



Report on M&O Budgets

1 - M&O A Expenses in 2008

Table 1 presents a summary of 2002 - 2008 category A M&O invoices, income and amounts outstanding by Funding Agency as December 31st, 2008.

A breakdown of the 2008 Maintenance & Operations budget and expenditure is given in table 2. In addition, during 2008 an amount of 453 kCHF has been paid on commitments from the previous year.

Table 3 gives a summary of income, expenditure and balance of the M&O A accounts for the period 2002 - 2008.

2 - M&O A Estimates 2010 - 2012

The ALICE Maintenance and Operations category A budget 2009 and cost estimates for the period 2010 - 2013 are summarized in table 4.

3 - Preliminary Estimate for M&O A Expenses in 2010

Based on presently available estimates of the 2009 M&O category A cost and the sharing as determined in September 2008, a preliminary estimate of the 2010 budget and sharing is presented in Table 5.

The budget and sharing will be updated during 2009 and presented to the Resources Review Board in October 2009 for approval. The unused budget for energy in 2008, which has been invoiced to Non Member States Funding Agencies, will be deducted from the 2010 invoices.

4 - Category B Estimates

Table 6 shows estimates of Category B M&O budget requirements for the period 2010 - 2013. In a number of cases the data has been updated with respect to those presented to the Resources Review Board meeting on November 12, 2008. The data will be reviewed during 2009 before being presented to the meeting of the Resources Review Board in October 2009 for information.

Table 7 shows the 2010 preliminary M&O B budget by funding agencies and system.

Year	Country	2002 - 2007				2008				2002-2008 Due
		Invoiced	Received	In-kind	Due	Invoiced	Received	In-kind	Due	
MS	CERN	1,368,626	1,368,626			518,200	518,200			
	Czech Republic	203,657	203,657			97,200	97,200			
	Denmark	93,544	93,894		-350	40,500	40,500			-350
	Finland	113,255	113,255			48,600	48,600			
	France CEA	140,934	140,934			56,700	56,700			
	France IN2P3	979,695	979,695			453,400	453,400			
	Germany BMBF	625,255	625,255			259,100	259,100			
	Germany GSI	399,999	399,999			145,700	145,700			
	Greece	80,295	80,695		-400	56,700	56,700			-400
	Hungary	59,242	59,242			24,300	24,300			
	Italy	2,338,628	2,338,628			955,400	957,377		-1,977	-1,977
	Netherlands	180,887	180,887			89,100	89,100			
	Norway	230,058	230,058			145,700	145,700			
	Poland	345,743	345,744		-1	113,400			113,400	113,399
	Slovak Republic	276,065	276,065			105,300	105,300			
	Spain/Cuba	41,600	41,600			56,700	56,700			
	Sweden	100,835	100,835			48,600	48,600			
	United Kingdom	128,825	128,825			89,100	89,100			
	MS Total	7,707,143	7,707,894		-751	3,303,700	3,192,277		111,423	110,672
NMS	Armenia	61,643	61,643			25,300	25,300			
	Brazil					50,700			50,700	50,700
	China	117,640	19,460	84,780	13,400	101,300	43,540	21,100	36,660	50,060
	Croatia	65,463	65,463			50,700	50,700			
	India	597,468	597,468			323,900	323,900			
	Japan	45,200	45,200			87,400	87,400			
	JINR	294,674	68,080	298,972	-72,378	76,000		36,770	39,230	-33,148
	Mexico	146,403	146,403			152,000	152,000			
	Republic of Korea	80,200	80,200			76,000	76,000			
	Romania	166,448	166,448			139,400	63,400		76,000	76,000
	Russia	1,004,594	1,004,594			502,900	278,034		224,866	224,866
	South Africa	70,370	70,370			38,000	38,000			
	Ukraine	95,892	59,620	28,000	8,272	38,000	26,000		12,000	20,272
	USA DOE	135,504	135,509		-5	250,700	250,700			-5
	USA NSF	92,707	92,809		-102	50,100	50,100			-102
	NMS Total	2,974,206	2,613,267	411,752	-50,813	1,962,400	1,465,074	57,870	439,456	388,643
	Grand Total	10,681,349	10,321,161	411,752	-51,564	5,266,100	4,657,351	57,870	550,879	499,315
	<i>Percentage collected:</i>		100.5				89.5 %			

Table 1 – 2002 - 2008 Cat. A M&O Invoices and Income
as 31/12/2008 (CHF)

Budget M&O Category	Total Budget	Expenditure			
		Spent	Committed	TOTAL	Ratio
Detector related costs	1,959.2	1,731.3	321.0	2,052.4	1.05
Secretariat	269.1	170.8		170.8	0.63
Communications	10.0	0.9		0.9	0.09
Off-line computing	427.2	551.9		551.9	1.29
On-line computing	797.3	508.0	108.7	616.7	0.77
Test beams & calibration facilities	147.2	126.7		126.7	0.86
Laboratory operations	360.0	352.4	91.8	444.1	1.23
General services	516.2	346.0	1.9	347.9	0.67
Consultancy	40.0	25.9	2.0	27.9	0.70
Outreach	65.0	60.6	16.3	76.9	1.18
Grand Total	4,591.2	3,874.4	541.7	4,416.1	0.96
Power*	2,592.0	341.1		341.1	0.13

* 2008 Unused power invoiced to MNS countries will be deducted from the 2010 M&O A invoices

Table 2 – 2008 Cat. A M&O Budget and Expenditure (kCHF)

M&O A Cashflow 2002 - 2008 by Calendar Year

Unit: CHF

Category	Income								
Contributions	Year							2008	Grand Total
Budget year	2002	2003	2004	2005	2006	2007			
2002	329,908	67,751	4,888	8,704	8,735	4,368			424,354
2003	12,460	564,616	72,880	23,860	15,463	6,460			695,739
2004			936,400	67,616	112,163	13,197			1,129,376
2005		12,660		1,213,160	123,337	153,473			1,502,630
2006				63,860	2,241,659	322,861	24,530		2,652,910
2007					274,300	3,562,423	502,780		4,339,503
2008						692,383	4,022,838		4,715,221
2009							110,583		110,583
Grand Total	342,368	632,367	1,026,828	1,377,200	2,775,657	4,755,165	4,660,731		15,570,316

Category	Expenditure								
Expenditure	Year							2008	Grand Total
Budget year	2002	2003	2004	2005	2006	2007			
2002	201,897	45,776							247,673
2003		502,184	75,484	20,000					597,668
2004			855,148	240,000					1,095,148
2005				1,134,088		273,692			1,407,780
2006					2,347,487	291,299			2,638,786
2007						3,422,297	453,111		3,875,408
2008							4,040,066		4,040,066
Grand Total	201,897	547,960	930,632	1,394,088	2,621,180	3,713,596	4,493,177		13,902,528

Balance/year	140,471	84,407	96,196	-16,888	154,477	1,041,569	167,554		1,667,788
End year balance	140,471	224,879	321,075	304,187	458,665	1,500,234	1,667,788		

Table 3 – Summary of M&O Cat. A 2002 - 2008 (CHF)

Category	2009	2010	2011	2012	2013
Detector related costs	1,828	1,846	1,796	1,796	1,796
Secretariat	278	288	288	288	288
Communications	0	0	0	0	0
Off-line computing	446	490	490	490	490
On-line computing	1,202	1,486	1,847	1,993	1,993
Test beams & calibration facilities	102	95	95	95	95
Laboratory operations	310	310	310	310	310
General services	520	511	511	511	511
<i>Total without power</i>	4,687	5,026	5,337	5,482	5,482
<i>Power</i>	2,592	2,231	2,231	2,231	2,231
<i>Grand Total</i>	7,279	7,257	7,567	7,713	7,713
Operational sub-items	2,594	2,647	2,647	2,647	2,647
Consumable sub-items	2,093	2,379	2,689	2,835	2,835
Power	2,592	2,231	2,231	2,231	2,231
<i>Grand Total</i>	7,279	7,257	7,567	7,713	7,713

Table 4 – Cat. A M&O Budget 2009 and Estimates 2010 – 2013 (kCHF)

2010 M&O A Budget no power	5,026.0 kCHF	
Power	2,230.6 kCHF	7,256.6
ALICE scientists	555.0	
M&O per scientist	9.1 kCHF	
Power per scientist	4.0 kCHF	

Preliminary 2010 M&O A Budget

	Scientists	M&O Cat A without energy	Energy	Energy billed to FA	Bill in kCHF
CERN	58	525.2	233.1		525.24
Czech Republic	12	108.7	48.2		108.67
Denmark	6	54.3	24.1		54.34
Finland	5	45.3	20.1		45.28
France CEA	6	54.3	24.1		54.34
France IN2P3	47	425.6	188.9		425.63
Germany BMBF	35	317.0	140.7		316.95
Germany GSI	21	190.2	84.4		190.17
Greece	5	45.3	20.1		45.28
Hungary	3	27.2	12.1		27.17
Italy	107	969.0	430.0		968.98
Netherlands	10	90.6	40.2		90.56
Norway	15	135.8	60.3		135.84
Poland	14	126.8	56.3		126.78
Slovak Republic	13	117.7	52.2		117.73
Spain/Cuba	7	63.4	28.1		63.39
Sweden	4	36.2	16.1		36.22
United Kingdom	10	90.6	40.2		90.56
Armenia	1	9.1	4.0	4.0	13.07
Brazil	7	63.4	28.1	28.1	91.52
China	7	63.4	28.1	28.1	91.52
Croatia	4	36.2	16.1	16.1	52.30
India	32	289.8	128.6	122.7	412.46
Japan	9	81.5	36.2	34.7	116.22
JINR	6	54.3	24.1	24.1	78.45
Mexico	13	117.7	52.2	52.2	169.97
Republic of Korea KICOS	6	54.3	24.1	24.1	78.45
Romania	10	90.6	40.2	40.2	130.75
Russia	39	353.2	156.7	114.2	467.42
South Africa	6	54.3	24.1	24.1	78.45
Ukraine	5	45.3	20.1	20.1	65.37
USA DOE	28	253.6	112.5	109.3	362.82
USA NSF	4	36.2	16.1	15.6	51.83
Total	555	5,026.0	2,230.6	657.7	5,683.73

Table 5 – Preliminary Cat. A Budget and Sharing for 2010 (kCHF).

A rebate will be applicable to Non Member States for the unused budget for energy in 2008.

System	Data			
	2010	2011	2012	2013
Pixel	155	104	104	104
Drift	195	200	200	200
Strip	194	194	194	194
ITS-CMA	63	63	63	63
TPC	65	65	65	65
TRD	163	163	163	163
TOF	158	158	158	158
HMPID	150	150	150	150
PHOS	130	130	130	130
Muons	280	280	280	280
Trigger	20	20	20	20
ACORDE	20	10	10	10
FMD	30	30	30	30
PMD	70	70	70	70
T0	38	48	48	48
V0	20	20	20	20
ZDC	37	37	50	37
<i>Grand Total</i>	<i>1,788</i>	<i>1,742</i>	<i>1,755</i>	<i>1,742</i>

Table 6 – Cat. B M&O Budget Estimates 2010 – 2013 (kCHF)

2010	System																	Grand Total
	Pixel	Drift	Strip	ITS-CMA	TPC	TRD	TOF	HMPID	PHOS	Muons	Trigger	ACORDE	FMD	PMD	T0	V0	ZDC	
CERN	77.7		24.1		10.4			45	9.09									157.12
Czech Republic		11.1																20.21
Denmark					2.08								30					32.08
Finland			10.1												38.1			48.19
France CEA										30								30.00
France IN2P3			39.2							130						10		179.19
Germany BMBF						153												153.00
Germany GSI					37.4													37.40
Italy	77.7	170	63.2	56.3			110	105		60							37	679.28
Netherlands			42.3															42.29
Norway									18.2									18.18
Poland					1.87				9.09									10.96
Slovak Republic					1.25													1.25
Sweden					11.6													11.65
United Kingdom											20							20.00
China									18.2									18.18
Croatia					0.35													0.35
India										30				70				100.00
Japan									9.09									9.09
JINR						7.1			9.09									16.19
Mexico												20						30.00
Republic of Korea							48									10		48.00
Romania NIPNE						3.3												3.30
Ukraine		11.1	13															24.11
United States OSU		0.55			2.82													3.36
Russia		2.15	1.94	3.38					57.3	30								94.74
<i>Grand Total</i>	<i>155</i>	<i>195</i>	<i>194</i>	<i>62.5</i>	<i>65</i>	<i>163</i>	<i>158</i>	<i>150</i>	<i>130</i>	<i>280</i>	<i>20</i>	<i>20</i>	<i>30</i>	<i>70</i>	<i>38.1</i>	<i>20</i>	<i>37</i>	<i>1,788.11</i>

Table 7 – Sharing of M&O B 2010 budget between Funding Agencies (kCHF)