

A collection of military medals and a pair of glasses on a wooden surface. The medals include a red ribbon medal with a circular emblem, a blue ribbon medal with a circular emblem, and two silver Maltese cross medals with central emblems. A pair of gold-rimmed glasses with thin temples is positioned diagonally across the center. In the bottom left corner, a circular compass is visible. The background is a light-colored wooden surface.

U.S. LHC Program Office Report

August 6, 2002
HEPAP Meeting
G. Crawford



Our Story So Far (Apr '02)

- ✍ CERN is dealing with cost/schedule issues
 - ✍ We are watching closely
 - ✍ We are communicating concerns to CERN
- ✍ US LHC Research Program “launching”
 - ✍ Significant challenges to meet profiles
 - ✍ Impacts still under consideration
 - ✍ Will be the focus of next round of reviews



CERN Status

✍ LHC Cost and Schedule Update

- ✍ CERN Mgmt response to overruns: many reviews, new LHC completion plan, now being implemented
- ✍ Approved by CERN Council in June
- ✍ CERN re-structuring plan accepted
- ✍ April '07 start now scheduled, no “pilot run.”
- ✍ Schedule is still “challenging.” SC cable prod’n is the critical path.
- ✍ Calls for additional Euros from Member States + others at April RRB



A Letter to R. Cashmore from US Agencies

✍ LHC is one of our highest priorities

- Cannot contribute to “supplemental” costs
- But we have contingency, and will use it to
 - Complete our deliverables
 - Address selected activities “of greatest interest to the experiment” (e.g. CMS Si Trkr, ATLAS tilecal modules)
- LHC schedule overruns limit our ability to be flexible
- “We face significant challenges” to provide resources for the LHC research program in the next few years
- We are worried about cost shifting from CERN ✍ Expts, esp. on infrastructure and tech. coord.



U.S. Detector Projects Status

- ✍ Some parts of US detector deliverables are tied to CERN LHC schedule (pixels, installation)
 - ✍ Currently evaluating end-game options
 - ✍ Current DOE Project Complete date is Sept 2005
 - ✍ US LHC Accelerator project will finish as scheduled
 - ✍ US ATLAS, US CMS to decide on a strategy and execute changes (if necessary) this Fall
 - ✍ Does not impact physics, but may impact performance ratings and project overheads
- ✍ N.B. NSF IG investigation of LHC, DOE IG beginning...



U.S. LHC Research Program

✍ This is meant to include:

✍ Maintenance and Operations (M&O)

✍ Software and Computing (S&C)

✍ Upgrade R&D (R&D)

✍ Detectors have advanced proposals

✍ NSF proposals: **Approved for FY2002-03!**

✍ S&C pieces have established reviews

✍ “Lehman” review of M&O/R&D piece Apr 9-11

✍ **US LHC Accelerator Research proposal more R&D-oriented...review in Sept.**

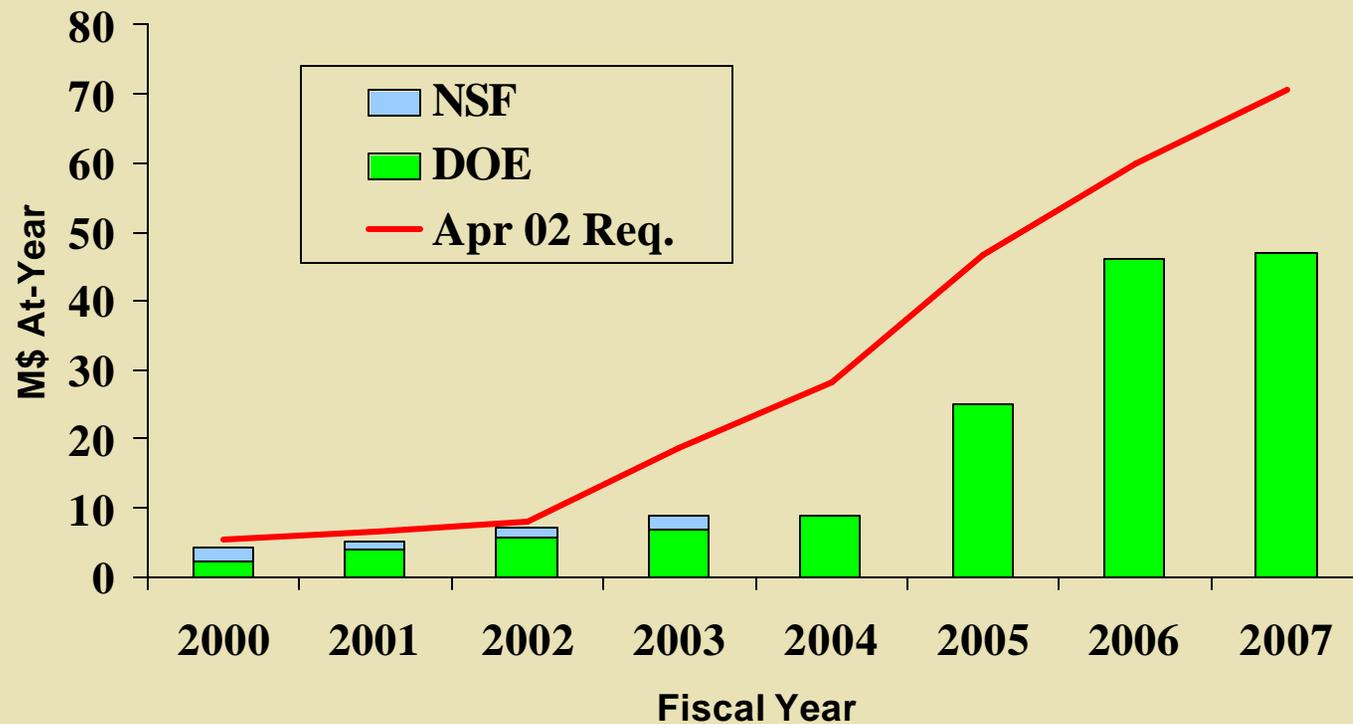


U.S. LHC Research Program Status

- ✍ Planning for FY2003 and beyond revealed serious resource issues
 - ✍ Seriously challenged by new DOE funding profile; several discussions w/agencies...
- ✍ Issues:
 - ✍ NSF commitment to LHC RP?
 - ✍ How to bridge FY2003-05?
 - ✍ Is this still a “leadership program”?

US LHC Research Program Funding Profiles

(Including S&C, M&O, Detector R&D)
{ Does not include NSF ITR funds }





Recent Progress

- ✍ Collaborations focused on “scrubbing” M&O, re-evaluated S&C options
 - Incorporated M&O planning into ATLAS/CMS Lehman reviews June 3-6
- ✍ Agencies take action
 - ✍ Joint Oversight Group discussion June 10
 - ✍ High-level briefings at both agencies
 - ✍ FY02 funding (both DOE + NSF)



Recent Progress II

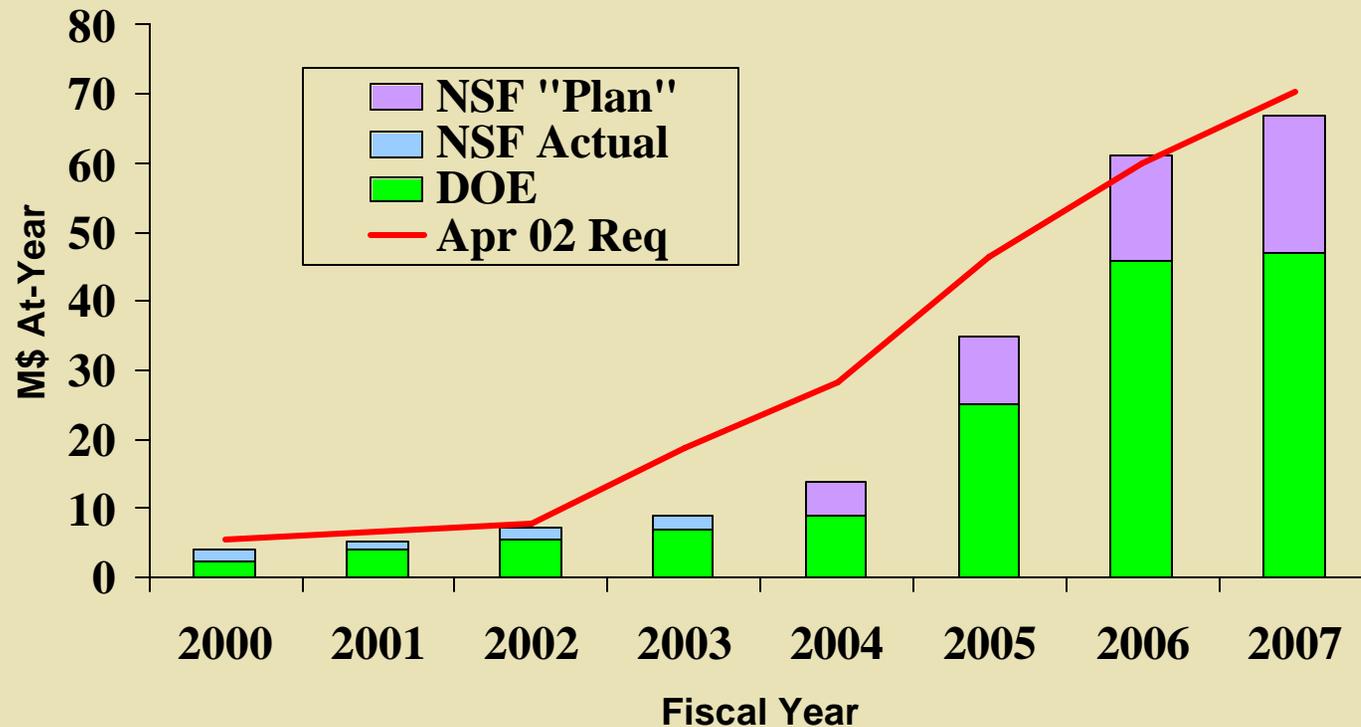
✍ US LHC Computing Reviews June 20/21

- ✍ J. Dehmer identifies LHC RP as one of the “highest priorities of NSF physics”
- ✍ Plan is for \$5M ✍ \$20M starting FY04
- ✍ Needs concurrence from NSF management

✍ Evaluating the *total* resources available (construction, research program, base) versus *total* needs, including real impacts and options

US LHC Research Program Virtual Profiles

(Including S&C, M&O, Detector R&D)
{ Does not include NSF ITR funds }





Next Steps

- ✍️ NSF: Mgmt action on “Dehmer Plan”
 - ✍️ New proposals (ITR,...?) for FY03
- ✍️ DOE: Orbach briefing Aug 16
 - ✍️ LHC Accelerator RP Review mid-Sept.
 - ✍️ Detector quarterlies Oct 1 ✍️ finalize endgame
 - ✍️ LHC Computing annual review Nov 12-15
- ✍️ Must continue to address near- and long-term funding issues