

Re-scheduling of construction

- We are starting to update the LCGT construction schedule.
 - Mainly because of delay in the excavation schedule.
(or financial decision of the government)
- Good chance to refine the schedule.
 - Current schedule is not a well-defined one.
 - * Challenging and aggressive schedule.
 - * Still have some inconsistencies between project master schedule and subsystem bottom-up plan.
 - We need better schedule management system.
 - * Quantitative evaluation of project progress both in project management and sub-system development.
 - * The status should be open for collaborators clearly.
 - Recommendation in the Last PAB:
Progress evaluation system, sub-system bottom-up plan.

Framework of the schedule

- New framework (or constraints) for the master schedule is suggested by the LCGT EC (Executive Committee).

[Original (current) schedule]

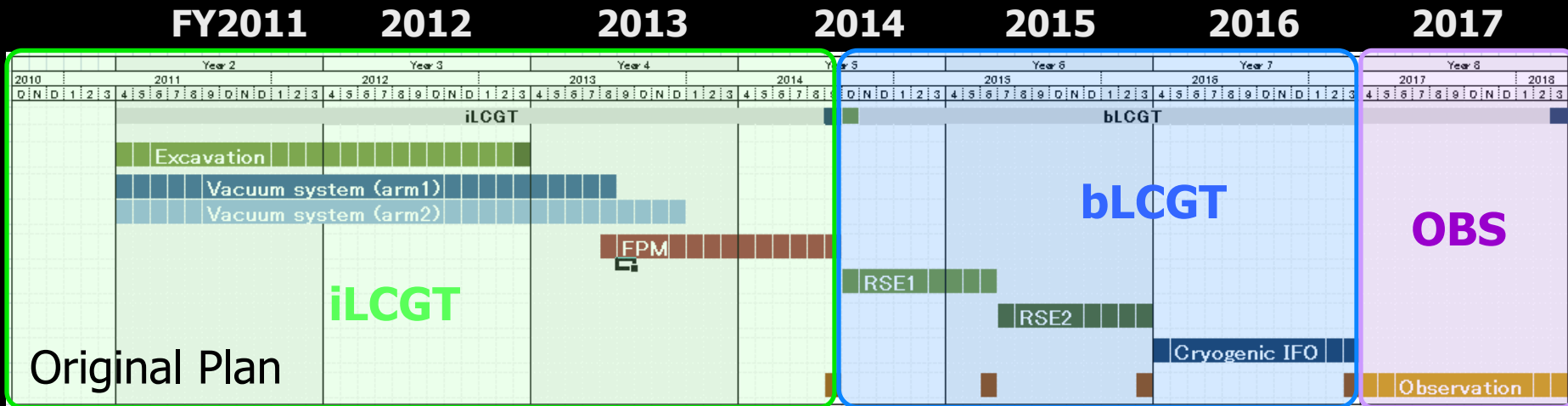
End FY2012 : Completion of the tunnel and facility
Mid. FY2013 : Vacuum system installed
Mid. FY2014 : Finish iLCGT and a short observation run
End. FY2016 : bLCGT installation completed
Form FY2017 : Observation run and detector adjustment

[Newly-suggested schedule]

End FY2013 : Completion of the tunnel and facility.
End FY2014 : Vacuum system installation⁽¹⁾ and interferometer operation.
End FY2017 : Start observation⁽²⁾ with bLCGT.

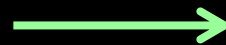
- * Completion the installation of the vacuum system⁽¹⁾ is a strict constraint. Detailed schedule will be determined with iterations with subsystem bottom-up plans. However, Earlier start of observation run⁽²⁾ is preferable.

Master Schedule Update



Framework of the new Plan

Tunnel and Facility



Vacuum system and interferometer

Start observation run



- * Completion the installation of the vacuum system is a strict constraint. Detailed schedule will be determined with iterations with subsystem bottom-up plans. However, Earlier start of observation run is preferable.

New schedule planning

- Subsystem bottom-up schedule

- Detailed subsystem schedule, including design, development, prototypes, first article tests, purchase, tests before installation, on-site installation and shakedown tasks
 - Should be consistent with the project master plan.
 - Also include risk factors and back-up plans.
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- Progress evaluation

- Evaluated by a 'milestone scheme'
 - * Set ~10 milestones for each subsystem
 - Picked up from a detailed schedule of each subsystem.
 - * Status for the milestones -- checked in regular meetings.
- The status will be open for all the collaborators.
 - A software and network system is being selected.

Plan for the schedule update

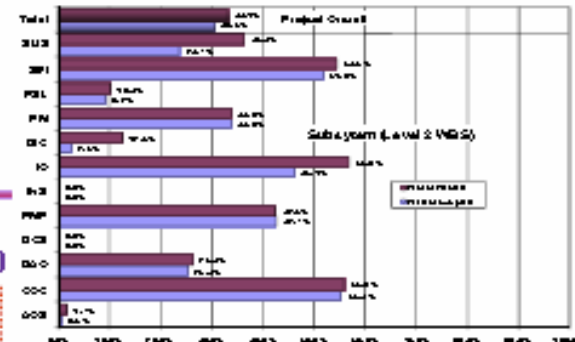
- First Dead line: Dec. 2011
 - Submit a recommendation on the updated schedule
 - * Should be consistent between the master schedule and subsystem bottom-up plan.
 - * Should be realistic with well-defined milestones.
 - Software/network system for scheduling will be in operation.
- After that
 - Needs approval by EC. It may be after some iterations.
 - Project progress will be checked regularly, with the 'milestone scheme'.
 - The final master schedule and subsystem bottom-up plans will be reviewed in Internal/External Reviews and the Program Advisory Board.

Example: the aLIGO case

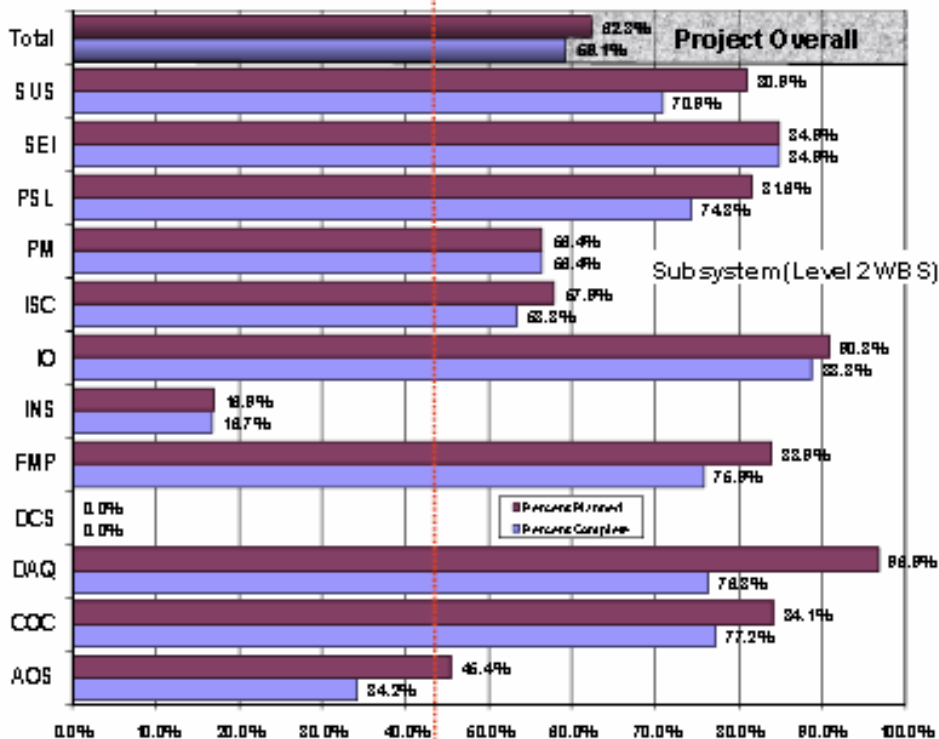


How far along are we?

June '10



Aug 2011



- All subsystems >50% complete (except AOS...)
- Data Analysis and Storage Computers (DCS) are just in time at end of construction.

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