

LHCb RRB April 2008

- a. 2007 Construction Budget
- b. 2007 M&O Book Closing
- c. Forecast

CERN-RRB-2008-044

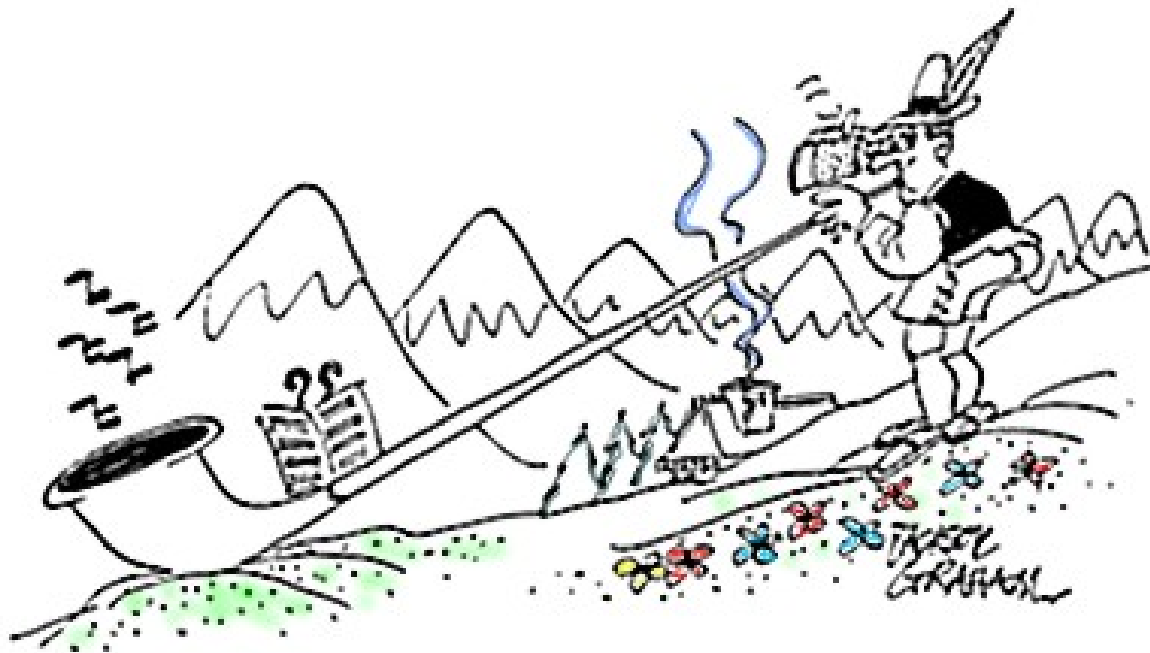
CERN-RRB-2008-046

O. Ullaland

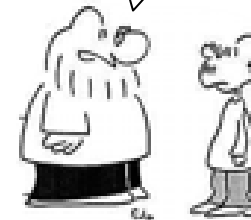
Due to schedule adjustments for LHC, and thereby the LHCb experiment, the spending profile has been slightly modified.

This is clearest in M&O Category A.

M&O Category A budget for 2009 will be discussed with the Scrutiny Group later this year. We expect only minor overall changes.



It is an old practice to tell the people deep in the pits that the schedule has changed.



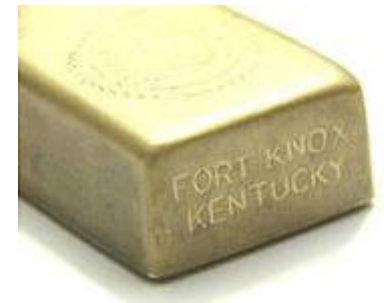
Common Fund. _____

As was previously reported to RRB in October 2007, all projects apart from Online/DAQ and Infrastructure have either used all their funds or have been completed.

2007	CALO	MUON	RICH	MAGNET	INFRASTR	DAQ	OTR	Sum
	158.2	381.5	22.4	0.0	1429.9		144.8	2136.8

Common Fund spending in 2007

We anticipate that in 2008 and 2009 Online/DAQ and Infrastructure will be the main users of the Common Fund.



CORE. _____

CORE spending on the detectors was almost completed by 2006. The only project still with CORE funds left is Online/DAQ. These will be used in the budget years 2008 and 2009.

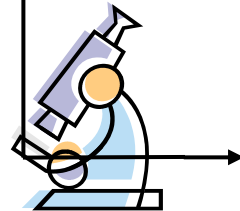
LHCb M&O Category A at Book Closing end January 2008
 (all in kSFr)
 (and without power)

	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

Rather well balanced budget.
 As could be expected, some over
 spending in support tasks and some
 under spending in operation tasks.

Propose to keep the surplus in 2007
 as a buffer for (mainly) Online in
 2008.

Report back to RRB in November and
 compensate in the 2009 budget.



Detector Related

Magnet	83.8 kSFr
Gas	274.5
Cooling	84.2
Safety	32.4
Tech. supp.	257.0
Beam Pipe	86.0

Secretariat

Sec. aid	146.0
----------	-------

On-line computing

Syst. mgm.	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

	PhD Equ.	%	2008 M&O A (SFr) 2,345,000	Estimate NMS power (SFr) 300,000	total
BRAZIL	14.0	3.93	92,141	11,788	103,929
FRANCE	48.0	13.47	315,914	0	315,914
BMBF GERMANY	12.0	3.37	78,978	0	78,978
MPI, MPG, GERMANY	7.0	1.96	46,071	0	46,071
IRELAND	5.0	1.40	32,908	4,210	37,118
INFN ITALY	53.0	14.88	348,821	0	348,821
NETHERLANDS	15.0	4.21	98,723	0	98,723
P. R. CHINA	3.0	0.84	19,745	2,526	22,271
POLAND	13.0	3.65	85,560	0	85,560
HHNIPNE ROMANIA	4.0	1.12	26,326	3,368	29,694
RUSSIA	32.0	8.98	210,609	11,416	222,025
SPAIN	15.0	4.21	98,723	0	98,723
SWITZERLAND	16.0	4.49	105,305	0	105,305
UKRAINE	4.0	1.12	26,326	3,368	29,694
UK	62.3	17.49	410,029	0	410,029
USA	6.0	1.68	39,489	4,784	44,273
CERN	47.0	13.19	309,332	0	309,332
	356.3	100.00	2,345,000	41,460	2,386,460

Approved budget for
M&O Category A for
2008.

Projected budget for
M&O Category A for
2009.

	[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

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.

No, I do not know what the moose has to do with VELO. Perhaps as moose is derived from the Algonquian Eastern Abnaki name *moz*, meaning "he trims, shaves, but never bikes".



CHF 20.80

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.

Core Computing.

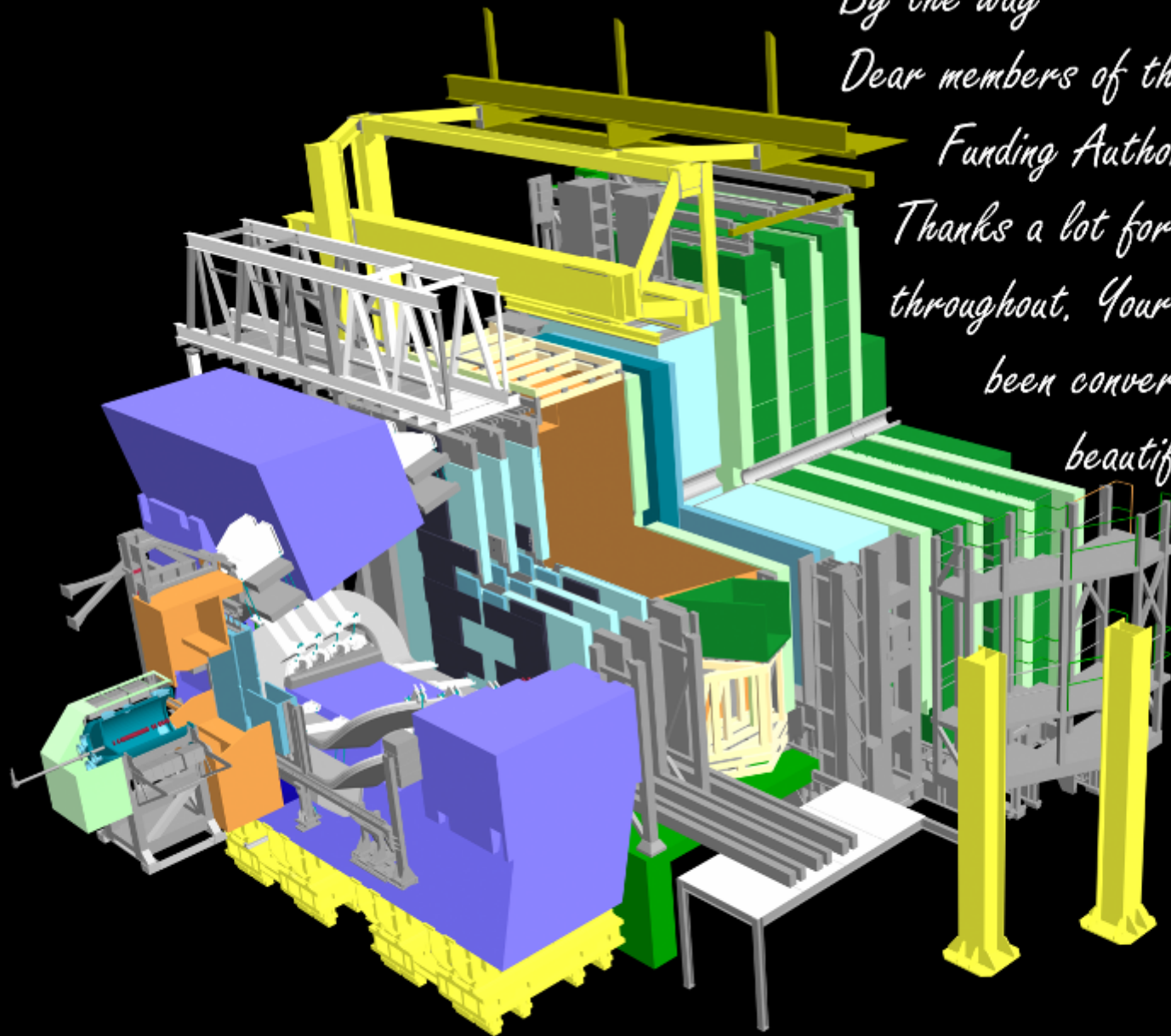
The CORE computing software manpower needs was estimated for 2008 and no new number is available. It is expected that the required support will be found as voluntary contributions from collaborating institutes that can be likened to Category B M&O. The current estimate is that the requirement in 2009 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 after discussions in the National Computing Board and the Scrutiny Group as well as at the Collaboration Board.

Outreach.

The collaboration is discussing a better usage and funding of this very essential undertaking.





*By the way
Dear members of the
Funding Authorities
Thanks a lot for your support
throughout. Your funds have
been converted to a
beautiful experiment*

*ready
to take data.*

Cat B Estimates for 2007	
Sub-detector	kCHF
VELO	126
RICH	114
STR	160
OTR	460
CALO	340
Muon	356
Online	325
Trigger	60.3

Back-up slide

Reminder from RRB April 2006

estimate from 2002
 Will increase to 719 k if HPD spares are not funded.
 3 FTE in 2007, 3x2 months in 2008 Onwards
 estimate from 2002
 Expected to drop to about 200 k /yr for later years

Reminder from RRB April 2007

Cat B estimates for 2008

Cat B 2008 TOTALS

VELO	126
RICH	197
ST	83
OT	34
CALO	340
MUON	229
TRIGGER	60.3
DAQ	270
ECS	70