

MUSE

MUSE GTO



GTO telescope time budget

- ❑ Contract with ESO:
225 nights for MUSE Investment
- ❑ plus 30 nights for AO Module.
- ❑ 255 nights × 8.5 h/night
= 2167 h total
(with maximum of 20 nights / semester).
- ❑ GTO may be reduced if instrument is significantly delayed.

GTO telescope time budget II

MUSE Board decision in 2009: only 50% of total GTO budget (~1100 hours) to be booked with projects;

Remaining 50% =

- ❑ buffer for weather losses;
- ❑ to follow new developments;
- ❑ to expand successful projects;
- ❑ for implementation of small projects.

How to distribute the GTO time?

- GTO has to reflect the scientific interests of the consortium in a balanced way!
- But most proposed MUSE observations are interesting across the consortium.
- We want to share resources as much as possible: data, tools & expertise
- Balance between competition ("we want the best science to be done") and protection of institutional interests.

Who decides?

- Instrument Scientist develops & proposes GTO plan, in iteration with consortium.
- Science Team monitors this process, gives preferences and sets constraints. Aim is a unanimously accepted plan.
- Executive Board performs formal approval.



The First Year

From Oct 2013 to Sep 2014: Initial 2 semesters
certainly **without adaptive optics**.

- Max. 40 nights \approx 340 hours
- How to share this?
 - Ramping up in observational difficulty
 - Giving everybody something to start
 - Enabling fast but visible results
- Commitment for 1st semester defined by
ESO OPC deadline in March 2013.



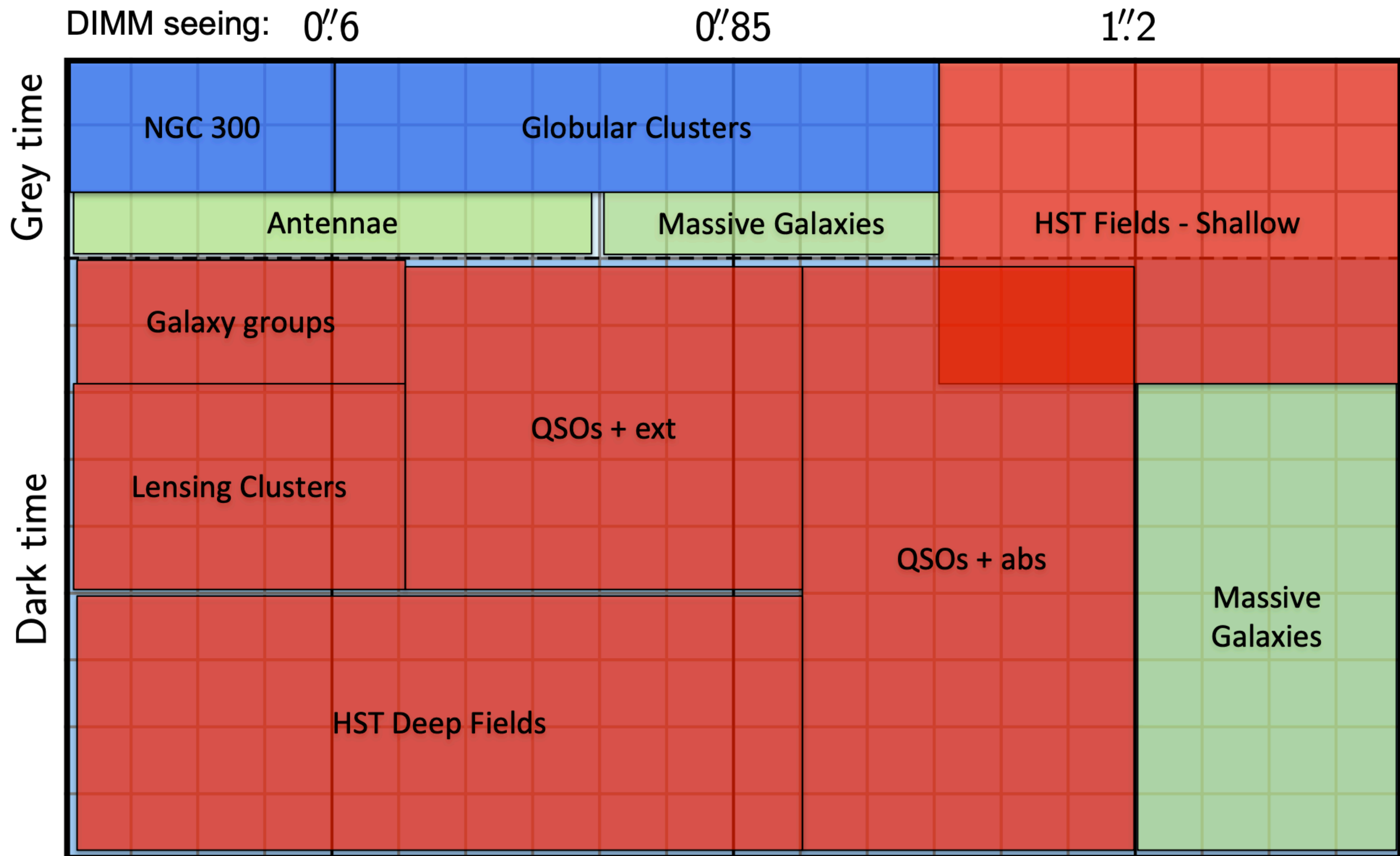
GTO proposals: Sharing the time – Reference shares for 1st year of GTO, approved by ExB at SBW6:

- MUSE-Deep: 18%, dark time / good & best seeing
- MUSE-Wide: 12%, grey & dark time / poor seeing
- Lensing clusters: 6%, dark time / best seeing
- QSOs ext.em: 12%, dark time / good seeing
- QSOs abs blind: 18%, dark time / \geq median seeing
- QSOs abs MgII: 4%, grey & dark time / \geq median seeing
- Galaxy groups: 4%, dark time / best seeing
- Massive Galaxies: 13%, dark time / poor seeing & grey time / good seeing
- Antennae: 3%, grey time / best seeing
- NGC 300: 3%, grey time / best seeing
- Globular Clusters: 7%, grey time / good & median seeing

Goal is to get close to these shares after 51 nights of observations.

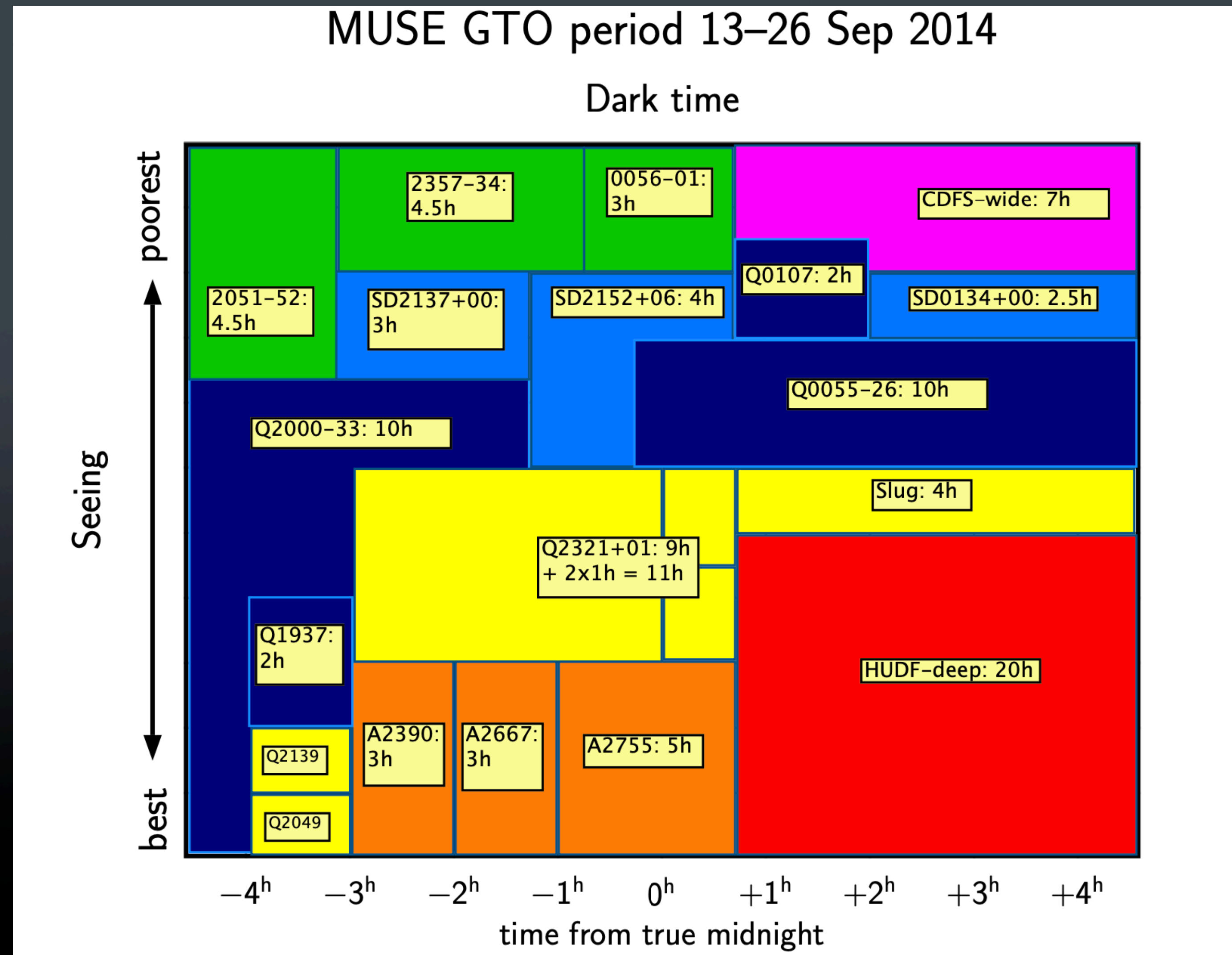
Programs Matrix

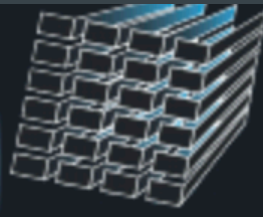
At 5th Busy Week in Aussois: Draft time distribution for first 240 hours of GTO



Observation Matrix (No AO)

- PS: observation matrix
- Prog. Leaders: internal priorities within a program
- Observer: execute the program taking into account observing decision





Run27 P101

Date: 2018-09-05 - 2018-09-15 [10 H2]

Observers

- **Team 1:** Nicolas Bouché (lead), Bas Zoutendijk
- **Team 2:** Martin Roth (lead), Anna Feltre

Instrument Status

- **Hardware changes:** Laser 1 is back - and 4-laser mode re-commissioned succesfully
- **Control software changes:** SGS cadence tested succesfully
- **Telescope:** —
- **Read-out noise:** stable
- **Gain values:** no evolution
- **Lamps:** drop in ARC flux and light increase in FLAT flux since Sep1 due to environmental changes
- **Alignment** CHAN02 & CHAN21 show a slight diverging trend.
- **Astrometric calibration:** taken on 2018-09-11 01:38:56 [Download DbView](#)
- **Geometric calibration:** taken on 2018-09-11 12:23:14 [Download DbView](#)

Useful tools update [as run-026]

- Latest version of MPDAF has been installed.
- An updated MUSE GTO *conda* environment is activated by default.
- PampelMuse has been installed.
- Bugfix in *muselog/log.py* to prevent crash after suppressing comment.
- The beta version of the PSF reconstruction has been installed (developed in collaboration with Thierry Fusco(LAM)). It can be launched easily from the log using the right click menu when an observation is selected. Results are displayed on an xterm window and saved in a log file.
- Python tool *psf_analysis* from Johan installed to analyse PampelMuse PSF.

Problems

- [as run-026] The filler program (which have no longer a specific ESO program ID) is mixed with the lensing program in the observation database. PDF log file have been manually edited, but the assignment is still wrong in the database.

Night 9 (2nd half)

Tonight we had quite a few of troublesome moments. Poor conditions since the beginning of H2 (seeing $\geq 0.9''$) that got worse in the very last part of the night (reaching $\sim 1.7''$).

Unfortunately, we also lost 1h17min due to failure of the SPARTA software.

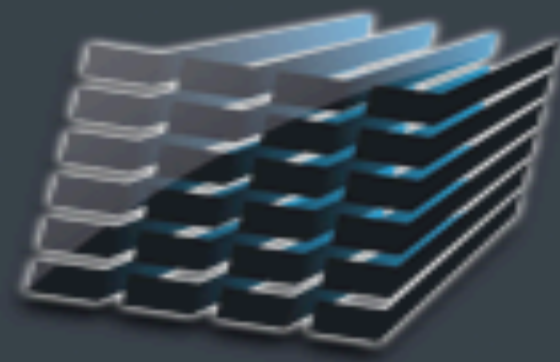
We managed to conclude all the open OBs on QSO-ext and Weirdos. Even though AO helped a lot in correcting for the strong GL contribution, we got MXDF exposures with IQ between 0.77 and 0.93 arcsec.



Maybe our belated visitor tour to UT4 and MUSE at sunset was not a good idea after all?

Night 8 (2nd half)

Tonight we were definitely impressed from the significant IQ improvement obtained with AO!! The night started with average/high seeing ($\sim 0.8/1.0''$) with strong GL contributing to it. AO corrections always provided us with very good quality images! We saw this happening in front of our eyes and are still amazed.



MUSE

Collaboration Policy

- Objectives of the Collaboration
- Membership
- Rights and duties of collaboration members
- Functions in the collaboration
 - PI, PS, Executive Board
- Science Projects
- External collaborations and follow-up projects

MUSE Collaboration Policy

Version 2 – Updated 7 June 2018, Approved by ExB 18 June 2018

Purpose and scope

This version of the MUSE Collaboration Policy has been approved on 2014-09-02 by the MUSE Executive Board (ExB); any changes will again require ExB approval. Responsible for the implementation of the policy is the MUSE Principal Investigator (PI).

This collaboration policy is valid up to the end of the proprietary period following the last GTO run. Given the expected GTO rate of 51 nights/year, it is expected to last 6 years after the 1st GTO run of September 2014. Possible extension of the collaboration will be decided at the end of the period.

Objectives of the Collaboration

The overall goal of the MUSE collaboration is to get the best and highest impact science out of the 255 GTO nights granted by ESO to the MUSE consortium in return for its investment. From the start of the MUSE project, it was foreseen to pursue this goal by a joint exploitation of the GTO, pooling observing time, personnel efforts, and expertise. At the same time, it is important to maintain a fair balance between the various scientific interests within the consortium nodes and to reflect their investment share in the project.

Membership

An official initial list of membership will be published after its approval by the ExB. To be on the initial list one must be a PhD scientist affiliated to one of the 6 institutes that funded and built the MUSE instrument: AIG, AIP, CRAL, ETH, IRAP, Leiden Observatory (NOVA); called the MUSE institutes henceforth, and one must have contributed to pre-GTO activities. Each ExB member will propose to the PI a list of potential members from her/his institute which will then be approved by the ExB.

This list will be updated on a yearly basis after approval by the ExB. Note that this list is different from the MUSE wiki access list which will be open more widely: e.g. including also students and external collaborators.

The ExB can give a special 'Builder' status to members who have a long-term association with MUSE and have been crucial to the project.

New members must match one of the following categories:

- Postdocs affiliated to the MUSE institutes and assigned to work on a MUSE project for at least 50% of his/her time. New postdocs will be announced by the Institute representative to the ExB, after which they

Each member can only lead one paper at a time

- Announce paper to the PS
- PS check subject not too broad or overlap with others papers
- Announced paper is published in the wiki
- Announced paper is presented to the team at the BW
- Short progress is given at the BW
- When ready, paper is circulated to the team, iterated and then submitted to the journal
- Final paper is presented to the team at the BW
- Announce a new paper

Publication Policy for the MUSE collaboration

Purpose and scope

This document describes the guiding principles and rules for authorship on publications of the MUSE Collaboration, in particular using data obtained with MUSE in Guaranteed Time Observations (GTO). Its main purpose is to ensure that appropriate and fair credit is given to individuals who contributed to the investigation. The document also outlines the actual publication process. The Publication Policy applies to all members of the MUSE collaboration, with membership being defined in the [MUSE Collaboration Policy](#). It also applies to external collaborators who have been granted access to MUSE GTO data and/or who benefit substantially from preparatory work conducted by MUSE collaboration members.

This version of the MUSE Publication Policy has been approved on 02/09/2014 by the MUSE Executive Board (ExB); any changes will again require ExB approval. Responsible for the implementation of the policy is the Programme Scientist (PS) in consultation with the MUSE Principle Investigator (PI).

Categories of MUSE papers

This policy extends to the following types of publications:

- MUSE Scientific Papers are based fully or partly on the analysis of MUSE GTO data, including catalogue papers and survey presentations. The topics and authors of MUSE Scientific Papers are established as described in more detail below. Papers on follow-up observations to MUSE GTO fall under this category if (and only if) that particular follow-up project has been designated an activity of the MUSE Collaboration by the ExB.
- MUSE Technical Papers are describing the MUSE instrument and its performance, or present software developed specifically for MUSE. The topics and authors of MUSE Technical Papers are selected by the PI in consultation with the ExB. The PI also maintains a list of those Technical Papers that all other MUSE publications are requested to cite.
- Seminars and conferences provide another platform for the (usually non-refereed and often informal) public dissemination of results. See the dedicated section below.

Authorship

The author list on a MUSE Scientific Paper consists of a first or lead author, followed by any number of coauthors. The ordering in the author list (after the lead author) is decided among the author group; the order may reflect different levels of contributions to the paper, or it may follow other criteria.

One of the authors is identified as 'Responsible Author' towards the collaboration; this may be the lead author, or the supervisor of a student, or another coauthor. The Responsible Author takes charge of coordinating the required scientific activities among the contributors, and ensuring that the guidelines for announcing and submission are being followed.

External collaborators (as defined in the Collaboration Policy) in general cannot be lead authors of MUSE Scientific Papers, except for specific cases approved by the ExB.

Everyone who made a significant contribution to the research study leading to a MUSE Scientific Paper can request coauthorship. Valid contributions include (but are not limited to) initial ideas and concepts, data reduction and analysis, development of relevant software

The concept of “busy-weeks”

- A nice and remote place, outside any institutes
- A single working and living place (a big hotel with meeting rooms)
- Poor internet connection
- A place to build communication (e.g. bar session)
- Common meetings and parallel sessions, empty place in the planning for instant collaborative meeting
- Half day outside social activities

