => equivalent to "open time"
- GTO - Guaranteed Time Observation => it is the time used by the team which built an instrument

DEFINITIONS: LP, DDT, TOO, RRM…

LP - Large Programme

a program spanning several semesters; usually requires extra technical justification as well as demonstration of proper manpower

DDT - Director Discretionary Time (usually a ~XX% of total observing time is "at discretion" of the director; below an example from the OAJ Call for Proposals)

- **OAJ Director's Discretionary Time** (OAJ-DDT), up to 40h/semester. OAJ-DDT proposals are reserved for testing the feasibility of potential future observing cases of great scientific impact, for the follow-up of objects in which a quick response is key for the scientific return, of for unexpected events. OAJ-DDT proposals are evaluated by an internal committee chaired by the Director of CEFCA.

DEFINITIONS: LP, DDT, TOO, RRM…

ToO - Target of Opportunity (below example from ESO; not all observatories offer ToO)

http://www.eso.org/sci/observing/policies/too_policy.html

Target of Opportunity Proposals

One may consider two categories of *Target of Opportunity Proposals* (ToOs).

1. **Unpredictable ToOs** are those concerning unpredictable sudden astronomical events which require urgent or immediate observations. Those should be submitted as DDT proposals, and are hence by definition DDT proposals and not ToOs in the ESO proposal terminology.
2. **Generically predictable ToOs** are those concerning events predictable in a generic sense only. This is typically (but not limited to) transient phenomena, and follow-up or co-ordinated observations of targets of special interest. Such proposals are, in the ESO proposal terminology, ToO proposals.

RRM - Rapid Response Mode

ToO mode in which one must act within minutes from the trigger (e.g. GRBs)

DEFINITIONS: LP, DDT, TOO, RRM…

ToO programs can often override other programs (be careful if you are a visitor astronomer)

http://www.ing.iac.es/astronomy/observing/overrides.html

DEFINITIONS: LP, DDT, TOO, RRM…

Fillers (e.g. GTC)

FILLER PROPOSALS: In order to have an efficient queue-scheduled observations scheme for the GTC, it is useful to have a set of "filler" programs that can be executed under adverse observing conditions (bad seeing, poor sky transmission, etc.) and with targets spanning a wide range in right ascension (RA). Proposers may request filler status for their program, and during the proposal selection process CAT will evaluate their suitability for this category. Such proposals can request a large number of observing hours. In order to be considered as filler proposals they must fulfil the following requirements:

- Their observing requirements should be very relaxed, i.e. little or no restrictions on seeing or cloud coverage.
- The chosen observing mode should be a frequently used mode (MOS observations are not accepted for filler programs).
- There is a scientific gain even if only a small fraction of the requested observations are executed.
- A list of targets with a broad RA coverage is provided or, if only few targets are included, they must have good visibility during the semester.

Note that filler proposals have generally been highly successful in the last semesters.

Which observatory?

WHICH OBSERVATORY?

Hawaii (Germini)

Spain (OAJ)

Chile (Gemini, SOAR, ESO, ALMA)

Brazil (OPD)

Space (HST, Chandra,...)

WHICH OBSERVATORY?

Latitude

- e.g. you do not apply at VLT to observe M31 (remember the second class?)

Type of access

- mostly "visitor mode" available at SOAR — if you have targets spread all across the sky, it may not be your first choice
- mostly service mode at Gemini — if you may need to fine tune your observations, it may not be your best pick

Instrumentation available

- no spectroscopy available at OAJ

Which Observatory?

Get acquainted with an observatory/telescope/instrument

FEROS/ESO-MPG-2p2

FORS/VLT

X-Shooter/VLT

OSIRIS/GTC

CAMELOT/IAC80

EFOSC/NTT

MUSE/VLT

CAIN/TCS

PPAK/CAHA3p5

VIMOS/VLT

ACAM/WHT

FIES/NOT

ALFOSC/NOT

T80Cam/JAST

Cassegrain Spectrograph/OAJ 1.6m

Which Observing Mode?

Which Observing Mode?

Service

- Natural in case of ToO or Filler
- Often the case for DDTs

Visitor

- If it is your only option
- If your target is variable
- If the brightness of your target is not well predictable

How Much Time Can I Ask?

The "oversubscription" factor

Some telescopes/instruments are in very high demand. This is "measured" via the "oversubscription" factor.

"Oversubscription" = time requested / time available

Any observatory aims at having an oversubscription >> 1

HST has oversubscription ~8.

OPD or OAJ have about 1.

Observatories/telescopes with several instruments may be oversubscribed because of one (or a subset of instruments).

How Much Time Can I Ask?

As much as you need

but only as much

Check how much time is granted

ESO http://archive.eso.org/wdb/wdb/eso/sched_rep_arc/form

OAJ http://oajweb.cefca.es/observingtime/telescope_time_allocation

IAC-CAT http://vivaldi.ll.iac.es/OOCC/night-cat/telescope-time-allocation/

How Much Time Can I Ask?

- <u>Use Exposure Time Calculators</u> this allows you to compute how much exposure time you need to get enough signal to do your science

- <u>Compute overheads</u> (a good rule of thumb is to add 20%): "overheads" is the amount of time you spend "not observing" (e.g. pointing the telescope)

  - some observatories offer tables of overheads

  - you can use "phase 2 tools"

How To Be Successful

Don't's

Submit too many proposals

Include collaborators without their agreement

Include targets which are not observable in the period

Hack the template

Submit at last minute.

Do's

- Read (and understand) the CfP

- Study "your" instrument

- Put your science in context => Keep it simple!

- Explain the scientific outcome of the proposal

- Be as thorough as possible in describing your constraints

- (In case it is a resubmission):

  - Read and follow the feedback you received

  - Don't assume the same panel will read the proposal

Exercise!

It will be your test; so no exercise this time :-)