



Estrategia de instrumentación para GTC

Pedro Álvarez
GRANTECAN

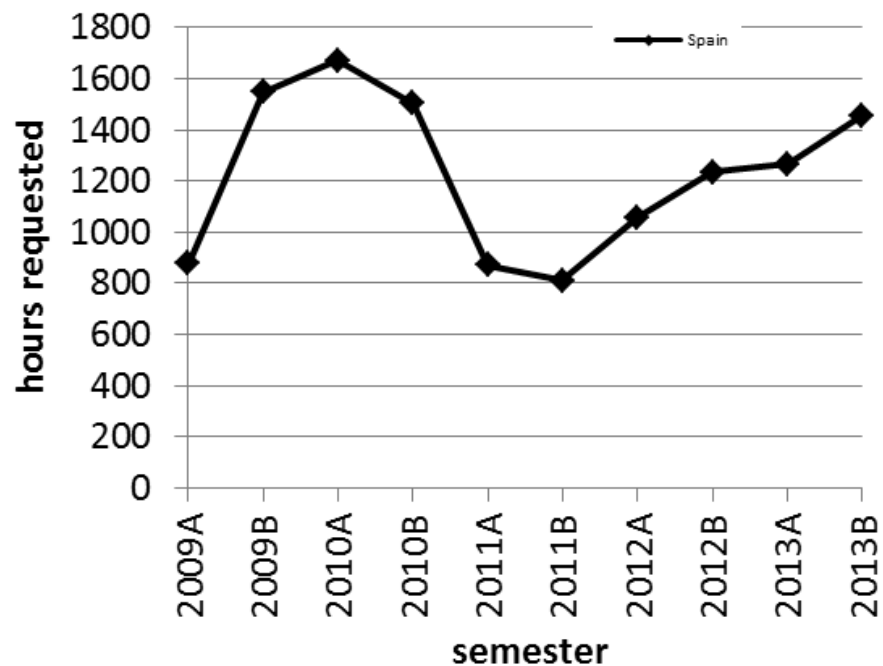
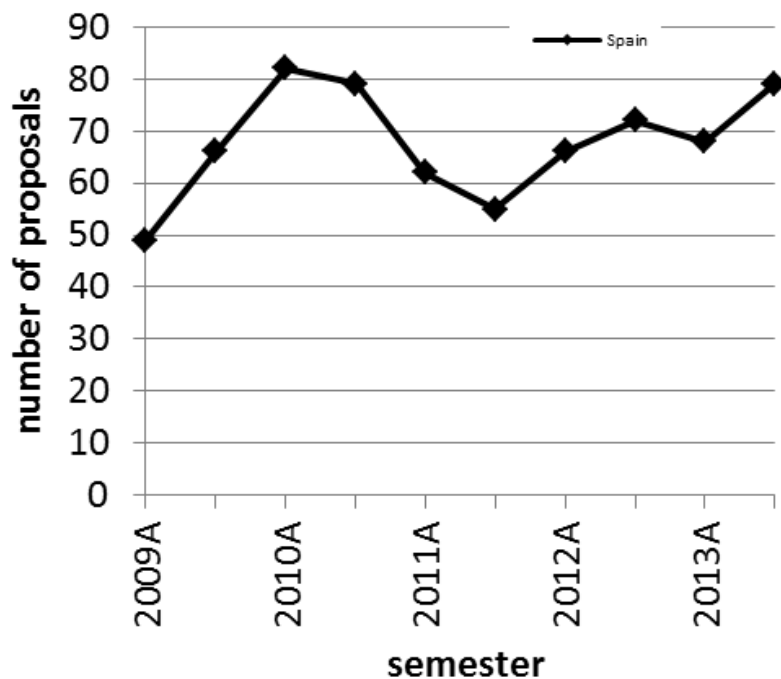
Encuentro RIA-AstroMadrid.
Desarrollo de instrumentación astronómica en España
Perspectivas y estrategia para la próxima década

Madrid, 25-27 septiembre, 2013



Operations statistics

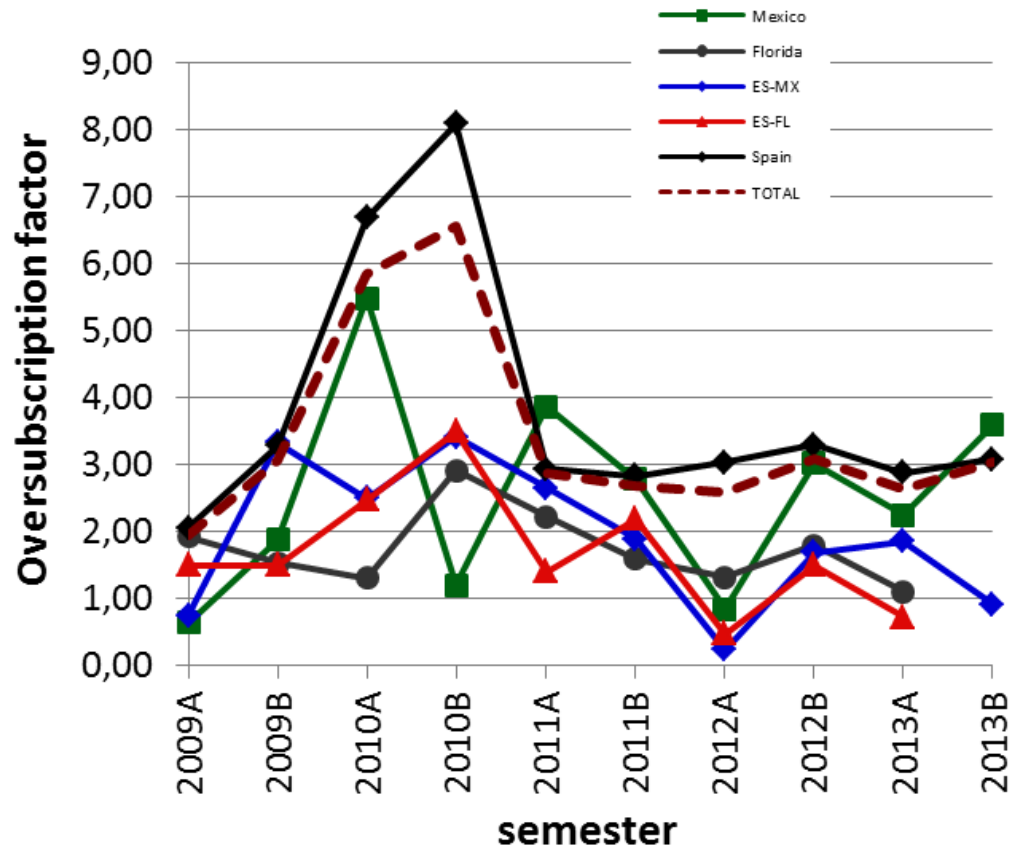
(Observing proposals from Spain)





Operations statistics

(Oversubscription rate)

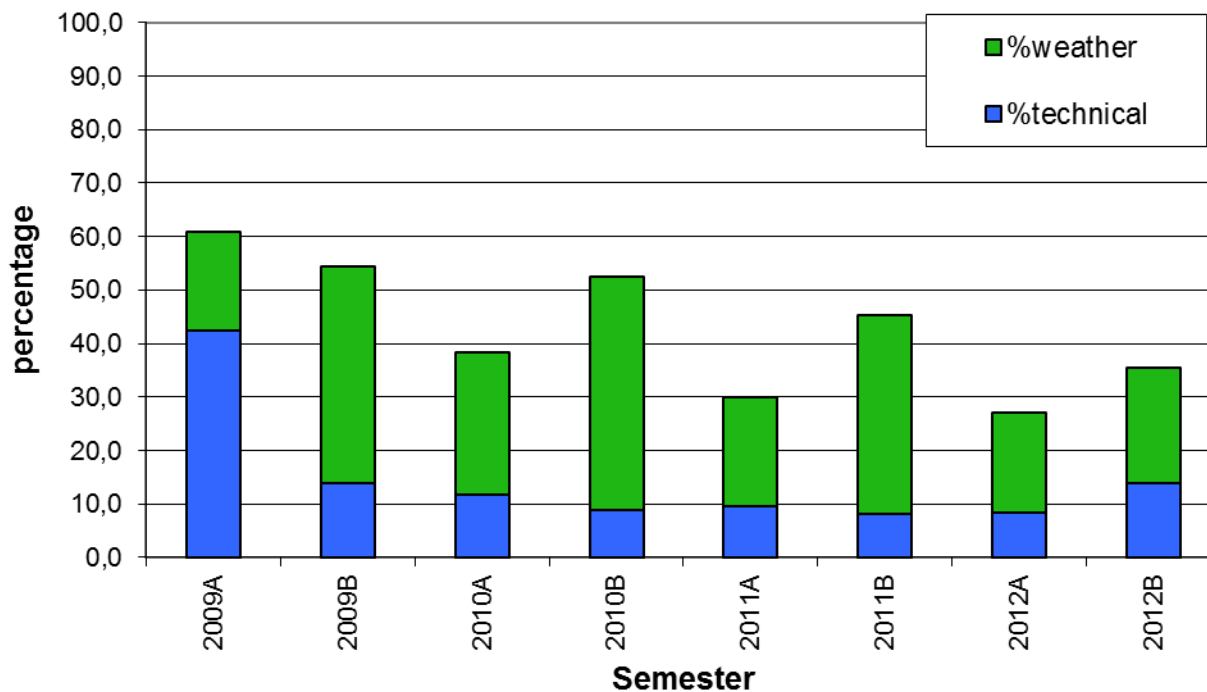




Operations statistics

(Weather and technical down-time)

GTC science time losses

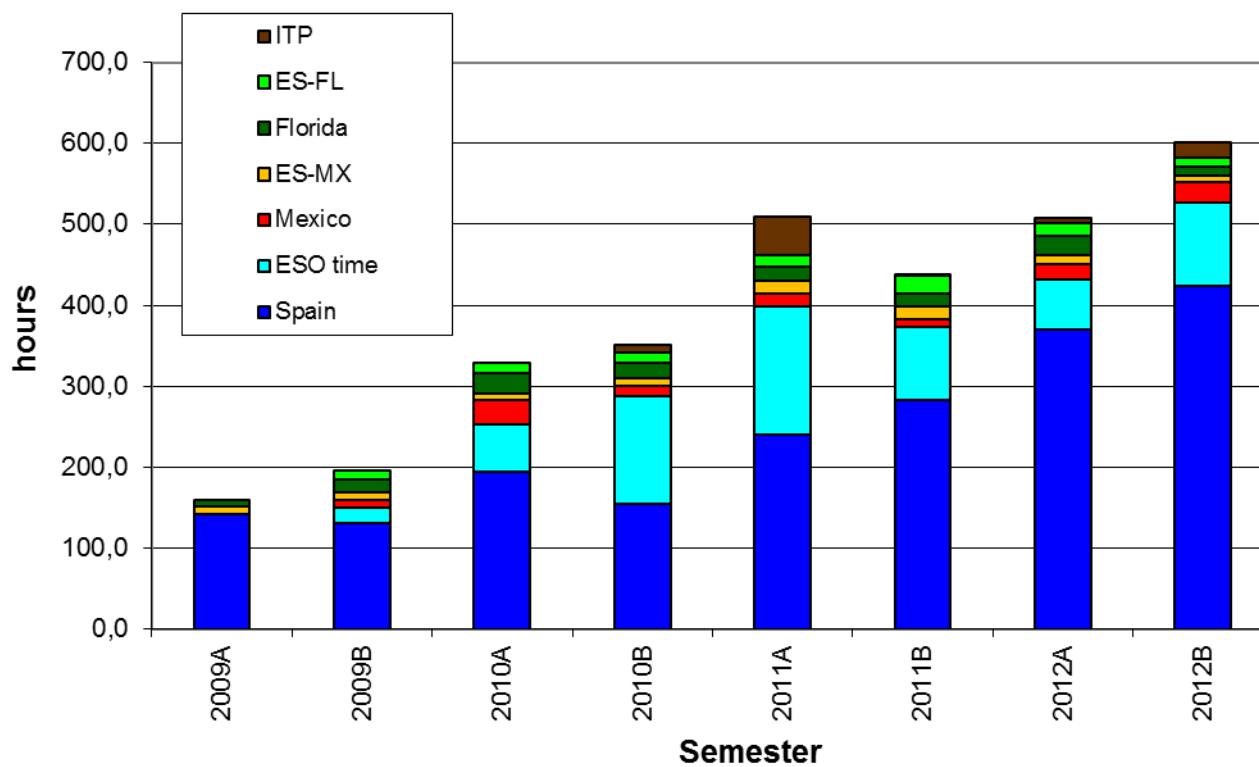




Operations statistics

(Science time use)

GTC science time use for TACs: queue + visitor mode





Science publications

only refereed papers

	2010	2011	2012	2013	TOTAL
publication in refereed journals	10	13	18	34	75

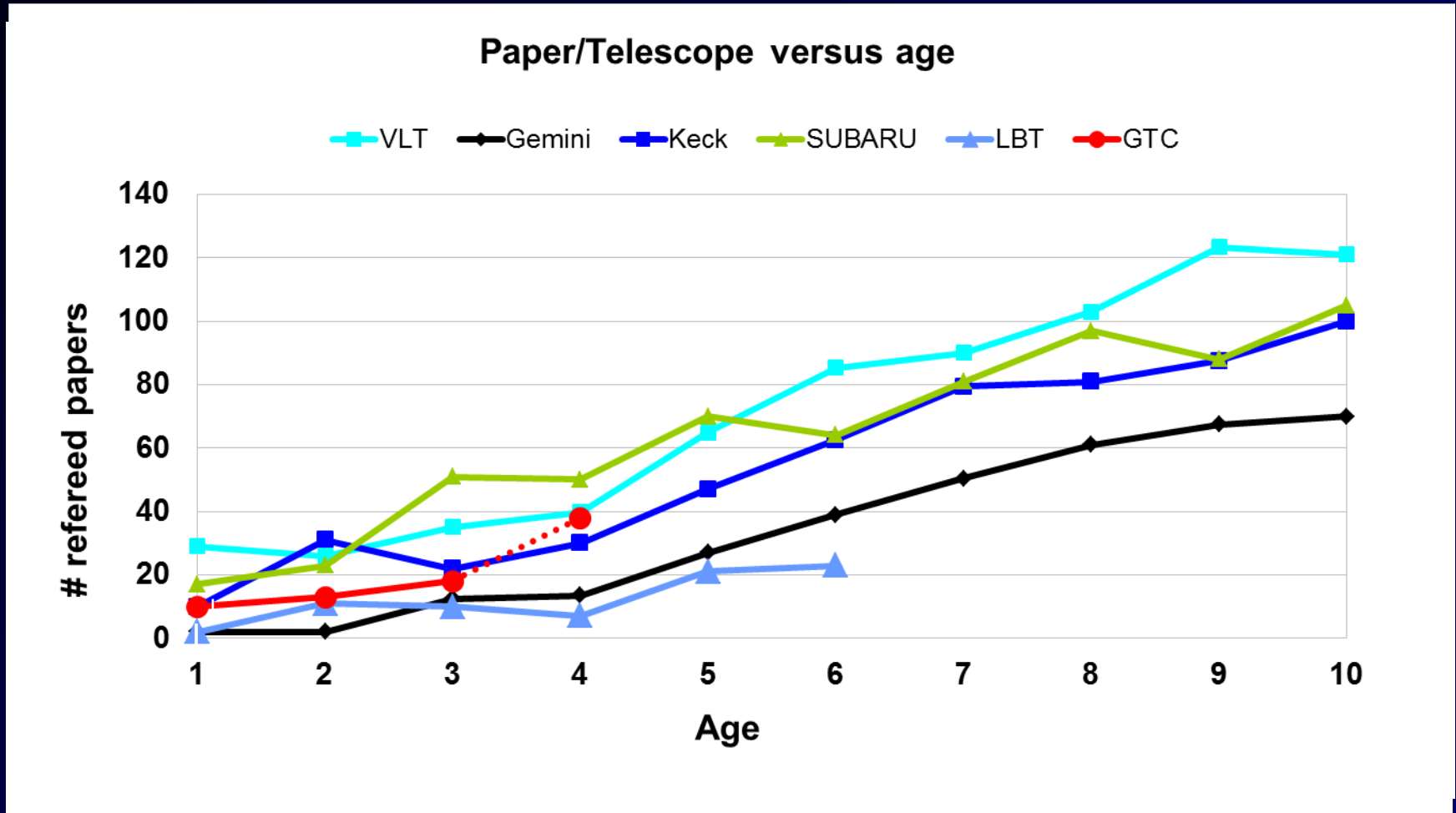
12 additional paper in the review process.

	Authors	First signature
Spain	92,0%	49,3%
Mexico	8.0%	4,0%
UF	12.0%	6,7%

See: <http://gtc-phase2.gtc.iac.es/science/publications/publications.php>



Science publications



Based on: ESO publication statistics, version July 2010
SAO/NASA ADS



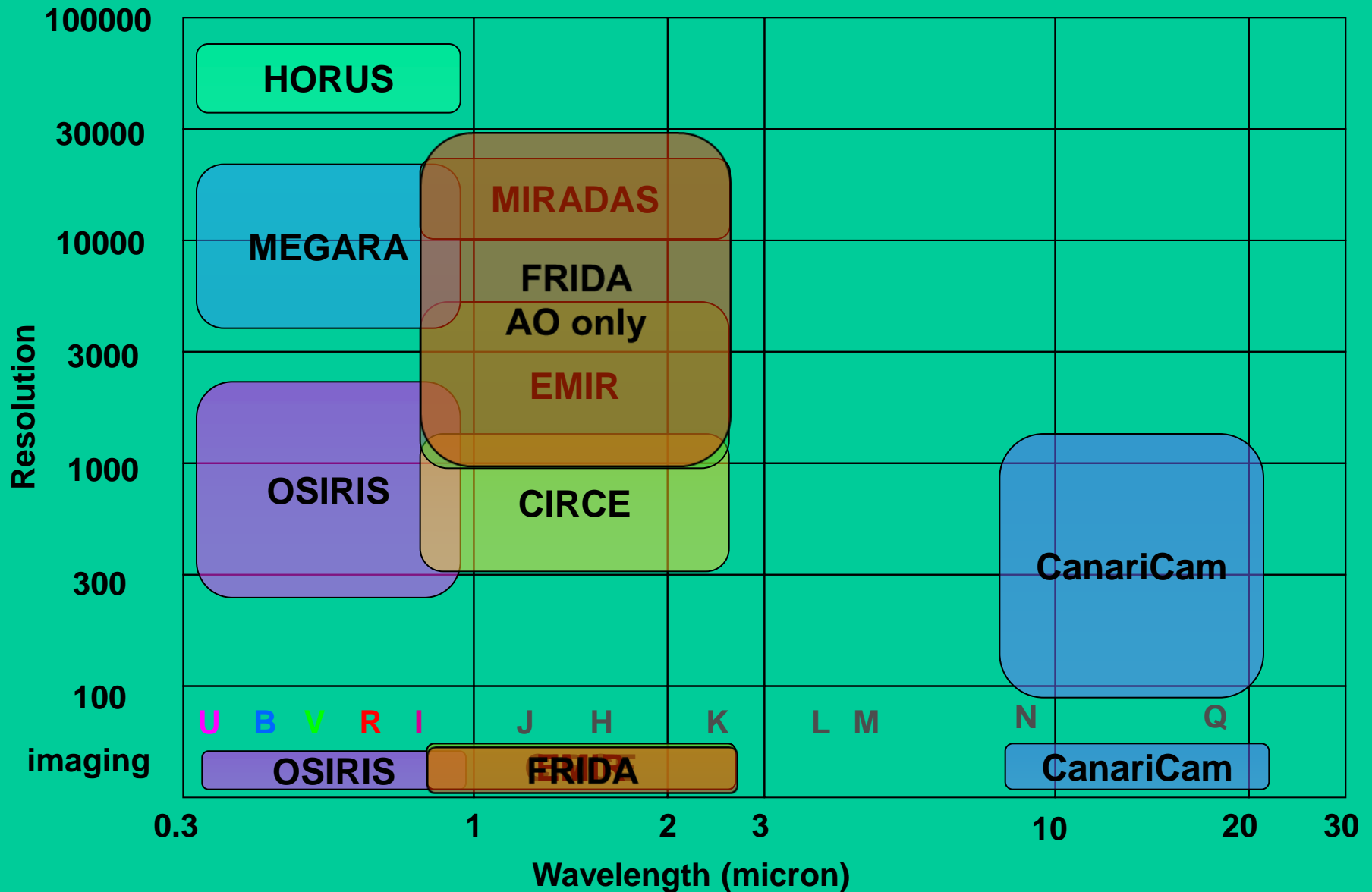
The GTC Instrumentation Plan

➔ Based on recommendations done by a Working Group report

- ✓ Delivered by mid-2008, later approved by the GTC SAC and the GTC Steering Committee (CSUG).
- ✓ Budget approved by the CSUG at mid-2009 and agreed to be contributed at a flat rate between 2010 and 2014.

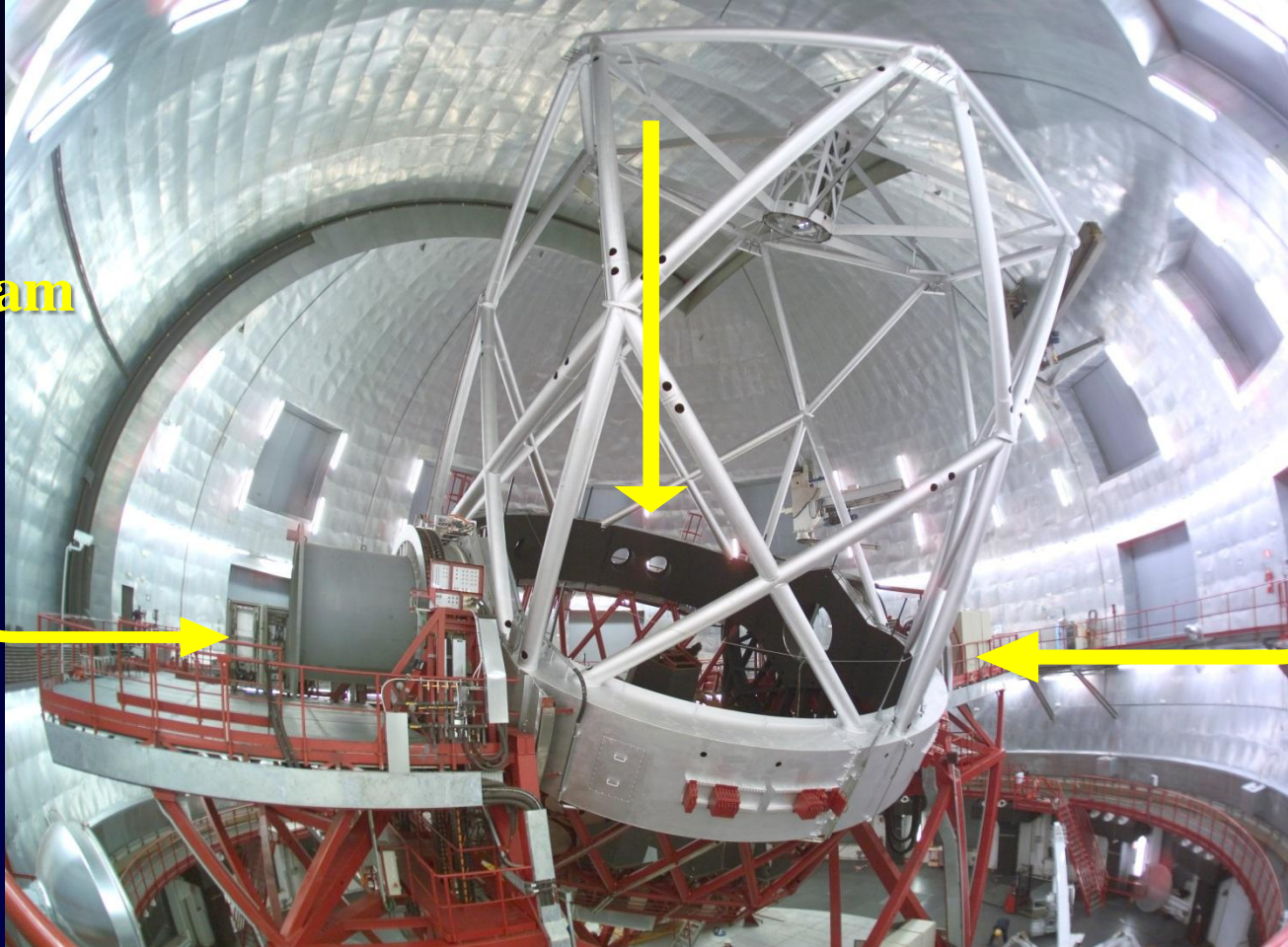


GTC Instrumentation Plan





4 x folded Cass



**CanariCam
@ NaA**

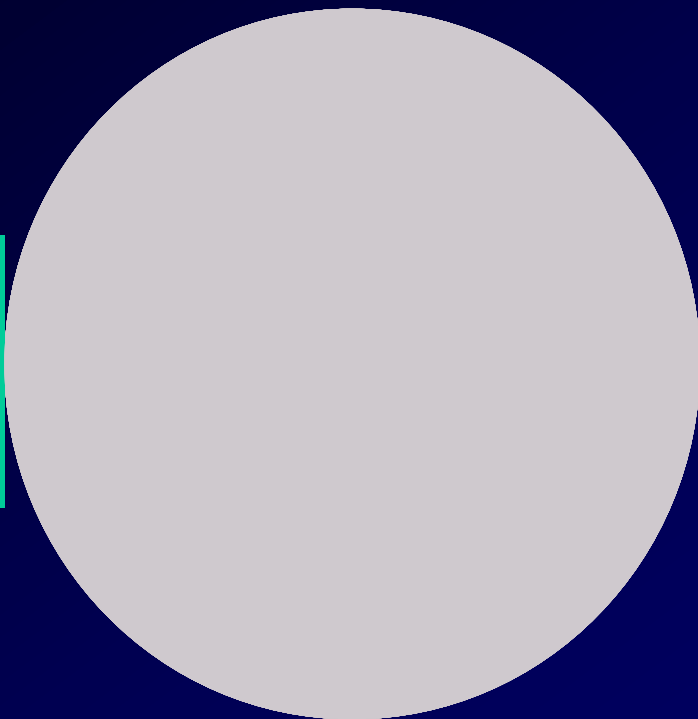
**OSIRIS
@ NaB**

Cassegrain



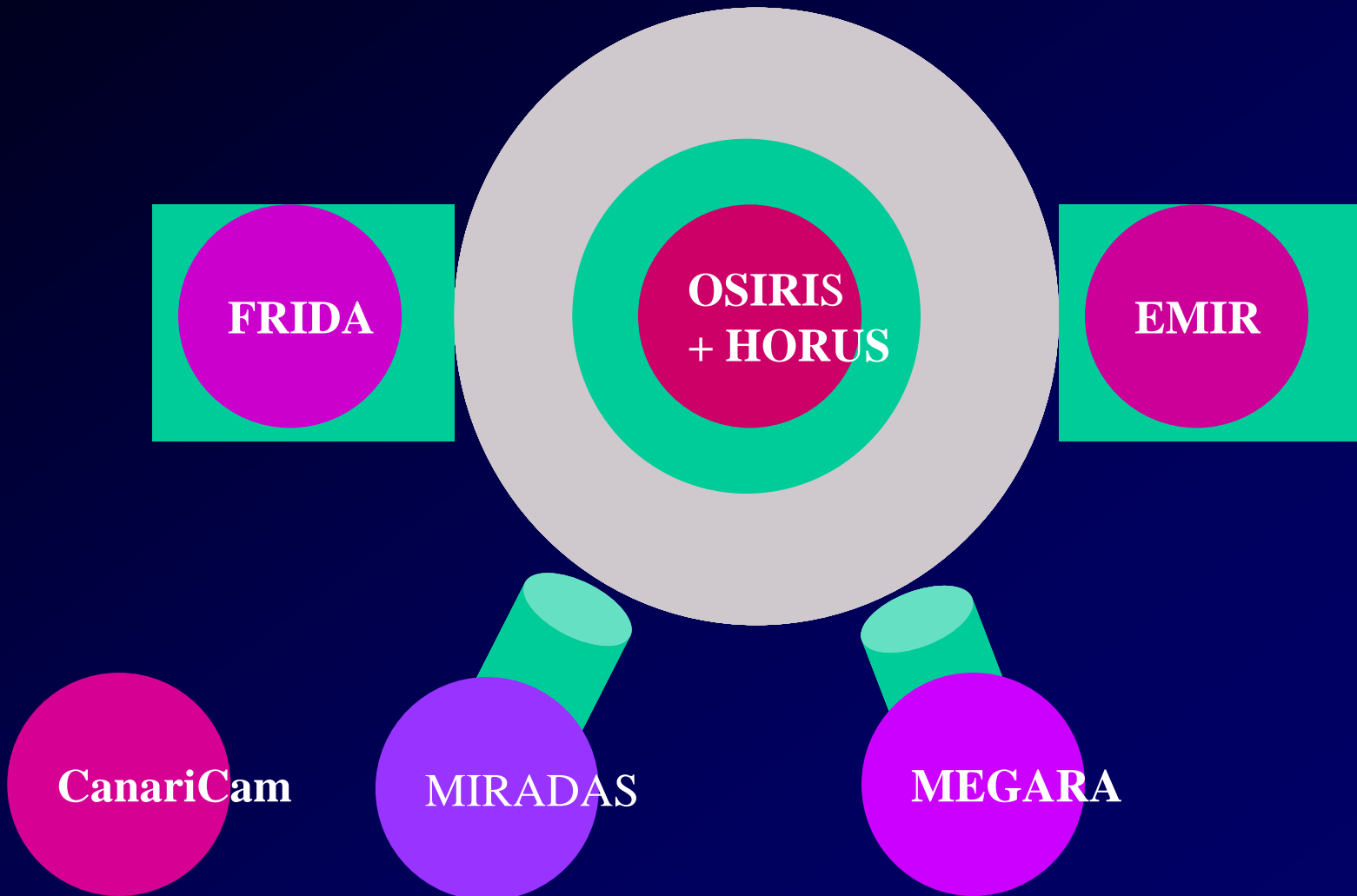


GTC instruments now





GTC instruments in the future





The GTC Instrumentation Plan

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➔ But...

- ✓ The Spanish contribution after the GTC construction phase (2009) remains unclear up to mid 2012.
- ✓ Once clarified, the yearly contribution to the GTC operations budget is extremely limited due to the current policy of austerity.
- ✓ Contributions to the GTC instrumentation budget were unfrozen a year ago (end 2012). But still pending formalities between administrations.
- ✓ Recruiting new personnel blocked since end 2011.
- ✓ The extremely reduced work force available was focused on commissioning the telescope and the two first science instruments (OSIRIS, CanariCam).



The GTC Instrumentation Plan

→ Then...

- ✓ The initial estimations are unrealistic now.
- ✓ New investment failed to start on time (MEGARA, MIRADAS, and other telescope subsystems).
- ✓ Ongoing developments (GTCAO, new focal stations, new telescope modes, etc) seriously delayed due to staff shortages.



The GTC Instrumentation Plan

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➔ The plan should be reviewed

- ✓ Whether to postpone instruments, how to preserve science? Are they still competitive?
- ✓ Asked for an independent external advice
- ✓ Requested the opinion of the PIs on that advice
- ✓ A new plan must be agreed between the GTC partners. The GTC Overseeing Committee will meet next Monday to take a decision



The GTC Instrumentation Plan

→ The alternatives:

- ✓ the timeline has to be stretched, delaying some instruments from others. No other alternatives.
- ✓ The initial approved budget seems too short for the current cost estimates.
- ✓ Then, **a shorter list of instruments** can be addressed. The external advice point to OSIRIS, EMIR and MEGARA.
- ✓ Or, the budget has to be increased along the time to deal with the initial plan: **a larger budget** along a longer time scale.



The GTC Instrumentation Plan

→ A realistic time line:

- ✓ To try to install CIRCE by mid-2014 getting some NearIR capabilities before EMIR.
- ✓ **To focus on EMIR** to be installed by mid-2015.
- ✓ **To focus on MEGARA** to be installed by end-2016.
- ✓ To work on GTCAO (plus its LGS extension) and FRIDA to go to the telescope by 2017/2018. OSIRIS to the Cass.
- ✓ To work on MIRADAS to go to the telescope by 2018/2019.
- ✓ With a cadence of an instrument every year or year and a half. Quite a challenge for a limited team



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→ Requirements:

- ✓ To increase the budget to cover the new plan until 2019
- ✓ To raise the operating funds to reach the target budget
- ✓ To reinforce the team
- ✓ To involve other institution/s within the GTCAO (and its LGS extension) to reduce our workload



The GTC Instrumentation Plan

- ➔ We will have a solution along the next days or weeks. I hope so.



Thanks for your attention