



The Status of the LHC Programme

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Director of Research**

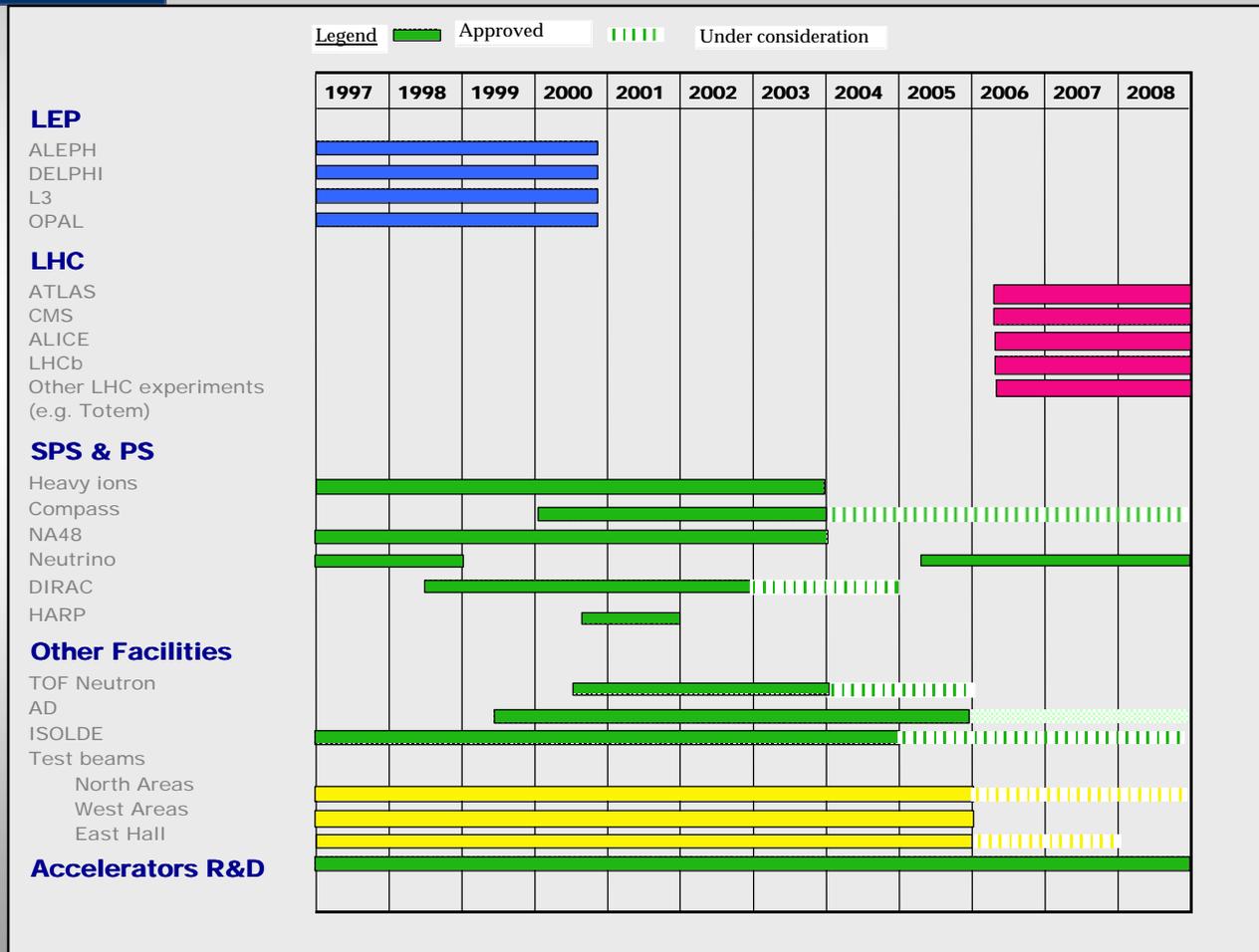


Outline

- ◆ **CERN and the LHC**
- ◆ **LHC Status**
- ◆ **Schedule**
- ◆ **CMS and ATLAS**
 - ◆ **Completion**
 - ◆ **M&O**
 - ◆ **Computing**

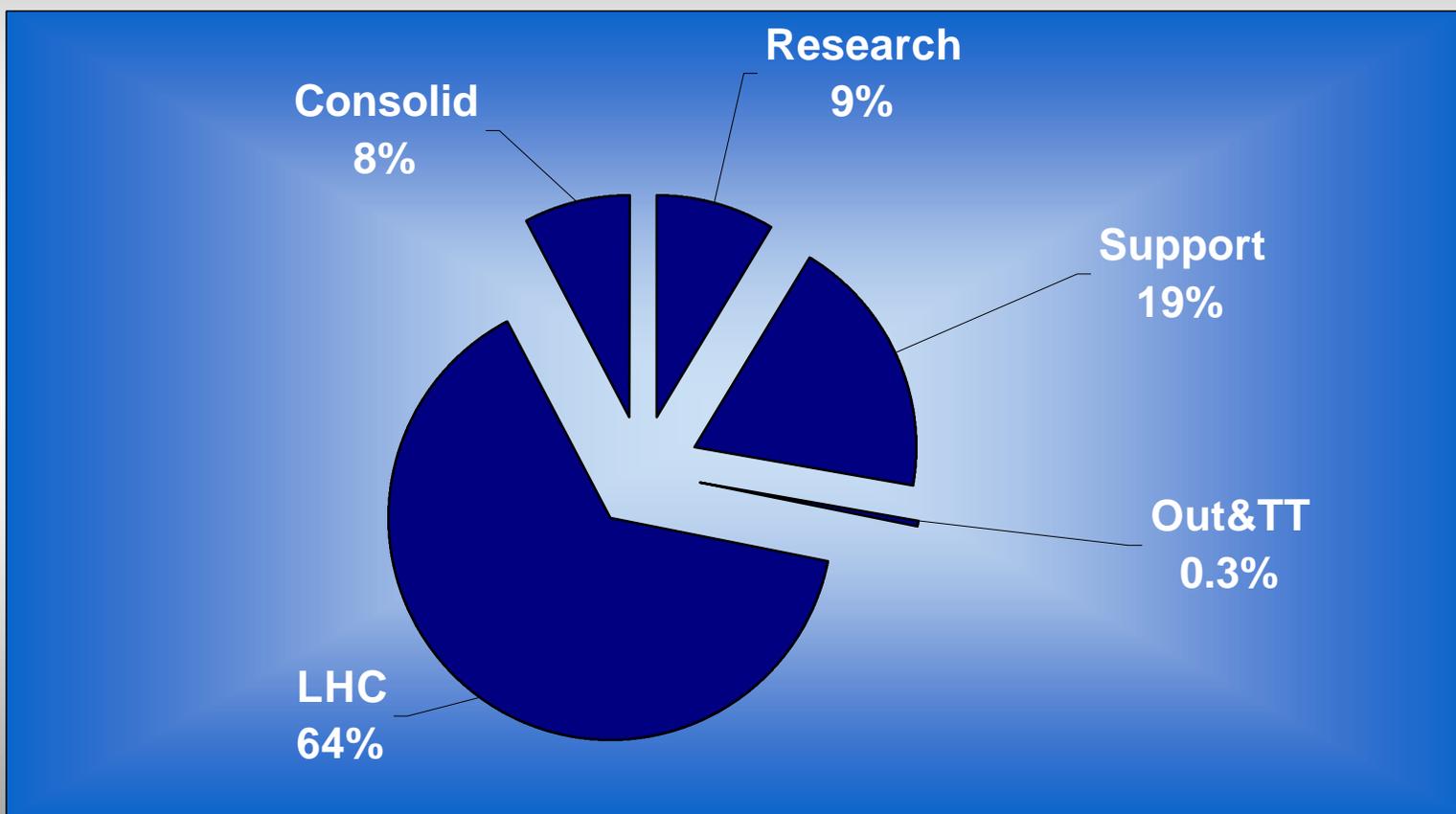


The CERN Scientific Programme



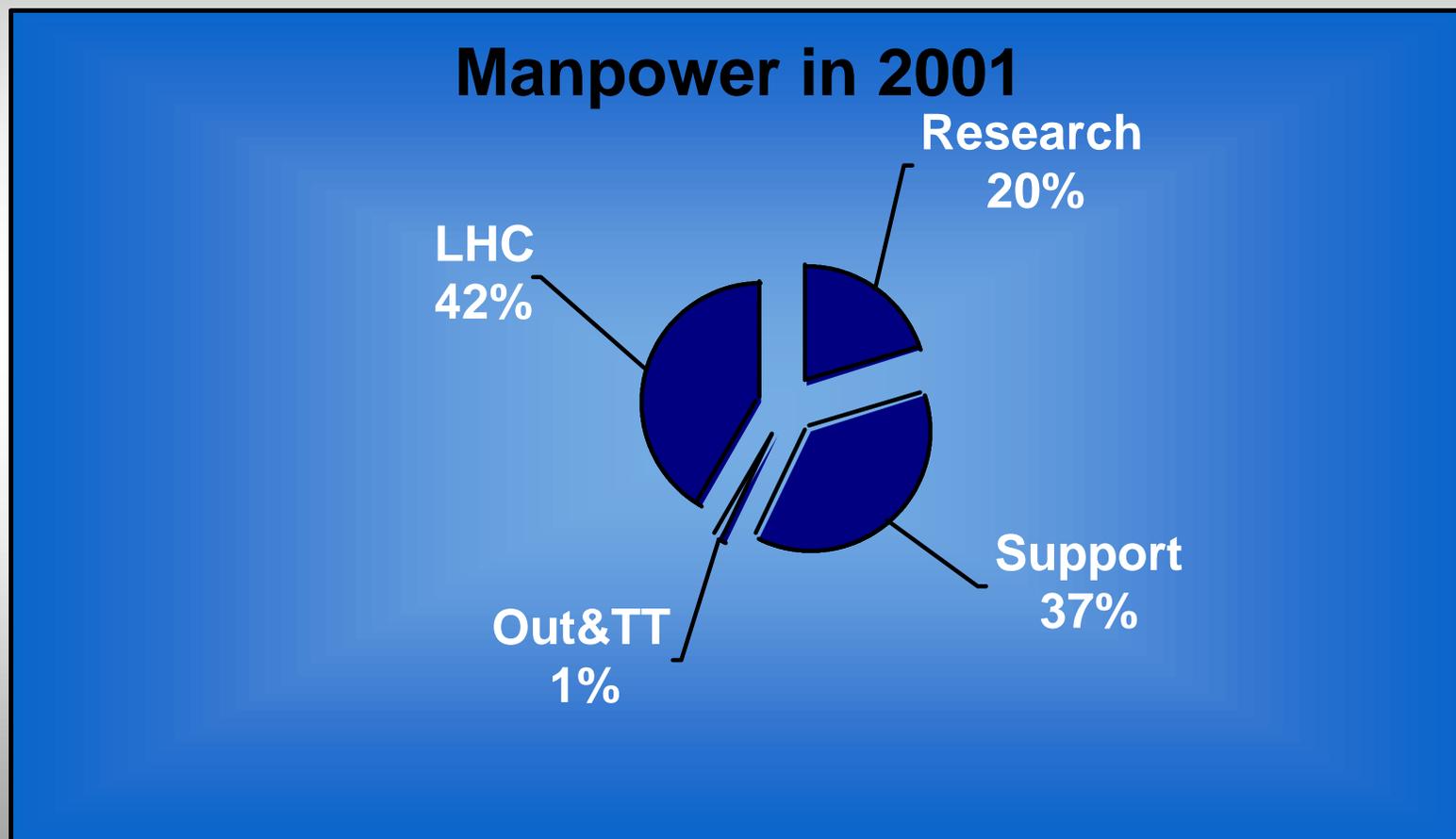


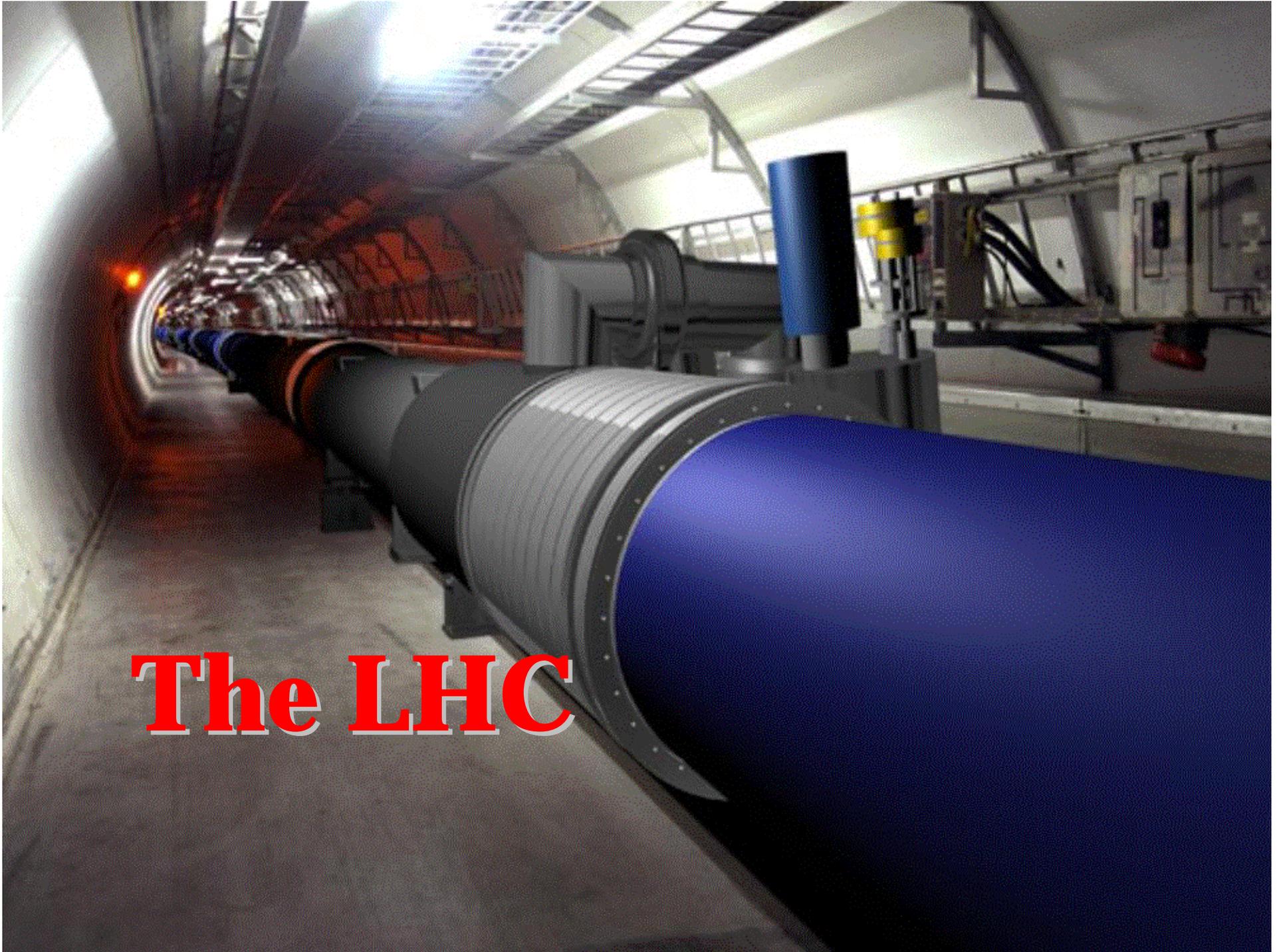
Expenditure from Material Budget in 2001





Manpower breakup in 2001





The LHC



LEP dismantling

PROJET LHC

Démantèlement du LEP

LEPIPL COURBDEM
19.02.01



AC-TCP/pl/hg

Mise à jour du 26.04.01



Magnets





Magnets



3-Jul-01

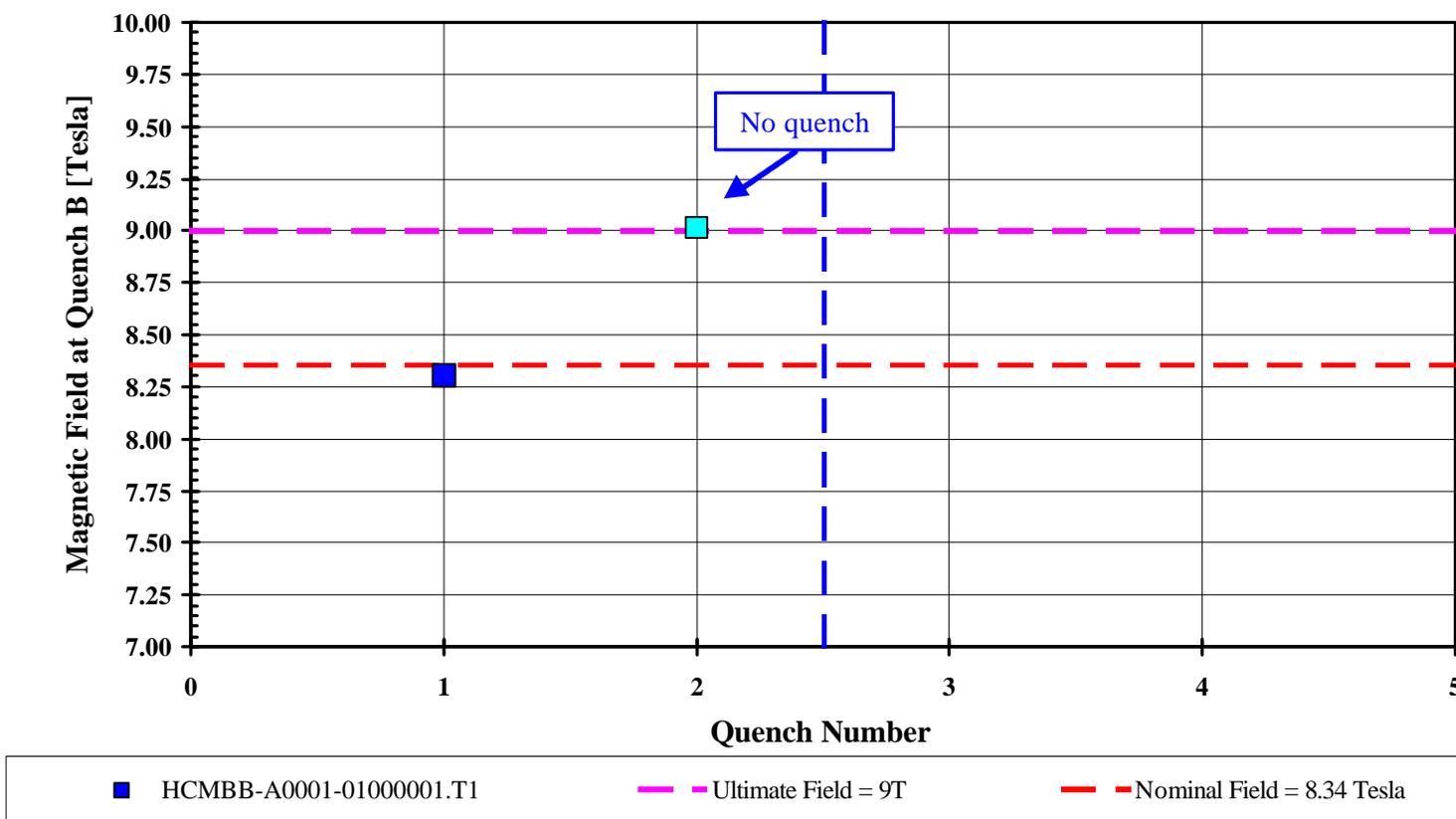
K.J. Cashmore - CMS Lecture Review

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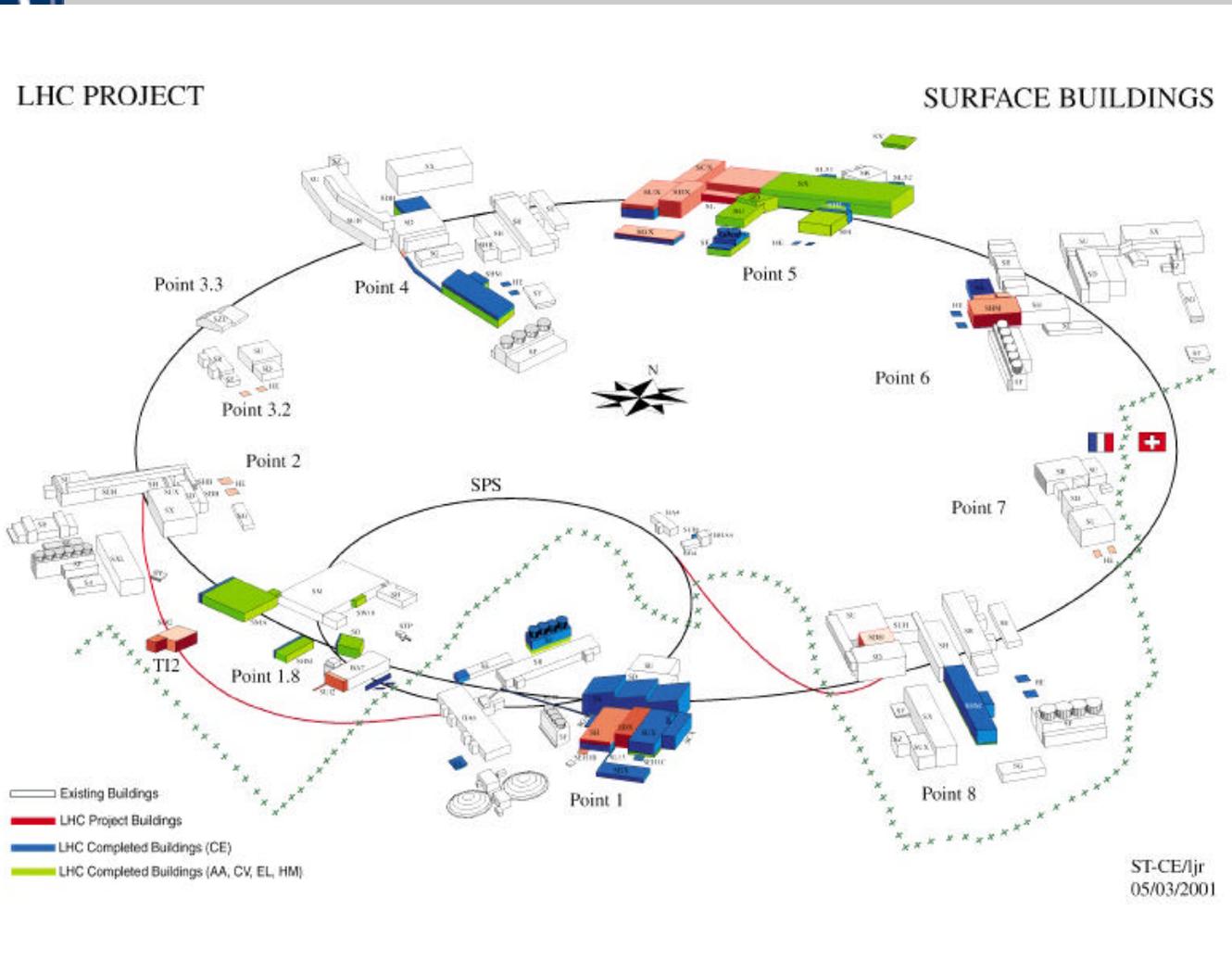
Dipole training quench performance

Training Quenches at 1.8K



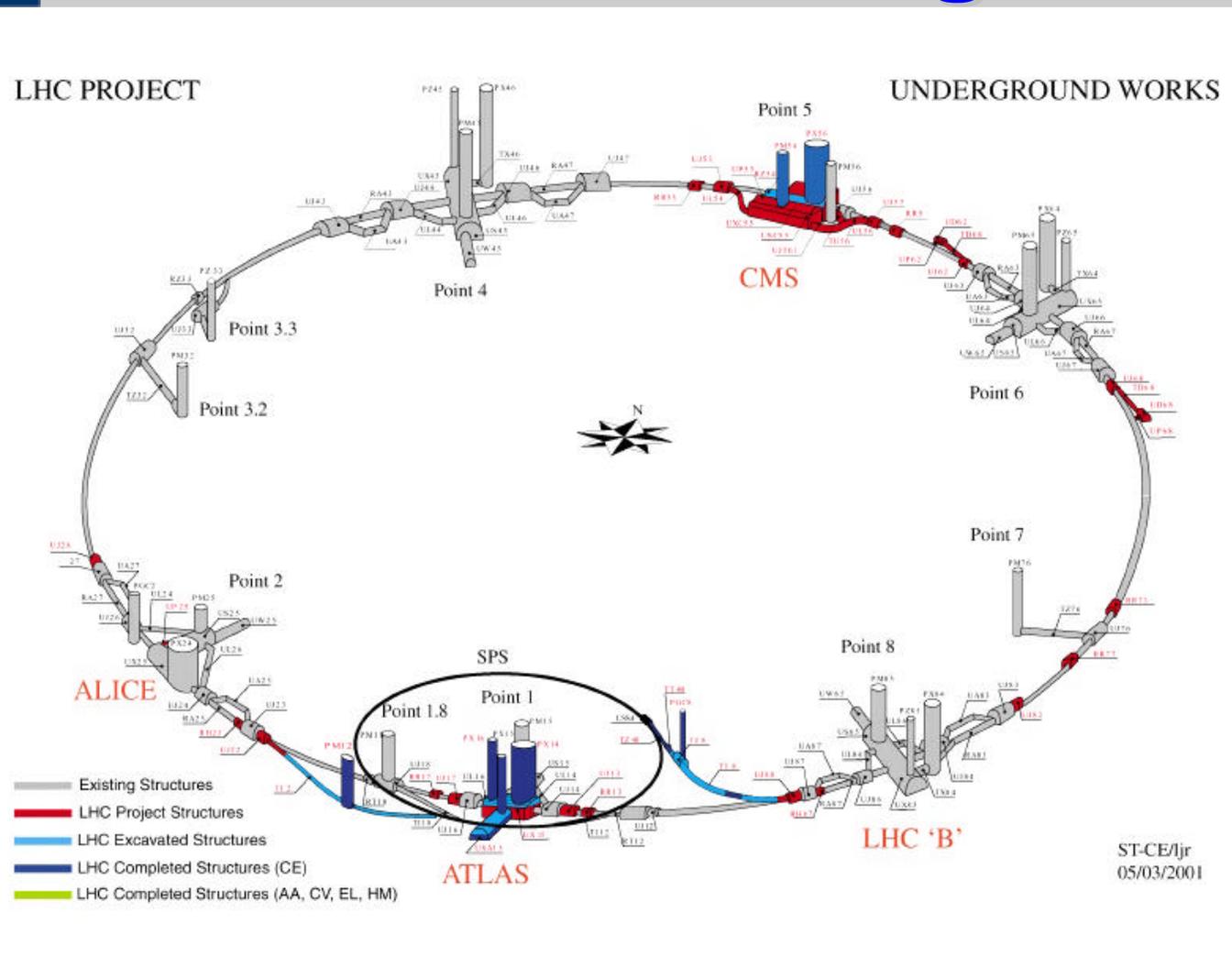


Civil engineering status - surface





Civil engineering status - underground





Civil engineering at Point 1 (ATLAS)





Point 5 (CMS)

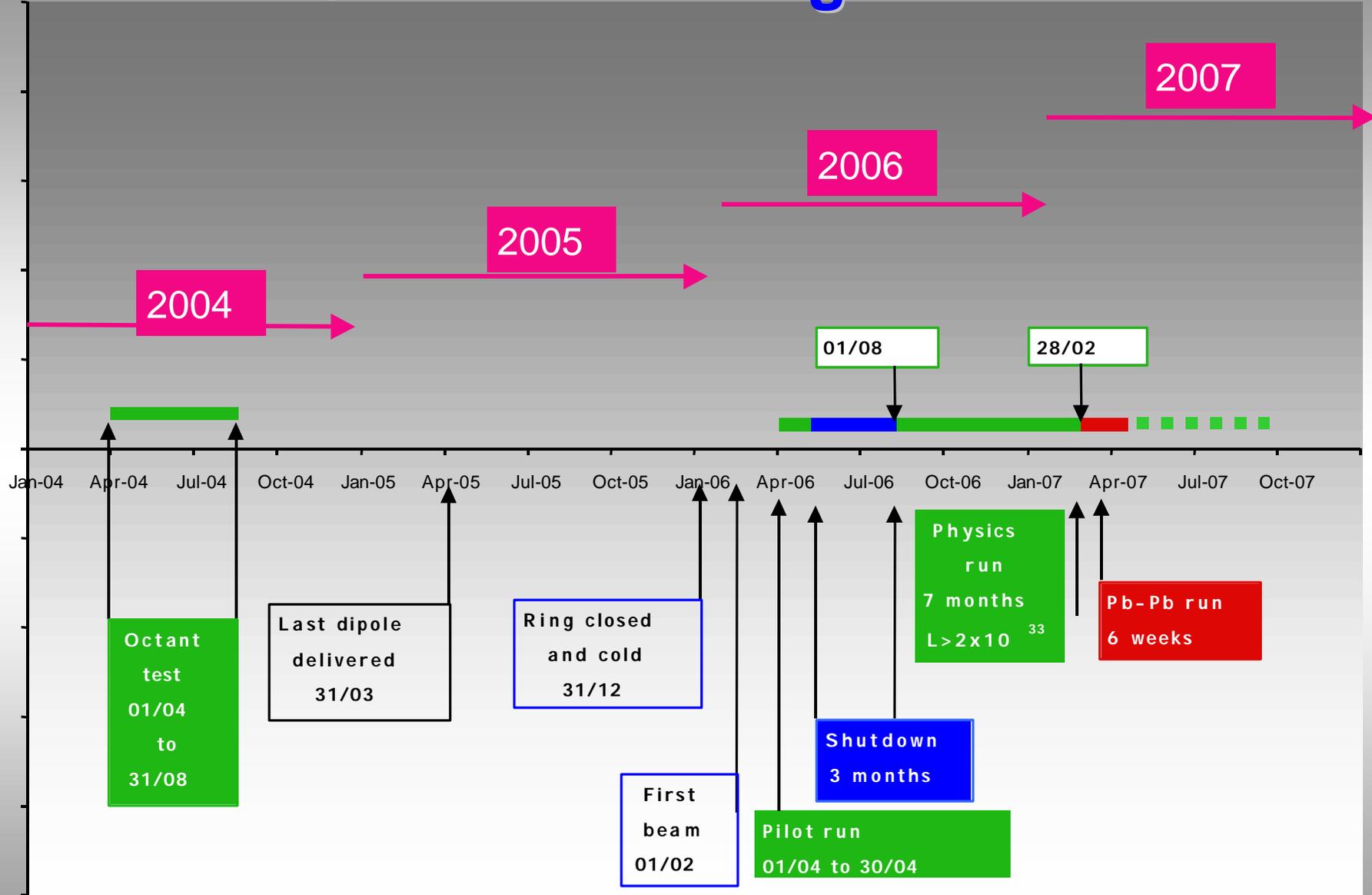


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R.J.Cashmore - CMS Lehman Review

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LHC commissioning schedule





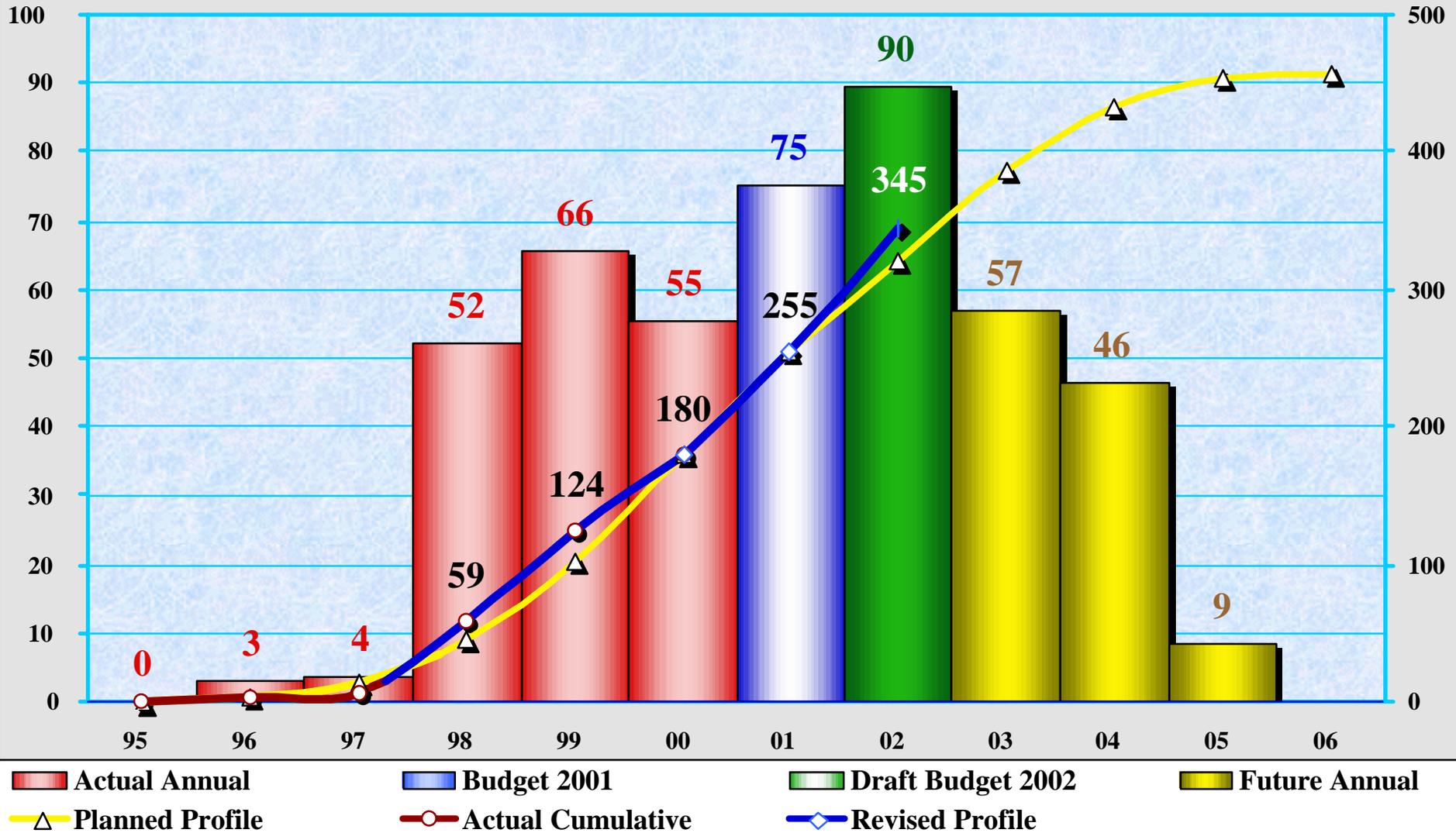
CMS and ATLAS

- ◆ **Current Financial Status**
 - ◆ 50% to completion
 - ◆ Appropriate to review situation
 - ◆ Reports to the Oct and April RRB's
- ◆ **Maintenance and Operation**



Summary of Expenditure 1995 - 2000

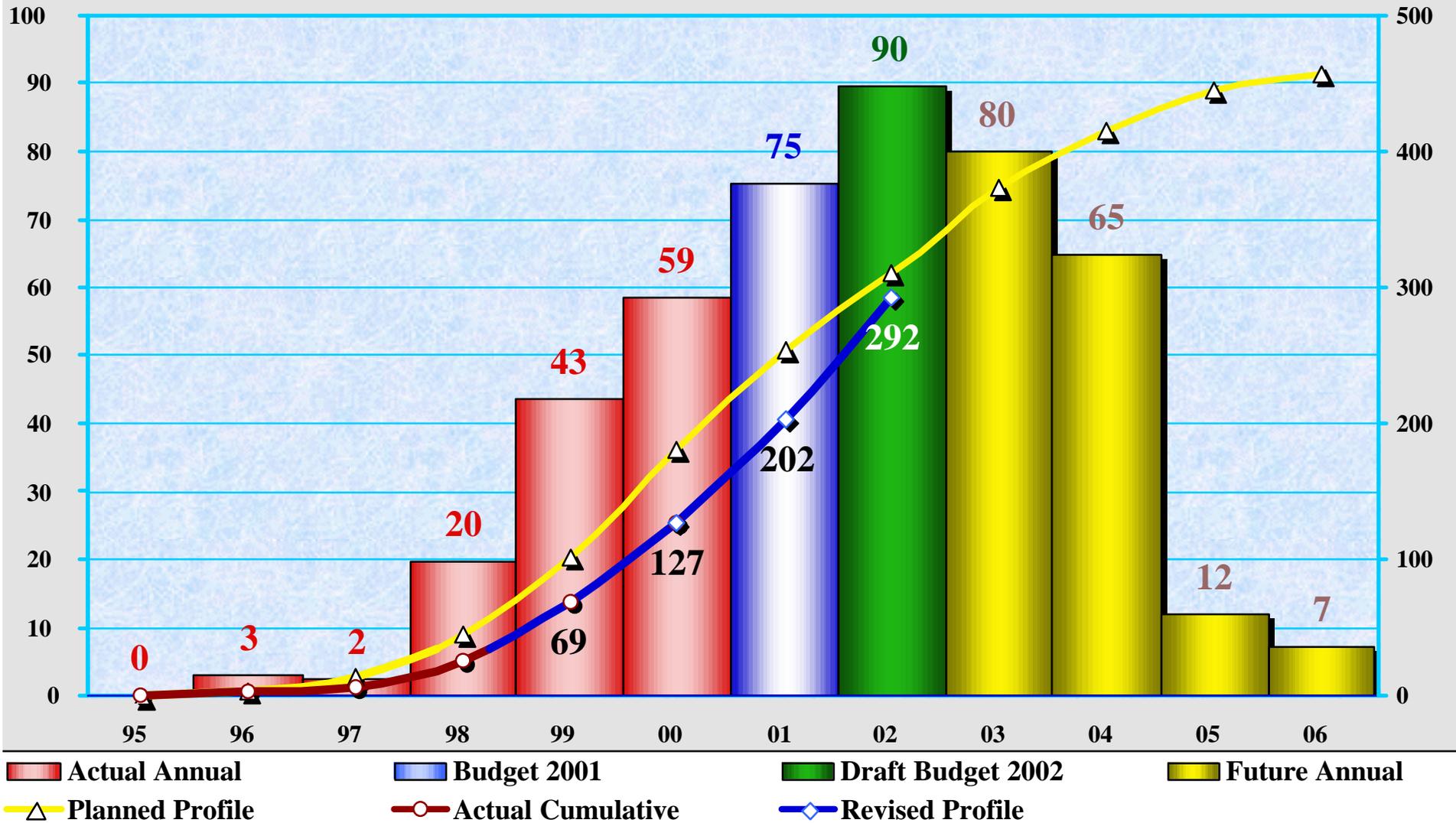
Total Commitments for CMS Construction





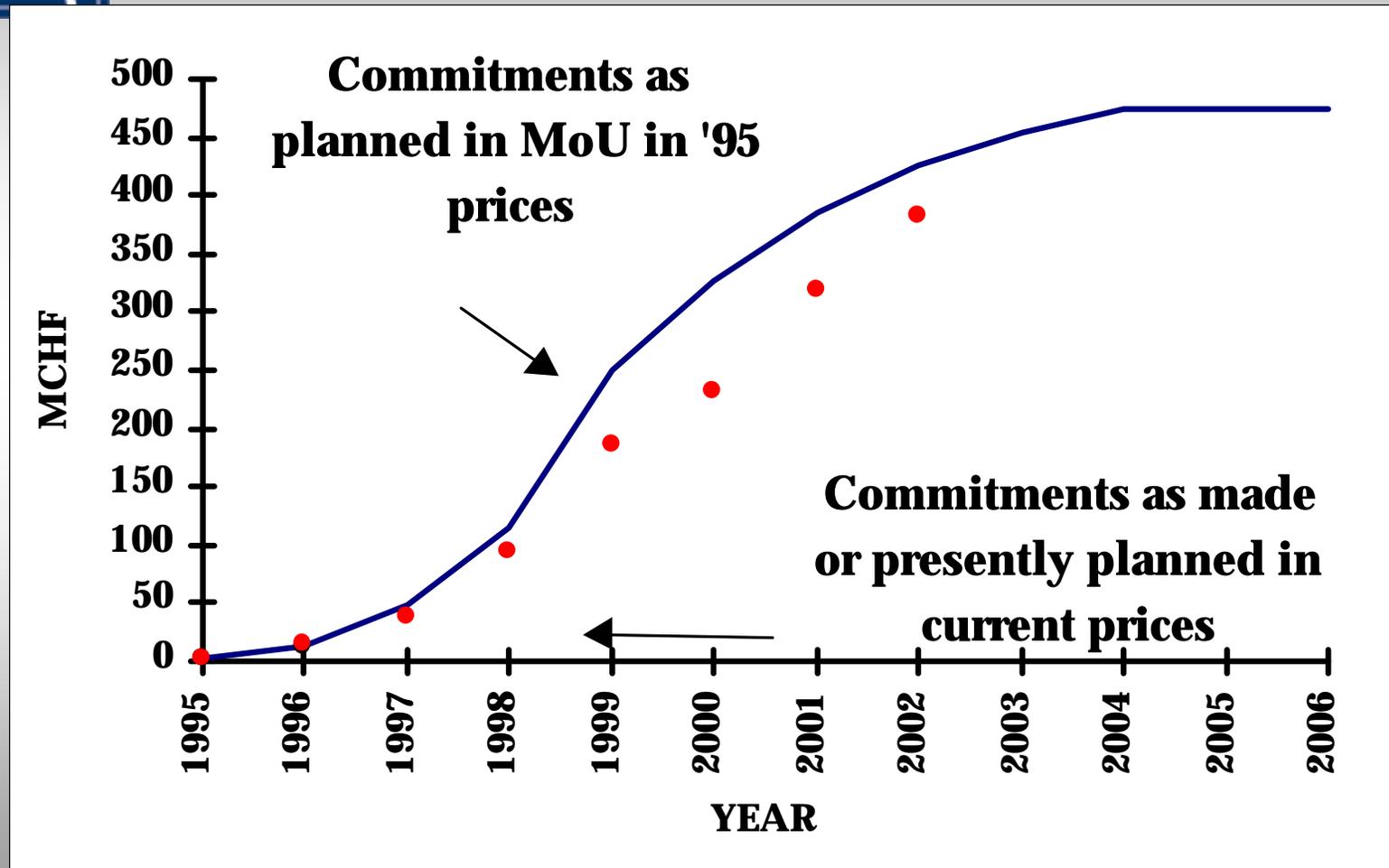
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Total Payments for CMS Construction



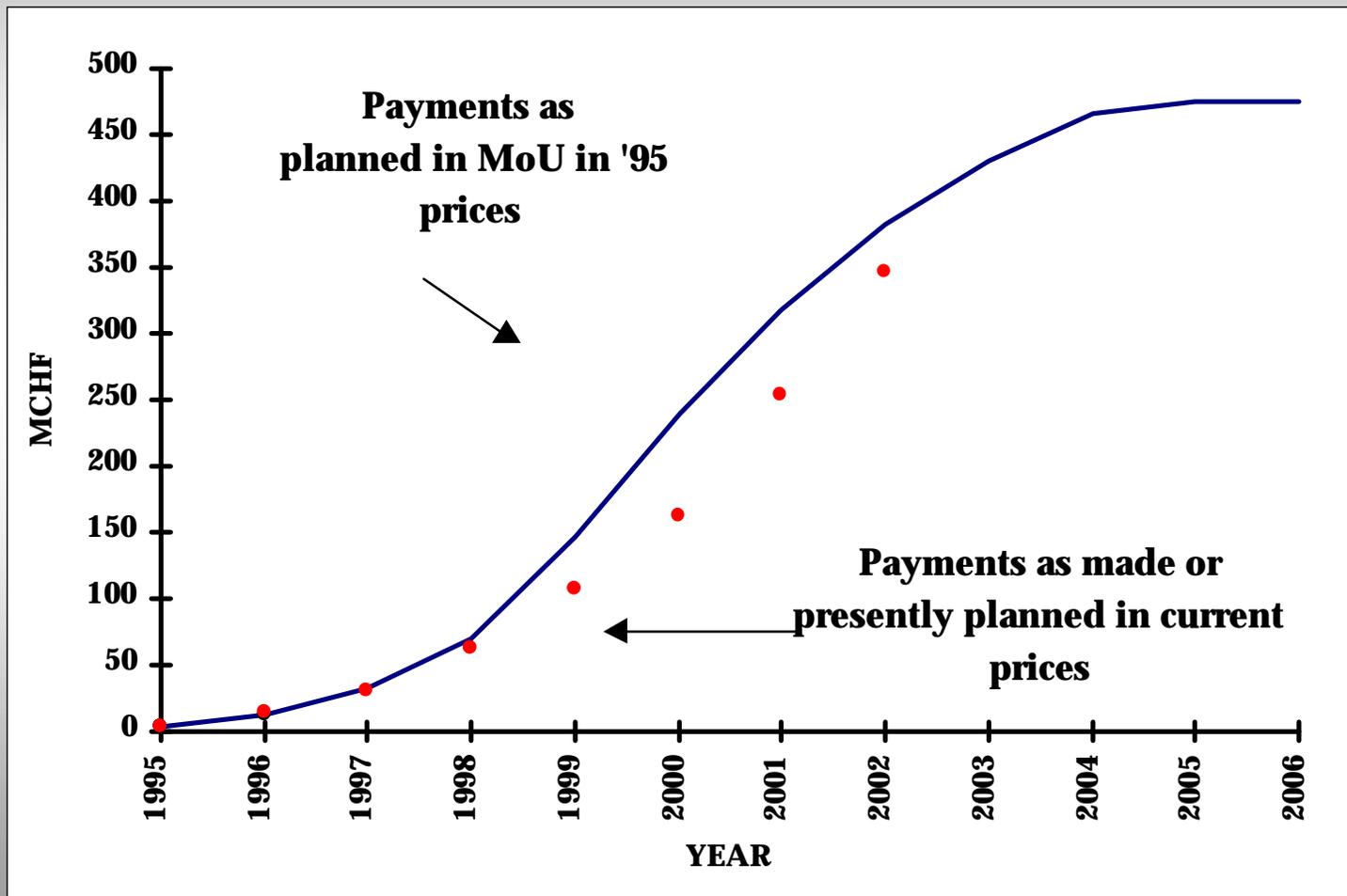


ATLAS Progress (1)





ATLAS Progress (2)





Maintenance and Operation of LHC experiments

- ◆ **ICFA guidelines accepted**
 - ◆ CERN provides safe, bare caverns and ancillary buildings
- ◆ **MoUs are binding**
- ◆ **need to have exposed, transparent costs:**
 - ◆ detectors investment ~ 40% of LHC investment, M&O costs in proportion
 - ◆ experiments involve a large fraction (50%) of Non-Member States
- ◆ **important for the way future global collaboration will work at CERN**



M& O (cont'd)

- ◆ **first discussion with SPC in March**
 - ◆ cost sharing principles, n. of. Authors preferred
- ◆ **first discussion with Funding Agencies in April 2001 RRB**
- ◆ **Tripartite Working Group (CERN, expts, external experts suggested by FA) will analyse costs for the discussion of RRB in October**



Cost categories

◆ Category A

- ◆ common operation costs e.g. gas, electricity, water ...
- ◆ Common Fund items e.g. magnets ...
- ◆ collaboration-wide services e.g. software licences ...

◆ Category B

- ◆ maintenance of items contributed by collaboration sub-sets

◆ Category C

- ◆ responsibility of host laboratory



LHC Computing

- ◆ **LHC Computing Review Completed**
- ◆ **Two Phase Approach**
 - ◆ **Prototype**
 - ◆ **Final System**
- ◆ **Plan to Cern Council in June**



Next Steps in the LHC Project

- Call for tender for Cryo-dipoles assembly is out, adjudication in September;
- Review of cost-to-completion going on, in view of the Status Report in December 2001;
- This will integrate the most important elements of the project:
 - most important adjudications
 - LHC computing
 - M&O discussion