

CERN-RRB-2009-131/rev.



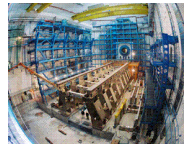
Status of ATLAS Resources

Presentation to RRB 12.10.2009

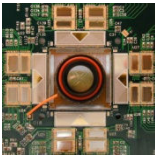
Markus Nordberg

ATLAS Resources Coordination

Full Design Luminosity (FDL) 2009-2010



- Document CERN-RRB-2009-105
- 2009 Status (for information)
 - TDAQ: contributions update 2.4 MCHF (Table 1)
 - Note: 1.7 MCHF worth of contributions beyond the initial, staged detector configuration but within the original CORE-framework
 - Insertable b-layer (IBL)
 - Current cost envelope 9.7 MCHF (“CORE style”), draft stage
 - » M&O-A (4.0 MCHF)+M&O-B (4.4 MCHF)+project money (1.2 MCHF)
 - No payments yet; Interim MoU for discussion by EoY 2009
 - TDR in Spring 2010; submitted to LHCC
 - Forward luminosity detectors
 - Work continues, based on voluntary and supplementary contributions. Costs & reporting being discussed
- 2010 TDAQ budget: 1.8 MCHF (Table 2, for approval)

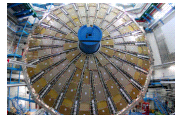


- **#106: Table 1**
- **2010 M&O-A Budget Estimates (kCHF)**

Category A (16.7 MCHF), including energy

- Cost drivers
 - Technical services (6.0 MCHF)
 - Magnet operation (2.3 MCHF)
 - Core computing I&S (2.1 MCHF)
 - On-line computing (3.3 MCHF)
 - Energy NMS part (1.0 MCHF)

Item & Cost Driver (by RRB SG Headings)	Cat. A M&O
Detector related costs Cryogenics operations Detector operations	5,783
Secretariat 1.5 FTE charged to ATLAS Publications, consumables	305
Communications GSM phones Computer network connections Collaborative tools	320
Core computing (infrastr. & serv Software process service Central production & operation	2,128
On-line computing Detector controls Software licences	2,960
Test beams, facilities Magnet Cryo Op. in B180 On-line computing support TDAQ common electronics	930
Laboratory operations Assembly areas, workshops TDAQ laboratory equipment	125
General services Heavy handling Technical support, storage Survey Outreach Energy	4,109
TOTAL	16,660
Hired manpower at CERN (in kC ^{incl. above} Institute manpower (in FTE)	0
TOTAL M&O FOR A	16,660



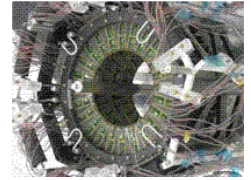
- #106: Table 1
- 2010 M&O-B Budget Estimates (kCHF)

- Category B (5.5 MCHF)

- Cost drivers
 - Technical services, manpower (1.9 MCHF)
 - Operation of areas, spares, stores (1.9 MCHF)
 - Electronics replacements, rental (1.5 MCHF)
 - 98 FTE core computing effort as in-kind
- Note: ID evaporative cooling included now in Cat-A

Pixel	SCT	TRT	ID	Gen	LAr	TileC	Muon	Comp	Cat. B M&O	Item & Cost Driver (by RRB SG Headings)
0	0	0	0	20	23	125			168	Mechanics
220	305	200	50	344	142	210			1,471	Standard electronics Crates, electronics pool rentals
0	0	0	0	40	15	30			85	Detector controls
45	20	30	320	10	65	0			490	Areas SR1-operations (ID), system tests, lab
1	5	0	8	5	7	5			31	Communications
24	30	30	80	10	23	0			197	Store items
450	0	0	0	630	110	0			1,190	Sub-detector spares (incl. b-layer replacement)
740	360	260	458	1,059	385	370	0		3,632	(Excluding hired manpower for Category B)
250	275	265	267	261	220	330			1,868	Hired manpower
5	5	5	11	2	9	8	98		143	
990	635	525	725	1,320	605	700	0		5,500	TOTAL M&O FOR B

Comments on M&O (A, B) 2010-2014



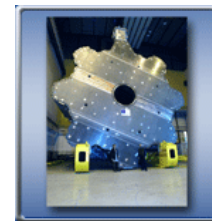
– M&O-A

- ID evaporative cooling work all in CAT-A (1.6 MCHF), part moved from M&O-B
- Includes the common part of IBL (4.0 MCHF)
- Both above have been reported to LHCC, requesting evaluation and approval in 2010 for M&O scrutiny 2011+
 - First feedback is positive

– M&O-B

- Includes ID-specific part of IBL (4.4 MCHF)
 - Original Pixel FAs have the option of treating their calculated share as separate project funding, reducing the 2010 M&O-B budget accordingly

M&O-A In-kind Contribution

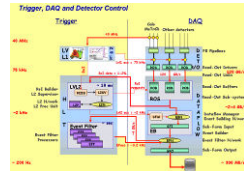


- **New M*O-A in-kind contribution for CB approval**

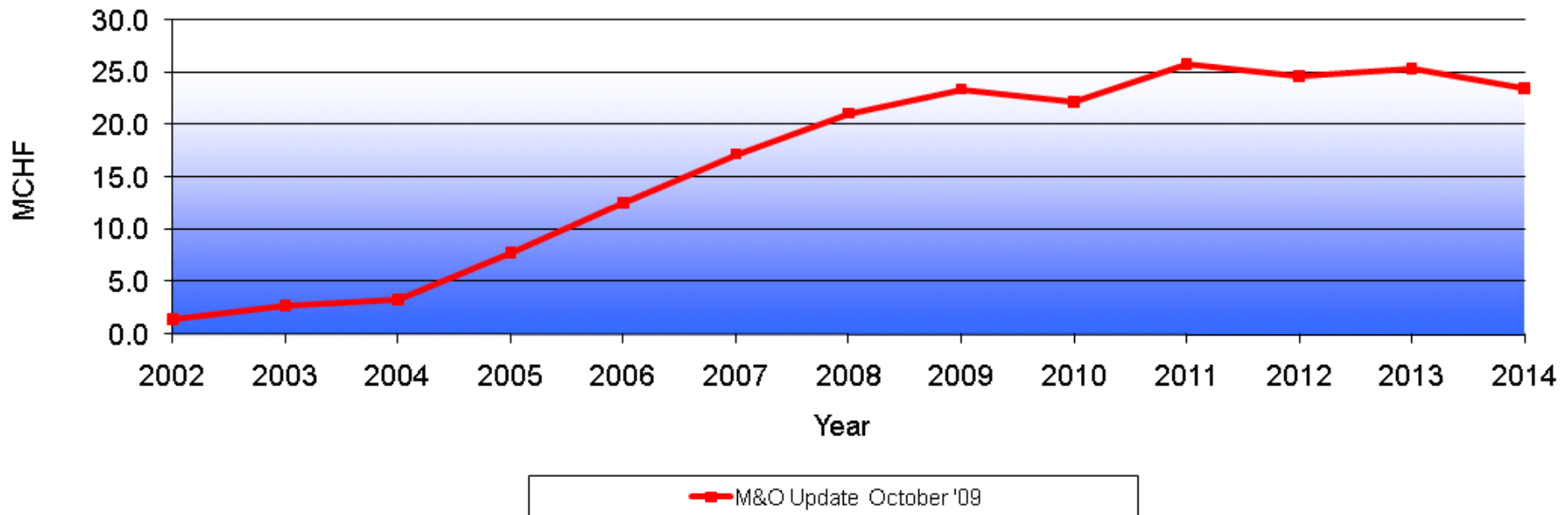
Core computing tasks (infrastructure and services; 1090 kCHF, from multiple Funding Agencies)

- The addendum for core computing Category-A M&O-A (CERN-RRB-2005-008) describes the computing tasks related to infrastructure and services. The following Funding Agencies offer in-kind contributions for these tasks: Czech Republic (0.40 FTE), IN2P3 (1.0 FTE), BMBF (1.3 FTE), DESY (0.3 FTE), Israel (0.2 FTE), Italy (1.7 FTE), Poland (0.2 FTE), Russia (0.7 FTE), Spain (0.4 FTE), UK (1.8 FTE), US (3.9 FTE). The average cost is 91 kCHF/FTE. The invoices sent to the above Funding Agencies will be reduced accordingly; however, the final financial values for each task will be settled once the achieved work packages have been completed and verified. In case any corrections need to be made for the above in-kind contributions for 2010, they will be reported for the April 2010 RRB.

Evolution of M&O 2002 – 2014, MCHF



Evolution of M&O Plans (MCHF)



Status of due M&O-A Contributions

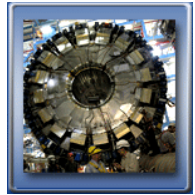
(October 1, 2009)



FUNDING AGENCIES	Outstanding 2002-2006	Outstanding 2007	Outstanding 2008	Outstanding 02-08
MEMBER STATES				
CZECH REPUBLIC			13 484	13 484
1) TOTAL MEMBER STATES			13 484	13 484
NON-MEMBER STATES				
ARMENIA	21 850	8 000		29 850
BELARUS	28 139	47 000	52 000	127 139
BRAZIL			5 000	5 000
MOROCCO		63 000		63 000
JINR	19 000	14 000	198 000	231 000
2) TOTAL NON-MEMBER STATES	68 989	132 000	255 000	455 989
GRAND TOTAL (1+2)	68 989	132 000	268 484	469 473

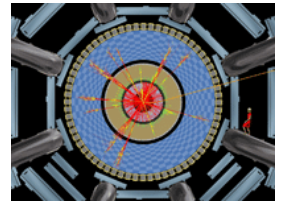
Status of due M&O-B Contributions

(October 1, 2009)



FUNDING AGENCIES	Outstanding 2002-2006	Outstanding 2007	Outstanding 2008	Outstanding 02-08
NON-MEMBER STATES				
ARMENIA	6 000	5 000	1 000	12 000
BELARUS			3 000	3 000
BRAZIL			3 000	3 000
MOROCCO	2 000			2 000
JINR	140 000	102 000	15 000	257 000
TOTAL NON-MEMBER STATES	148 000	107 000	22 000	277 000

RRB Invited to



- Take note of the 2009 FDL Status
- Approve FDL TDAQ budget proposal for 2010
- Approve M&O budget proposal for 2010