

## Report on M&O Budgets

### 1 - M&O A Expenses in 2005

Table 1 presents a summary of 2002 - 2005 category A M&O invoices, income and amounts outstanding by Funding Agency. It is noted that invoices for 2002 - 2005 for China, USA ORNL and USA OSC (Institutes or Funding Agencies that have not signed the Construction MoU) have been cancelled.

A breakdown of the 2005 Maintenance & Operations expenditure is given in table 2.

At the end of 2005, and in addition to the expenditure, commitments had been taken for a number of items totaling 305,324 CHF.

Table 3 summarizes budgets, income, expenditure and balance for the period 2002 - 2005.

### 2 - Preliminary Estimate for M&O A Expenses in 2007

Based on presently available estimates of the 2007 M&O category A cost and the sharing as determined in September 2005, a preliminary estimate of the 2007 budget and sharing is presented in Table 4.

The budget and sharing will be updated during 2006 and presented to the Resources Review Board in October 2006 for approval.

### 3 - M&O A Estimates 2007 - 2010

The ALICE Maintenance and Operations category A budget 2006 and cost estimates for the period 2007 - 2010 are summarized in table 5.

The estimates under the heading 'Offline Computing' include the cost of both maintenance of offline computing equipment and operations cost.

### 4 - Category B Estimates

Table 6 shows preliminary estimates of Category B M&O budget requirements for the period 2007 - 2010. The data have been updated with respect to those presented to the Resources Review Board meeting on October 19, 2005. The data will be reviewed during 2006 before being presented to the meeting of the Resources Review Board in October 2006 for information.

### 5 - Payment procedure

A procedure for the payment of M&O A contributions has been approved by the ALICE Collaboration Board. The procedure implies that failure to pay M&O A contributions in time may eventually result in the withdrawal of the right to sign scientific papers for the staff of the Institutes concerned.

Year	Country	2002 - 2004			2005				2002 - 2005			
		Invoiced	Received	Due	Invoiced	Received	In-kind	Due	Invoiced	Received	In-kind	Due
MS	CERN	299,396	299,396		219,230	219,230			518,626	518,626		
	Czech Republic	41,687	41,687		31,770	31,770			73,457	73,457		
	Denmark	17,734	17,734		12,710	12,660		50	30,444	30,394		50
	Finland	21,965	21,965		15,890	15,890			37,855	37,855		
	France CEA	23,274	23,274		19,060	19,060			42,334	42,334		
	France IN2P3	186,665	186,665		149,330	149,330			335,995	335,995		
	Germany BMBF	143,365	143,365		98,490	98,490			241,855	241,855		
	Germany GSI	103,959	103,959		63,540	63,560		-20	167,499	167,519		-20
	Greece	12,965	4,625	8,340	9,530			9,530	22,495	4,625		17,870
	Hungary	12,712	12,712		9,530	9,530			22,242	22,242		
	Italy	523,378	523,378		368,550	368,550			891,928	891,928		
	Netherlands	36,067	36,067		25,420	25,420			61,487	61,487		
	Norway	40,388	40,388		31,770	31,770			72,158	72,158		
	Poland	72,073		72,073	60,370			60,370	132,443			132,443
	Slovak Republic	57,035	57,035		38,130	38,130			95,165	95,165		
	Sweden	23,345	23,345		15,890	15,890			39,235	39,235		
	United Kingdom	28,965	28,965		19,060			19,060	48,025	28,965		19,060
	<b>MS Total</b>	<b>1,644,973</b>	<b>1,564,560</b>	<b>80,413</b>				<b>88,990</b>	<b>2,833,243</b>	<b>2,663,840</b>		<b>169,403</b>
NMS	Armenia	14,273	6,000	8,273	7,270			7,270	21,543	6,000		15,543
	Croatia	17,263	17,263		10,900			10,900	28,163	17,263		10,900
	India	145,208	145,208		75,860	75,860			221,068	221,068		
	JINR	85,604	68,080	17,524	61,770			61,770	147,374	68,080		79,294
	Mexico	31,703	20,013	11,690	21,800			21,800	53,503	20,013		33,490
	Romania	25,178	25,178		18,170	18,170			43,348	43,348		
	Russia	212,944	161,534	51,410	133,350			133,350	346,294	161,534		184,760
	South Africa	13,070	4,470	8,600	10,900	10,900			23,970	15,370		8,600
	Ukraine	34,962	7,290	27,672	14,530		28,000	-13,470	49,492	7,290	28,000	14,202
	USA Creighton	2,840	2,840		3,620	3,620			6,460	6,460		
	USA ORNL	3,254	3,259	-5					3,254	3,259		-5
	USA OSC	1,490	1,490						1,490	1,490		
	USA OSU	25,727	25,829	-102	14,480	14,480			40,207	40,309		-102
	<b>NMS Total</b>	<b>613,516</b>	<b>488,454</b>	<b>125,062</b>	<b>372,650</b>	<b>123,030</b>		<b>221,620</b>	<b>986,166</b>	<b>611,484</b>		<b>346,682</b>
	<b>Grand Total</b>	<b>2,258,489</b>	<b>2,053,014</b>	<b>205,475</b>	<b>1,560,920</b>	<b>1,222,310</b>	<b>28,000</b>	<b>310,610</b>	<b>3,819,409</b>	<b>3,275,324</b>	<b>28,000</b>	<b>516,085</b>
<i>Percentage collected:</i>		90.9 %			80.1 %				86.5 %			

Table 1 - 2002 - 2005 Cat. A M&amp;O Invoices and Income (CHF)

Budget year	Category	Budget	Spent	Comm.	In kind	Total	% spent
2005	Detector Related Costs	378,000	268,792	10,233		279,025	73.8
	Secretariat	199,000	216,813			216,813	109.0
	Communications	10,000					
	On-line Computing	243,000	178,806		28,000	206,806	85.1
	Off-line Computing	40,000	48,000			48,000	120.0
	Test Beam & Calibration Facilities	87,000	95,424	4,200		99,624	114.5
	Laboratory Operations	260,000	240,123	47,733		287,856	110.7
	General Services	262,000	9,028	242,000		251,028	95.8
	Academic subsistence	40,000					
	Outreach	40,000	29,102	1,158		30,260	75.7
	Power	48,000	48,000			48,000	100.0
2005 Total		1,607,000	1,134,088	305,324	28,000	1,467,412	91.3

Table 2 - 2005 Cat. A M&amp;O Expenditure (CHF)

<b>Income (CHF)</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>In-kind</b>	<b>Total</b>	<b>Budget</b>	<b>%</b>
2002 budget	329,908	67,751	4,888	8,704		411,251	429,991	95.6
2003 budget	12,460	561,017	72,880	23,860		670,217	718,970	93.2
2004 budget			903,930	66,686		970,616	1,157,360	83.9
2005 budget			12,660	1,209,630	28,000	1,250,290	1,608,070	77.8
2006 budget				64,790		64,790		
Interest		3,599	4,470	3,530		11,599		
<b>Total</b>	<b>342,368</b>	<b>632,367</b>	<b>998,828</b>	<b>1,377,200</b>	<b>28,000</b>	<b>3,378,763</b>	<b>3,914,391</b>	<b>86.3</b>

<b>Expenditure (CHF)</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>In-kind</b>	<b>Comm.</b>	<b>Total</b>	<b>Budget</b>	<b>%</b>
2002 budget	201,897	45,776					247,673	429,991	57.6
2003 budget		502,184	75,484	20,000			597,668	718,970	83.1
2004 budget			827,147	240,000			1,067,147	1,157,360	92.2
2005 budget				1,134,088	28,000	305,324	1,467,412	1,608,070	91.3
<b>Total</b>	<b>201,897</b>	<b>547,960</b>	<b>902,631</b>	<b>1,394,088</b>	<b>28,000</b>	<b>305,324</b>	<b>3,379,900</b>	<b>3,914,391</b>	<b>86.3</b>

<b>Balance (CHF)</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>Total</b>
Income - expenditure	140,471	84,407	96,197	-16,888	-305,324
End-year cash balance	140,471	224,878	321,075	304,188	-1,136

Table 3 – Summary of M&amp;O Cat. A 2002 - 2005 (CHF)

	<b>Scientists</b>	<b>M&amp;O Cat A, no energy</b>	<b>Energy</b>	<b>Energy billed to FA</b>	<b>Bill in kCHF</b>
CERN	69	562.3	160.0		562.3
Czech Republic	10	81.5	23.2		81.5
Denmark	4	32.6	9.3		32.6
Finland	5	40.7	11.6		40.7
France CEA	8	65.2	18.5		65.2
France IN2P3	50	407.5	115.9		407.5
Germany BMBF	30	244.5	69.6		244.5
Germany GSI	20	163.0	46.4		163.0
Greece	3	24.4	7.0		24.4
Hungary	3	24.4	7.0		24.4
Italy	118	961.6	273.6		961.6
Netherlands	8	65.2	18.5		65.2
Norway	10	81.5	23.2		81.5
Poland	19	154.8	44.1		154.8
Slovak Republic	13	105.9	30.1		105.9
Sweden	5	40.7	11.6		40.7
United Kingdom	6	48.9	13.9		48.9
Armenia	2	16.3	4.6	4.6	20.9
China	7	57.0	16.2	16.2	73.3
Croatia	3	24.4	7.0	7.0	31.4
India	21	171.1	48.7	46.4	217.6
JINR	16	130.4	37.1	37.1	167.5
Mexico	6	48.9	13.9	13.9	62.8
Romania	5	40.7	11.6	11.6	52.3
Russia	38	309.7	88.1	64.2	373.8
South Africa	3	24.4	7.0	7.0	31.4
Ukraine	3	24.4	7.0	7.0	31.4
USA (Creighton)	1	8.1	2.3	2.3	10.4
USA (Oak Ridge)	5	40.7	11.6	11.3	52.0
USA (OSC)	1	8.1	2.3	2.3	10.4
USA (OSU)	4	32.6	9.3	9.0	41.6
<b>Total</b>	<b>496</b>	<b>4,042.0</b>	<b>1,150.0</b>	<b>239.7</b>	<b>4,281.7</b>

Table 4 – Preliminary Cat. A Budget and Sharing for 2007 (kCHF)

	2006	2007	2008	2009	2010
Detector related costs	821	1,768	1,865	1,865	1,865
Secretariat	233	240	243	246	246
Communications	10	10	10	10	10
Off-line computing	251	383	427	427	427
On-line computing (no rec. media)	375	589	1,057	1,275	2,252
Test beams & calibration facilities	195	195	195	195	195
Laboratory operations	260	260	260	260	260
General services	527	597	578	586	586
<i>TOTAL without power</i>	2,672	4,042	4,636	4,864	5,841
<i>Power</i>	477	1,150	2,531	2,531	2,531
<i>GRAND TOTAL</i>	3,149	5,191	7,166	7,394	8,372
Operation sub-items	1,656	2,527	2,674	2,677	2,677
Consumables sub-items	1,493	2,664	4,492	4,717	5,694

Table 5 - Cat. A M&amp;O Budget 2006 and Estimates 2007 - 2010 (kCHF)

Detector	Data			
	2007	2008	2009	2010
Pixel	141	121	55	55
Drift	182	182	182	182
Strip	41	41	41	41
ITS	1	1	1	1
TPC	50	50	50	50
TRD	10	62	93	109
TOF	80	80	80	80
HMPID	150	150	150	150
PHOS	25	35	35	35
Forward	71	82	132	132
Muontrack	53	53	53	53
Muontrig	60	60	60	60
Trigger	40	40	40	40
Grand Total	904	957	972	988

Table 6 - Cat. B M&amp;O Budget Estimates 2007 - 2010 (kCHF)