

## MEMORANDUM

Date: 7 November 2008

To : Members of the LHCb RRB  
 From : O. Ullaland  
 Subject : Category A M&O status for 2008 and estimate for 2009

Situation for 2008.

About 90 % of the expected contributions for M&O in 2008 had been received by the end of August. Together with the carry over of funds from 2007 and the non-arrival of invoices from some services, these contributions have ensured that there has been no spending profile problem. The spending until September is given in Table 1.

Item List	Spent	Budget
Detector related cost	760.3	986.0
Secretariat	107.4	192.0
Communications	0.1	12.0
Core computing	0.0	0.0
Online computing	343.0	705.0
Test Beam and calibration facilities	41.5	30.0
Laboratory operation	44.8	60.0
General services	267.6	360.0
Power		970.0

**Table 1.**

Status of Category A M&O at end of August in kSFr.

Based on extrapolations of the spending profile until end of August and the experience from previous years, we expect that the budget forecast for this year is correct for all the items apart from the power estimate. A compensation for power is proposed for 2009.

The budget for 2009, as discussed with the Scrutiny Group, is given in Table 2. The sharing between the different Funding Authorities, Table 3, is modified due to changes in the number of PhD equivalent members at the different institutes. The particle physics group of M.V. Lomonosov Moscow State University and INFN and University of Bari have also joined the collaboration.

Item List	Budget 2009
Detector related cost	914
Secretariat	192
Communications	12
Core computing	100
Online computing	850
Test Beam and calibration facilities	20
Laboratory operation	60
General services	360
Power	600.0
VELO Spare (500 kSFr over 5 years)	100.0

**Table 2.**

Category A M&O for 2009 in kSFr.

	PhD eq. total/ funding auth.		M&O A kSFr 2508	VELO kSFr 100	Power kSFr 600	Total
		%	SFr	SFr	SFr	SFr
<b>BRAZIL</b>	12.0	3.70	92,796	3,700	22,188	118,684
<b>FRANCE</b>	40.0	12.33	309,236	12,330	0	321,566
<b>BMBF GERMANY</b>	11.0	3.39	85,021	3,390	0	88,411
<b>MPI, MPG, GERMANY</b>	5.0	1.54	38,623	1,540	0	40,163
<b>IRELAND</b>	3.0	0.92	23,074	920	5,547	29,541
<b>INFN ITALY</b>	44.0	13.56	340,085	13,560	0	353,645
<b>NETHERLANDS</b>	19.0	5.86	146,969	5,860	0	152,829
<b>P. R. CHINA</b>	3.0	0.92	23,074	920	5,547	29,541
<b>POLAND</b>	10.0	3.08	77,246	3,080	0	80,326
<b>HHNIPNE ROMANIA</b>	4.0	1.23	30,848	1,230	7,396	39,474
<b>RUSSIA</b>	32.0	9.86	247,289	9,860	25,069	282,218
<b>SPAIN</b>	17.0	5.24	131,419	5,240	0	136,659
<b>SWITZERLAND</b>	17.0	5.24	131,419	5,240	0	136,659
<b>UKRAINE</b>	4.0	1.23	30,848	1,230	7,396	39,474
<b>UK</b>	57.5	17.72	444,418	17,720	0	462,138
<b>USA</b>	6.0	1.85	46,398	1,850	10,506	58,754
<b>CERN</b>	40.0	12.33	309,237	12,330	0	321,567
	324.5	100.00	2,508,000	100,000	83,649	2,691,649

**Table 3.**

Sharing of the proposed Category A M&O budget and VELO Spare for 2009.

Changes from 2008.

100 kSFr has been allocated for Core Computing. The Core Computing Chapter has always been set to zero until now. The expressed intention of the LHCb collaboration has throughout been that we will try to find the missing manpower, 4 FTE by the last count, on voluntary basis inside the collaboration and not ask for Core Computing service tasks charged to Category A. This position is no longer tenable. The funds will be used to support a Data Manager at CERN.

Outreach has been increased from 20 to 65 kSFr. The first task will be to make consistent, to strengthen and update the web pages created by the different projects of the experiment, organize and follow-up of the LHCb exhibition and furthermore to prepare written information target for different interest groups. With the first physics results, the task will be to make the results accessible and to put them into context of general physics and society.

Without changing the total budget for 2009, these items have been mainly funded by charging electronics and car pool items to Category B.

2007 under spending.

In view of the uncertainties in the LHC schedule and possible glitches in detector related support and services together with late or missing contributions, we propose that the under spending from 2007, 226.3 kSFr, is kept as a buffer in M&O A. This is in agreement with CERN-RRB-2006-026.

Category B M&O.

Category B M&O budget for 2008 is given in Table 4. Only minor adjustments are anticipated for 2009.

CALO	318.5
HLT	0.0
Level_0	60.3
MOUN	229.0
On Line	14.0
Outer Tracker	120.0
RICH	292.0
Silicon Tracker	98.0
VELO	113.1

**Table 4.**

Category B M&O budget for 2008 in kSFr.