

# CMS

## M&O Expenditure for 2007

Compact Muon Solenoid

**CERN-RRB-2008-054**

Cf. CERN-RRB-2008-029

A. Petrilli, RRB-26, April 14, 2008



## Introduction

- This is the sixth time the CMS Collaboration presents an M&O Expenditure report
- Reported expenses are for payments and open commitments related to delivered goods
- Long-term commitments should normally not occur
- Expenses are compared to the budgets



## M&O-A 2002-2007 Contributions

- M&O-A received contributions are as indicated in the Finance report (cf. CERN-RRB-2008-003)
- CMS thanks all Funding Agencies for their timely payments to the 2007 M&O-A

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## M&O-A 2007 Expenditures Overview

Year	2007
System	A. M&O-A

Type	M&O-A w/o Power	Subsystem	kCHF	
			Budget	Payments
Expense		A.1. Detector related costs	3,242	3,305
		A.2. Secretariat	245	265
		A.3. Communications	70	84
		A.4. On-line computing	1,256	1,194
		A.5. Test beams, calibration facilities	165	133
		A.6. Laboratory operations	280	268
		A.7. General services	1,860	1,740
		A.9. Core Computing Infrastructure & Services	980	937
		<i>M&amp;O-A w/o Power Total</i>	8,098	7,927
	<i>Power</i>		1,600	1,455
<i>Expense Total</i>			9,698	9,382
<i>Income</i>			9,698	9,548

All data extracted from Annex 1

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## Outstanding Contributions M&O-A

<b>Budget Year</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Invoiced CHF</b>	924,788	1,765,337	2,497,757	3,692,022	6,564,745	8,847,436
<i>Paid before following year April RRB</i>	805,287	1,548,732	2,301,570	3,371,721	6,384,062	8,839,133
<i>% Outstanding before following year April RRB</i>	12.9%	12.3%	7.9%	8.7%	2.8%	0.1%
<b>Paid to-date</b>	894,567	1,704,116	2,462,961	3,597,022	6,551,375	8,839,133
<i>% Outstanding to-date</i>	3.3%	3.5%	1.4%	2.6%	0.2%	0.1%

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## M&O-B Expenditures Overview

- **As CMS does not centrally invoice for M&O-B, the Collaboration is reporting qualitatively on these expenses**
- **The arrangements made in 2007 worked satisfactorily**
- **There are no reports of Institutes not participating to their fair share of M&O-B costs.**

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## Summary

**The RRB is invited to take note of the present expenditure report.**

- **We kindly ask Funding Agencies to ensure that payments are made as early as possible**
- **We urgently ask Funding Agencies with outstanding contributions for the previous years to make these payments as soon as possible**
- **With the help of CERN, we will keep working on reducing the outstanding contributions**

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# CMS

## Status of M&O MoU Signatures

Compact Muon Solenoid



## Status of M&O MoU Signatures

Funding Agency	Signed on
Austria	9-Oct-2002
Belgium-FNRS	23-Aug-2002
Belgium-FWO	20-Aug-2002
Brazil	
Bulgaria	
Colombia	
CERN	4-Dec-2002
China NSFC/CAS	2-Aug-2002
Croatia	8-Oct-2002
Cyprus	16-Aug-2002
Estonia	17-Oct-2002
Finland	19-Sep-2002
France-CEA	26-Aug-2002
France-IN2P3	25-Sep-2002
Germany	12-Sep-2002
Greece	
Hungary	13-Sep-2002
India	16-Sep-2002
Iran	
Ireland	

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## Status of M&O MoU Signatures

Funding Agency	Signed on
Italy	25-Nov-2002
Korea	25-Oct-2006
Mexico	
New Zealand	
Pakistan	3-Mar-2003
Poland	19-Oct-2004
Portugal	26-Jun-2002
RDMS-Dubna	17-Sep-2002
RDMS-Russia	26-Mar-2006
Serbia	12-Aug-2005
Spain	17-Feb-2003
Switzerland-ETHZ	
Switzerland-PSI	
Switzerland-Univ. Basel	15-Nov-2002
Switzerland-Univ. Zurich	27-Nov-2002
Taipei	12-Jul-2002
Turkey	12-Mar-2003
UK	24-Sep-2002
USA-DOE/NSF	14-Oct-2002

The M&O MoU has not yet been sent to the following Funding Agencies:  
Brazil, Colombia, Iran, Ireland, Mexico and New Zealand

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# CMS

## Preliminary Draft Budget for M&O 2009

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Cf. CERN-RRB-2008-030

A. Petrilli, RRB-26, April 14, 2008



## Introduction

- The CMS Collaboration is presenting, as last year, a preliminary draft Budget Request both for Category A and Category B M&O for information only
- The cost sharing presented here is for information only and will change
- Further input from the Scrutiny Group will be taken into account in the October M&O Draft Budget.



## 2009 M&O-A PDB Comments

- M&O-A costs will be reviewed by the CMS Finance Board prior to be submitted to the Scrutiny Group
- The M&O-A cost estimates have changed with respect to the October 2007 RRB meeting in one area with a total increase in the cost estimates of some 150 kCHF
- The M&O-A sharing is based on the latest PhDs list available in October 2007 (cf. CERN-RRB-2007-083), this list will be updated for the October 2008 RRB

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## 2009 M&O-A PDB Overview of Annex A.1

Maintenance & Operations (kCHF)		Year
Group	Description	2009
Maintenance & Operations	Detector related costs	3,697
	Secretariat	340
	Communications	120
	On-line computing	3,400
	Test beams, calibration facilities	115
	Laboratory operations	270
	General services	1,550
	Core Computing Infrastructure & Services	1,645
Maintenance & Operations Total		11,137
Power	Electricity	1,800
Power Total		1,800
Grand Total		12,937

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## 2009 M&O-B PDB Comments

- M&O-B costs have been reviewed by the CMS Collaboration
- This budget request will be further updated before submission to the Scrutiny Group
- The M&O-B cost sharing presented is the same as the one presented in October 2007
- The sharing is still subject to changes

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## 2009 M&O-B PDB Overview of Annex B.1

Year	2009
Latest	TRUE

KCHF/FTE			Detector						
Level2	Keys	Level3	Tracker	ECAL	HCAL	Muon	Trigger	Core Computing	Grand Total
Material Resources	B.1.01	Mechanics	26	28	69	11			133
	B.1.02	Gas-system	14	5	2	44			65
	B.1.03	Cryo-system				0			0
	B.1.04	Cooling system	31	35	2	21			88
	B.1.05	FE electronics	0	0	0	172			172
	B.1.06	Standard electronics, PS (LV, HV)	548	215	0	185			948
	B.1.07	Standard electronics, Crates	0	48	0	68			116
	B.1.08	Standard electronics, RO Modules	748	167	0	245	490		1,650
	B.1.09	Controls, (DCS, DSS)	58	100	0	134			292
	B.1.10	Sub-Detector Spares	0	210	0	74			284
	B.1.11	Areas	233	80	23	82			418
	B.1.12	Communications	23	21	96	29			169
	B.1.13	Store Items	48	60	31	49			188
	B.1.14	Hired Manpower @ CERN (CHF)	660	465	346	290	200		1,961
<b>Material Resources Total</b>			<b>2,389</b>	<b>1,433</b>	<b>568</b>	<b>1,405</b>	<b>690</b>		<b>6,485</b>
Human Resources	B.2.01	Technical Manpower @CERN (FTE)	8	10	15	15	8		56
	B.2.02	Core Computing Manpower @CMS (FTE)						96	96
<b>Human Resources Total</b>			<b>8</b>	<b>10</b>	<b>15</b>	<b>15</b>	<b>8</b>	<b>96</b>	<b>152</b>

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## M&O-B Manpower

- **As reported in October 2007, CMS is working towards Memoranda of Agreement (MoA) to formalize the service work to operate the CMS detector**
- **There may be some partial overlap between MoA and M&O-B**
- **We will make sure no double counting exists before finalizing the MoA**

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## Summary

- **The M&O-A Preliminary Draft Budget 2009 amounts to some 13 MCHF**
- **The M&O-B Preliminary Draft Budget 2009 amounts to some 6.5 MCHF and some 152 FTEs of collaborating Institutes manpower**
- **The RRB is invited take note of the present, unscrutinized, cost estimates for M&O-A and M&O-B**

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