

MEMORANDUM

Date 06/04/2008

To: Members of the LHCb RRB
 From: O. Ullaland
 Subject: Status of M&O Category A.

Budget Closing Report for 2007.

LHCb stated at the last RRB that it was expected that the general spending on M&O Category A would closely follow the approved budget for 2007. The closing result for 2007 is given in Table 1. The main deviation is for the Online budget line. This is a result of our decision not to hire a third person for System Management and Data Base Support in view of the restructured schedule for LHC start-up. Due to a partial understaffing of the LHCb secretariat, this budget line is also slightly under spent. We propose that the overall under spending for 2007 is kept in the 2008 budget as a safeguard for Online. We will report back to RRB in November and compensate in the 2009 budget.

	Budget 2007	Spent 2007	Difference
Detector related	983.0	992.7	-9.7
Secretariat	189.0	149.9	39.1
Communication	12.0	5.3	6.7
Core computing	0.0	0.0	0.0
Online	580.0	378.5	201.5
Test beams	40.0	47.8	-7.8
Laboratory	45.0	52.8	-7.8
General services	373.0	368.7	4.3
	2,222.0	1,995.7	226.3
Power	600.0		

Table 1.
M&O Category A in kSFr at book closing for 2007.

The Power cost budget line was also under spent in 2007. This is already reflected in the 2008 budget.

Current status of 2008 M&O Category A.

RRB in October 2007 approved 2008 M&O Category A to a total of 2,345.0 kSFr with a power cost estimated to 300.0 kSFr. The latter was reduced from 970.0 kSFr to reflect the LHC schedule changes in 2007. In line with previous years, there are only minor movements on the M&O Category A by the end of February. We are however confident that also the expenditure this year will follow closely the budget forecast.

Forecast for 2009 M&O Category A.

The estimated budget for 2009 will be examined with the Scrutiny Group later this year and presented for ratification to RRB in November 2008. Any revisions are unlikely to make significant changes to the overall budget. Some changes can be expected in common electronics borrowed from PH Electronics Pool. The total budget currently stands at

2504.0 kSFr with the extra power cost at 970.0 kSFr. See Table 2. The latter is as usual shared by all Funding Authorities, but only charged to Non Member States.

	Budget 2009
Detector related	992.0
Secretariat	195.0
Communication	12.0
Core computing	0.0
Online	850.0
Test beams	35.0
Laboratory	60.0
General services	360.0
	2,504.0
Power	970.0

Table 2.
Estimated 2009 budget in kSFr for M&O Category A.

The main changes in the budget from 2008 to 2009, reflects the changes from an installation and commissioning phase to a running experiment with a strong budget line for maintenance and operation for DAQ, together with System Management and Database Support. The General Service budget line has been further reduced. The budget line for Power cost might need further optimisation when the LHC schedule is better established.

The sharing between the different Funding Authorities is based on the number of PhD equivalent members at each institute. This number is normally agreed for the next year in September the previous year. With the same numbers as for 2008, the sharing is given in Table 3.

	[2008] PhD Equ.	%	2009 M&O A (SFr) 2,504,000	Estimate NMS power (SFr) 970,000	total
BRAZIL	14.0	3.93	98,389	38,114	136,503
FRANCE	48.0	13.47	337,334	0	337,334
BMBF GERMANY	12.0	3.37	84,333	0	84,333
MPI, MPG, GERMANY	7.0	1.96	49,194	0	49,194
IRELAND	5.0	1.40	35,139	13,612	48,751
INFN ITALY	53.0	14.88	372,473	0	372,473
NETHERLANDS	15.0	4.21	105,417	0	105,417
P. R. CHINA	3.0	0.84	21,083	8,167	29,251
POLAND	13.0	3.65	91,361	0	91,361
HHNIPNE ROMANIA	4.0	1.12	28,111	10,890	39,001
RUSSIA	32.0	8.98	224,889	36,912	261,801
SPAIN	15.0	4.21	105,417	0	105,417
SWITZERLAND	16.0	4.49	112,445	0	112,445
UKRAINE	4.0	1.12	28,111	10,890	39,001
UK	62.3	17.49	437,831	0	437,831
USA	6.0	1.68	42,167	15,469	57,636
CERN	47.0	13.19	330,306	0	330,306
	356.3	100.0	2,504,000	134,053	2,638,053

Table 3.
Sharing of the estimated 2009 budget in SFr for M&O Category A.

Core Computing.

The CORE computing software manpower needs was estimated for 2008 and no new number is available. It is expected that the required support will be found as voluntary contributions from collaborating institutes that can be likened to Category B M&O. The current estimate is that the requirement in 2009 will be identical to last year, namely for 37 FTEs. No change is anticipated for the next few years. There is still in the range of 4 FTEs missing for this year but solutions are being sought and LHCb still hopes to avoid having this item partially met by service personnel charged to Category A. More work on the estimates for 2009 will be performed before the autumn RRB and will have been discussed both with National Computing Board and the Scrutiny Group as well as the Collaboration Board.

M&O Category B

There is not yet any new information concerning M&O Category B for the experiment. These budgets are currently being discussed and studied in each project. We anticipate to be able to present these to the Scrutiny Group, if they so require.

VELO Replacement. LHCb share.

The VELO replacement strategy was agreed at the LHCb Collaboration Board in September and presented to RRB in October 2007. The question was moreover referred to LHCC together with a clarifications of the MoU. LHCC has given it a positive recommendation. The LHCb collaboration therefore seeks an agreement in principle for this approach as given in CERN-RRB-2008-041 and CERN-RRB-2008-042.

Appendix 1.

In line with the procedure from previous years, a partial list of the main items paid from M&O Category A are given in tabulated form below.

Detector Related			
	Magnet	83.8	kSFr
	Gas	274.5	
	Cooling	84.2	
	Safety	32.4	
	Technical support	257.0	
	Beam Pipe	86.0	
Secretariat			
	Secretarial aid	146.0	
On-line computing			
	System management	239.1	
	Hardware	139.3	
Test beams, calibration facilities			
	Operation	47.8	
Laboratory operations			
	Operation	52.8	
General services			
	Cooling, Ventilation and Power distr.	79.8	
	Transport	229.9	
	Survey	55.0	