

ESO and its time request and allocation process

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ESO Proposals: basic information

General information/1



- So far(*), ESO has called 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)
- Proposal preparation and submission is indicated as **Phase 1**
- In the ESO jargon the observing semesters are called PERIODS. Next period for proposal submission is **P116** (Feb 20, 2025, to March 20, 2025)
- Submission of Large Programmes is allowed only once a year
- It is possible to apply for Service Mode (SM: queue) and/or Visitor Mode (VM: classical)
- **NEW**: first Yearly Call will start in Fall 2025
<https://ui.adsabs.harvard.edu/abs/2024Msngr.193...45P/abstract>

General information/2



- The principal investigator (PI) submits the proposal, likely with a number of co-investigators (co-Is) → *delegation is possible*
- 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)
- MS and non-MS proposals are treated in the same way. Only in everything_else_being_the_same-cases preference is given to MS.
- All expenses (travel to and lodging at ESO facilities in Chile) will be covered by ESO for successful MS applicants. No extra funds are provided (data reduction, students)

ESO proposals: some numbers



- ESO receives about 900 proposals/Period
- About 700 distinct PIs
- About 3500 distinct co-Is from about 50 countries (IAU members ~10,000)
- The request is about 3200 nights/semester
- The available science time is around 1070 nights/semester
- A fraction (up to 15%) goes to **G**uaranteed **T**ime **O**bservations (GTO)



ESO Call for Proposals and its components

ESO Call For Proposals

- Every period (2 x yr) ESO opens the call for proposals, but soon to move to yearly calls, cf.

<https://ui.adsabs.harvard.edu/abs/2024Msngr.193...45P/abstract>

- The Call For Proposals document contains:
 - Important recent changes and reminders
 - Updated information on offered instruments
 - Proposal types, policies, and procedures
- *Consider using science_p1support@eso.org*



European Southern Observatory

ESO CALL FOR PROPOSALS

Apply Now!

PERIOD 113

- Maximise scheduling chances by understanding the over and under-subscribed observing conditions
- Beware of the high demand on UT4, especially in the $9 < RA < 14h$ range
- Take advantage of the VLT/I–ALMA and VLT/I–XMM Newton joint programmes
- Check the Call for Proposals document for the upcoming restrictions at VLT–UT
- ESO is considering decommissioning VISIR due to low demand, last chances to apply?
- Reminder: Large Programmes are not offered at odd periods

Deadline: 26 September 2023, 12:00 CEST

Contact us: <https://support.eso.org/>





User Portal and the p1 User Interface

User Portal: manage your account



[Home](#) [Science](#) [Contact](#) Dr. Jerabkova

User Portal Profile

Manage your profile settings

General Information

Username

tereza

E-mail Address

tereza.jerabkova@eso.org

Password

Change Password

Title

Dr.

First Name

Tereza

Last Name

Jerabkova

Employer Country / Organisation

ESO

Professional Status

Professional astronomer

☒ I want to submit (an) observing proposal(s) (as PI, dPI or Col) and/or be considered for selection as a proposal referee

Additional Information

Institute

ESO Garching

Gender

☒ Female

☐ Male

☐ Non-Binary

☐ I do not wish to say

Year of Ph.D.

2020

ORCID iD

<https://orcid.org/0000-0002-1251-9905>

User Portal: the golden gate to ESO services



ESO User Portal Services



Phase 1

Submit/edit an observing proposal
Check the time allocation information



Phase 2

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



Phase 3

Download the Science Data Products Standard
Submit data
Delegate Phase 3 tasks



Archive Services

La Silla Paranal data (raw)
Science Portal (processed data)
APEX reduced data
Catalogue data
Programmatic and Tool Access

Check your Archive requests
Delegate proprietary data access rights
Access ALMA data
Archive homepage for other services



Help

Ask for help
Find User Portal Information and FAQ
Check the data reduction FAQ
Go to the ESO Archive Community Forum [↗](#)

The p1 user interface/1



The Phase1 web-based proposal submission system (p1)

For information on the current status of operations see:

<https://www.eso.org/sci/facilities/lpo/news.html>

Proposals for observing time on all facilities of the La Silla Paranal Observatory (VLT/I, VISTA, VST, NTT, 3.6m, APEX) must be submitted using the

www.eso.org/p1

This is accessible via your User Portal credentials.

Please be reminded that: **PI + cols --> need UP account**

- The Principal Investigator and all Co-Investigators must have an ESO User Portal Account. You can register at www.eso.org/UserPortal ;
- You can access (edit/clone) old proposals from the same p1 interface;

Create new proposal

Your Proposals

Show my PI proposals

Periodall periodsclear

search by title or investigator

- P113 Test proposal

Summary

Title & Abstract

Scientific Keywords

Tags

Investigators

Rationale

Targets

Runs

TargetsRuns

Observations

Remarks & Justifications

Awarded & Future Time Requests

Previous Usage

Applicants' Publications

+

+

+

APPLICATION FOR OBSERVING TIME

Clone

Help

pdf

Principal Investigator: F. Primas

ID: to be assigned · Type: Normal · Cycle: P113 · Status: Draft

Delete Proposal

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.

TITLE: P113 Test proposal

Errors

Need to solve them all, to be able to submit

The following errors must be resolved prior to submission of the proposal:

- Define at least one [observing run](#).
- Attach a [Scientific Rationale](#) in PDF format.
- The input field [Abstract](#) must be filled. If not relevant, please type in n/a.
- The input field [Special Remarks](#) must be filled. If not relevant, please type in n/a.
- The input field [Lunar Phase and Constraints Justification](#) must be filled. If not relevant, please type in n/a.
- The input field [Time Justification](#) must be filled. If not relevant, please type in n/a.
- The input field [Telescope Justification](#) must be filled. If not relevant, please type in n/a.
- The input field [Observing Mode Selection](#) must be filled. If not relevant, please type in n/a.
- The input field [Calibration Request](#) must be filled. If not relevant, please type in n/a.
- The input field [Duplication with ESO Science Archive](#) must be filled. If not relevant, please type in n/a.
- The input field [GTO Target Duplication Justification](#) must be filled. If not relevant, please type in n/a.
- The input field [Background and Expertise](#) must be filled. If not relevant, please type in n/a.
- Please select a minimum of 2 and a maximum of 5 [Scientific Keywords](#).
- [Total telescope time](#) 0.0h must be at least 0.1h.

ABSTRACT

Edit

The p1 user interface /2



- P113 Test proposal
 - Summary
 - Title & Abstract
 - Scientific Keywords
 - Tags
 - Investigators
 - Rationale
 - Targets
 - Runs
 - Targets → Runs
 - Observations
 - Remarks & Justifications
 - Awarded & Future Time Requests
 - Previous Usage
 - Applicants' Publications

Special cases/combinations

Available Tags

- [Add](#) 3.6m time-share
- [Add](#) Joint VLT/I-ALMA
- [Add](#) Joint VLT/I-XMM

Available Scientific Keywords

- ▶ COSMOLOGY
- ▶ GALAXIES
- ▶ INTERSTELLAR MEDIUM (ISM), NEBULAE
- ▶ PLANETARY SYSTEMS
- ▶ STARS
- ▶ THE GALAXY
- ▶ THE SUN

!!! Important to select keywords
in order of importance

The p1 user interface /3



- P113 Test proposal
- Summary
- Title & Abstract
- Scientific Keywords
- Tags
- Investigators
- Rationale
- Targets
- Runs**
- Targets → Runs
- Observations**
- Remarks & Justifications
- Awarded & Future Time Requests
- Previous Usage
- Applicants' Publications

Add Observing Run

Run Name	Instrument	Telescope Setup	Run Type	Observing Mode	Period	Proprietary Time
Run 1	<div>✓ - select - CRIRES EFOSC2 ERIS ESPRESSO FLAMES FORS2 GRAVITY</div>	<div>- select - </div>	<div>✓ - select - Normal ToO-Hard ToO-RRM ToO-Soft</div>	<div>✓ - select - DVM SM VM</div>	113	12 months
						<div>✕ Cancel</div> <div>Add Run</div>

Observations

Show all Show all with details Collapse all

▼ 1. Run 1 · P113 · UVES · SM

Tel. Time: 3h00m

FLI: 80% · Turb.: 50% (Seeing < 0.8 arcsec) · pwv: 30mm · Sky: THN · Airmass: 1.6

▼ HD 140283, 15:43:03.097, -10:56:00.595

Tel. Time: 3h00m

Night

Period

Propagate Tel. Times

▶ Observation 1: OS 1

Telescope Time [s]

1800



* Repeat

6

= 10800s

The playground



Everyone can practice in the **p1 demo**



Phase 1 1.2.90

 **Proposals Overview**

? Help ▼

DEMO ENVIRONMENT

 **Phase 1/2 Tutorial Account** ▼

Create new proposal

It is updated at every new Call release

It has the same set-up as the p1ui, all instrumental details will be the same

<https://www.eso.org/p1demo/proposals>

Programme types

Normal vs Large NOW



NORMAL

- < 100 hours
- It usually spans 1 period (cf. MP)
- Max. 2 pages for scientific rationale (including figures/tables ...)
- Evaluated by OPC/Panels or DPR depending on time requested (16h)

LARGE

- ≥ 100 hours
- Must have the potential to lead to a major advance or breakthrough
- Well structured and organised team (expertise, resources, analysis)
- Can span between 1 and 4 periods
- Must provide all data products (according to pre-agreed timeline)

YC: exact split (in hours) to change, likely around 200h

For completeness ...



- **Monitoring** → need for little observing time but across periods
 - Between 2 (min.) and 4 (max.) periods
 - choice of instruments might be reduced
 - must be amongst the highest-ranked ones to be scheduled
- **Calibration** → complementary to existing ESO Calibration Plans
 - up to 3% of the available observing time
 - no proprietary period (raw and advanced calibration data)
 - advanced calibration data products must be delivered to ESO withing one year
- **VLT/I-ALMA & XMM-ALMA** → for optical-NIR or X-ray and sub-mm complementarity
 - Special channel for joint proposals
 - ESO/ALMA can allocate up to 50 hours (per year) on each other's facility
 - PI must choose the *leading* facility (science, requested time, referees' expertise)

Target of Opportunity (ToO) and Director Discretionary Time (DDT) Proposals



When opportunity knocks

Distinguish between two cases:

- Targets appearing at random times, but you can guess that they will happen with a certain frequency
 - Examples: comets, variable stars, stellar outbursts, novae, supernovae, gamma-ray bursts, gravitational wave events

➤ Target of Opportunity

- Targets that appear unexpectedly (are not forecast to happen)
 - Examples: comet impact on Jupiter (if not predicted before one year), extremely rare event where a regular proposal would be a waste of time (e.g. Galactic supernova)

➤ Director Discretionary Time

ToO Proposals



Need fast reaction

ToO proposal deal with **predictable** (in a given time frame) events of **unknown** location in the sky

- Can be combined with regular observations, e.g. ToO runs for early follow-up and regular runs for late-time monitoring
- Observations will be triggered by the user when the event has been localized
- Three options:
 - Rapid Response Mode (RRM)
Here an automatic (software) trigger is provided to the user. Observations within less than an hour possible.
 - Hard ToO trigger
Observations within the coming two nights, if at all possible. Trigger is through the P1 system
 - Soft ToO trigger
Observations with the coming week. Trigger similar as with Hard ToOs.

ToO proposal

A real example (monitoring proposal to follow core-collapse supernovae)

Request of the runs in the P1 system

Run	Period	Instrument	Tel. Setup	Constraints	Mode	Type	Propr. Time	Time Constr.	Req. Time
111.24TJ.001 • Hard-ToO P111	111	FORS2	UT1	FLI: 100% • Turb.: 85% • pwv: 30.0mm • Sky: Clear	SM	ToO-Hard	12m	×	01h35m
111.24TJ.002 • Soft-ToO P111	111	FORS2	UT1	FLI: 100% • Turb.: 85% • pwv: 30.0mm • Sky: Clear	SM	ToO-Soft	12m	×	01h35m
111.24TJ.003 • Regular P111	111	FORS2	UT1	FLI: 100% • Turb.: 85% • pwv: 30.0mm • Sky: Clear	SM	Normal	12m	×	01h35m
111.24TJ.004 • Hard-ToO P112	112	FORS2	UT1	FLI: 100% • Turb.: 85% • pwv: 30.0mm • Sky: Clear	SM	ToO-Hard	12m	×	01h35m
111.24TJ.005 • Soft-ToO P112	112	FORS2	UT1	FLI: 100% • Turb.: 85% • pwv: 30.0mm • Sky: Clear	SM	ToO-Soft	12m	×	01h35m
111.24TJ.006 • Regular P112	112	FORS2	UT1	FLI: 100% • Turb.: 85% • pwv: 30.0mm • Sky: Clear	SM	Normal	12m	×	01h35m
111.24TJ.007 • Hard-ToO P113	113	FORS2	UT1	FLI: 100% • Turb.: 85% • pwv: 30.0mm • Sky: Clear	SM	ToO-Hard	12m	×	01h35m

ToO proposal (cont.)

Same proposal as before

Target specification

TARGETS

Name	RA	Dec	Coord	Runs	Comment
SN-IIP 1	00:00:00.000	00:00:00.000	J2000	1, 2, 3	Placeholder for a SN in P111; will be replaced by an actual target upon discovery.
r'=16					
SN-IIP 2	00:00:00.000	00:00:00.000	J2000	1, 2, 3	Placeholder for a SN in P111; will be replaced by an actual target upon discovery.
r'=19					
SN-IIP 3	00:00:00.000	00:00:00.000	J2000	4, 5, 6	Placeholder for a SN in P112; will be replaced by an actual target upon discovery.
r'=16					
SN-IIP 4	00:00:00.000	00:00:00.000	J2000	4, 5, 6	Placeholder for a SN in P112; will be replaced by an actual target upon discovery.

Target Notes

Our targets are SNe IIP that explode in galaxies in which another SN IIP has exploded in the past. They will be discovered in the course of P111 to P113 and we will replace the placeholders given above with the real target information upon discovery.

DDT Proposals

https://www.eso.org/sci/observing/policies/ddt_policy.html

General DDT policy

- Up to 5% of the available observing time may be used for DDTs
- Typical categories
 - Immediate observation of a sudden and unexpected astronomical event
 - Observations on a hot and highly competitive scientific topic
 - Follow-up observations to enable quick results to complement other ground- or space-based facilities
 - Risky proposals requesting a small amount of observing time
- Offered in service mode only.
- Clear DDT justification required (special box in the entry form)

Proposal evaluation and scheduling

Phase 1 – Proposal preparation and submission



Call for proposals



2 x year
→



Proposal
preparation:
P1 tool



Proposal evaluation: OPC



OPC Panel Review



- **OPC = Observing Programmes Committee**
 - It evaluates ~50% of all proposals
 - 16 members plus the OPC Chair
 - Supported by 13 Expert Panels (2 in A, 3 in B, 4 in C, 4 in D)
 - OPC members are Chairs of one Panel, each Panel has 6 reviewers
 - Each Panel covers all sub-categories in a given science category --> broad expertise required
 - Membership: nominations are submitted ~once per year by each MS (via their UC representative), then approved by the Nominating Committee (NomCom)
 - OPC Chair and vice-Chair appointed by Council
 - Term of service: 1 year (2 reviews) for Expert Panel members; 2 years (4 reviews) for OPC members
- **Nominating Committee (NomCom)**
 - 4 members (senior astronomers), one per science category

Proposal evaluation: DPR

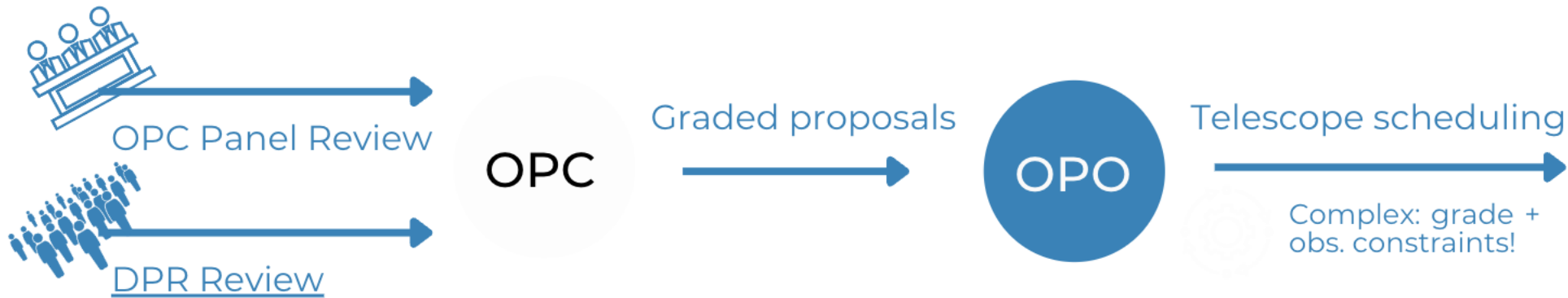


DPR = Distributed Peer Review

All PIs of proposals qualifying for DPR accept to review a number of proposals submitted by their peers

- Why DPR? In simplified terms, to cope with and to provide high quality reviews to the increasing number of proposals submitted.
- Which proposals qualify for DPR? All proposals requesting less than 16h, with several exceptions.
- Each PI/DPR reviewer will have to commit to review 10 proposals at time of proposal submission – should they not, their proposal will be rejected
- DPR is a great opportunity to gain peer-review experience!
- Introduced at ESO in P110, first results promising, see Jerabkova et al. 2023 (The Messenger, vol. 190, p. 63-66)

Proposal evaluation and scheduling



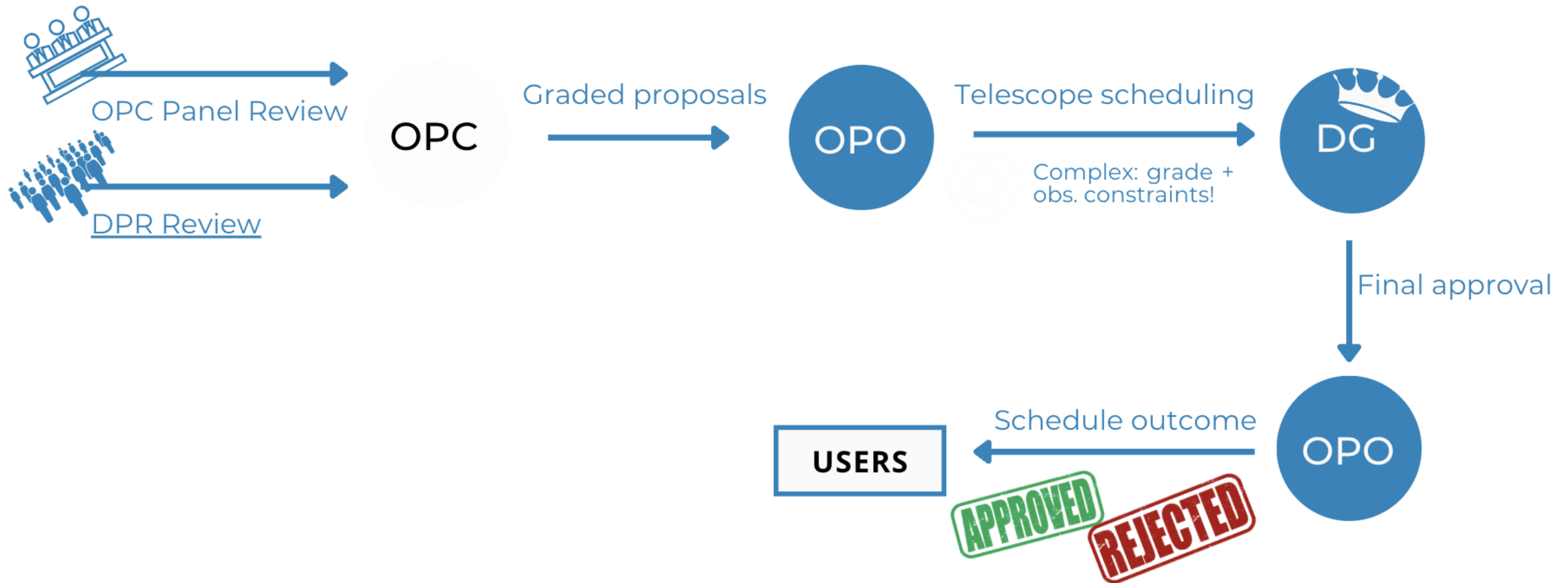
Scheduling is a very complex process!

The OPC grades decide the scheduling priority.

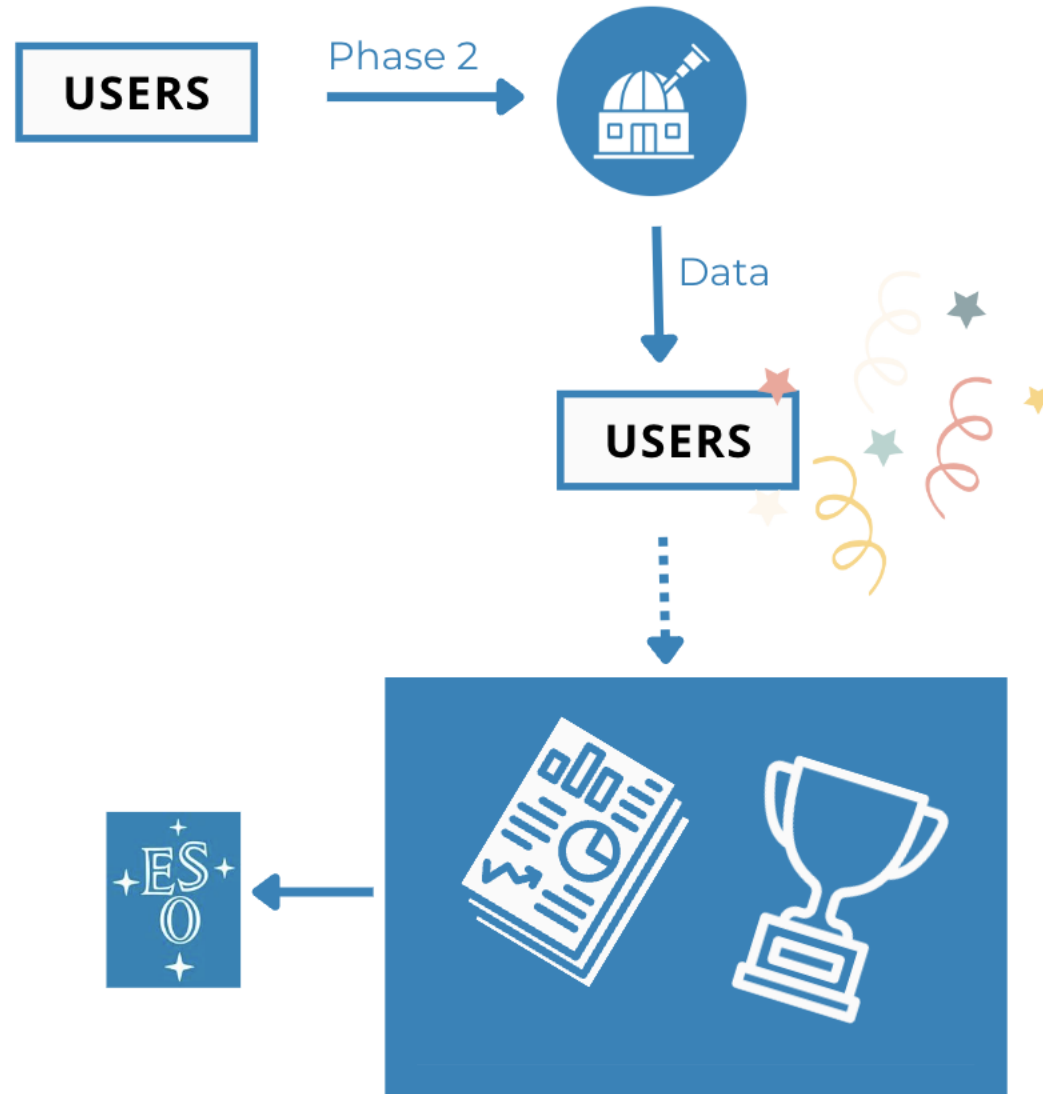
But if your proposal is not at the very top, the choice of observing conditions, targets and additional constraints will affect whether it will be possible to successfully schedule your observations.

This is simply because there is a limited amount of time per semester for a given constraints. Check the CfP to gain more insights.

Proposal evaluation and scheduling



Phase 2 and data collection



Tips for the Science rationale

Writing a proposal: key ingredients



*Project
Proposal
Writing*



- Need to have a good idea
- Need to explain it very clearly (including its feasibility)
- Need to justify the request for telescope resources (time, instrument(s), conditions)

WHAT?

HOW?

WHY?

What makes a proposal a **good** proposal



- An original, impacting idea
 - Need to demonstrate scientific impact of proposed research, i.e. what will we learn by answering it?



- The way you communicate it
 - Effectiveness, conciseness and clarity are key
 - Good critical coverage of literature
 - Need to convince your peers your idea is good, it will lead somewhere, and it is worth being pursued



- Its adequacy to the facility requirements and scopes
 - Strategic for the specific field and for the facility
 - Need to justify the request for telescope resources (time/instr./conditions)
 - Propose a convincing methodology

To be kept in mind



You are not the only applicant.
Referees will have *maaaany* proposals to read (~25-30 each!)



Make your science understandable

Avoid jargon

→ *expressions in your field may not be used in others*

Avoid acronyms

→ *what was ϵ Eri Ba again?*
→ *H_0 ok, w' needs explanation*

Avoid complicated language

→ *use simple English*
→ *should be correct English*

If you need special terms and/or acronyms, explain them

Have (senior)
colleagues/collaborators
read your proposal

Key questions (to ask yourself)



- Is the proposal research new?
- Is it significant to the specific field?
- Does it have an impact outside of the specific field?
- Does it clearly motivate and formulate THE question?
- Does it outline the current knowledge in the field? Does it present preliminary ideas, proposed approach and results achieved so far?
- Does it sketch the research methodology?
- Does it state what will change if the proposal is successful?
- Does it justify the request for resources?

Further information



- For any type of question: support.eso.org
- If you are interested in reading more about ESO Phase1:

[Growth of observing programmes at ESO \(Patat & Hussain 2012\)](#)

[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 Working Group report \(Patat 2018b\)](#)

[The Distributed Peer Review Experiment \(Patat+ 2019\)](#)

[DPR enhanced with NL processing and ML \(Kerzendorf+2019\)](#)

[The First Results of Distributed Peer Review at ESO Show Promising Outcomes \(Jerabkova+2023\)](#)



Overview of ESO opportunities

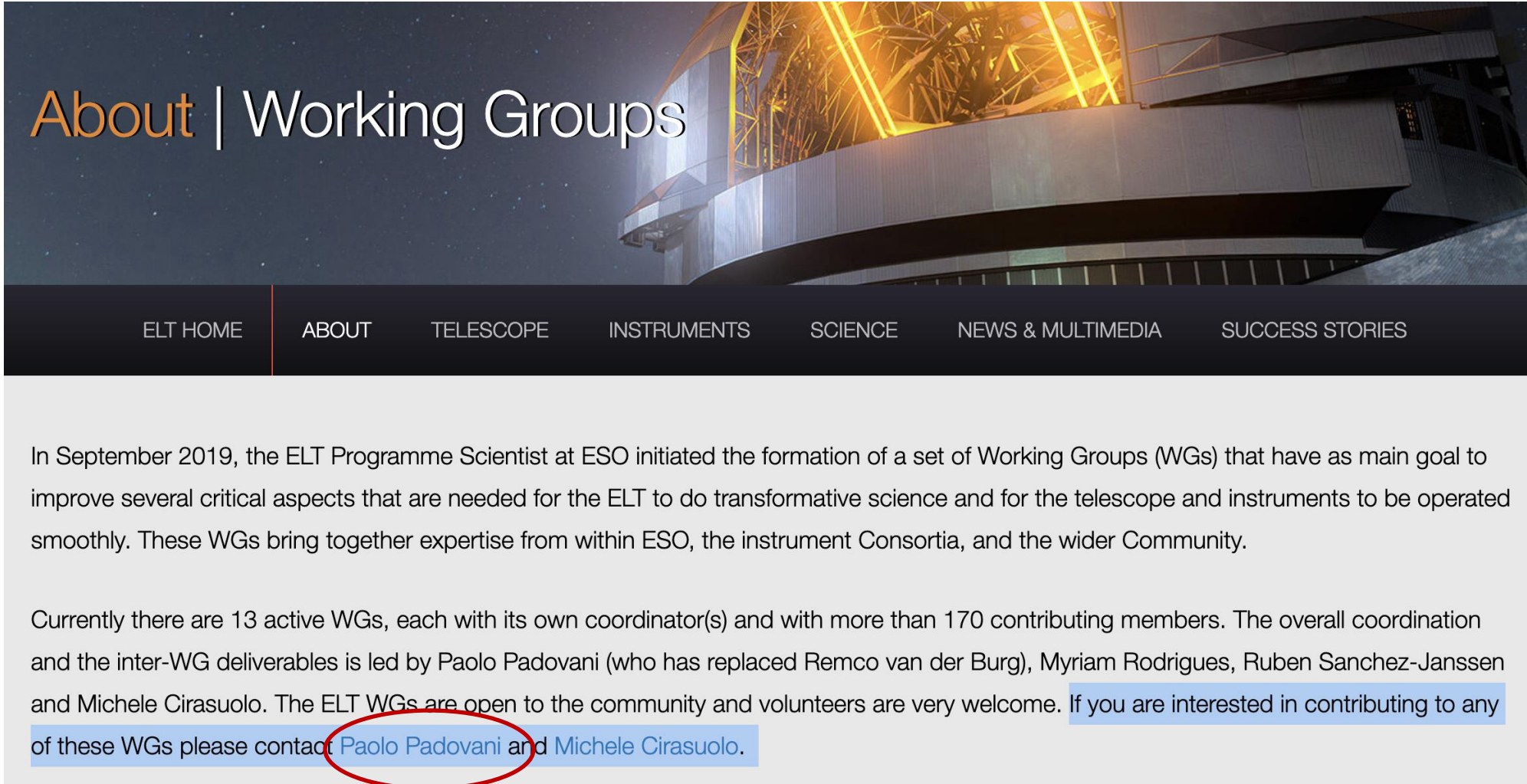
ESO Studentship and Fellowship programmes



- **Full PhD at ESO within the IMPRS programme (only for Garching)**
 - Apply for projects designed by ESO astronomers
- **ESO studentship, 0.5 – 2 yrs at ESO as a part of your PhD (Garching or Santiago)**
 - Enhance your PhD project by collaborations with ESO astronomers
- **ESO fellowship (Garching or Santiago)**
 - Unique opportunity to conduct independent research and gain experience with observatory operations
 - In Garching you will have 25% duties for 3yr, In Chile 50% duties for 3yr + 1yr extra
- **ESO Early-Career Scientific Visitor Programme in Garching and in Chile**

If you are interested, contact us! There are other possibilities for collaborations.

ELT Working Groups



The screenshot shows the 'About | Working Groups' page of the ESO website. The header features a large image of the ELT telescope structure with the text 'About | Working Groups' overlaid. Below the header is a navigation bar with links: ELT HOME, ABOUT, TELESCOPE, INSTRUMENTS, SCIENCE, NEWS & MULTIMEDIA, and SUCCESS STORIES. The main content area contains two paragraphs of text. The first paragraph describes the formation of Working Groups (WGs) in September 2019. The second paragraph lists the coordinators and mentions that the ELT WGs are open to the community. The names 'Paolo Padovani' and 'Michele Cirasuolo' are highlighted in blue and circled in red in the original image.

About | Working Groups

ELT HOME ABOUT TELESCOPE INSTRUMENTS SCIENCE NEWS & MULTIMEDIA SUCCESS STORIES

In September 2019, the ELT Programme Scientist at ESO initiated the formation of a set of Working Groups (WGs) that have as main goal to improve several critical aspects that are needed for the ELT to do transformative science and for the telescope and instruments to be operated smoothly. These WGs bring together expertise from within ESO, the instrument Consortia, and the wider Community.

Currently there are 13 active WGs, each with its own coordinator(s) and with more than 170 contributing members. The overall coordination and the inter-WG deliverables is led by Paolo Padovani (who has replaced Remco van der Burg), Myriam Rodrigues, Ruben Sanchez-Janssen and Michele Cirasuolo. The ELT WGs are open to the community and volunteers are very welcome. If you are interested in contributing to any of these WGs please contact Paolo Padovani and Michele Cirasuolo.

ESO Science Visitors Programme



Applications always welcomed!

- Need for ESO “contact” for collaboration and support letter
- Need for science project(s) to carry out during the visit
- Most visits last 1-3 months, but they can be longer (if well justified)
- Programme usually covers one most economic travel + per-diem expenses

More details about programme policies and application forms can be found here:

<https://www.eso.org/sci/activities/garching/personnelvisitors.html>

ESO Committees: OPC, NomCom, UC and STC



Terms of service: usually 3 years (except for the OPC/Expert Panels) and renewable once



➤ **OPC, NomCom** → cf. slide #26

➤ **Users' Committee**

- Provides feedback from the community and suggests improvements
- Membership based on nominations provided by Member States (MS) to ESO DG

➤ **Science and Technical Committee**

- Reviews ESO scientific and instrumentation programmes and issues recommendations
- Members are appointed by Council, based on DG's proposals

Feel free to contact ESO or us, any time!

ESO: support@eso.org

Francesca: fprimas@eso.org

Tereza: tjerabkova@eso.org (but soon in Brno)