# Selecting and scheduling observing programmes at ESO

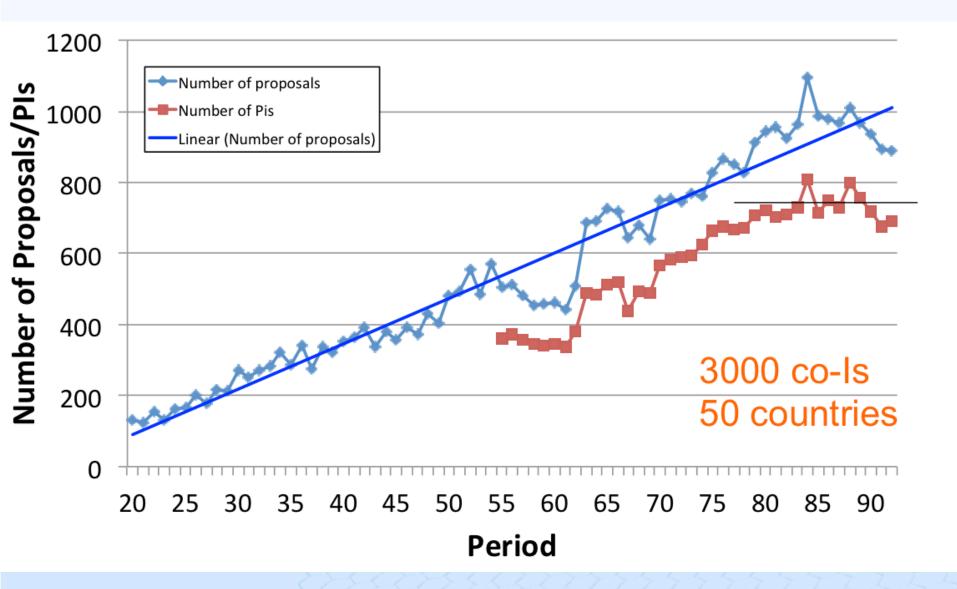


- A (brief) history of time allocation
- Proposal review & selection
- Preparation of the Schedule
- Talking points



## Proposal submission: A history





## Programme Types



#### **Single Semester**

- •Normal Programmes: < 100h
- •Target of Opportunity: <5%, incl. RRM
- Guaranteed Time Observations
- Calibration

#### **Multiple Semester**

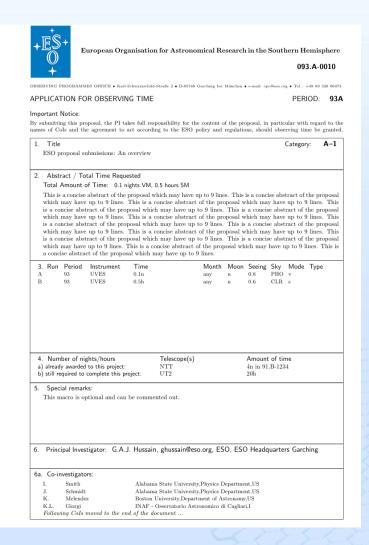
- Monitoring Programmes: <100h,</li>span 4 periods (Paranal & APEX)
- Large Programmes: >100h,4/8 periods (Paranal & APEX/La Silla)
- •XMM/VLT Programmes: 2 periods
- •Director's discretionary time: <5%

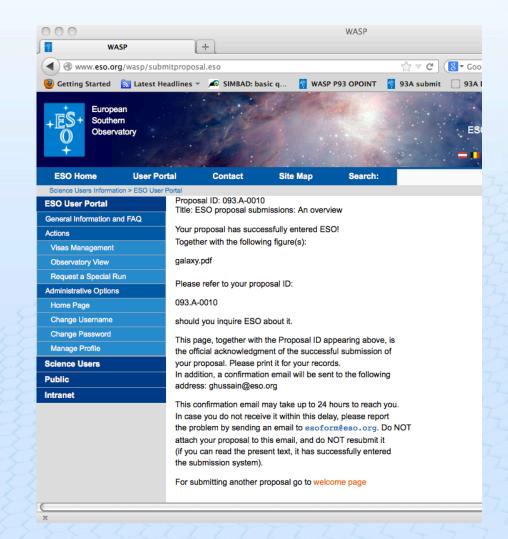




## **Proposal Submission**







# Observing Programmes Committee (OPC)



#### **OPC & Panels:**

- 78 OPC and panel members + OPC Chair
- Distributed in 13 panels by scientific expertise

#### The OPC's function is to

- Review, evaluate proposals on scientific merit
- Rank all proposals
- Advise the Director General



## **OPC** Meeting



### **Pre-OPC Meeting**

- Pre-OPC grades: 1.0/5.0 (outstanding/rejected)
- Triage applied at 70% before meeting

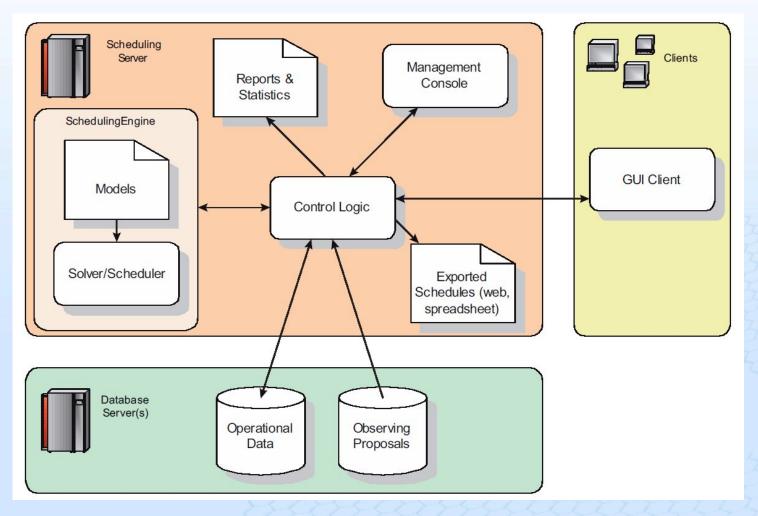
### **During OPC meeting**

- During meeting all proposals are graded and ranked in individual panels except for Large and Calibration
- Large and Calibration proposals voted on by all OPC members

The final ranked list is used to guide the scheduling process.



### TaToo



J. Alves 2005, The ESO Messenger 119, 20



Scheduling task	Time to completion
Post OPC prep work	5
VLT Interferometry	5
TaToo configuration	1
Unit Telescopes	3+1
La Silla Scheduling	2
VISTA, VST, APEX	2
Scheduling report	1
Schedule optimization	1
Fillers	1
Prepare schedule exports	1
Technical feasibility report prep	1
Webletters preparation	1
Total time	25



Scheduling task	Time to completion
Post OPC prep work	5

- Ingest runs into scheduling database
- Reject poorly ranked normal and special proposals
- Consistency checks
- Check ongoing Large Programmes
- Calculate Large Programme commitment
- Chilean time 10% of time on all telescopes
- ToO commitment
- Scheduling modifications recommended by OPC

Prepare schedule exports	1
Technical feasibility report prep	1
Webletters preparation	1
Total time	25





Scheduling task	Time to completion
Post OPC prep work	5
VLT Interferometry	5

- Identify visitor instrument runs
- Time constrained observations
- Demands in RA bins against baselines
- Technical feasibility checks

Scheduling report	1
Schedule optimization	1
Fillers	1
Prepare schedule exports	1
Technical feasibility report prep	1
Webletters preparation	1
Total time	25



Scheduling task	Time to completion
Post OPC prep work	5
VLT Interferometry	5
TaToo configuration	1
Unit Telescopes	3+1

- UT4: laser guide star demand & slots
- All UTs: Creation of fake carryover runs
- Time constrained runs
- All Visitor Mode runs are scheduled manually

Fillers	1
Prepare schedule exports	1
Technical feasibility report prep	1
Webletters preparation	1
Total time	25



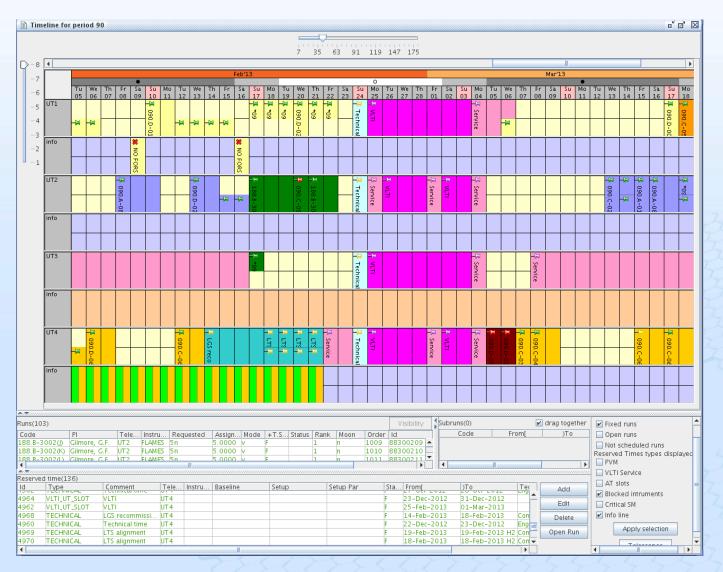
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Fillers	1

- Selection of fillers
- Check technical feasibility
- Conversion of VM fillers to SM

Total time 25

# ESO European Organisation for Astronomical Research in the Southern Hemisphere

### TaToo: Timeline view



## Summary & Talking points



- Current system allows for a variety of programme types, instrument configurations, and observing modes
- Long-term schedule: static 6-month schedule
  - not designed to be updated within this period
- Room for optimisation including:
  - Time constraints
  - Incorporate more flexibility in system
    - Anticipate new programme types (e.g., enhanced fast response channel and "fillers")
    - Include DDTs, VLTI, long running programmes



## Further reading...



Organizations, People and Strategies in Astronomy 2 (OPSA 2), 231-256 Ed. A. Heck, © 2013 Venngeist.

#### SELECTING AND SCHEDULING OBSERVING PROGRAMMES AT ESO

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Abstract. The European Southern Observatory (ESO) manages the largest astronomical ground-based optical and near-IR facility on the planet. It typically receives one thousand applications per semester, and it serves about one third of the astronomical community world-wide. In this paper we review the procedures currently in place at ESO for proposal selection and telescope time allocation.

