



Writing a Successful Proposal

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ESO Users Workshop 2021

Generalities/1

- ESO calls for proposals **two times a year**
- Proposal submission is open in September (for observations in April to September) and in March (for observations in October to March [following year])
- In the ESO jargon the observing semesters are called **PERIODS**. Next useful period for proposal submission is **P108** (Oct 1st 2021 to Mar 31st 2022)
- Proposal preparation and submission is indicated as **Phase 1**
- It is possible to apply for **Service Mode** (SM: queue) and/or **Visitor Mode** (VM: classical)

Generalities/2

- The principal investigator (PI) submits the proposal, possibly with a number of co-investigators (co-Is)
- The PI's affiliation is what counts for the countries time share statistics
- A proposal is considered as a non-member state proposal if more than 2/3 of the co-Is are not affiliated to an ESO member state (MS)
- All expenses (travel and lodging) will be covered by ESO for successful MS applicants. No extra funds are provided (data reduction, students)



This is the right time to start!

- Call for proposal for P108 is open as of Feb 25, 2020
- Deadline: **Mar 25th 12:00 CET**

Starting point: <http://www.eso.org/sci/observing/phase1.html>

Useful information:

<http://www.eso.org/sci/observing/phase1/p108/proposalsopen.html>

- **Special Call for P107, open as of Apr 1st, 2021**

<https://www.eso.org/sci/observing/phase1/special-call-period-107.html>

[interesting] reading

- [Selecting and Scheduling observing programmes at ESO \(Patat & Hussain 2013\)](#)
- [Gender systematics in time allocation at ESO \(Patat 2016\)](#)
- [P100: the past, present and future of ESO Observing Programmes \(Patat+ 2017\)](#)
- [The ESO survey of non-publishing programmes \(Patat+ 2017\)](#)
- [Peer-review under review \(Patat 2018\)](#)
- [The time allocation WG report \(Patat 2018b\)](#)
- [The Distributed Peer Review Experiment \(Patat+ 2019\)](#)



Submit a proposal!



European Organisation for Astronomical Research in the Southern Hemisphere

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APPLICATION FOR OBSERVING TIME

PERIOD: **91A**

Important Notice:

By submitting this proposal, the PI takes full responsibility for the content of the proposal, in particular with regard to the names of CoIs and the agreement to act according to the ESO policy and regulations, should observing time be granted.

1. Title	Category: D-8
Is Earth moving?	

Writing a proposal is easy.

Writing a good proposal is not.

There is only one way to be sure you do not get telescope time:
do not submit a proposal!

The Call for Proposals (CfP)

- Important document

- contains a lot of relevant information
- especially important for first-time users. Reading it is a must!
- contains many useful links to instrumentation and other useful information
- binding document, if proposal is approved
- it is the “contract” between ESO and the successful applicants



ESO Call for Proposals – P108
Proposal Deadline: 25 March 2021, 12:00 noon CET



The Call for Proposals/2

- Everybody **MUST** read

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www.eso.org/UserPortal



The User Portal

ESO User Portal

Privileged Actions

Request a Special Run

Account Configuration

Change Username

Change Password

Change E-mail Address

Manage Profile

Science Users

Science User Information

ALMA Science Portal

ESO User Portal



Phase 1

Submit an observing proposal
Check the time allocation information



Phase 2

Prepare observing material
Submit a target or set-up change request
Check the status of your observing runs
Delegate Phase 2 tasks



Archive Services



Update your Account!

- Make sure you have a UP account
- Make sure it is updated
- Make sure you have ticked the box:
 - I want to submit (an) observing proposal(s) (as PI, dPI or Col) and/or be considered for selection as a proposal referee.
- Make sure all your Cols have done so, well ahead of the proposal submission deadline



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Important links

- The CfP is the starting point of proposal preparation. It provides links to dynamically updated pages. It is a good habit to start from the IMPORTANT LINKS:

<http://www.eso.org/sci/observing/phase1/p108/links.html>

Important Links for Period 108

Information on Instruments & Facilities

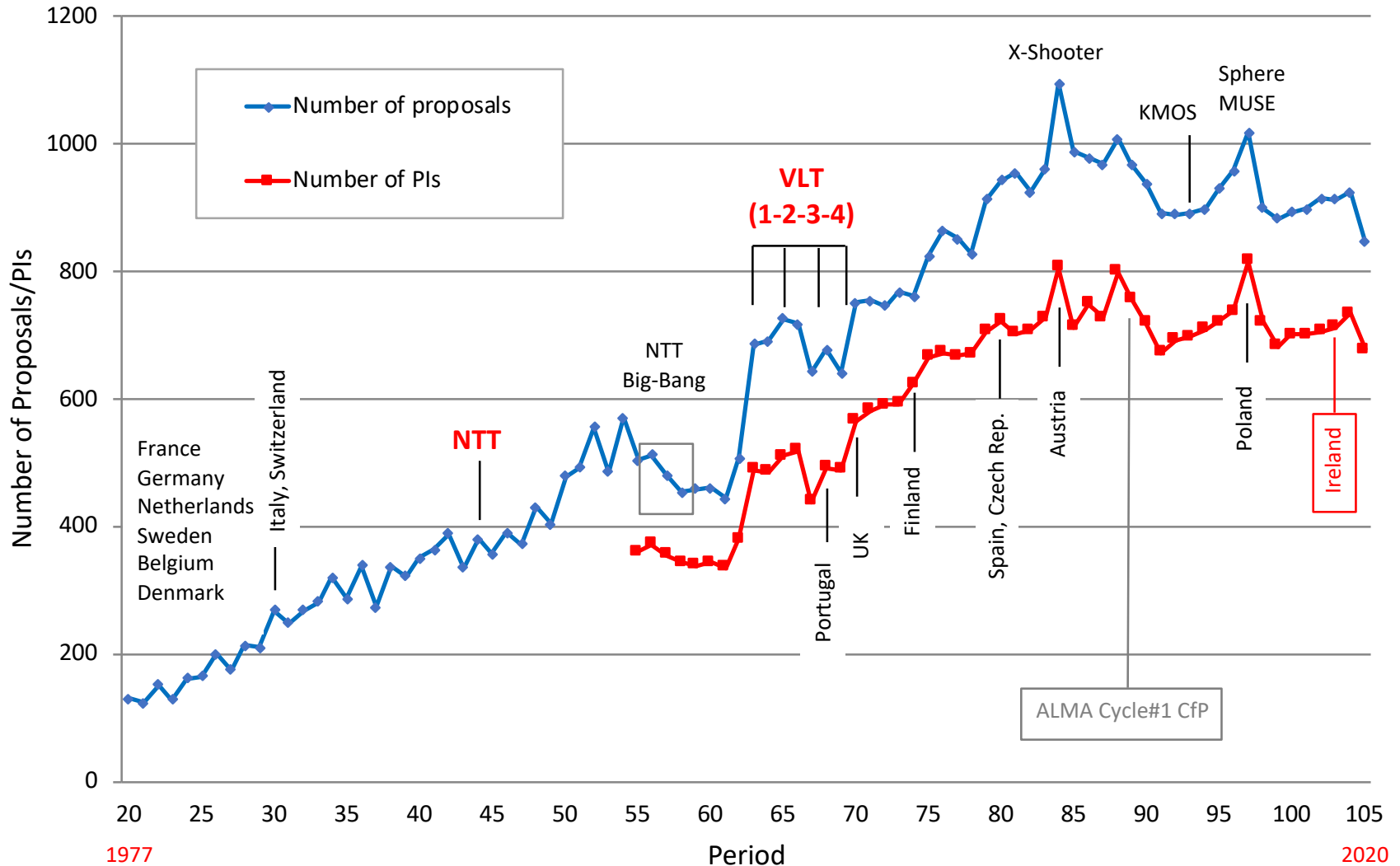
La Silla Paranal Observatory	Homepage for the La Silla and Paranal Observatory facilities
Instrumentation and Facilities in Period 108	Links to technical information for Period 108
Instruments available in Period 108	Instruments and facilities in Period 108
Recent changes for Period 108	Important changes for Period 108
Foreseen changes for next Periods	Planned changes for future Periods
The APEX telescope	APEX Homepage
Observing with APEX	Applying for time on APEX facilities
Exposure time calculators (ETCs)	ETCs for Paranal and La Silla instrumentation

Setting the stage

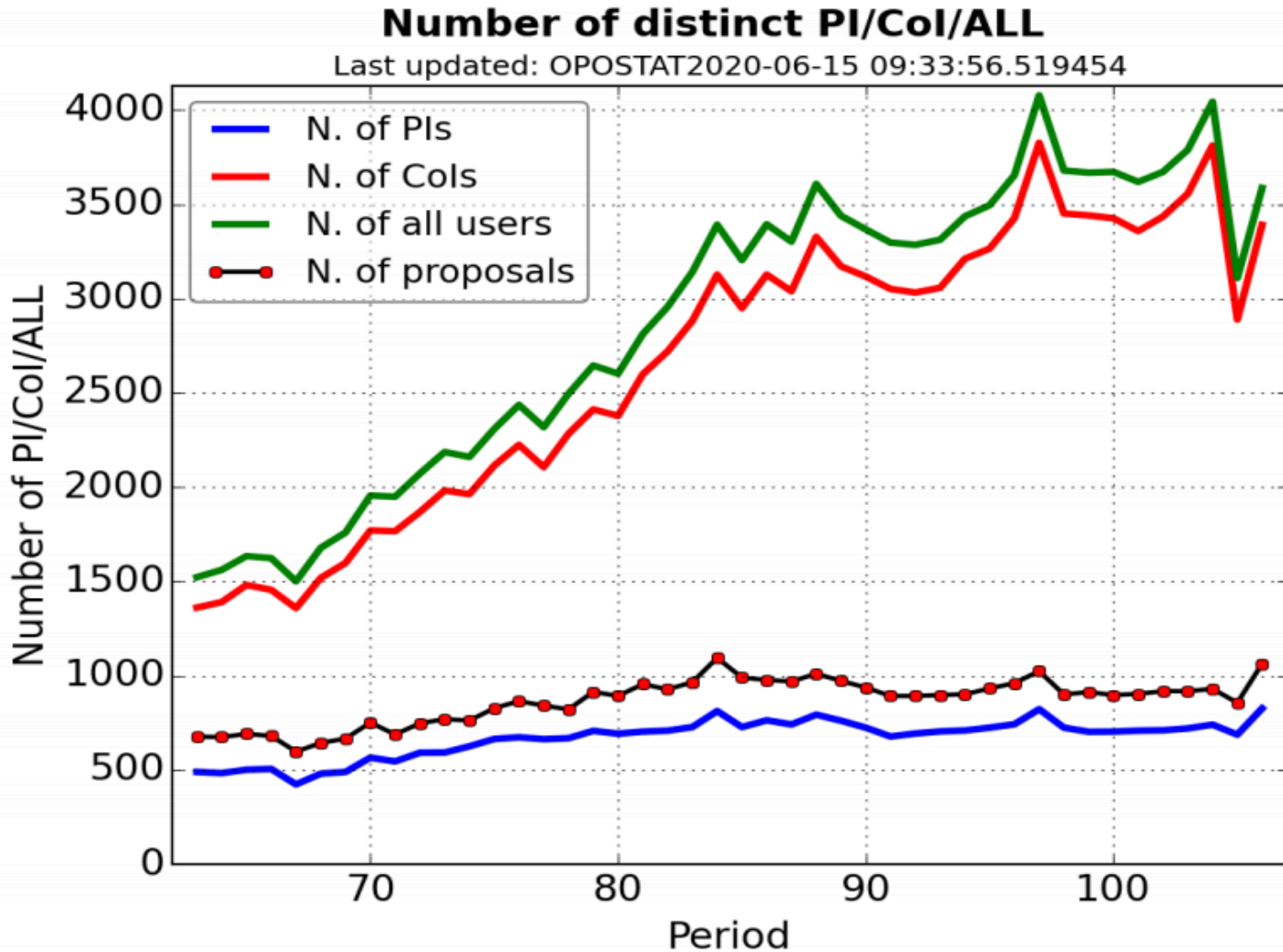
- ESO receives ~900 proposals/period
- ~700 distinct PIs
- ~3500 distinct co-Is from ~50 countries (IAU members ~10,000)
- The request is ~3200 nights/semester
- The available science time is ~1070 nights/semester
- A fraction (up to 15%) goes to **Guaranteed Time Observations (GTO)**



Proposal submission stats



The ESO Community



Structure of the ESO OPC

- **13 panels in 4 science categories**
 - A: Cosmology and Intergalactic Medium (3 panels)
 - B: Galaxies (2 panels)
 - C: ISM, star formation and planetary systems (4 panels)
 - D: Stellar evolution (4 panels)
- **6 members per panel**
 - 1 panel chair
 - 1 panel co-chair
- **OPC:**
 - 13 panel chairs
 - 3 panel co-chairs (1 in A, 2 in B)
 - 1 OPC chair (not a panel member)
- **Total:**
 - 17 OPC members
 - 72 panel members

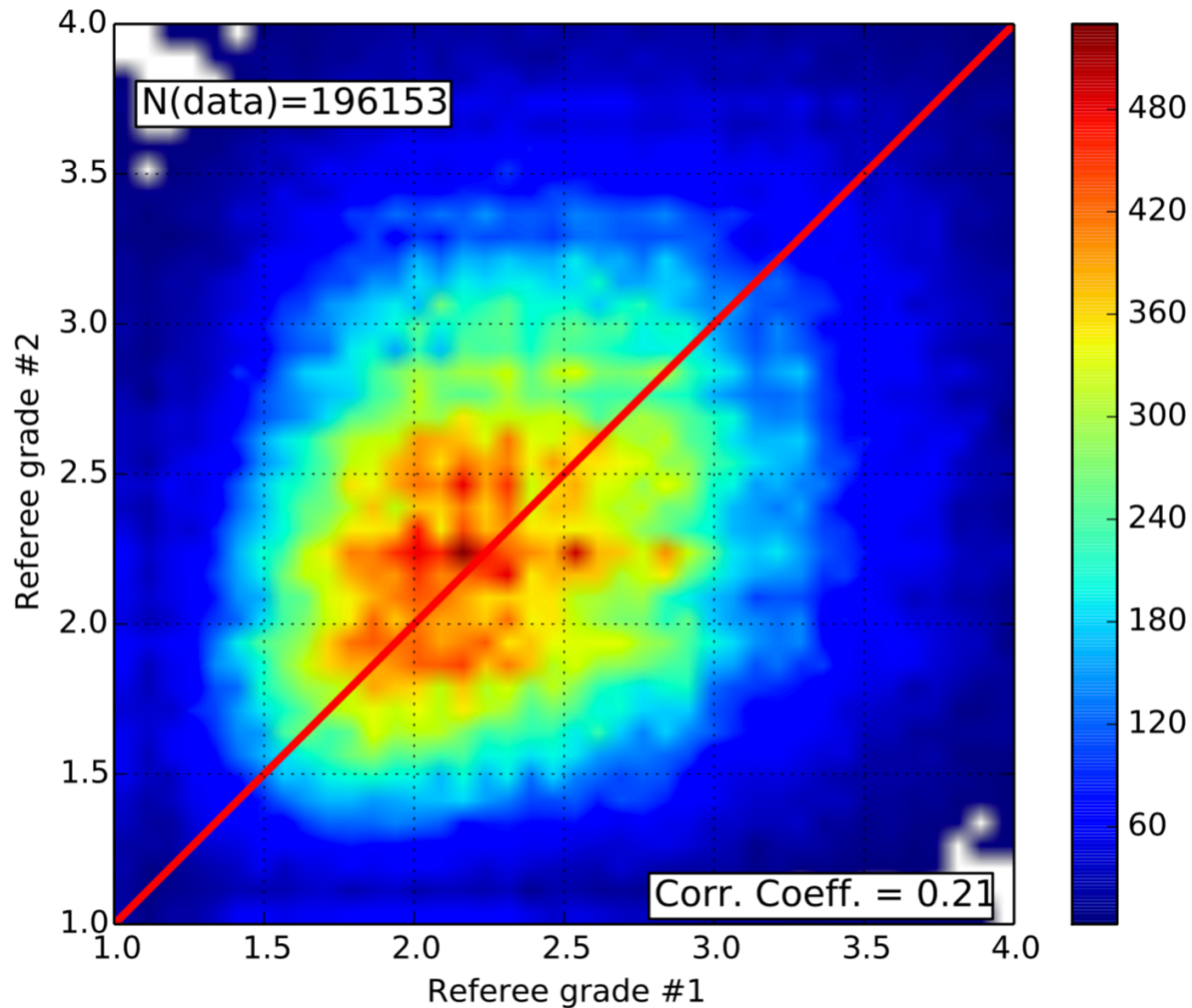
ESO and the OPC

- The OPC is a body consisting of members of the astronomical community, who provide a service to this community
- ESO facilitates the OPC process, but takes no active part in the scientific evaluation of the proposals
- Time allocation is implemented by ESO based on the outcome of the OPC proposal review process, taking into account technical, operational and scheduling constraints

OPC Feedback

- The primary referee is responsible for writing feedback comments to be communicated to the PI
- Feedback comments are based on the discussion of the proposal at the meeting
- OPO adds scheduling information including:
 - the quartile in which the run is located in the ranking of the given telescope
 - the oversubscription factor of the requested telescope
 - the reason why the run was not scheduled (if it was not scheduled...)
 - any technical feasibility comment from the La Silla Paranal Observatory
 - a note stating that the referee did not know if the proposal would be allocated time when he wrote his feedback comment (when applicable)

What should I expect?



Oversubscription

- Pressure factor typically high
 - typical oversubscription for ESO telescopes is >3
 - often reaching 5 and in certain periods/RA ranges 8 or higher
 - Large Programmes have an acceptance rate of about 20% or less
 - Getting ToO time is harder, because it must be A-rank
 - GRBs, supernovae, novae, stellar occultations by TNOs, microlensing, other transient phenomena



Proposal Anonymization

- As of P107 ESO adopts the Dual-Anonymous Peer Review.
- The main purpose is to have the review focusing on science, not on the team.
- Proposals have to comply to the anonymization guidelines: [Dual-Anonymous Guidelines](#).
- Anonymizing your proposal takes time and effort: do not simply clone previous submissions!
- 100% anonymity cannot be reached. Proposers will have done their job if it is reasonably ambiguous who submitted the proposal.

Non-anonymous sections

- Anonymization must be applied to Title/Abstract/Scientific Rationale/Time justification/...
- The following sections are not anonymous and will not be shown to the reviewers. There you can/have-to be explicit:
 - Previous usages of the ESO facilities
 - Publication list
 - Background & Expertise
 - Team composition (in alphabetical order)
- These sections will be revealed to the reviewers only after the ranking is completed.

Writing a successful proposal

- Make your science understandable
 - make it as simple as possible for the panel to understand your science and proposal
 - remember these are broad topical panels
 - get to the point immediately
 - be explicit, do not assume that the panel will work out what you mean
 - if the referee does not understand what you say you have lost
 - there is no possibility to check the literature



Writing a successful proposal

- Need to have a good idea (*“whenever you think you had a great idea, either somebody else had it already or it is a bad idea”*)
- Need to explain very clearly: What is the main question? What will we learn by answering it?
- Need to convince your peers your idea is good, it will lead somewhere, and it should be pursued
- Need to justify the request for telescope resources (time/instrument/conditions)
- Need to demonstrate what you propose is feasible

Writing a successful proposal

- Be aware that you are not the only applicant and that the reviewers will have *maaaany* proposals to read (60 to 80 each!)
- Make your science understandable
 - avoid jargon
 - expressions in your field may not be used in others
 - avoid acronyms, which may not be clear to everybody
 - what was ϵ Eri Ba again?
 - H_0 may be understood by most, w' needs explanation
 - if you need acronyms or special terms explain them
 - avoid complicated language
 - use simple English
 - should be correct English – have (senior/native) colleagues or collaborators read your proposal

Keep it in mind

- **OPC evaluation of proposals:** Proposers should keep in mind the need for each OPC panel to cover a broad range of scientific areas. As a result, a particular proposal may not fall within the main area of specialisation of any of the panel members.

Proposers should make sure that the context of their project and its relevance for general astrophysics, as well as any recent related results, are emphasised in a way that can be understood by their peers regardless of their expertise.

CfP 108, p. 17-18

The Abstract

- This is the one paragraph that is guaranteed to be read by everybody
- You must be able to summarise the excitement in one paragraph
- Revisit your abstract several times during the writing and improve it
- The abstract has to contain the punch line

Consistency

- Write a consistent proposal
 - have you selected the best suited instrument for your observations?
 - the exposure times and the target sample have to match your science case
 - there is a good chance one reviewer will identify any inconsistencies
 - exposure times have to make sense, use the ETCs
 - figures and tables should help the text and be relevant

Overheads and Exposure Times

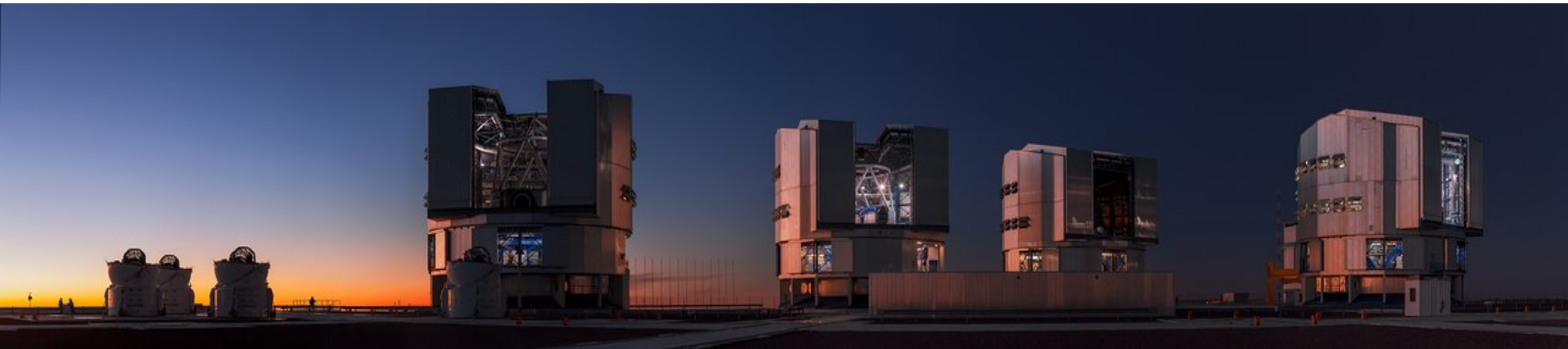
- There are specific tables. They can/should also be verified using the Phase 2 Proposal Preparation Tool (p2), by preparing test Observing Blocks (OBs). This is the most accurate way of deriving the execution times that need to be entered in the proposal.
- Exposure times can be derived from the Exposure Time Calculators (ETC), provided for each instrument:

<http://www.eso.org/observing/etc/>

- See talk by H. Boffin

Helpful Tips (Dos and Don'ts)

- Take the instructions seriously
 - any proposal that does not provide all requested information damages itself
 - read the relevant parts of the Call for Proposals



Don't

- Include mostly/only targets outside the nominal RA range of the period
 - even if you need only a couple of hours of observing time
 - oversubscription of the few hours of visibility of a target at RA=18h between October and March can quickly reach several 10s

- Include post-stamp size figures
 - or any other type of figures that are not readily legible on an A4-size printout of your proposal

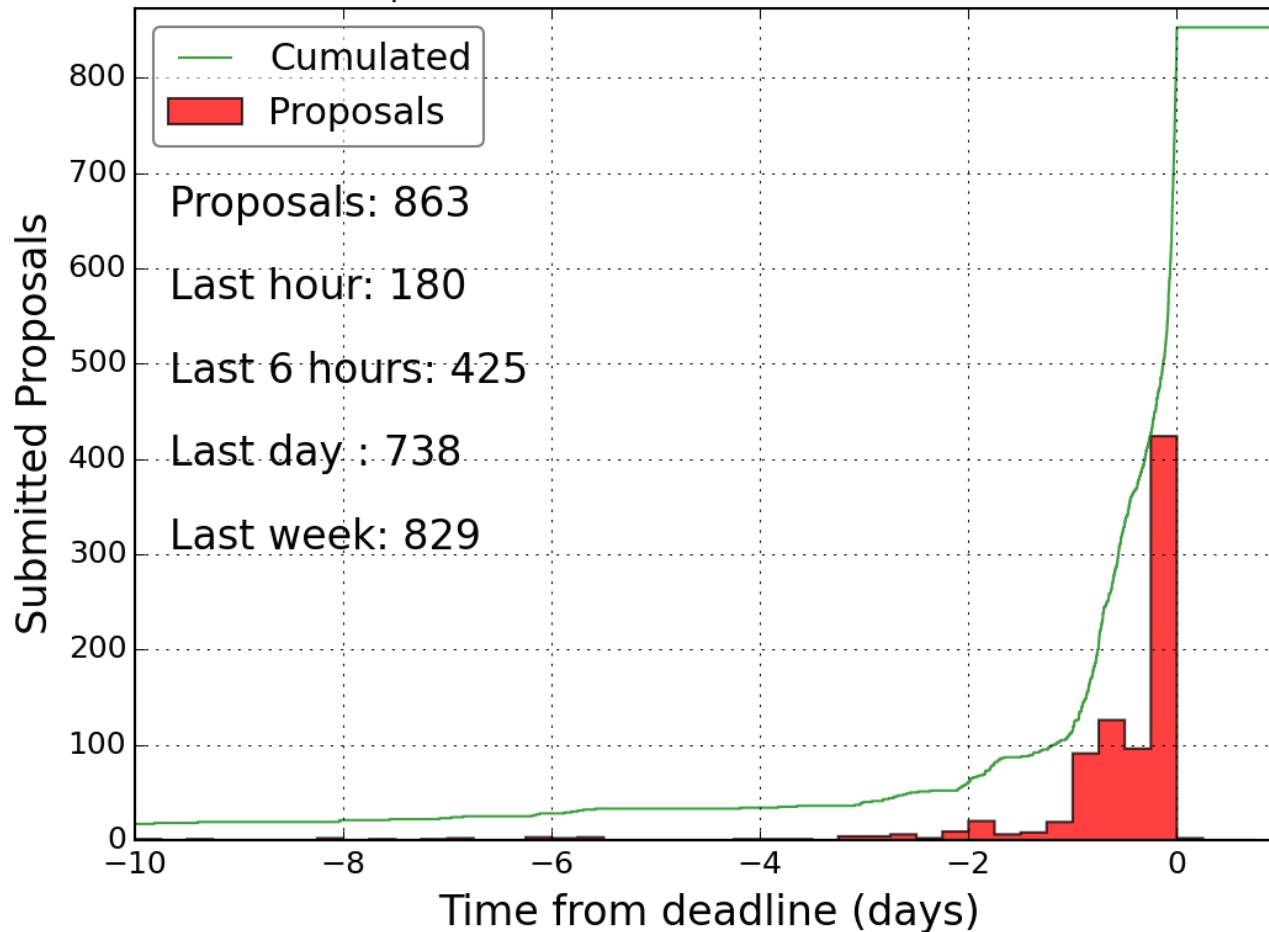
- Submit your proposal at the last minute
 - or even after the deadline (!)
 - errors/oversights are frequent in last-minute submissions



Don't wait for the last minute

Proposal arrival times - Period 105

Last updated: OPOSTAT 2021-03-02 16:29:11.086487



Don't

- Submit more proposals (as PI or co-I) than you can reasonably deal with
- Include co-Is in the proposers' list without their explicit agreement
- Plagiarise proposals which you had access to

DO

- read (and understand!) the relevant parts of the Call for Proposals, in particular:
 - Important recent changes
 - Foreseen changes in upcoming periods
 - Remarks on the instrument(s) that you are planning to use

- Keep in mind that you are applying for time at one of the most demanded scientific facilities on the planet

- Check the GTO target protection lists for the instrument of interest



Check the GTO target protection lists

Science Users Information
Observing Facilities
Future Facilities and Development
Observing with ESO Telescopes
Policies and Procedures
Telescope Time Allocation
GTO Programmes
Telescope Schedule
Large Programmes
ToO Programmes
DDT Programmes
ESO/GTC Programmes
Targets of Public Surveys
All approved Programmes
RMM protected runs
Monitoring Programmes
Calibration Programmes
Phase 1 Proposals

Guaranteed Time Observations for Period 106

Please find below the protected target lists of the GTO teams for P106. Please note that some lists refer to GTO-Large

ARTEMIS

- [List of protected observations for the ARTEMIS consortium](#) (GTO-Large targets)

ESPRESSO

- [List of protected observations for the ESPRESSO consortium](#) (GTO-Large targets)

GRAVITY

- [List of protected observations for the GRAVITY consortium](#) (normal GTO targets)
- [List of protected observations for the NAOMI-IPAG consortium](#) (normal GTO targets)

HARPS

- [List of protected observations for the LFC consortium](#) (normal GTO targets)

- Be specific about the expected outcome of the project
 - What is the quantitative information about the targets that should be obtained?
 - Which physical processes will this information constrain, and how?
 - Will the data be compared to theoretical models? Do these models already exist? If not, when and how will they be developed?

- In case of resubmission of an unsuccessful proposal from a previous period, take into account the feedback that you received
 - but don't take for granted that this guarantees success
- Carefully justify the required parameters of your observations
 - Choice of telescope/instrument
 - Signal-to-noise ratio
 - Spatial/spectral resolution
 - Size of the sample to be observed
 - Target selection criteria

(Note: “statistical significance” needs to be qualified)

DO

- Fill as accurately and completely as possible all required fields of the proposal form
- Check your proposal for compliance as early as possible

And once the time allocation process is completed:

- Read carefully, and understand, your web-letter(s)
- Send queries for further information to OPO
 - if you wish more feedback information
 - if you feel that an error was made
 - but note: science evaluations are not subject to revision and this is not an opportunity to rewrite your proposal!

Resubmissions

- >35% of the proposals are resubmissions
- We all have had proposals rejected
 - and yes, sometimes it really hurts
- Address comments from a previous submission
 - be clear what has changed and how the proposal has improved
- Why did the panel not understand your proposal?
 - this is not only their fault
 - be more explicit, more direct, crystal clear

Resubmissions

- Continuation of programmes
 - address the new goals
 - explain why you need a bigger sample
 - what has changed since the last proposal



What makes a proposal successful

- *If I had a recipe for this I would probably not be here.*
- **Exciting science**
 - providing a clear progress in our understanding of some phenomenon
- **A neat idea**
 - unusual method, new idea, new approach, unique observation or experiment
- **Clear language**
 - presentation of an exciting story, which is interesting for many people
 - cover all questions somebody may have
 - information to the point

- A consistent story
 - the proposal is complete and provides all information
 - quantitative arguments for the amount of time requested
- Good Luck!





Time to apply for time...



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ESO Call for Proposals – P108

Proposal Deadline: 25 March 2021, 12:00 noon CET