

3. Preparing an ESO/VLT proposal

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Preparing an ESO/VLT proposal



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graph TD; A[Preparing an ESO/VLT proposal] --> B[How does the OPC work]; A --> C[Esoform tour]; A --> D[Common mistakes]; B --> E[Structure]; E --> F[Pressure]; F --> G[Proposal evaluation]; D --> H[When you get refused]; H --> I[When you get time but no data];
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How does the OPC work

Structure

Pressure

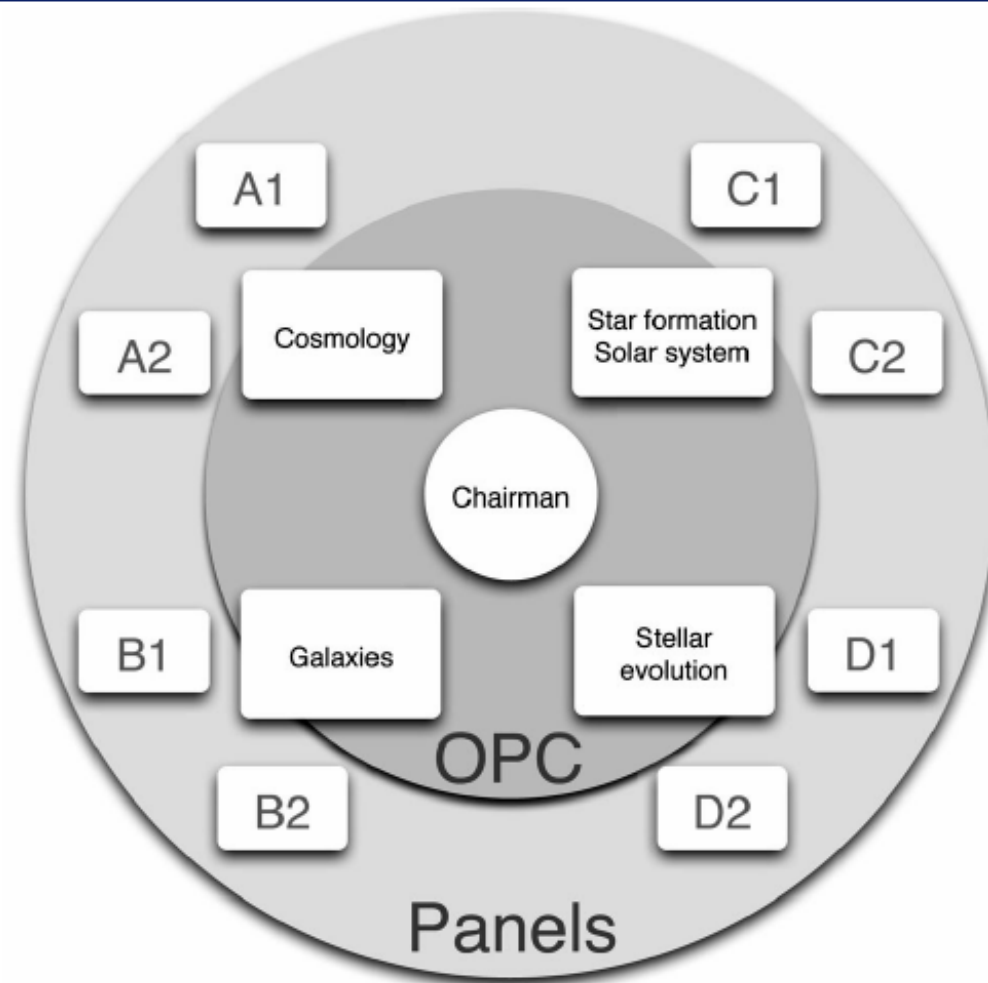
Proposal evaluation

Esoform tour

Common mistakes

When you get refused

When you get time but no data



ESO-VISAS 2005

- Each sub panel has 1 OPC + 5 experts
- C3 + D3 added recently

OPC structure



The Observing Program Committee (OPC) advises ESO DG

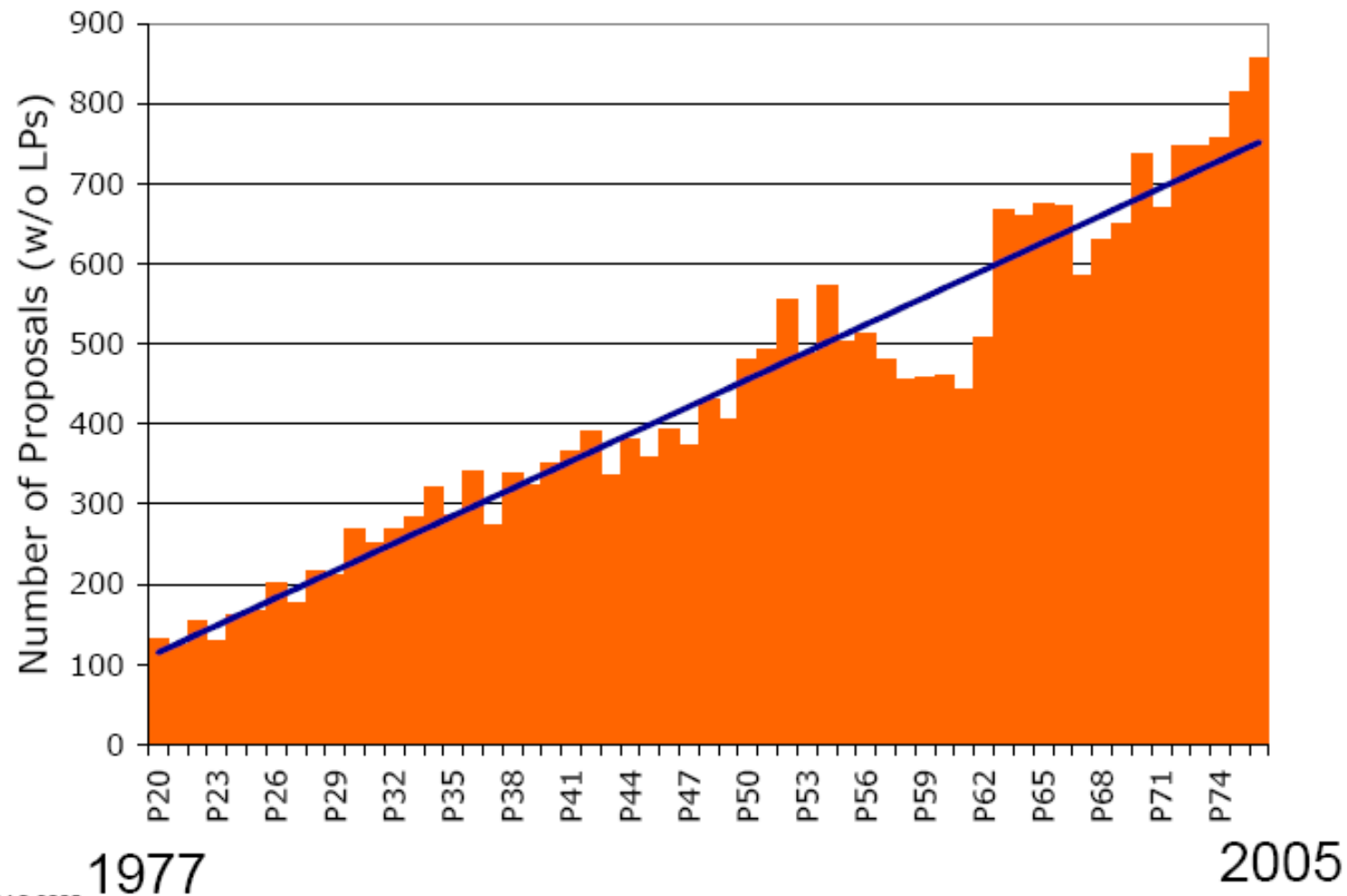
Composition and selection:

- 1 national member (including Chile) per country, selected by DG from list of 2-3 names submitted by National committee.
- Chairman selected from national representatives by DG and Council president
- Members at large, experts for panels, selected by ESO in consultation with OPC chair and using suggestions from all OPC members.

ESO/OPC national members (P80)

Dr. Xavier Barcons (E)	Dr. Hermann Boehnhardt (D)	Hans de Ruiter (I)	Dr. Michiel Hogerheijde (NL)
Dr. Donald Wayne Kurtz (UK)	Dr. Simon Morris (UK)	Dr. Svetlana Berdyugina (CH)	Dr. Monica Tosi (I)
Dr. Eric F. Bell (D)	Dr. Sven de Rijcke (B)	Dr. Goesta Gahm (S)	Dr. Jari Kotilainen (FIN)
Dr. André Moitinho de Almeida (P)	Dr. Tom Richtler (RCH)	Dr. Sebastian Wolf (D)	Dr. Lutz Wisotzki (D) (Chairman)

The ESO community



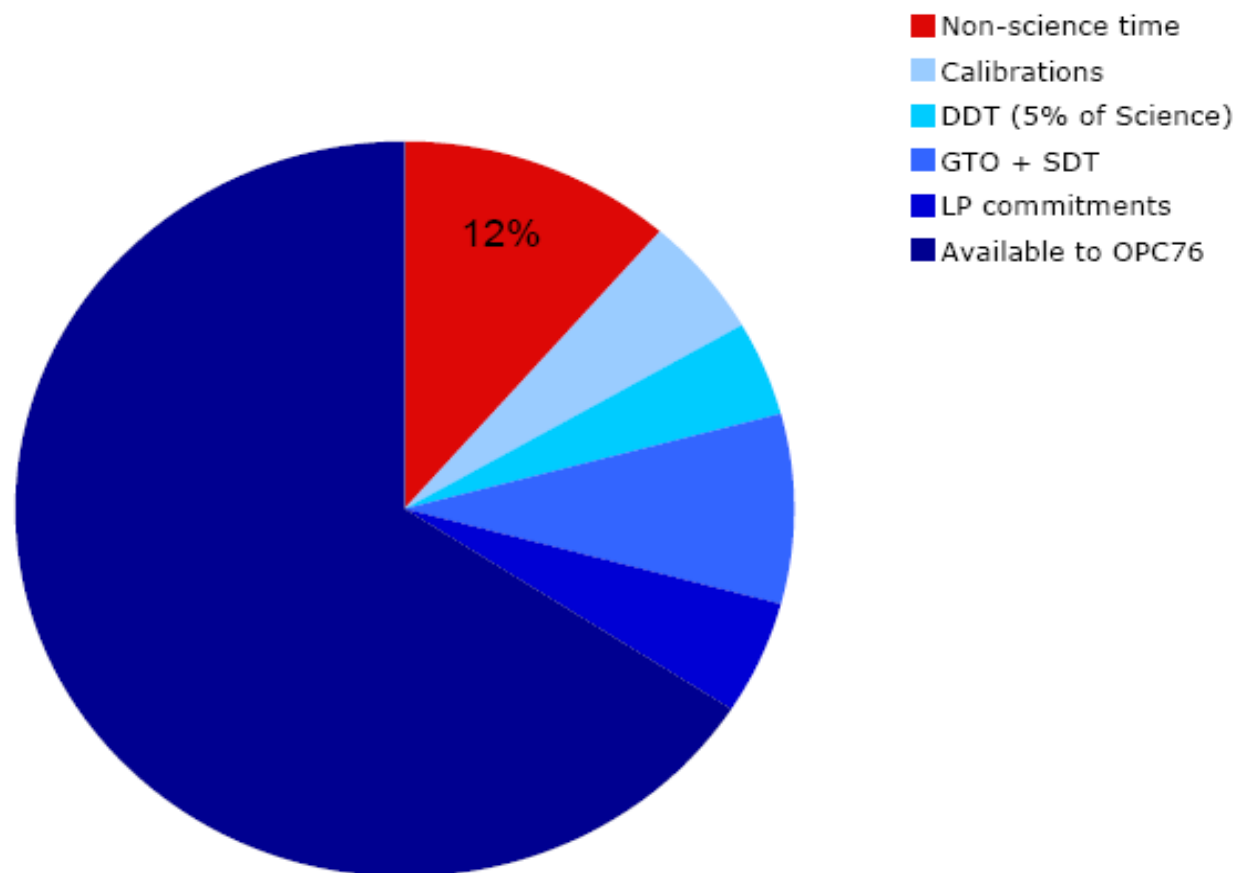
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Almost every period a new record in number of submitted proposals is broken!

Priorities when scheduling the time

- Director Discretionary Time – DDT
- Large programme – LP
- Normal programmes
 - typically this is your proposal
- DDT proposals should be used but they have specific criteria
 - High approval rate 50% (check eso web)
 - Feasibility observations: prepare new observations
 - Can be applied every time
 - If a ToO doesn't exist you can react fast
 - <http://www.eso.org/observing/visas/ddt/>

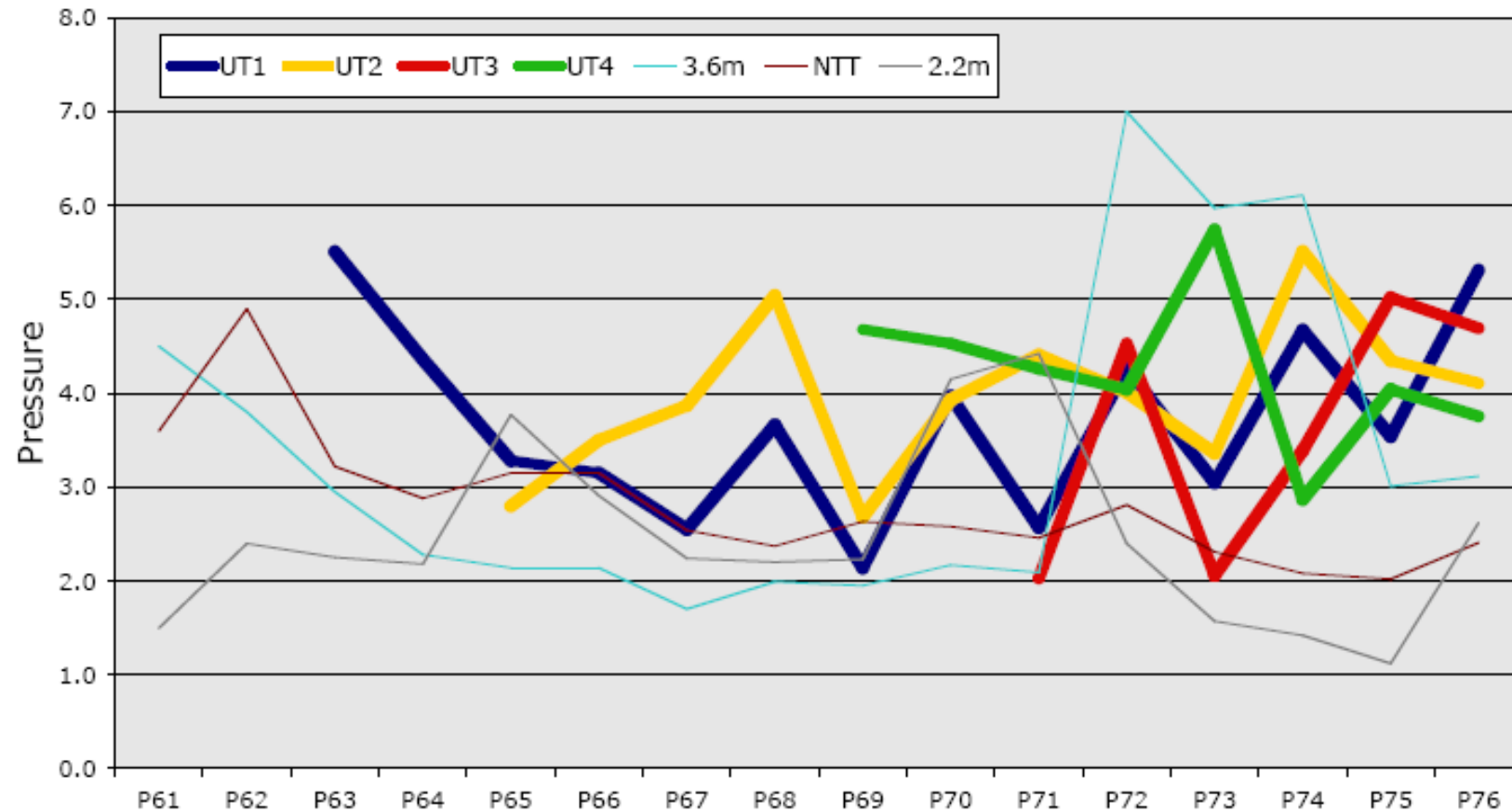
P76 big cake: 1248 nights



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- Non-science time: commissioning + technical time (no weather)

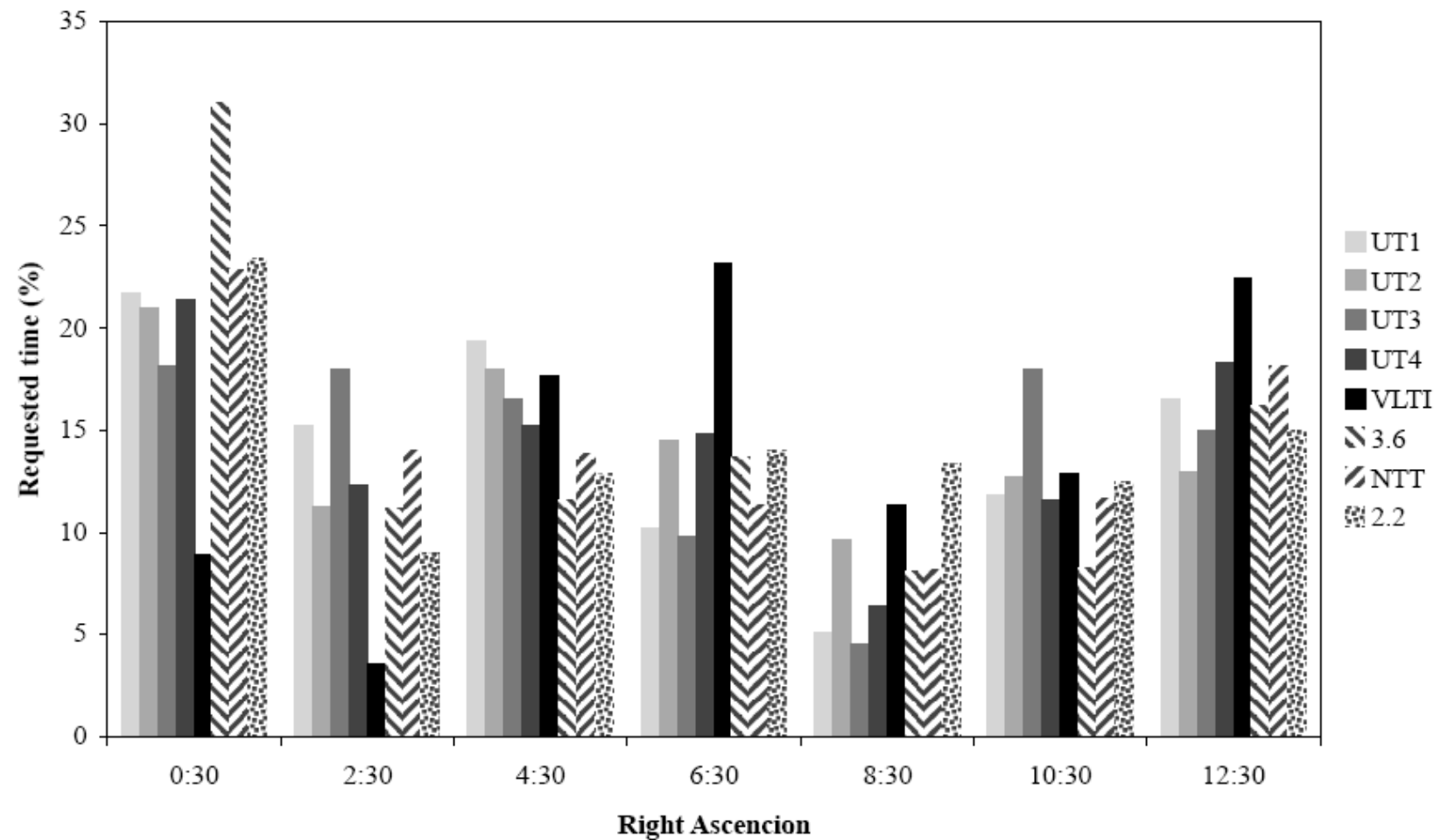
Pressure



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Pressure = number of nights asked / number of nights available

Pressure in function of RA

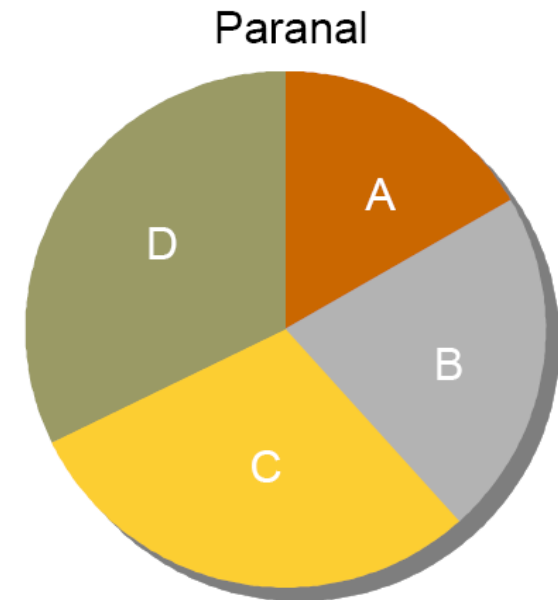
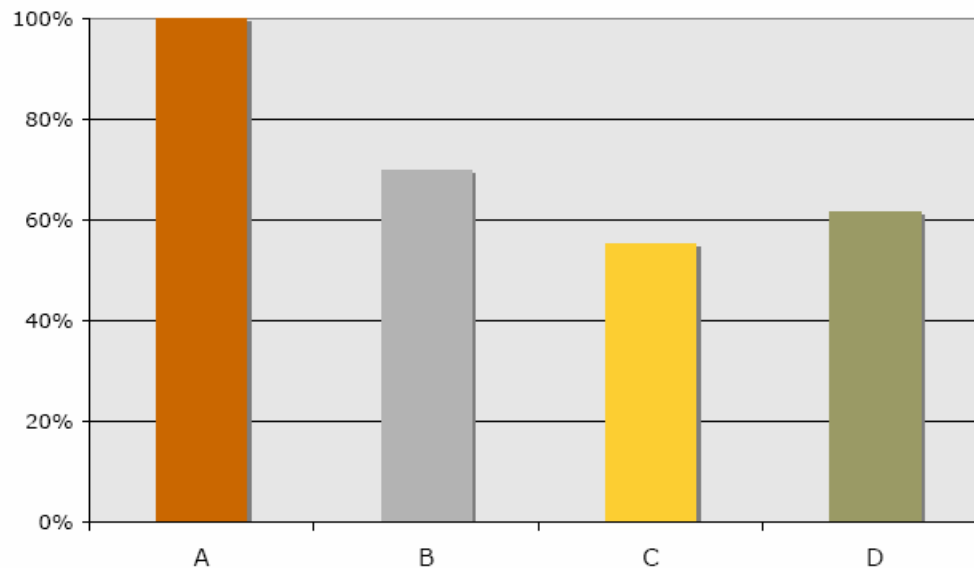


Who gets the time: equipartition

Relative program length (average)



Distribution of the number of proposals



- A: Cosmology
- B: Galaxies and galactic nuclei
- C: ISM, star formation and planetary systems
- D: Stellar evolution

Typical OPC meeting

- Each proposal has 3 referees (1 principal + 2)
- Previously to the meeting the referees send their marks and comments to the panel
- Meeting lasts for one week
 - 2 days for panels meetings
 - 3 days for OPC member final ranking
- **Each** of the 6 panel members gets
 - ~35 referee proposals
 - 60-90 per panel
- Time spent with each proposal
 - Before panel typical time is ~ 20 min
 - During panel discussions typical time is ~ 5-10 min

Typical OPC meeting

- Members of the panel have a wide expertise

C - INTERSTELLAR MEDIUM, STAR FORMATION and PLANETARY SYSTEMS

- C1 Gas and dust, giant molecular clouds, cool and hot gas, diffuse and translucent clouds
- C2 Chemical processes in the interstellar medium
- C3 Star forming regions, globules, protostars, HII regions
- C4 Pre-main-sequence stars (massive PMS stars, Herbig Ae/Be stars and T Tauri stars)
- C5 Outflows, stellar jets, HH objects
- C6 Main-sequence stars with circumstellar matter, early evolution
- C7 Young binaries, brown dwarfs, exosolar planet searches
- C8 Solar system (planets, comets, small bodies)

- Conflict of interest
 - Should be declared by the referee one week after receiving the proposals
 - If detected only at the meeting – members doesn't vote (leaves the room)
 - People normally follow this rule

Typical OPC meeting: evaluation

- Proposal discussion
 - 3 referees discuss + and – points of the proposal
 - Other members ask questions, express opinion
 - 6 members vote (referees marks may change during discussion)
- Marks: A -> C
 - 1.0 – outstanding
 - 1.5 – excellent
 - 2.0 – very good
 - 2.5 – good, should be done if time permits
 - 2.9 – limit of acceptable, lowest priority for implementation
 - 3.0 – not recommended for implementation
 - 4.0 – bad proposal, not recommended for implementation
 - 5.0 – very bad proposal, strongly discouraged for implementation

Typical OPC meeting: evaluation

- Scientific merit & the importance of its contribution to the advancement of scientific knowledge
- Evidence of
 - sufficient time and resources
 - a detailed strategy for a complete and timely data analysis
- Scientific output from previous observations
 - Reports/papers published or in preparation
- Good prospects of success
 - Not taking into account technical feasibility
 - After the OPC meeting all recommended proposals will be reviewed by ESO experts for technical feasibility
- Requests of time for completion of programs already accepted are given special consideration.
- Affiliation and nationality of the applicants should **not** influence the evaluation process

Proposal ranking categories

- **A** Programmes highly ranked
 - All possible effort will be made to execute all the OBs in the requested observing period
 - If not totally executed
 - can be declared “substantially complete”
 - carry it over to at most the next useful period
- **B** Programmes well ranked
 - Best effort will be made to execute all the OBs in the requested observing period
- **C** Filler programmes selected from below the cut-off line
 - OBs will only be executed if the observing conditions do not permit to conduct programmes A and B.

What to do

- Read very carefully the esoform + instrument manuals
- Understand how the system works
 - Call for proposals
 - OPC minutes
 - VLT/VLTI Science Operations Policy
 - Users group minutes
 - Discuss with your national representative, experienced users
 - Watch this talk
- Prepare your proposal well in advance (not when you get the call)
 - Ask you colleague in a another area to read it
- Help the panel to grade (well) your proposal

Going through the ESOFORM



EUROPEAN SOUTHERN OBSERVATORY

Organisation Européenne pour des Recherches Astronomiques dans l'Hémisphère Austral
Europäische Organisation für astronomische Forschung in der südlichen Hemisphäre

VISITING ASTRONOMERS SECTION • Karl-Schwarzschild-Straße 2 • D-85748 Garching bei München • e-mail: visas@eso.org • Tel.: +49-89-32 00 64 73

APPLICATION FOR OBSERVING TIME

PERIOD: **78A**

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

- Deadlines are 31st March and 1st October
- Correspond to semesters 1/10-31/3 and 1/4-30/9
- Period 78 (1 October 2006 – 31 March 2007)

1. Title

This Is The Proposal Title This Is The Proposal Title

Category: **B-4**

2. Abstract

- Title and abstract obey to the normal considerations (written skills talk)
 - Why, how (instrument/objects) and what (you get)
 - Don't forget that audience is probably less specialized than for a given paper/talk
- Categories – check the esoform users manual
 - Will define the to which panels the proposal goes
 - A: Cosmology
 - B: Galaxies and galactic nuclei
 - B4: galaxy dynamics
 - C: ISM, star formation and planetary systems
 - D: Stellar evolution

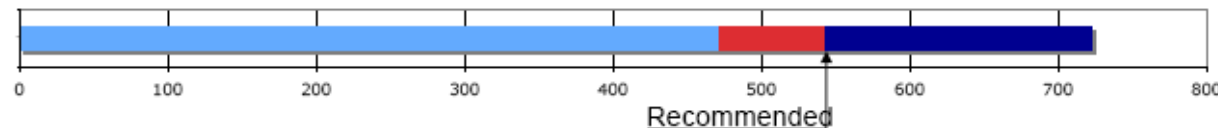
3. Run	Period	Instrument	Time	Month	Moon	Seeing	Sky Trans.	Obs.Mode
A	78	FORS1	40h	nov	n	$\leq 0.8''$	PHO	s
A/alt	78	EMMI	$8n=3x2+4H2$	nov	n	$< 0.8''$	PHO	v
B	78	SUSI2	$6n=6x1$	dec	n	$\leq 0.6''$	CLR	v
C	78	EFOSC2	$8n=3x2+4H2$	feb	n	$\leq 0.8''$	THN	v
D	78	NACO	1.5n	mar	n	$\leq 0.8''$	THN	v
E	78	AMBER	6h	oct	n	$\leq 1.4''$	THN	s
F	78	MIDI	6h	oct	n	n	THN	s

- Identify your minimum requirements
- If you ask $2''$ you always get \leq than that

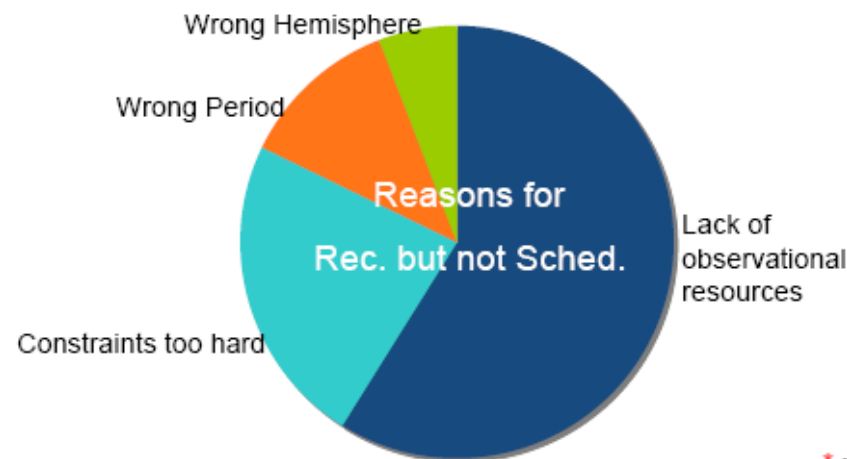
P76 Schedule



Of the 544 OPC recommended runs, **72*** (~13%) could not be scheduled:



but **240 runs** below the “cut-off” and with a grade better than 3.0 were scheduled
(why? because of localized RA pressure, extra science time from converted engineering time, smaller programs)



ESO-VISAS 2005

* Most of these programs have approved runs

- Lack of observational resources
 - Not enough time available due to weather, seeing...

4. Number of nights/hours	Telescope(s)	Amount of time
a) already awarded to this project:	NTT	4n in 76.B-1234
b) still required to complete this project:	2.2/NTT	2n/20h
5. Special remarks:		
Take advantage of this box to provide any special remark using up to three lines (e.g., for ToO proposals indicate the number of RRM triggers and normal ToO triggers).		

- Project means that you are going to use some previous data together with this new data in your next paper
- Don't try to trick the OPC because they will remember your last application.
- Can be used to
 - Increase objects data base
 - Obtain a few more visibilities to remove model degeneracy
- Special remarks
 - Can be used to tell the OPC that this is a resubmission of a previous well rated proposal not executed
 - Indicate the NUMBER of triggers

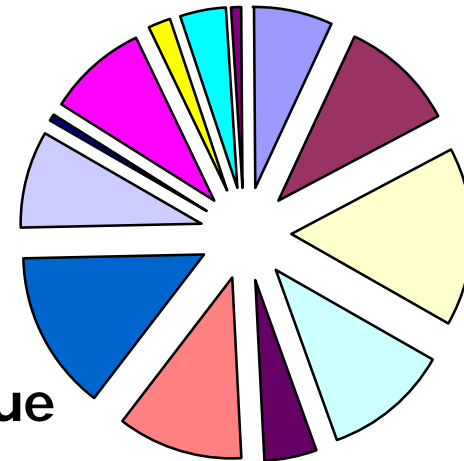
6. Principal Investigator: **I. Name1** (Paris Observatory, F, name@obspm.fr)

Col(s): I. Name2 (Leiden, NL), I. Name3 (Geneva, CH), I. Name4 (STScI, USA), I. Name5 (ESO, ESO)

Total telescope time
distribution per country

Average P74-P77

Nationality of the PI is not an issue



Other ESO F D I NL CH UK ESO ESA RCH USA OTHER PublicSurvey

7. Is this proposal linked to a PhD thesis preparation? State role of PhD student in this project

Yes / A. Student. Data important for PhD thesis and student will lead the project / mid-course

- This is a positive point
- First proposals from PhD student(s) will be valued
- Students/postdocs will exploit the data more rapidly

8. Description of the proposed programme

A) Scientific Rationale: Scientific rationale: scientific background of the project, pertinent references; previous work plus justification for present proposal. Scientific rationale: scientific background of the project,

- Should be written in a similar form to a paper introduction (but simpler – panel composition)
- The importance of the work in the field at large (sometimes very large) should be made clear
 - Panel composition is wide, the 6 members have to be convinced
 - Write this aspect for a specialist outside your narrow area

B) Immediate Objective: Immediate objective of the proposal: state what is actually going to be observed and what shall be extracted from the observations, so that the feasibility becomes clear. Immediate objective

- The results and discussion of the paper should be anticipated
- If you get a negative result – discuss the implications
- Feasibility must be clear – don't try to trick the OPC
 - Always identify objectively the risks and outcomes

C) Telescope Justification: Justification for the use of the selected telescope (e.g., VLT, NTT, etc...) with respect to other available alternatives. Justification for the use of the selected telescope (e.g., VLT, NTT, etc...)

- Not really an issue as long as instrument is unique – e.g. VLT
- But beware of asking UT time when it can be done with ATs
- SOFI/ISAAC or FORS/SUSI
- Can be an issue for those with access to Keck/CHARA/...

D) Observing Mode Justification (visitor or service): Justification for the observing mode requested (visitor or service). Justification for the observing mode requested (visitor or service). Justification for the

- Visitor mode can be relevant if
 - observing difficult (magnitude/zenithal distance) targets
 - Some instruments/modes only work in visitor mode
 - Should be justified
 - You should ask 2 nigh (but 1 night is OK)
- Service is more efficient
 - In the call a limit is 6h but as low as 1h is OK

E) Strategy for Data Reduction and Analysis: Brief explanation of the strategy for data reduction and analysis with description of available hardware, software, and manpower. Brief explanation of the strategy for

- Mentioning that you frequent the data reduction school might help
- Find a collaborator that is experienced in the technique/data analysis

Time Justification: (including seeing overhead) Provide here a careful justification of the requested number of nights or hours. ESO Exposure Time Calculators exist for all Paranal and for some La Silla instruments and are available at the following web address: <http://www.eso.org/observing/etc>. In relation to the telescope(s) and instrument(s) to be used, please indicate what version of the ESO Exposure Time Calculator you have used. Do not include any correction for unexpected meteorological conditions. Provide below a careful justification

- Identify the minimum amount of time to achieve your goals
- Explain carefully including overheads – referees will verify ETC calculations
- Estimations that are too hand waving (1h for 1 *, 100h for 100*s)
- OPC generally will prefer to downgrade your proposal to reduce it's allocated time
- Don't be afraid of asking 1h for starting if you can already do some science (check DDT)

8. Attachments (Figures)

9. Justification of requested observing time and lunar phase

Lunar Phase Justification: Provide here the requested lunar phase. Provide below the requested lunar

Calibration Request: Special Calibration - Adopt a special calibration

- Figures are very useful don't be constrained to use them
- Not really an issue for the VLT : Bright time

10. Report on the use of ESO facilities during the last 2 years

Report on the use of the ESO facilities during the last 2 years (4 observing periods). Describe the status of the data obtained and the scientific output generated. Report on the use of the ESO facilities during the last

11. Applicant's publications related to the subject of this application during the last 2 years

Name1 A., Name2 B., 2001, ApJ, 518, 567: Title of article1

- Are you really doing science or increasing the archive volume?
- Pass here the information that you are an active and efficient user of ESO facilities
- Are you an experienced ESO user?
 - If yes the probability of getting time is higher
 - as should be expected

12. List of targets proposed in this programme

Run	Target/Field	α (J2000)	δ (J2000)	ToT	Mag.	Diam.	Additional info	Reference star
AB	NGC 104	00 24 06	-72 04 58	3.0	5	30 min	47 Tuc	

Target Notes: The planned grid pointings around the targets listed above will be defined during the first observing night.

12b. ESO Archive - Are the data requested by this proposal in the ESO Archive (<http://archive.eso.org>)? If yes, explain why the need for new data.

- Referees will verify this point carefully
- If this true and you haven't filled this point – bye, bye!

13. Scheduling requirements

- Generally irrelevant, but
 - Is the moon passing near your target?
 - Are you combining with other observations?
 - Beware of over constraining, you might not get scheduled

14. Instrument configuration

Period	Instrument	Run ID	Parameter	Value or list
78	FORS1	A	IMG	ESO filters: provide HERE list
78	SUSI2	B	Imaging-filters	provide HERE std SUSI2 filter No.
78	EFOSC2	C	Imaging-filters	EFOSC2 filters: provide list here
78	NACO	D	IMG 54 mas/px IR-WFS	provide HERE list of filters
78	AMBER	E	LR-HK	2.2
78	MIDI	F	PRISM	HIGH-SENS

RTFM!

15. List of interferometry targets proposed in this programme

Run	Name	Vmag	mag(λ)	λ_{obs}	size(λ)	Baseline	Vis.	mag_c	Tot
E	Alpha Ori	-1.4	-1.4	2.2	6	UT1-UT2-UT3	0.45/0.60/0.10	0.3/-0.2/4.0	2
F	Alpha Ori	-1.4	-1.4	10.6	6	G0-H0-32m	0.80	-0.9	1

VLT Target Notes: Run E can also be carried out using the UT1-UT3-UT4 baseline.

Size – expected size (Read the CFP for more details)

Vis – is V

Mag_c – $\text{mag} + 2.5 \log_{10}(V)$ – check ASPRO loss of correlated magnitude

Common mistakes

- Bad use of telescope time
 - Huge program with low return (probability)
- Don't take into account that panels are very wide in composition
 - Only a couple of the members are real experts in the domain
 - The proposal should very well introduce the domain
- Proposal too specific and with irrelevant details
- Errors that show that the proposal was done in a hurry
- Asking for too stringent observing conditions
- Unstructured proposal (use latex correctly including bolds – but do not reduce the font!)
- Figures are very good! Even if they are not mandatory
- Submitting too much proposals

The panel likes

- Innovative/ambitious proposals
 - With high impact potential when compared with the average A&A paper
- Well structured proposals etc.

What to do when you get rejected

- Do not overemphasize the message you got
 - Messages are deliberately short, neutral and general to avoid polemic and useless critique
- Understand why you got rejected
 - Read the proposal again
 - Ask your colleague to read the proposal and give you his feedback
 - Contact your OPC representative/VISAS
 - Always be positive and objective
- Avoid at all cost entering into conspiracy theory kind of reasoning

What to do when you get A/B but no data...

- A proposals are carried over
- B proposals can be re-submitted with a special remark (5.) on non-execution and grade
- Relax observing constrains (seeing, etc)

Thank you!

Scientific Review of Proposals

- Proposals are ranked according to
 - Scientific merit and its contribution to the advancement of knowledge
 - Ensure that the ESO community remains at the cutting edge in all leading areas
 - Evidence that detailed plans, resources and time exist for complete and timely data
- ESO will assess the technical feasibility of all observations before scheduling them (during discussion ESO can be consulted)
- non-ESO-member state proposals
 - 2/3 of the co-authors are not affiliated to ESO member state institutes
 - Evaluating criteria
 - The proposal has to be scientifically outstanding.
 - The required telescope/instrumentation is not available at any other observatory accessible to the applicants.
 - If similar proposals of ESO members states and non-members state proposals **are rated equally**, preference will be given to the ESO member state proposals.